

KOAMTAC▶

# KDC User Manual

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## Table of Contents

<b>Listing of figures.....</b>	<b>6</b>
<b>Listing of tables.....</b>	<b>8</b>
<b>1. Introduction.....</b>	<b>13</b>
1.1 <i>KDC Package.....</i>	14
1.2 <i>KDC Characteristics.....</i>	15
<b>2. Installation.....</b>	<b>16</b>
2.1 <i>Bluetooth Pairing.....</i>	16
2.1.1      Preparing for Pairing.....	16
2.1.2      Pairing.....	17
2.2 <i>KoamTac Installation Wizard.....</i>	21
2.2.1      Windows 7 and 8.....	21
2.2.2      Windows Mobile 5.0+.....	24
2.2.3      Android.....	26
2.2.4      Blackberry.....	26
2.2.5      iPad/iPhone/iPod touch.....	26
2.3 <i>Manual Installation.....</i>	27
2.3.1      Windows XP/Vista7/8.....	27
2.3.2      Windows Mobile 5.0+.....	27
<b>3. Operating the KDC.....</b>	<b>28</b>
3.1 <i>Getting Started.....</i>	28
3.1.1      Attach Lanyard/Hand strap to KDC.....	28
3.1.2      Charge KDC Battery.....	28
3.1.3      Configure KDC.....	28
3.2 <i>Basics.....</i>	30
3.2.1      Reading Barcodes.....	30
3.2.2      Delete Data Function in KDC30.....	31
3.2.3      Synchronizing Data to the host device.....	31
3.3 <i>KDC Menus.....</i>	32
3.3.1      Set Barcodes Menu.....	35

3.3.2	Code Options Menu.....	35
3.3.3	Scan Options Menu .....	36
3.3.4	Data Process Menu.....	38
3.3.5	BT Config Menu .....	40
3.3.6	BT Service.....	42
3.3.7	System Menu.....	42
3.3.8	Pair and connect KDC30iand iOS4.0+ in HID mode .....	43
3.3.9	iOS Soft Keyboard toggling using BT Toggle option.....	44
3.4	LED Status .....	45
3.5	Empty Battery.....	45
3.6	Buffer Full.....	45
3.7	Power-on/off.....	45
3.8	Replace Battery.....	46
<b>4.</b>	<b>BLUETOOTH .....</b>	<b>47</b>
4.1	Bluetooth Config.....	47
4.1.1	ConnectDevice.....	47
4.1.2	Auto Connect.....	48
4.1.3	Auto Reconnect.....	48
4.1.4	Auto Power On.....	48
4.1.5	PWR ON Time .....	48
4.1.6	Auto Power Off .....	49
4.1.7	Beep Warning .....	49
4.1.8	PWR OFF Time .....	49
4.1.9	PowerOFF Msg.....	49
4.1.10	MAC Address .....	49
4.1.11	FW Version .....	49
4.1.12	Wakeup Nulls.....	50
4.1.13	Autolock Time .....	50
4.1.14	HID Keyboard.....	50
4.1.15	HID Initial and Inter-Character Delay.....	50
4.1.16	Control character transmission in HID mode.....	50

4.1.17	Function key transmission in HID mode .....	51
4.1.18	Disconnect/Reconnect/BT(HID) Toggle .....	51
4.2	<i>Bluetooth Service</i> .....	52
4.2.1	Power .....	52
4.2.2	Pairing.....	52
4.2.3	Discovering.....	52
4.2.4	Connect To .....	52
4.2.5	HID Sync .....	53
<b>5.</b>	<b>Synchronization .....</b>	<b>54</b>
5.1	<i>KTSync Menu</i> .....	54
5.2	<i>File Menu</i> .....	57
5.2.1	Connect to KDC.....	57
5.2.2	Synchronize .....	57
5.2.3	Bluetooth .....	58
5.2.4	Configuration.....	59
5.3	<i>Synchronization Settings</i> .....	60
5.3.1	Destination of Data.....	60
5.3.2	Synchronization Methods .....	61
5.3.3	Current KDC Wedge Method .....	62
5.3.4	Synchronization Options.....	63
5.3.5	Application Options .....	63
5.4	<i>Barcode &amp; KDC Settings</i> .....	64
5.4.1	Select Symbolologies and Symbology Options.....	65
5.4.2	Data Editing Option .....	65
5.5	<i>Other Settings</i> .....	66
5.6	<i>KDC Menu in KTSync</i> .....	67
5.7	<i>Mobile pKTSync</i> .....	68
5.8	<i>Android aKTSync</i> .....	69
5.8.1	KDC and Android Pairing.....	69
5.8.2	Launch KTSync.....	69
5.8.3	Keyboard Wedge .....	70
5.9	<i>iPad/iPhone/iPod touch KTSync</i> .....	71
5.9.1	KDC30i connection using iPhone mode .....	71

- 5.9.2 iKTSync Settings.....72
  - 5.9.3 How to connect and reconnect iPhone mode using UP keys .....72
  - 5.10 Blackberry bKTSync..... 73
  - 5.11 KTSync for Mac OS X..... 75
    - 5.11.1 Connect Button .....76
    - 5.11.2 Disconnect Button .....76
    - 5.11.3 Synchronize Button.....76
    - 5.11.4 Clear Button .....76
    - 5.11.5 Settings Button.....77
- 6. TROUBLESHOOTING .....80
- 7. WARRANTY .....81
- 8. Contact Information.....82

## Listing of figures

---

<i>Figure 1- KDC Package.....</i>	<i>14</i>
<i>Figure 2 – Characteristics of KDC30.....</i>	<i>15</i>
<i>Figure 3 – How to turn on the power in KDC30.....</i>	<i>16</i>
<i>Figure 4 – Selecting a Bluetooth device type in KDC.....</i>	<i>17</i>
<i>Figure 6 – Pairing mode button in KDC30.....</i>	<i>18</i>
<i>Figure 7 – Finding Bluetooth Mac Address .....</i>	<i>19</i>
<i>Figure 8 - Connecting KDC with a smart phone by scanning Bluetooth MAC Address Barcode..</i>	<i>19</i>
<i>Figure 9 - Location and use of buttons on a keypad (KDC350).....</i>	<i>29</i>
<i>Figure 10 – KDC Display.....</i>	<i>30</i>
<i>Figure 11 – Scanning barcodes with KTSync .....</i>	<i>30</i>
<i>Figure 12 – Delete Function in KDC30.....</i>	<i>31</i>
<i>Figure 13 - Replacing Battery.....</i>	<i>46</i>
<i>Figure 14 - KTSync® Synchronizer Menu.....</i>	<i>54</i>
<i>Figure 15 – File Menu.....</i>	<i>55</i>
<i>Figure 16 – Setting Menu .....</i>	<i>56</i>
<i>Figure 17 – Application Menu.....</i>	<i>56</i>
<i>Figure 18 – About Menu.....</i>	<i>56</i>
<i>Figure 19 - COM Port Selection for KDC.....</i>	<i>57</i>
<i>Figure 20 - Bluetooth Device Registry.....</i>	<i>58</i>
<i>Figure 21 – Configuration.....</i>	<i>59</i>
<i>Figure 22 - KTSync® Synchronization Settings.....</i>	<i>60</i>
<i>Figure 23 - Barcode &amp; KDC Settings, Symbolologies, Data Editing and Scan Options .....</i>	<i>64</i>
<i>Figure 24 - KTSync® Confirmation Settings.....</i>	<i>66</i>
<i>Figure 25 – KDC Menu in KTSync (KDC30) .....</i>	<i>67</i>
<i>Figure 26 – Mobile pKTSync.....</i>	<i>68</i>
<i>Figure 27 – Android aKTSync.....</i>	<i>70</i>
<i>Figure 28 – iPad/iPhone/iPod touch KTSync .....</i>	<i>72</i>
<i>Figure 29 – Blackberry bKTSync.....</i>	<i>74</i>
<i>Figure 30 – Application Menu.....</i>	<i>79</i>
<i>Figure 31 – Application Warning Window.....</i>	<i>79</i>
<i>Figure 32 – Application Generation Menu.....</i>	<i>79</i>
<i>Figure 33 – Data Filter Settings.....</i>	<i>79</i>

Figure 34 – Master/Slave Application Settings..... 80

# Listing of tables

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<i>Table 1 – KDC30 Specifications</i>	<i>13</i>
<i>Table 2 – KDC30 Menu Options</i>	<i>35</i>
<i>Table 3 - Explanation of LEDs</i>	<i>45</i>
<i>Table 4 - Troubleshooting Techniques</i>	<i>80</i>



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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.

## Regulatory Compliance



FCC ID: VH9KDC30

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:

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.



Products intended for sale within the European Union are marked with a CE Mark which indicates compliance to applicable Directives and European Normes (EN), as follows. Amendments to these Directives or ENs are included: Normes (EN), as follows:

### Applicable Directives:

toxic substances.

- Dispose of used battery in accordance with the prevailing community regulations that apply to the disposal of batteries. Cover the metal terminals with insulating tape. (This is to prevent accidental short-circuiting).
- Never expose the battery to any liquid.
- Always keep the battery out of reach of infants or small children.
- Never shock the battery by dropping it or throwing it.
- Dispose of a spent or damaged battery promptly.

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

#### Product Disposal

Your device should not be placed in municipal waste. Please check local regulations for disposal of electronic products.

#### Bluetooth

Core Specification: 2.1+EDR

#### Apple

Made for iPhone, Made for iPod, Made for iPad

#### Samsung

Compatible with Galaxy Series

# 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](http://www.koamtac.com).

KDC30 Specifications	
FEATURE	Barcode scanner Compliant with Class II Bluetooth v2.0 and v2.1 Enhanced Data Rate (EDR) support
MAJOR PARTS	AT91SAM7S256-AU (ARM7 32bits Processor) S3C6410X-533 (ARM11 RISC Microprocessor) MT29F1G08ABBEAH4 (1Gbit NAND Flash Memory) K4X51323PK-8GD8 (512Mbit Mobile DDR SDRAM) F1E22 (Bluetooth module) CR8000 (Decoded Scan Engine (CAM))
BLUETOOTH STANDARDS	Class II Bluetooth v2.1 + EDR 2.4 GHz - 2.4835 GHz SPP, HID profile Internal chip Antenna
INTERFACE	USB 2.0/1.1 (A-type connector)
POWER	Lithium-Polymer Battery (Typ. 3.7V, 650mAh) Typ. 300mA Consumption @ 3.3V
PHYSICAL DIMENSIONS	1.50"x3.29"x0.71" (38mmX83.5mmX18mm)
WEIGHT	1.82oz. (51.5grams)

*Table 1 – KDC30 Specifications*

## 1.1 KDC Package

The standard KDC package contains:

1. One KDC Barcode Data Collector
2. One USB Cable
3. One Lanyard
4. KoamTac Installation CD with
  - KTSync® for Microsoft Windows XP, Vista 7 and Mobile 5.0+
  - KDC Device Driver
  - User Manual

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

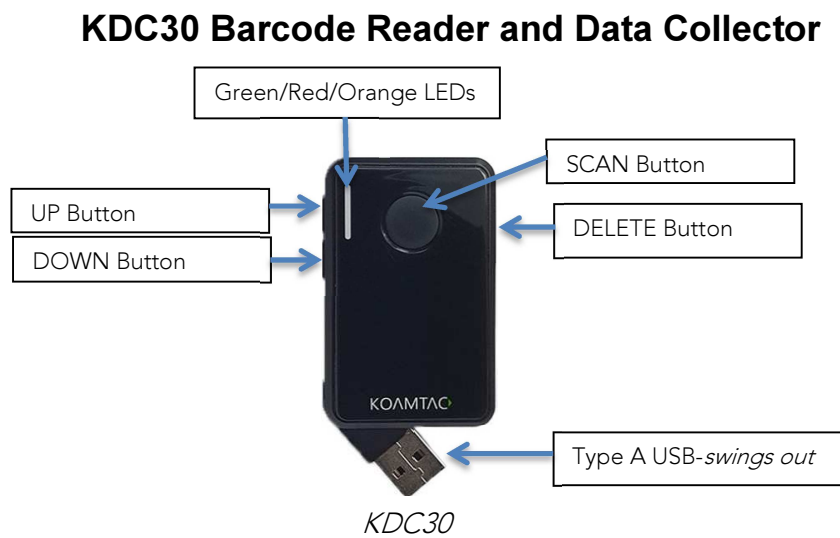


KDC30

*Figure 1- KDC Package*

## 1.2 KDC Characteristics

Before you use your KDC, please become familiar with its physical characteristics. Refer to Figure 2 below which indicate placement of SCAN, UP and DOWN buttons, LEDs, and ports on your KDC. KDC30 does not include LCD screen since it is designed as the simplest barcode scanner to use without LCD screen.



*Figure 2 – Characteristics of KDC30*

## 2. Installation

### 2.1 Bluetooth Pairing

KDC itself reads barcodes independently, and it can also be used in combination with PC, PDA, or smart phones. When you want to read barcodes with KDC in connection with other devices, you need to conduct pairing between your KDC and smart phone via Bluetooth first. Unless there are changes in Bluetooth settings, your smart phone will always recognize your KDC that has already been paired. However, if you change Bluetooth settings, you need to go through pairing process for your KDC again. You can also refer to [Chapter 4. BLUETOOTH](#) for more information about Bluetooth pairing.

#### 2.1.1 Preparing for Pairing

1. Turn on the power first if you are a KDC30 user.

Press SCAN and DOWN buttons simultaneously for 5 seconds. You will hear beep sound when it is turned on.



Figure 3 – How to turn on the power in KDC30

2. Set a Bluetooth device type mode. There are two ways to set a Bluetooth device type mode.
  - Select and scan your Bluetooth device type barcode among the barcodes below, or

Bluetooth Profile SPP



└MKDC6A000.

Bluetooth Profile HID iOS



└MKDC6A001.

Bluetooth Profile IPHONE

Bluetooth Profile SPP2.0



Bluetooth Profile HID normal



### 2.1.2 Pairing

#### Way One: Connect your KDC from your smart phone or PDA

This method is recommended for first-time users or when you are only connecting a few KDCs.

##### 1. Put your KDC into Pairing mode

- Select and scan a pairing barcode below according to your KDC model, or

KDC 30



Pairing

- Press Scan button for three seconds to enter Pairing mode.

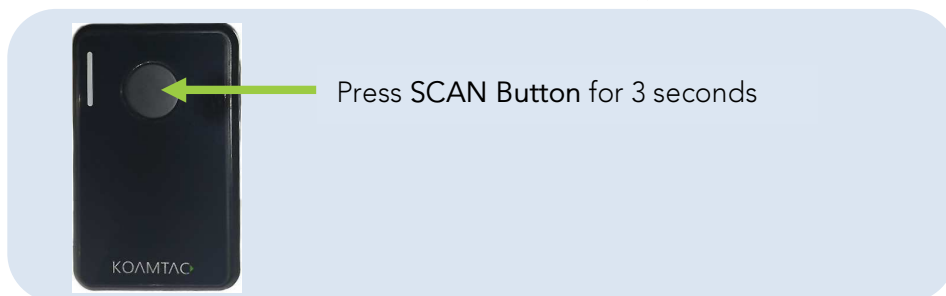
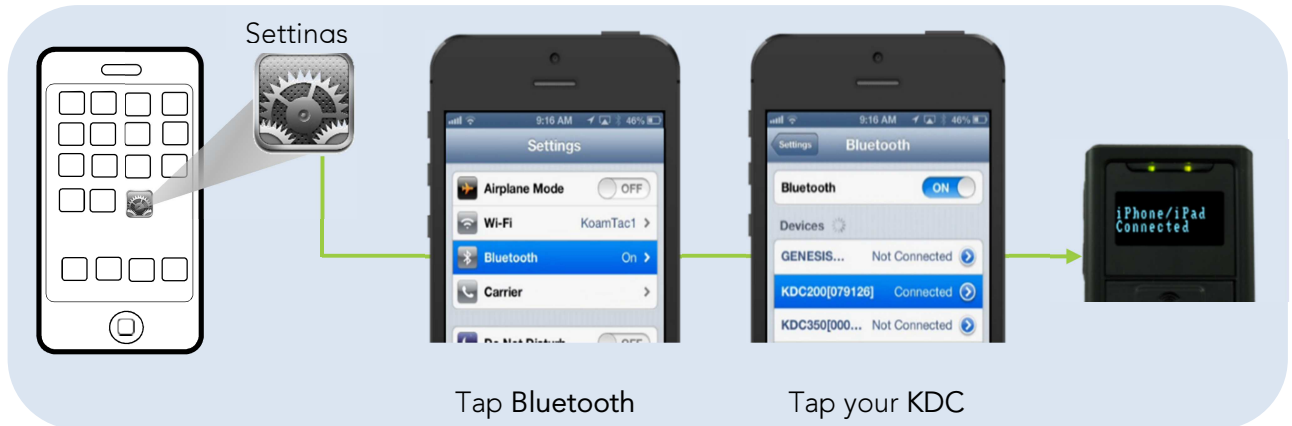




Figure 5 – Pairing mode button in KDC30

2. On your host device, go to **Settings->Bluetooth**, find the KDC with which you want to pair and select it. Your KDC and host device are now communicating each other.



3. Open KTSync after it has been installed and it will automatically find the KDC and connect. (Refer to [2.2 KoamTac Installation Wizard](#) for more information about installing KTSync)

## Way Two: Connect your host device from your KDC by scanning a Special Bluetooth MAC Address barcode

The method is recommended for more advanced users or when your application or process calls for pairing one of many KDCs to one of many host devices on a regular basis.

1. Find the Bluetooth MAC Address of your host device.



1. Tap on General
2. Tap on About
3. Bluetooth address

Figure 6 – Finding Bluetooth Mac Address

2. Create your Bluetooth MAC Address Barcode according to the format below.

Bluetooth MAC Address: **1234567890AB**  
 Barcode Type (Symbology): Code 128  
 Contents: ^FNC365**1234567890AB**  
 Options: includetext parsefnc

3. Print your Bluetooth MAC Address

Note: Laser scanners like KDC30 is not designed to read from a LCD screen and will only read the printed barcode.

4. Connect your KDC to your host device by scanning the Bluetooth MAC Address Barcode.

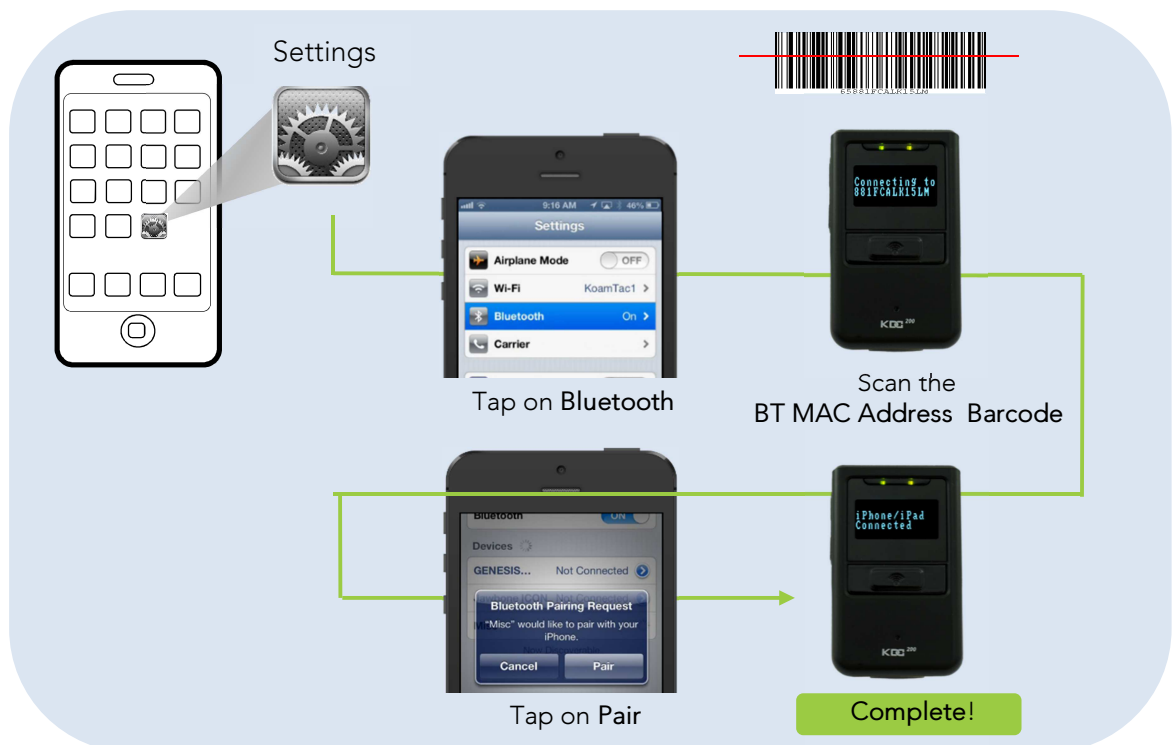


Figure 7 - Connecting KDC with a smart phone by scanning Bluetooth MAC Address Barcode

5. Open KTSync after it has been installed and it will automatically find the KDC and connect. (Refer to [2.2 KoamTac Installation Wizard](#) for more information about installing KTSync)

## 2.2 KoamTac Installation Wizard

### 2.2.1 Windows 7 and 8

**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.

**Note:**

- *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 [2.3 Manual Installation](#).*

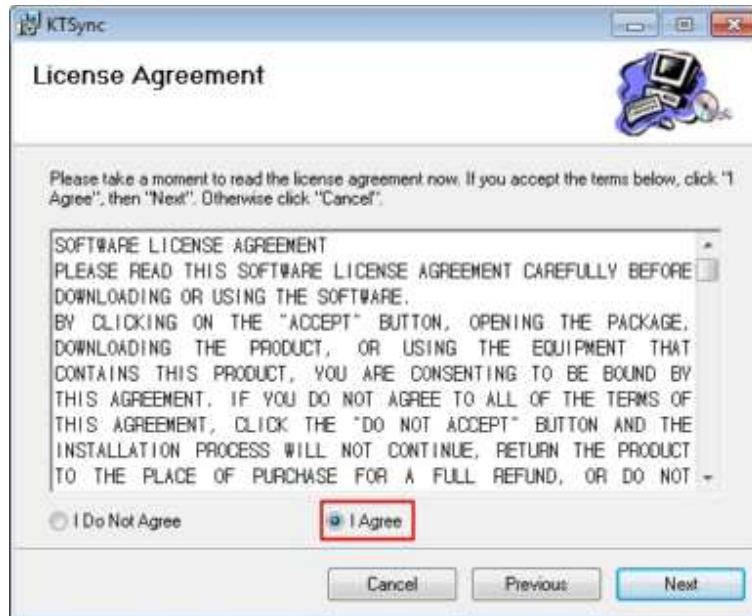
#### *KTSync Setup Wizard*

Follow the steps to install KTSync as images below.

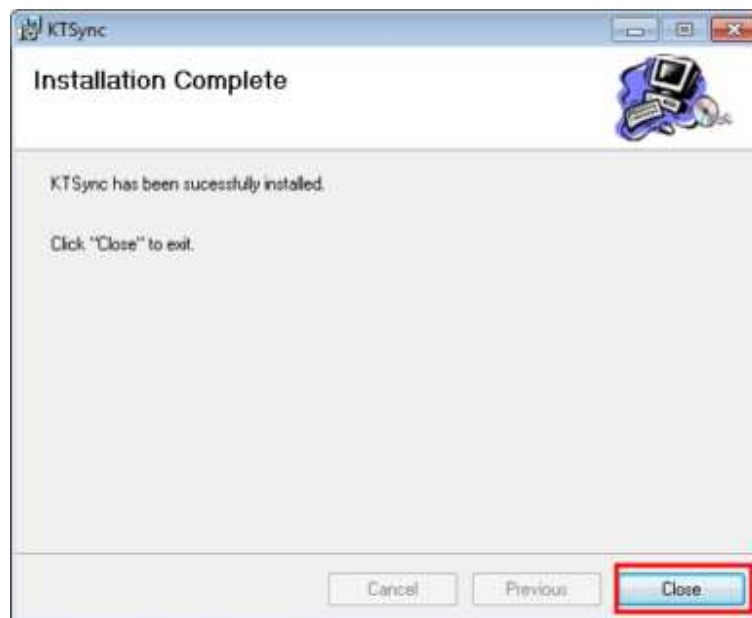
- Click **Next** icon in KTSync Setup Wizard window



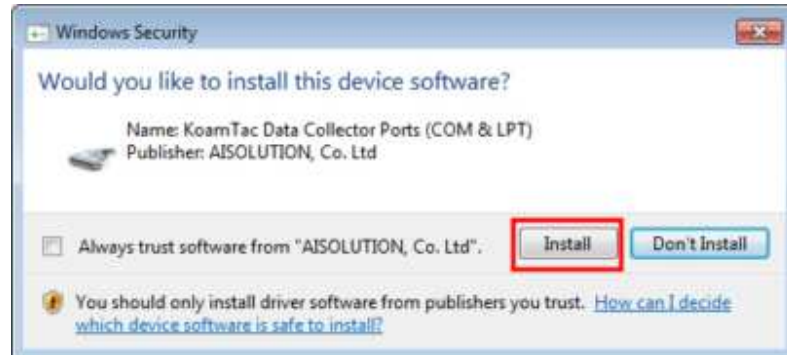
- Check "I Agree" and Click **Next** icon in License Agreement window



- Click **Close** icon in KTSync Installation Complete window and wait for Device Driver Installation Wizard



- Click Install this driver in Windows Security window and installation is finished.



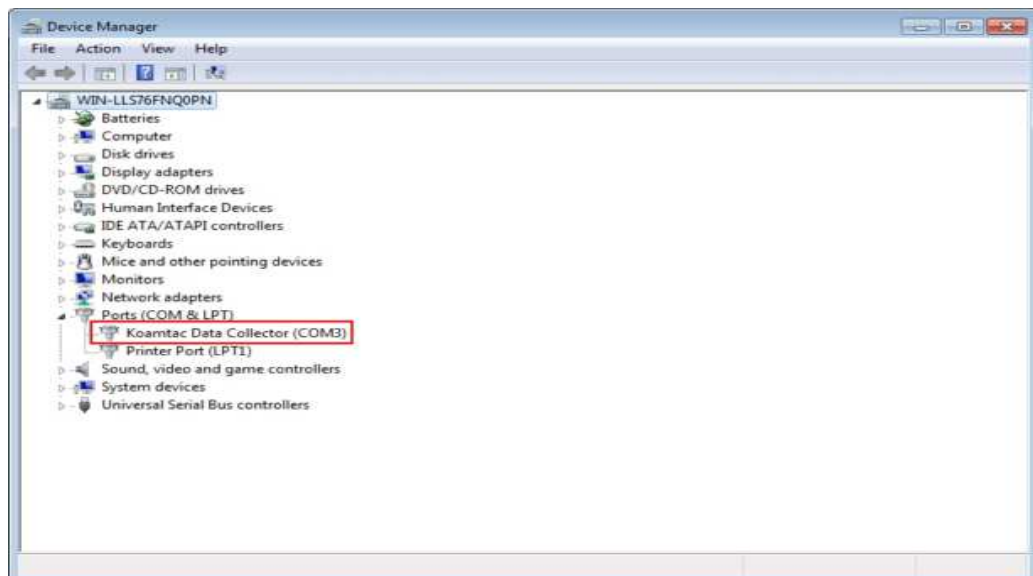
### *Connect KDC to Computer*

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

- Connect 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*

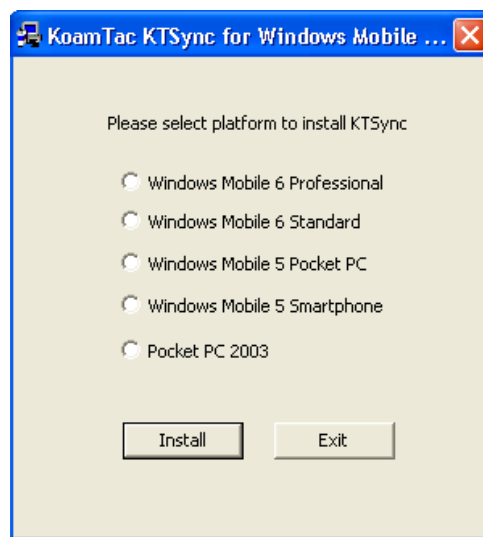
- User can verify installed COM Port in Device Manager



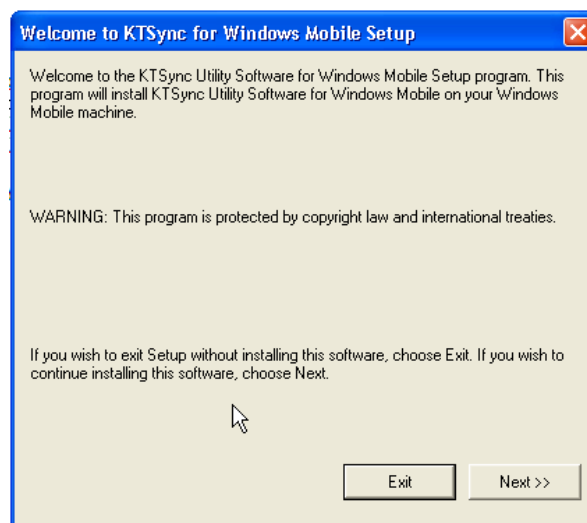
### 2.2.2 Windows Mobile 5.0+

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

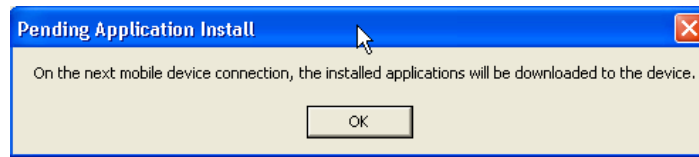
1. PC\_Setup.exe creates Mobile\_Setup.exe file under C:\Program Files\KoamTac\KTSync\Windows.Mobile directory
  2. Execute Mobile\_Setup.exe
- Select Windows Mobile version to install.



- 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



### 2.2.3 Android

- Download and install aKTSync from the Android Play Store  
<https://play.google.com/store/apps/details?id=com.koamtac.ktsync&hl>

### 2.2.4 Blackberry

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

### 2.2.5 iPad/iPhone/iPod touch

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



## 2.3 Manual Installation

### 2.3.1 Windows XP/Vista/7/8

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.

### 2.3.2 Windows Mobile 5.0+

Connect Windows Mobile PDA with your computer to install KTSync program.

1. Create a KoamTac folder in your PDA.
2. Copy the **Mobile5.0\_6.0** folder in KoamTac CD and paste it in the PDA KoamTac folder that was created in My Computer.
3. In the **Mobile5.0\_6.0** folder, you will find KTSync® Programs for Microsoft® Windows Pocket PC 2003, Mobile 5.0, Mobile 6.0 Standard, and Mobile6.0 Professional as well as KDC User Manual.

## 3. Operating the KDC

---

### 3.1 Getting Started

#### 3.1.1 Attach Lanyard/Hand strap to KDC

To prevent possible damage to the KDC, we *strongly* recommend wearing it around your neck or 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 Lanyard:

1. Fit the thin end of Lanyard through the pillar of the KDC.
2. Loop the thick end of strap through the thin loop
3. Pull the strap tight to secure

#### 3.1.2 Charge KDC Battery

Prior to using the KDC, you must charge its battery. It will take approximately 2 hours to charge your KDC30. To charge the battery, follow the directions below.

1. Connect the KDC cable to the 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.

#### 3.1.3 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 using three different methods which are explained in Section [3.3 – KDC Menus](#), [Chapter 4 – Synchronization](#), and [10. Appendix C – Special Barcodes](#).

#### CONFIGURATION METHODS FOR THE KDC30

- KTSync® Software
- Special Barcodes

## 3.2 Basics

### 3.2.1 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 window 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.*

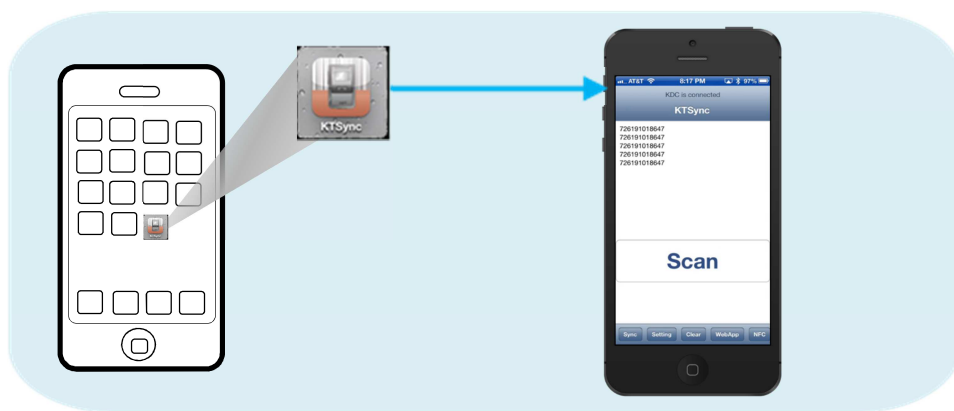


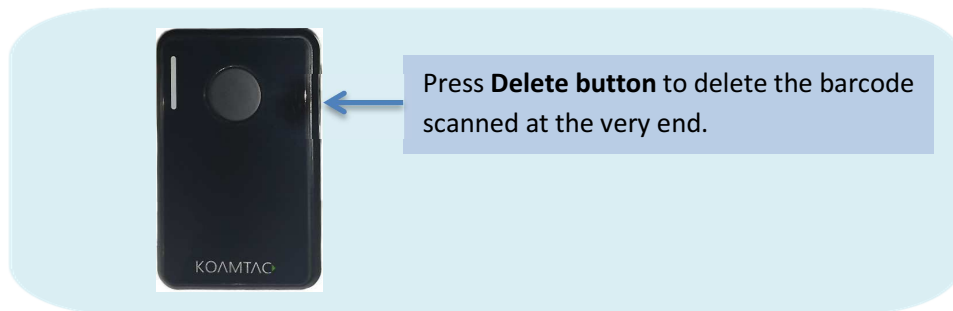
Figure 10 – Scanning barcodes with KTSync

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

### 3.2.2 Delete Data Function in KDC30

You can delete the last scanned barcode by pressing the DELETE button on the right side of your KDC30 although it does not have LCD screen to view the data.



*Figure 11 – Delete Function in KDC30*

### 3.2.3 Synchronizing Data to the host device

Use the KTSync® program to synchronize barcode data from the KDC to your host device. Please refer to [Chapter 6. Synchronization](#) for details.

### 3.3 KDC Menus

Top Menu	Sub Menu	Options	KDC30
<b>KDC Mode</b>	Normal		Default
	Application		N/A
<b>View Data</b>	View/Delete		N/A
<b>Set Barcodes</b>	1D Symbology	Codabar	Enabled
		Code 11	Enabled
		Code 32	Enabled
		Code 39	Enabled
		Code 93	Enabled
		Code 128	Enabled
		EAN-8	Enabled
		EAN-13	Enabled
		GS1 Composit	Enabled
		I2of5	Enabled
		Matrix 2of5	Enabled
		MSI	Enabled
		Plessey	Enabled
		PosiCode	Enabled
		GS1 Omni	Enabled
		GS1 Limited	Enabled
		GS1 Expanded	Enabled
		S2of5 Ind	Enabled
		S2of5 IATA	Enabled
		TCL39	Enabled
		Telepen	Enabled
		Trioptic	Enabled
		UPCA	Enabled
		UPCE0	Enabled
		UPCE1	Enabled
	2D Symbology	AztecCode	Enabled
		AztecRunes	Enabled
		CodablockF	Enabled
		Code16K	Enabled
		Code49	Enabled
		DataMatrix	Enabled
		MaxiCode	Enabled
		MicroPDF	Enabled
		PDF417	Enabled
		QRCode	Enabled
		HanXin Code	Enabled
	Postal Codes	Postnet	Enabled
		PlanetCode	Enabled
		UK Post	Enabled
		Canada Post	Enabled
		Kix Post	Enabled
		Australia Post	Enabled
		Japan Post	Enabled
		China Post	Enabled
		Korea Post	Enabled
	OCR	OCR Off	Enabled
		OCR A	Disabled
		OCR B	Disabled
		OCR USC	Disabled
		OCR MICR	Disabled
		OCR SEMI	Disabled

<b>Barcode Options</b>	Codabar	Tx StartStop(Enabled/Disabled)	Disabled
		Check Digit(DoNotVerify/VerifyDONotTX/VerifyDoTx)	DoNotVerify
		Concatenate(Disabled/Enabled/Required)	Enabled
	Code39	Tx StartStop(Enabled/Disabled)	Disabled
		Check Digit(DoNotVerify/VerifyDONotTX/VerifyDoTx)	DoNotVerify
		Append(Enabled/Disabled)	Disabled
		Full ASCII(Enabled/Disabled)	Disabled
	I2of5	Check Digit(DoNotVerify/VerifyDONotTX/VerifyDoTx)	DoNotVerify
	Code11	Check Digit(2 digits/1 digit)	2 digits
	Code128	Concatenate(Disabled/Enabled)	Disabled
	Telepen	Output(Original/AIM)	AIM
	UPCA	VerifyChkDgt(Enabled/Disabled)	Enabled
		NumberSys(Enabled/Disabled)	Enabled
		2DgtAddenda(Enabled/Disabled)	Disabled
		5DgtAddenda(Enabled/Disabled)	Disabled
		Req. Addenda(Enabled/Disabled)	Disabled
		Sep. Addenda(Enabled/Disabled)	Enabled
		Coupon Code(Enabled/Disabled)	Enabled
	UPCE	Expand(Enabled/Disabled)	Disabled
		Req. Addenda(Enabled/Disabled)	Disabled
		Sep. Addenda(Enabled/Disabled)	Enabled
		Check Digit(Enabled/Disabled)	Enabled
		NumberSys(Enabled/Disabled)	Enabled
		2DgtAddenda(Enabled/Disabled)	Disabled
		5DgtAddenda(Enabled/Disabled)	Disabled
	EAN-13	VerifyChkDgt(Enabled/Disabled)	Enabled
		2DgtAddenda(Enabled/Disabled)	Disabled
		5DgtAddenda(Enabled/Disabled)	Disabled
		Req. Addenda(Enabled/Disabled)	Disabled
		Sep. Addenda(Enabled/Disabled)	Enabled
		ISBN Trans.(Enabled/Disabled)	Disabled
	EAN-8	VerifyChkDgt(Enabled/Disabled)	Enabled
		2DgtAddenda(Enabled/Disabled)	Disabled
		5DgtAddenda(Enabled/Disabled)	Disabled
		Req. Addenda(Enabled/Disabled)	Disabled
		Sep. Addenda(Enabled/Disabled)	Enabled
	MSI	Tx CheckChar(Enabled/Disabled)	Disabled
	PosiCode	A and B/A&B LimitedA/A&B LimitedB	A&B LimitedB
	GS1	UPCEAN Ver.(Enabled/Disabled)	Disabled
		GS1 Emulation(No Emulate/GS1 128 Emul/GS1 Emulate)	No Emulate
	PostNet	Tx CheckChar(Enabled/Disabled)	Disabled
	PlanetCode	Tx CheckChar(Enabled/Disabled)	Disabled
<b>Scan Options</b>	Scan Angle	Narrow/Wide	N/A
	Filter	Normal/High	N/A
	Time Out	.5 seconds to 10 seconds	2 second(s)
	Min. Barcode Length	2 to 36 characters	N/A



	Min. Barcode Length	2 to 48 characters	4 chars
	Security Level	1 to 4 level	N/A
	Image Capture	Enabled/Disabled	Disabled
	Auto Trigger	Enabled/Disabled	Disabled
	Reread Delay	Continuous, Short, Medium, Long, Extra Long	Medium
	Finger Trigger	Enabled/Disabled	N/A
	Partial Display	Start Position	1
		No. of Char(s)	0 chars
		Action	Select
<b>Data Process</b>	Wedge / Store	Wedge Only	
		Wedge & Store Always	Default
		Store Only	
		Save if Sent	
		Save if Not Sent	
	Data Format	Barcode only	Default
		Packet Data	
	Data Editor/Prefix	Delete	Delete
	Data Editor/Suffix	Delete	Delete
	Data Editor/AIM ID	None/In Prefix/In Suffix	None
	Data Editor/Partial Data	Start Position	1
		No. of Char(s)	0 chars
		Action	Select
	Handshake	Enable/Disabled	Disabled
	Terminator	None, CR, LF, CR+LF, Tab, Right Arrow, Left Arrow, Down Arrow, Up Arrow	CR+LF
	Chk Duplicate	Enabled/Disabled	Disabled
	Enter Key	Enabled/Disabled	N/A
<b>BT Config</b>	ConnectDevice (Non Mfi mode)	SPP	Default
		HID iOS	
		SPP2.0	
		HID normal	
	ConnectDevice (Mfi mode )	SPP	
		iPhone	Default
	Auto Connect	Enabled/Disabled	Disabled
	Auto Reconnect	Enabled/Disabled	Disabled
	Auto Power On	Enabled/Disabled	Disabled
	Auto Power On/Power On Time	disabled, 1sec to 10second(s)	Disabled
	Auto Power Off	Enabled/Disabled	Disabled
	Auto Power Off/Beep Warning	Enabled/Disabled	Disabled
	Auto Power Off/Power Off Time	1 to 30 minutes	Disabled
	PowerOff Msg	Enabled/Disabled	Disabled
	MAC Address	12 Characters Bluetooth MAC Address	
	BT FW Version	v1.2.xrt Bluetooth Firmware Version	
	Wakeup Nulls	Enabled/Disabled	Disabled
	Connect Alert	Enabled/Disabled	Disabled
	BT Toggle	Enabled/Disabled	Enabled
	DisconnectBtn	Enabled/Disabled	Enabled
	HID AutoLock	disabledd, 1,2,3,4,5,10,15 minutes	1 minutes
	HID Keyboard	US,German,French,Italian,Spanish	US
	HID Delay/Initial	Disabled, 1,2,3,5,10 secs	Disabled
	HID Delay/Inter char	Disabled,10, 20, 30, 50, 100msec	Disabled
	HID Ctrl Char	Disabled, Alt+Numpad, ^+Character, Replace to	Disabled
<b>BT Service</b>	Power	Enabled/Disabled	Enabled
	Pairing	Pairing neighboring Bluetooth devices	

	Discovering	Discovering neighboring <i>Bluetooth</i> devices	
	Connecting to	View Connect to <i>Bluetooth</i> device	
	HID Sync		
<b>USB Config-USB Serial Mode (M model)</b>	USB Mode	USB Serial/USB Disk	USB Serial
<b>System Config</b>	Memory Size(3.0 only)	0.5/3.5, 1/3, 2/2, 3/1, 4/0	N/A
	Memory Status	No. of Stored Barcodes	
		Free Memory Available	
	Reset Memory	Memory(Empties Data)	
		Application Memory	
	Auto Erase	Enabled/Disabled	Disabled
	Sleep Timeout	Disabled, 1sec to 10minute(s)	5 second(s)
	Date / Time	YYYY:MM:DD &	
		HH:MM:SS	
	Battery		
	Version		
	Button Lock	Enabled/Disabled	N/A
	Beep Alert /Beep Sound	Enabled/Disabled	Enabled
	Beep Alert /Power On Beep	Enabled/Disabled	Enabled
	Beep Alert /Beep On Connect	Enabled/Disabled	Enabled
	Beep Alert /Beep On Scan	Enabled/Disabled	Enabled
	Beep Volume	Low/High	Low
	Mfi ( i-chip installed)	Enabled/Disabled	Enabled
	Auto Exit	Enabled/Disabled	N/A
	Port Status	Enabled/Disabled	N/A
	Display Format	Time & Battery / Type & Time / Type & Battery / Memory Status / GPS Data(KDC250 only)/Barcode Only	N/A
	Menu Barcode	Enabled/Disabled	N/A
	Scrolling	Enabled/Disabled	N/A
	Brightness	1 to 15 level(8 level)	N/A
	Factory Default		

Table 2 – KDC30 Menu Options

### 3.3.1 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 [11. Appendix – 11.1 Symbologies](#) for a detailed listing of symbologies supported by your KDC.

### 3.3.2 Code Options Menu

Your KDC supports various Code Options including Transmission of Start and Stop Characters, Symbology Conversion, Verification of Optional Check Character, and

Transmission of Check Digit. Please refer to [11. Appendix A – 11.2 Code Options](#) for a detailed explanation of each option.

### 3.3.3 Scan Options Menu

- Scan Angle (Opticon model only): Allows you to configure the laser beam angle to the barcode. There are two options for scan angle: Wide and Narrow. Wide is 54° and Narrow is 27°. The default is Wide.
- Filter (Opticon model only): Allows you to change the Filter mode from Normal to High for poor quality barcodes. The default is Normal.
- Timeout: Allows you to set the interval between one scanning and the other. The timeout options are from 5 seconds up to 10 seconds. The default is 2 seconds.
- Minimum Barcode Length: Allows you to set a barcode length from 2 characters to 36 characters. It is strongly recommended that you maximize the minimum barcode length setting to prevent possible errors. The default minimum barcode length of KDC30 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 Composit		
	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)
OCR	Korea Post	2(4)	80(48)
	OCR Off		
	OCR A		
	OCR B		
	OCR USC		
	OCR MICR		

	OCR SEMI	
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- Security Level: Allows you to ensure an accurate barcode reading by setting the number of times the KDC will read a barcode. Security Level is set from 1 up to 4. The higher security level means more reliable readings though some performance degradation is likely. For poor quality barcodes, we recommend increasing the security level. The default is 2.
- 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.

### 3.3.4 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: KDC30i add 4 bytes barcode index to maintain last synchronized barcode information.*
  - 1) *This optional index would be added if data format is "Packet Data".*
  - 2) *4 bytes index would be added before "@" when responding to "p" command.*
  - 3) *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.
- 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 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 to 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 to 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.

### 3.3.5 BT Config Menu

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 buttons on the side of the KDC. Use the DOWN button to scroll to Bluetooth then press 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.

IMPORTANT: 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. BLUETOOTH.](#)

- ConnectDevice: Users can choose Bluetooth device type
  - Options - HID normal (KDC30)
    - HID iOS (KDC30)
    - SPP2.0
    - SPP(KDC30/30i)
    - iPhone (KDC30i)
- Auto Connect : Enabled or Disabled
- Auto Reconnect: Enabled or Disabled (iPhone, HID iOS, HID normal mode)
- Auto Power On: Enabled or Disabled
- PWR On Time: Disabled, 1 to 10 seconds
- Auto Power Off : Enabled or Disabled
- 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.
- BT Disconnect Button – Enable or Disable Bluetooth disconnection by pressing down button for 3 seconds.
- 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 1 second to 10 seconds 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.

### 3.3.6 BT Service

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

### 3.3.7 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 button + UP button + DOWN button + DOWN button + 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*.
- 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 Alert
  - Beep Sound: Enables or disables KDC beep sound.
  - Power On Beep: Enables or disables beep sound when KDC power is on.
  - Beep On Connect: Enables or disables beep sound when KDC is connected to host.

- Beep On Scan: Enables or disables beep sound when KDC is scanning.
- Beep Volume: High or low.
- MFi Mode (KDC30i): Enables or disables MFi mode. MFi mode supports SPP and iPhone Bluetooth profiles. Non-MFi mode supports SPP, SPP2.0, HID iOS and HID normal.
- Vibrator: Enables or disables KDC vibrator.
- 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
- 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.

### 3.3.8 Pair and connect KDC30i and iOS4.0+ in HID mode

#### Note:

- Users have to disable MFi option in System > MFi menu to use HID Bluetooth profiles.
- Users have to RESET the iPhone/iPad/iPod touch to change HID to iPhone mode, and vice versa, after removing previous KDC connection.
- KDC with Bluetooth Spec2.1+EDR doesn't prompt Pin code entry menu.
- *KDC with Bluetooth Spec. 2.1+EDR stack doesn't require 4 or 6 digits PIN digits entry*

Follow the steps to pair and connect KDC models for MFi and iOS4.0 in HID mode.

1. Go to the KDC System > MFi menu.
2. Change MFi option to Disabled.
3. Change KDC to Pairing mode.
4. The iPhone/iPad/iPod touch will find a new device as *Keyboard*.
5. Click *Keyboard* device.

#### Note:

- *Please skip the following steps if iPhone/iPad/iPod touch doesn't ask for the PIN number.*

6. Click *Keyboard* device: The iPhone/iPad/iPod touch will ask for the PIN number. The iPad will ask for 6 digits and the iPhone/iPod touch will ask for 4 digits.

7. As soon as the iPhone/iPad/iPod touch asks for the PIN number, KDC will display the PIN digits selection menu. By default, it is 6 digits.
8. Press SCAN button to select the 6 digit PIN code for the iPad. Press DOWN button and then SCAN button to select the 4 digit PIN code for the iPhone/iPod touch.
9. The iPhone/iPad/iPod touch will display the PIN code that users should enter into the KDC.
10. By default, the KDC displays pin codes 555555(5555). Users can change the PIN code by using UP button on the side of the KDC unit to increase numbers, DOWN button to decrease numbers, and SCAN button to confirm and move to the next digit.
11. Once the last PIN number is entered, press and hold SCAN button for a few seconds. KDC will display *HID connected* message and the iPad/iPhone/iPod touch will display *Connected* message if paired successfully.

### 3.3.9 iOS Soft Keyboard toggling using BT Toggle option

1. Users need to select the option to use this feature in the BT Config > BT Toggle.
2. Press DOWN button to disconnect the HID connection and bring a soft keyboard (If DisconnectBTN option is enabled).
3. Press UP button to connect HID
4. The BT toggle is a useful feature if users desire to use both the KDC and soft keyboard.

### 3.4 LED Status

LED Color	Status
Green	<ul style="list-style-type: none"><li>• Successful Reading</li><li>• USB is connected and battery is fully charged</li><li>• iPhone mode in pairing mode</li></ul>
Orange	<ul style="list-style-type: none"><li>• Low battery</li><li>• USB is connected and battery is charging</li><li>• HID mode in pairing mode</li></ul>
Red	<ul style="list-style-type: none"><li>• No reading</li><li>• SPP mode in pairing mode</li></ul>

Table 3 - Explanation of LEDs

### 3.5 Empty Battery

- Under 30% - Orange LED flickers at 1-second-interval for 5 seconds every minute.
- Under 20% - Orange LED flickers in 1- second-interval for 10 seconds every minute.
- Under 10% - Red LED flickers in 1- second-interval for 10 seconds every minute and you will hear beeping sound.

### 3.6 Buffer Full

KDC30 Users will hear a beep when the size of collected data reaches 160KB (85 version) / 60KB (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.

### 3.7 Power-on/off

You can turn the power on and off by pressing DOWN and SCAN button simultaneously for 5 seconds. When the LED light is in green, you can release the buttons and the

power is on. When you turn off your KDC30, you will hear a beep sound after you press DOWN and SCAN buttons simultaneously.

### 3.8 Replace Battery

KDC comes with a rechargeable, Lithium-polymer battery. The battery is recharged from any USB port or KDC charging cradle 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 KDC. Replacement batteries can be purchased from a KoamTac distributor. Batteries should be disposed properly according to the WEEE regulation. 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.

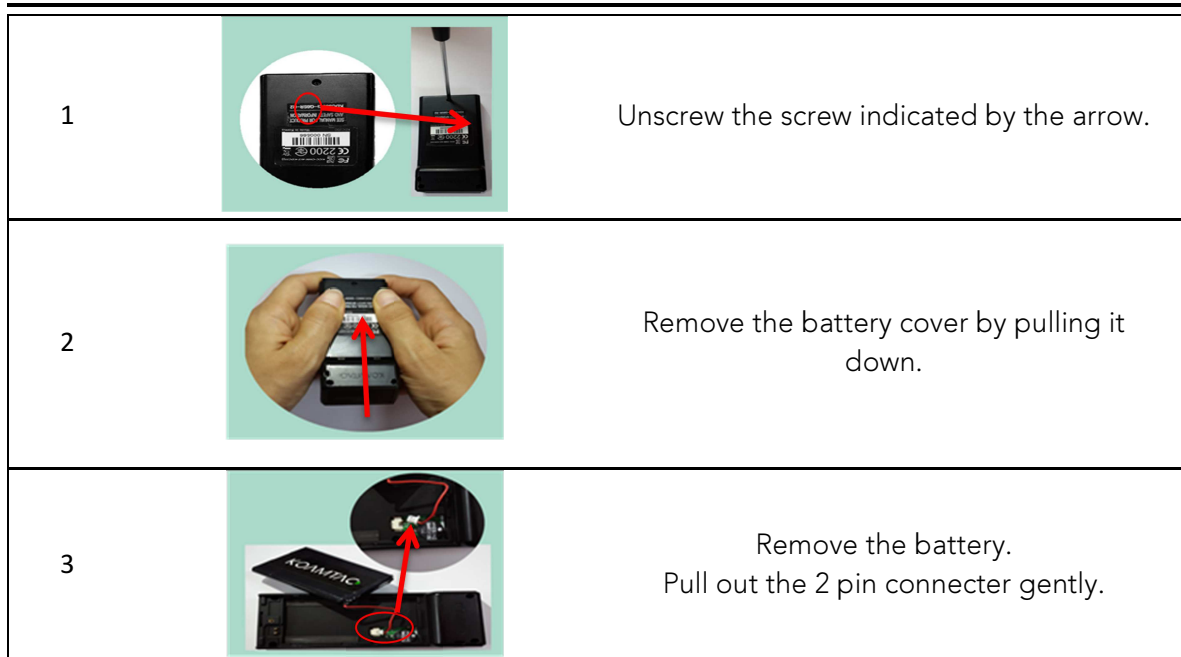


Figure 12 - Replacing Battery

## 4. BLUETOOTH

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The KDC30 support HID (Human Interface Device) normal, HID iOS, SPP (Serial Port Profile) and SPP2.0 profiles. KDC30i support SPP and iPhone (Made for iPhone) profiles. They are compatible with the following Bluetooth stacks.

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

KDC30 can configure Bluetooth options using PC KTSync and special barcodes.

### 4.1 Bluetooth Config

#### 4.1.1 ConnectDevice

KDC supports both Serial Port Profile (SPP) and Human Interface Device Profile (HID). User can choose SPP2.0, SPP (2.1), HID normal, HID iOS profiles to communicate with the host device. Additional iPhone (Made for iPhone) option is available for KDC30i.

User can connect and disconnect Bluetooth connection with the host device by pressing UP and DOWN buttons 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 also enable and disable iPhone and iPad soft key instantly using this BT Toggle option.

UP button shows Bluetooth connection status and DOWN button shows time if KDC is connected using SPP profile.

#### Note:

User should unpair the KDC first from the Bluetooth host to change the Connect Device setting on the scanner to other Bluetooth profile.

### 4.1.2 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 automatically tries to connect to the host 10 times during two minutes when *Bluetooth* power is ON, *Bluetooth* is disconnected, Auto Connect is enabled and system Sleep Timeout is set to 5 seconds

### 4.1.3 Auto Reconnect

This feature allows the KDC to connect automatically to the host device when the KDC is disconnected from a host.

IMPORTANT: This feature is available when KDC "Connect Device" options are "iPhone", "HID iOS" and "HID Normal".

**Note:**

- *KDC tries to connect automatically to the host 10 times during two minutes if Bluetooth is disconnected.*

### 4.1.4 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.

### 4.1.5 PWR ON Time

The PWR On Time option works in conjunction with the Auto Power On option. Default value is Disabled. If KDC Bluetooth power is off, user can turn on Bluetooth power by pressing SCAN button for PWR On Time option value.

#### 4.1.6 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 Disabled. 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.

#### 4.1.7 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"
  - "KDC30 is DISCONNECTED from HOST"
  - "Bluetooth power is ON"

#### 4.1.8 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 setting for this option is from one (1) minute to 30 minutes. The default is five (5) minutes.

#### 4.1.9 PowerOFF Msg

KDC sends Bluetooth power off message "BTOFF" to the host if PowerOFF message option is enabled.

#### 4.1.10 MAC Address

User can verify KDC Bluetooth MAC Address.

#### 4.1.11 FW Version

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



#### 4.1.12 Wakeup Nulls

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

#### 4.1.13 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 the auto-lock time. The auto-lock time would be set as 0, 1, 2, 3, 4, 5, 10, 15 minutes. 0 means iPhone/iPad/iPod touch never enters sleep mode.

#### 4.1.14 HID Keyboard

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

#### 4.1.15 HID Initial and Inter-Character Delay

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

- 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

#### 4.1.16 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.
- Replacement to | → Control characters would be substituted as "|".

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	^\		

#### 4.1.17 Function key transmission in HID mode

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

#### 4.1.18 Disconnect/Reconnect/BT(HID) Toggle

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

Bluetooth Profile	UP Key	DOWN Key (DisconnectBTN disabled)	DOWN Key (DisconnectBTN enabled)
SPP	Do nothing	Do nothing	Release BT connection
HID iOS	Reconnect	Soft Keyboard Toggle if pressing less than 3sec,	Soft Keyboard Toggle if pressing less than 3sec, Release BT connection
iPhone	Reconnect	Do nothing	Release BT connection
SPP 2.0	Do nothing	Do nothing	Release BT connection
HID normal	Reconnect	Do nothing	Release BT connection

## 4.2 Bluetooth Service

### 4.2.1 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 for Bluetooth devices increases power consumption. 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.

### 4.2.2 Pairing

Before you are able to use Bluetooth, the KDC must be paired with the host device. This pairing 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.*

### 4.2.3 Discovering

KDC30 starts to search neighboring *Bluetooth* devices if this Discovering menu is executed. It would take about 30 seconds to finish search and list available neighboring *Bluetooth* devices. User may enter corresponding Bluetooth MAC address in KTSync Bluetooth menu instead of searching neighborhood *Bluetooth* devices.

### 4.2.4 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.*

#### 4.2.5 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. This option is available when KDC MFi Mode option is disabled.

## 5. Synchronization

When barcode data is collected, it must be uploaded to your application. KTSync®, which is bundled with the KDC, is a 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.

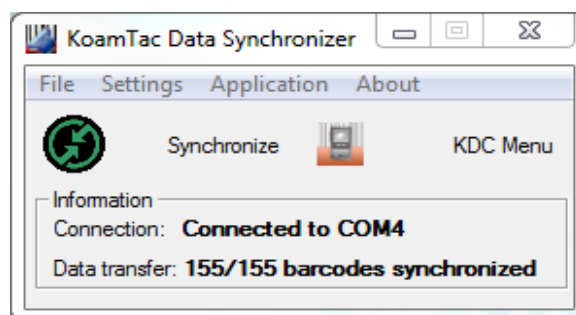
- Synchronization - Provides data upload functionality to your applications.
- Keyboard Emulator - Allows scanned data to be uploaded directly into your application as if the data were being entered manually with a keyboard.
- Application Generation - Allows users to create custom applications or download predefined applications such as Master-Slave, Pick/Bin, DB Lookup and Inventory.  
(Application Generation function is not available for KDC30. Only Keyboard wedging feature is available for KDC30.)

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.



KDC30

*Figure 13 - 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.*

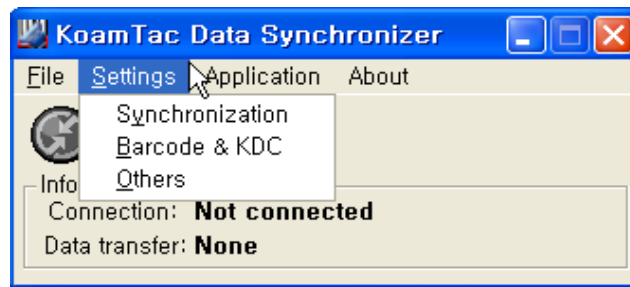
- **Bluetooth:** User can register MAC address to be directly connected by KDC30.
- **Configuration:** This option allows users to set different KDCs with same settings by exporting and importing settings from one KDC to the other.
- **Exit:** This option ends the KTSync program. You must re-run KTSync before you can synchronize data on the KDC.



Figure 14 – File Menu

### Settings Menu

- **Synchronization:** Select Synchronize options.
- **Barcode & KDC:** Select Barcode and KDC options.
- **Others:** Select Auto Connection and/or Synchronization Confirmation options.



Application Menu

Figure 15 – Setting 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.

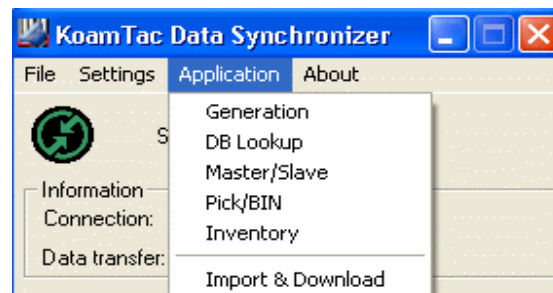


Figure 16 – Application Menu

#### About Menu - KTSync® - Version Information



Figure 17 – About Menu

## 5.2 File Menu

### 5.2.1 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 18 - 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*

### 5.2.2 Synchronize

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



5.2.3 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.

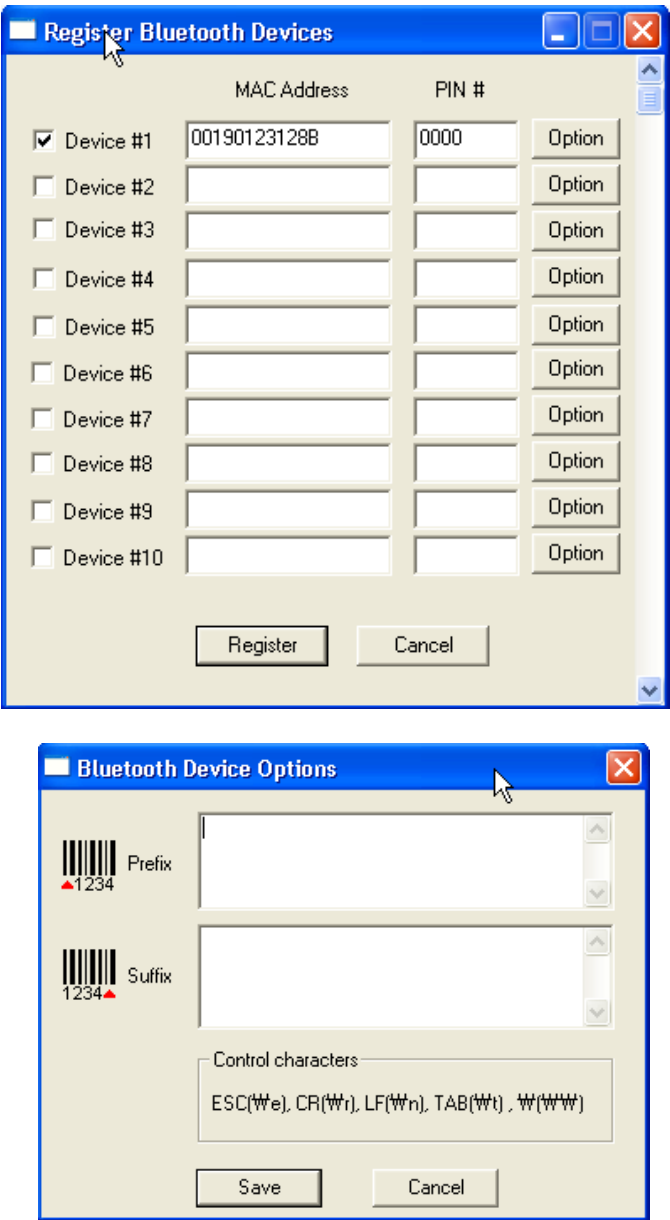
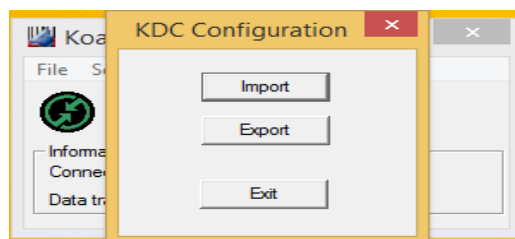


Figure 19 - Bluetooth Device Registry

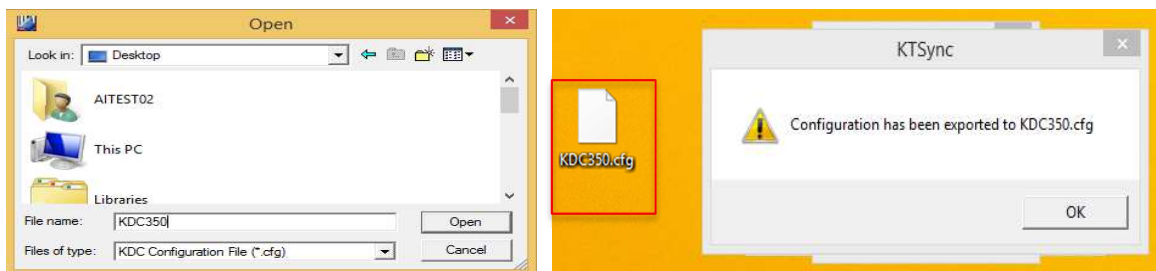
## 5.2.4 Configuration

This menu is useful for the users who need to configure different KDCs with same settings. In this menu, you can export settings from a KDC to your computer and import it to other KDCs.

When you select **Configuration** in File menu, you will need to choose either **Export** or **Import**. First, select **Export**. You name the settings file, press **Open**, and it is exported to your computer. Second, connect a different KDC to your computer and import the settings file to the KDC by selecting **Import** in the Configuration menu. Once configuration has been finished, KDC will restart.



- Export



- Import

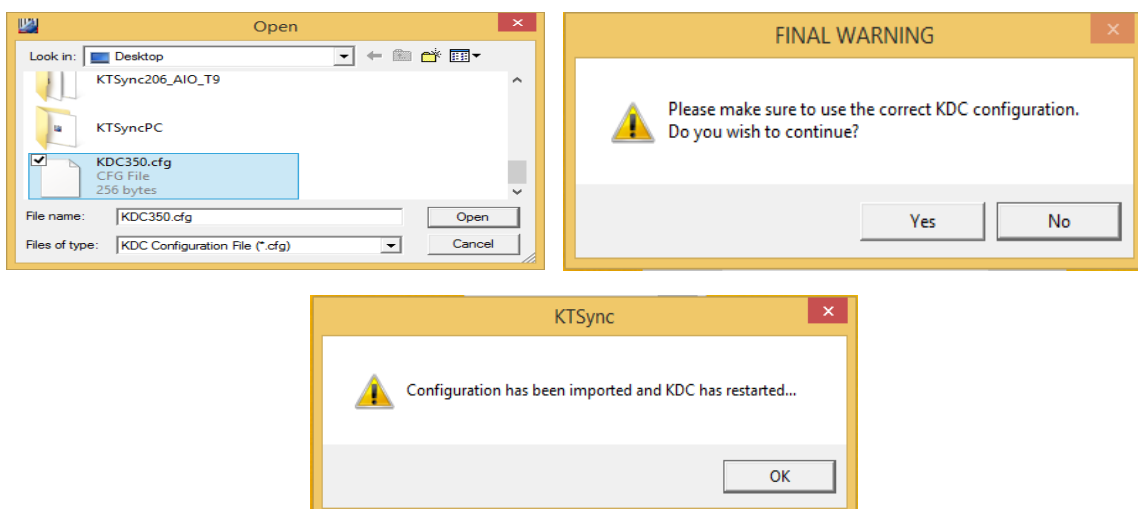


Figure 20 – Configuration

## 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+.

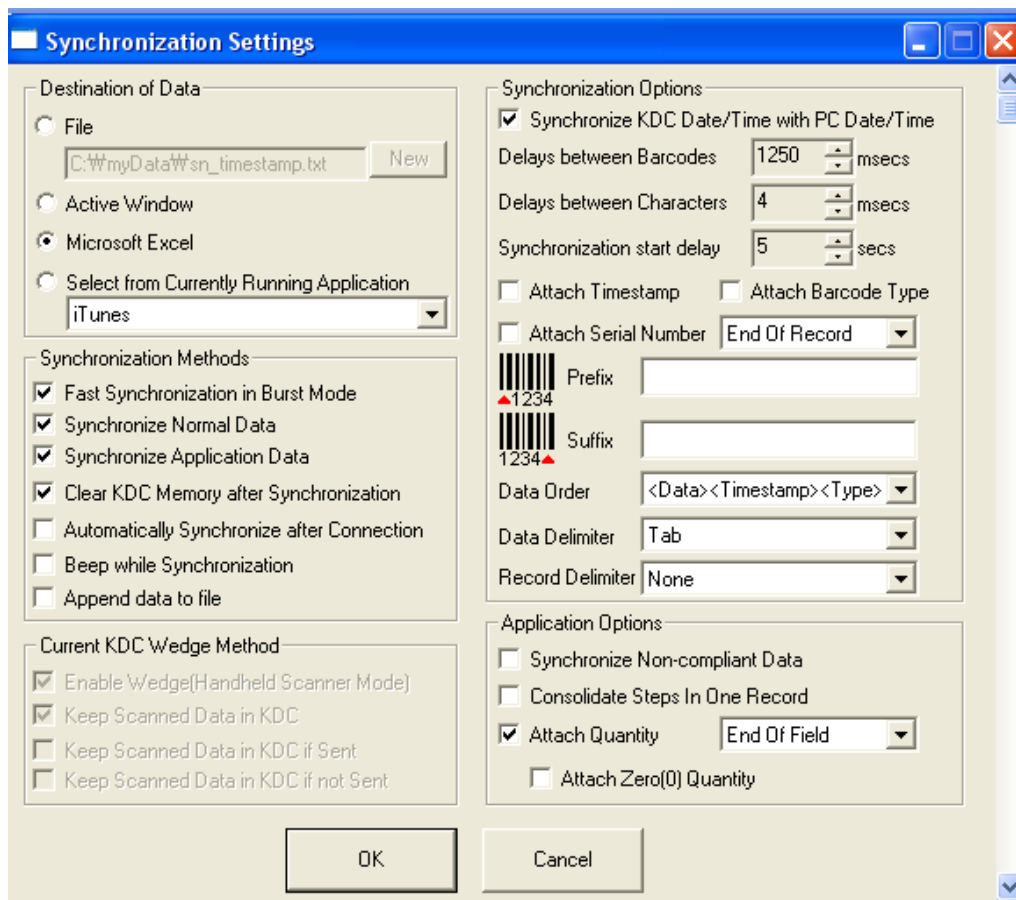


Figure 21 - KTSync® Synchronization Settings

### 5.3.1 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.

### 5.3.2 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 KDC30 can store a total of 10,240 barcodes or 60KB (86 version)/160KB (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.

### 5.3.3 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.

### 5.3.4 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>

### 5.3.5 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 [11. Appendix A – Barcode & Scan Options](#) for proper barcode settings for your application.

**Note:**

- You must configure barcode and scan options properly for optimal KDC performance

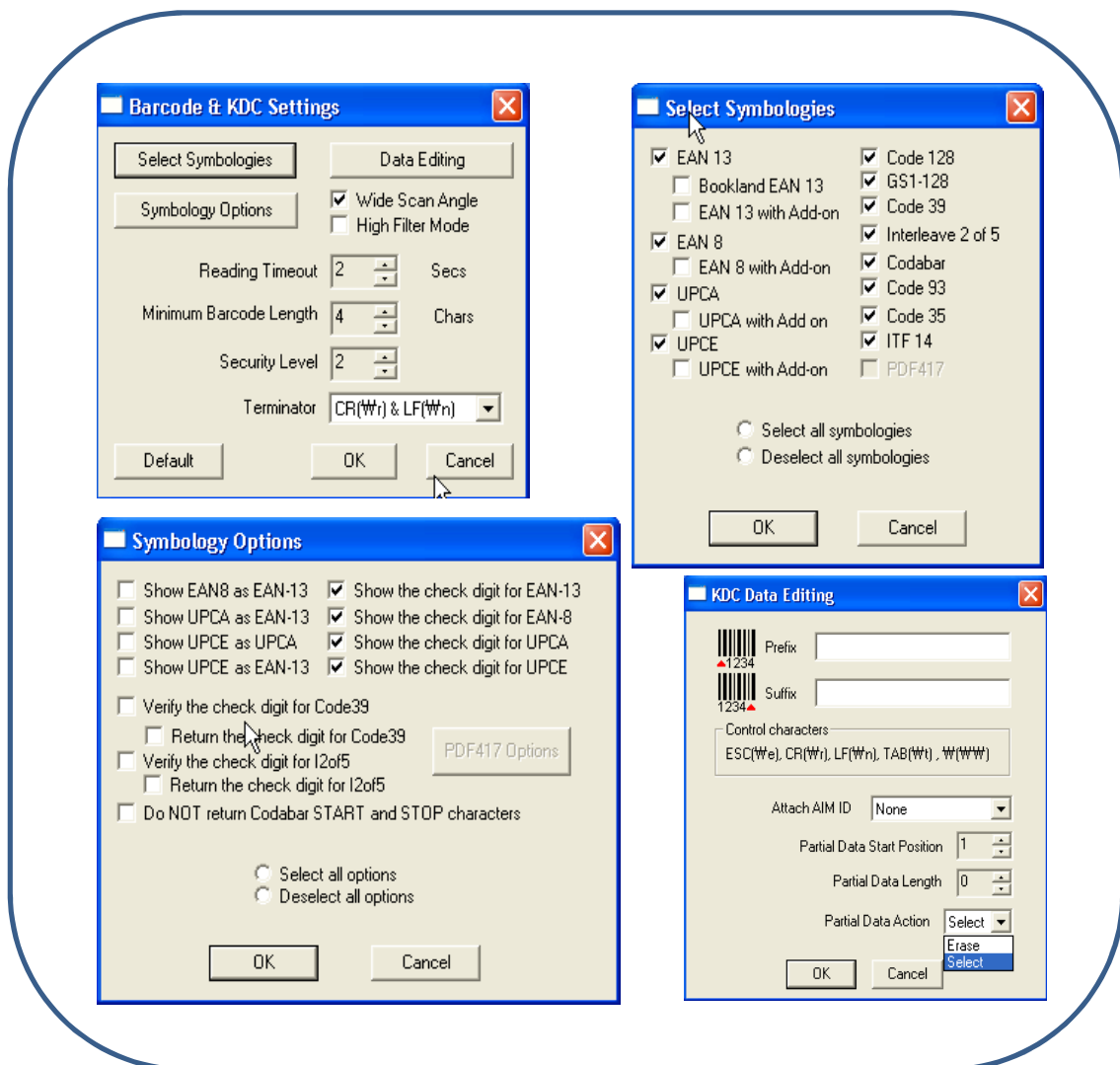


Figure 22 - Barcode & KDC Settings, Symbolgies, Data Editing and Scan Options

### 5.4.1 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.

### 5.4.2 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 Other Settings

Other options under the Settings menu allow 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.

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.

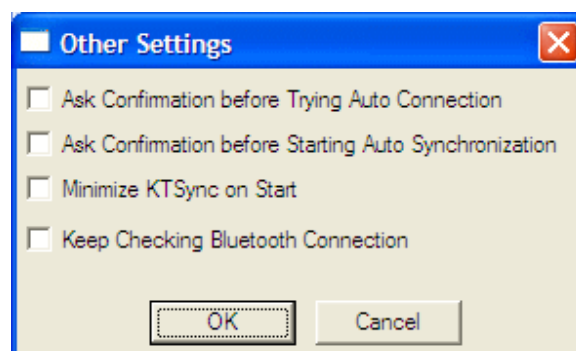


Figure 23 - KTSync® Confirmation Settings

## 5.6 KDC Menu in KTSync

After connecting KDC 20 to PC with a USB cable, run KTSync in your PC and you will see KDC Menu on the right side of KTSync window. Click KDC Menu, and you can configure your KDC30 in KDC Menu window as below.

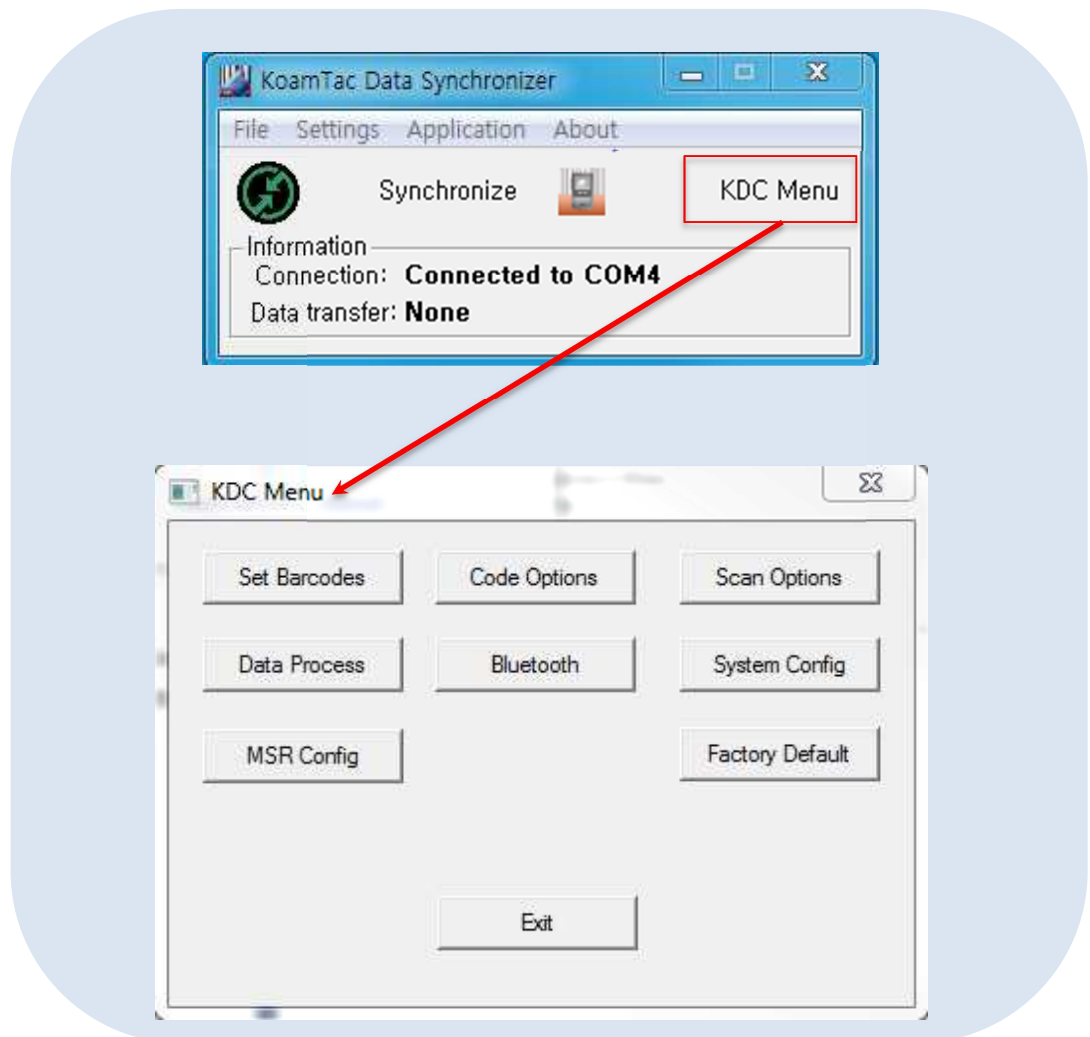


Figure 24 – KDC Menu in KTSync (KDC30)

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.*

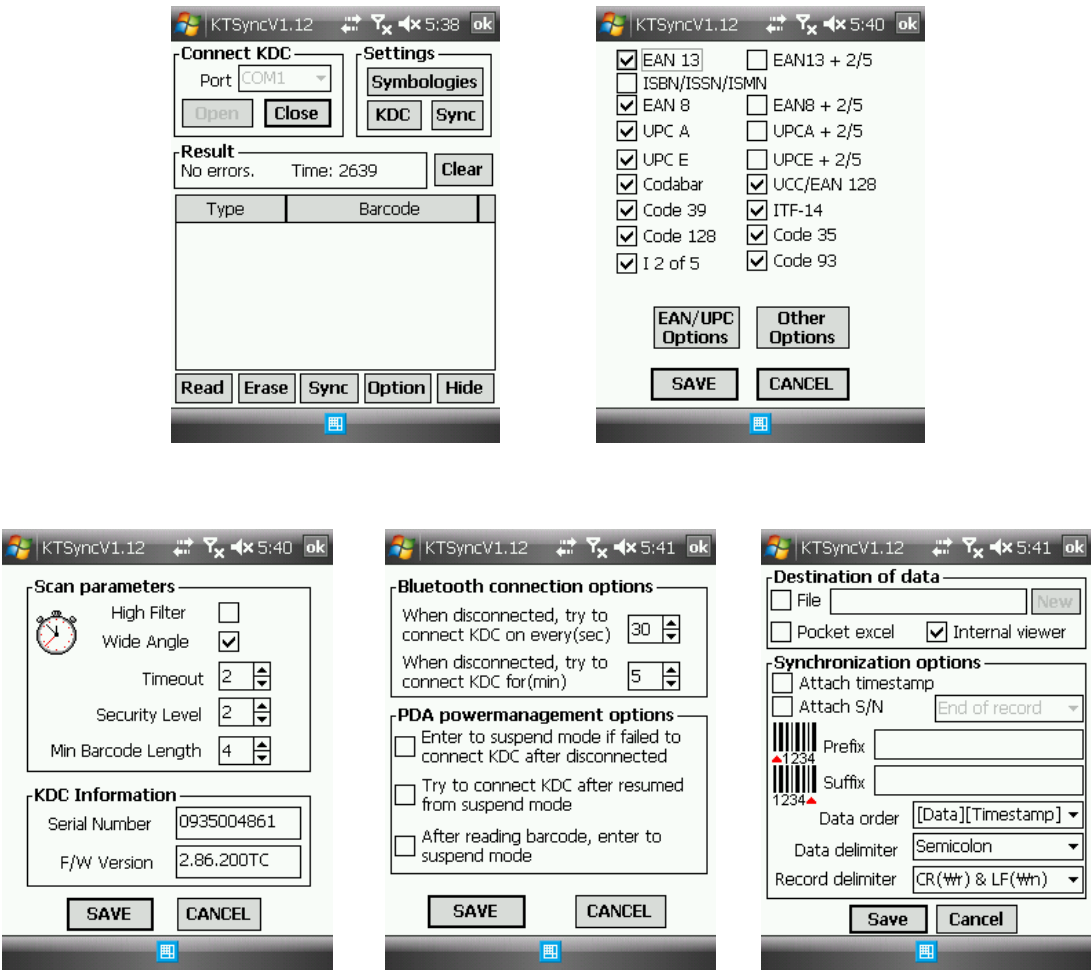


Figure 25 – Mobile pKTSync

## 5.8 Android aKTSync

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

**Note:**

- *aKTSync only supports Android devices with 2.1+ OS version and that are compatible with BluetoothChat application.*
- *KDC with Bluetooth Spec2.1+EDR doesn't prompt Pin code entry menu*

### 5.8.1 KDC and Android Pairing

1. Pairing

- Select SPP Bluetooth profile from KDC ConnectDevice submenu in BT Config menu.
- Search KDCxxx from Android and pairing two devices.
- KDCxxx PIN code is "0000" if SPP2.0 is selected.

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.

### 5.8.2 Launch KTSync

1. Download and install aKTSync from the Android Play Store.  
[http://www.androidzoom.com/android\\_applications/productivity/ktsync\\_luxv.html](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 a message *"connecting"*, and 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.

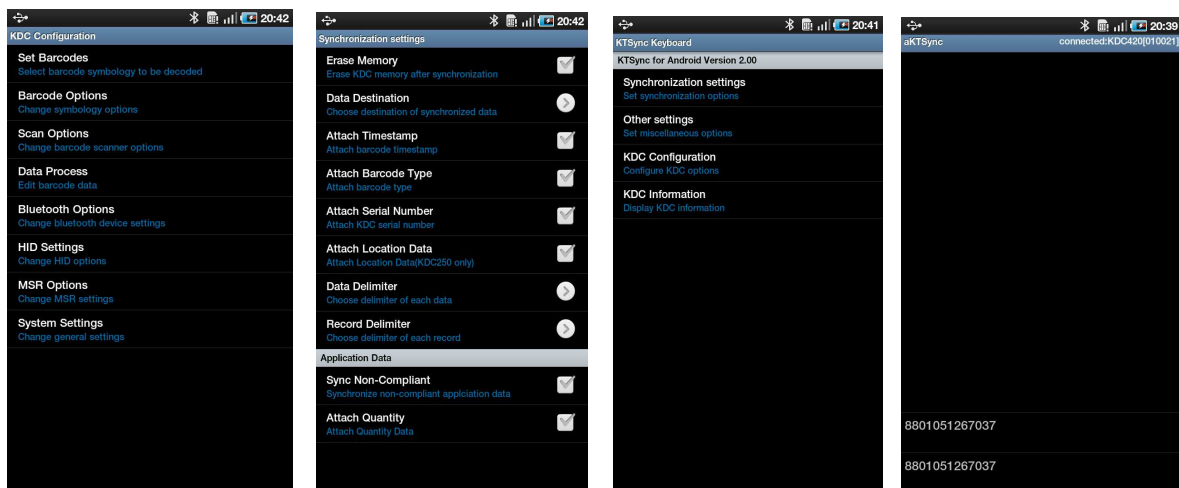


Figure 26 – Android aKTSync

### 5.8.3 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.

## 5.9 iPad/iPhone/iPod touch KTSync

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

1. The KDC supports SPP and iPhone Bluetooth profiles.
2. The iPhone/iPad/iPod touch should use iPhone Bluetooth profiles. iPhone is the default profile of KDCi models.
3. Download the KTSync program from the App Store.
4. Enable the iPhone/iPad/iPod touch Bluetooth power from the **Setting > General > Bluetooth** menu.

### Note:

- Users have to disable MFi option in **System > MFi** menu to use HID Bluetooth profiles.
- Users have to RESET the iPhone/iPad/iPod touch to change "HID to iPhone mode" or "vice versa" after removing previous KDC connection.
- KDC with Bluetooth Spec2.1+EDR doesn't prompt Pin code entry menu.

### 5.9.1 KDC30i connection using iPhone mode

1. Download and install iKTSync from the Apple App Store.  
<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 **Bluetooth** menu using KDC Down button
4. Press the front middle scan button
5. Scroll down to **Discovering** and press the front middle scan button
  - a. "Discovering Started ..." message will be displayed on KDC screen
  - b. Discovering will take about 30 seconds.
6. 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. The message "Connecting to iPhone/iPod touch device name" will be displayed
  - d. iPhone/iPad/iPod touch will ask for the PIN number.
  - f. Please enter "0000" and hit "connect" icon
  - g. "iPhone Connected" message will be displayed
7. Launch KTSync and configure Settings

### 5.9.2 iKTSync Settings

iKTSync provides following Settings menu.

- Synchronization - User can configure Synchronization options such as destination of data, data formation and delimiters.

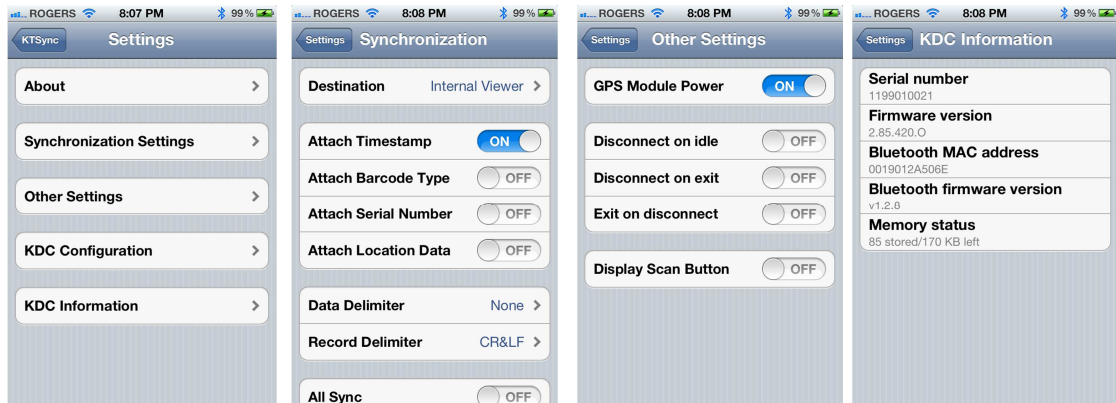


Figure 27 – iPad/iPhone/iPod touch KTSync

### 5.9.3 How to connect and reconnect iPhone mode using UP keys

1. Users needs to select the option to use this feature in the BT Config > BT Toggle
2. Press the UP button to connect or reconnect to the iPhone/iPad/iPod touch

## 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
  - E. The Blackberry will display "*Pairing with KDC*"... "*complete*."
  - F. Close the Blackberry Bluetooth manager
5. Go to Downloads folder and execute KTSync
6. User can configure KDC options in KDC settings and Symbologies Settings menu
7. Go to KTSync Synchronization Settings and select Destination. To send collected barcode data as an email attachment, choose **Email Attachment** as destination and enter in the email address, subject and body message that you want to send. You can enter multiple email addresses using the semicolon (;) separator.
8. 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 wherever the cursor is flashing.





Figure 28 – Blackberry bKTSync

## 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.

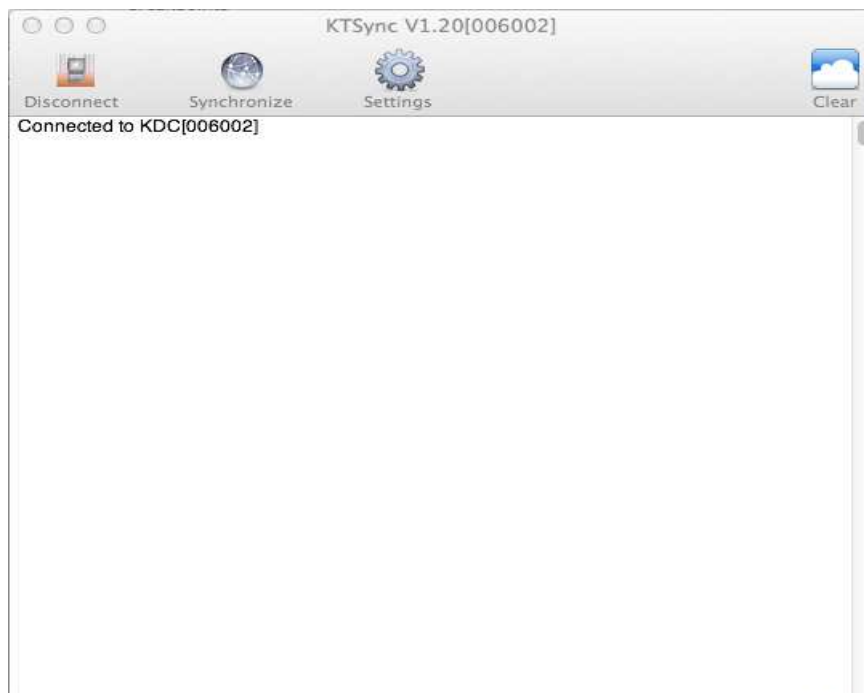
**Note:**

- *KTSync for Mac OS X version supports both Bluetooth SPP profile and USB connection. User should pair KDC with Mac before using the KTSync program via Bluetooth connection.*
- *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 and later versions.*

KTSync Mac OS X version supports the following features:

- ✓ Keyboard wedge function to a file, internal viewer, active window and user application.
- ✓ Synchronization to a file, internal viewer, active window and user application.
- ✓ Automatic connection and disconnection on USB port.

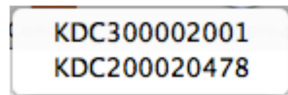
User will see the following initial KTSync screen upon launching the program. KTSync will connect automatically if KDC is plugged on USB port or KDC is paired.



### 5.11.1 Connect Button



User can connect the Mac with the KDC that is paired or plugged into the USB port 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.



### 5.11.2 Disconnect Button



KTSync changes Connect button to Disconnect button once the KDC is connected. User can disconnect the KDC manually by selecting connected KDC on the following screen.

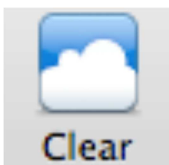


### 5.11.3 Synchronize Button



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 4 selectable destinations: File, Internal viewer, Active window and User application.

### 5.11.4 Clear Button

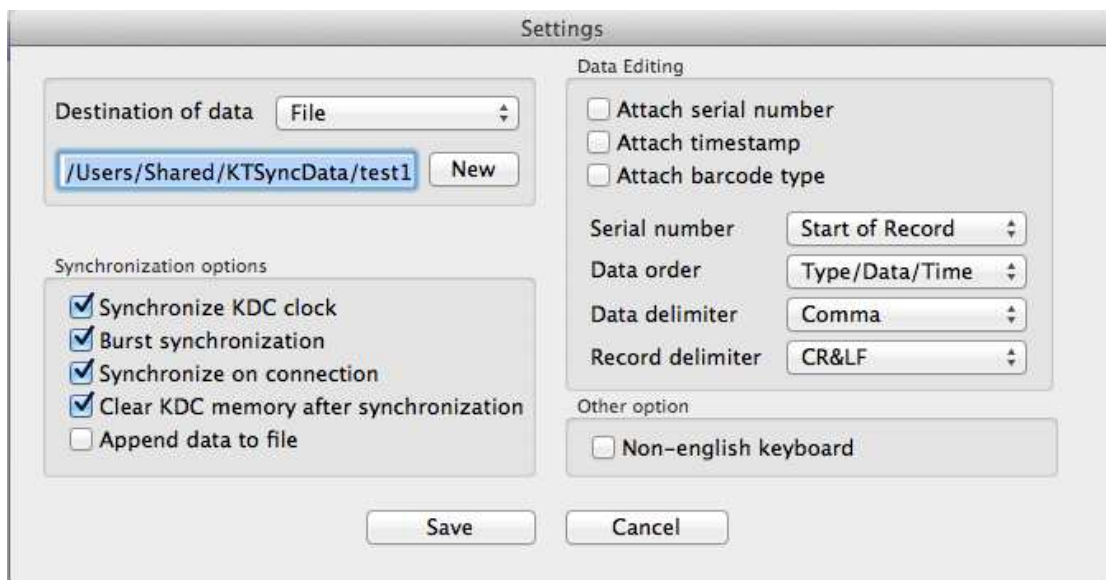


User may press this button to clear the KTSync internal viewer.

### 5.11.5 Settings Button

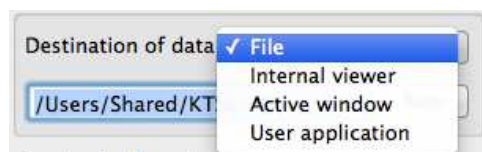


User can configure synchronization options on the following screen by pressing the Settings button.



#### Destination of data

The KTSync program wedges or downloads barcode data to one of the following four destinations:



- File: The KTSync makes file name based on 3.11 if file name is specified as a "sn\_timestamp.txt". The default directory is /Users/Shared/KTSyncData directory. User can define other directory or other filename by clicking "New" button. The maximum file path length is 128 characters.
- Internal viewer: The KTSync displays barcode data in KTSync internal text viewer.
- 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.

## Synchronization Options

- Synchronize KDC clock  
KTSync will set the KDC's date and time with Mac PC date and time when the KDC is connected to Mac if this option is enabled.
- Burst synchronization  
KTSync will synchronize barcode data from KDC in the burst mode if this option is enabled. Otherwise, KTSync will synchronize barcode data one by one. This option is enabled by default and can't be disabled.
- Synchronization on connection  
If this option is enabled, KTSync will automatically synchronize barcode data from the KDC when the KDC is connected.
- Clear KDC memory after synchronization  
KTSync clears barcode data stored in the KDC's memory once synchronization has finished if this option is enabled.
- Append data to file  
KTSync appends synchronized data to existing file specified on destination. If file doesn't exist then KTSync creates a new file.

## Data Edition

- Attach serial number  
The KTSync would add a KDC serial number to barcode data if this option is enabled. This option is enabled by default and can't be disabled.
- Attach time stamp  
The KTSync would add timestamp to barcode data if this option is enabled. This option is enabled by default and can't be disabled.
- Attached barcode type  
The KTSync would add barcode type to barcode data if this option is enabled. This option is enabled by default and can't be disabled.
- Serial number  
When **Attach serial number** is enabled, this option determines when to attach serial number. "Start of record" means to attach at the front of record and "End of record" means to attach to the end of record.
- Data order  
This option specifies the order of data (Barcode Type, Barcode Data and Timestamp) in the record.

- **Data delimiter**  
This option is used to select a character to be added between barcode data, serial number and timestamp and/or barcode type. User can select one of the following: **None**, **Tab**, **Space**, **Comma** and **Semicolon** as the data delimiter. The **Comma** is selected by default and can't be changed.
- **Record delimiter**  
This option is used to select a character to be added at the end of the barcode record. User can select one of **None**, **CR**, **LF**, **TAB**, and **CR&LF** as the record delimiter. The **CR&LF** is selected by default and can't be changed.

### Other Options

- **Non-English keyboard**  
This option is used when the barcode data has non-English characters and a non-English keyboard.

## 6.TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
KDC not working	Dead battery	<ul style="list-style-type: none"> <li>● Charge battery by connecting KDC to your PC using the included cable</li> </ul>
	Hardware failure	<ul style="list-style-type: none"> <li>● Contact distributor for technical support</li> </ul>
KDC not charging	Bad battery	<ul style="list-style-type: none"> <li>● Replace battery – Contact Local Distributor</li> </ul>
	Poor USB port	<ul style="list-style-type: none"> <li>● USB port doesn't supply proper current to KDC</li> <li>- Charge KDC using a different USB port on your PC</li> </ul>
Failed reading	Damaged barcode	<ul style="list-style-type: none"> <li>● Scan a different barcode</li> </ul>
	Out of scan range	<ul style="list-style-type: none"> <li>● Move the scanner closer to barcode</li> <li>● Move scanner farther from the barcode</li> </ul>
	Incorrect angle	<ul style="list-style-type: none"> <li>● Change the angle of scanner to barcode</li> </ul>
	Symbology not supported	<ul style="list-style-type: none"> <li>● Contact KoamTac - <a href="http://www.koamtac.com">www.koamtac.com</a> for possibility of custom symbology support</li> </ul>
	Scan options	<ul style="list-style-type: none"> <li>● Check scan option settings</li> </ul>
	Dirty scan window	<ul style="list-style-type: none"> <li>● Clean scan window</li> </ul>
	Damaged scan window	<ul style="list-style-type: none"> <li>● Replace scan window</li> </ul>
KDC reads wrong barcode	Dirty scan window	<ul style="list-style-type: none"> <li>● Clean scan window</li> </ul>
	Damaged scan window	<ul style="list-style-type: none"> <li>● Replace scan window</li> </ul>
	Poor quality barcode	<ul style="list-style-type: none"> <li>● Select only necessary barcodes</li> <li>● Increase minimum barcode length</li> <li>● Increase security level</li> </ul>
Can't communicate with PC, PDA, or smartphone	USB cable is not connected properly	<ul style="list-style-type: none"> <li>● Check cable connection between KDC and host device</li> </ul>
	Software is not working properly	<ul style="list-style-type: none"> <li>● Reload the software</li> </ul>
	COM configuration	<ul style="list-style-type: none"> <li>● Check COM port configurations</li> </ul>
LED blinks yellow	Low battery power	<ul style="list-style-type: none"> <li>● Charge the battery by connecting KDC to PC.</li> <li>● KDC will lose collected data if the battery is empty.</li> </ul>
Buffer Full Message	Full Memory	<ul style="list-style-type: none"> <li>● Clear the Memory using Synchronization program</li> </ul>
Empty Battery Message	Empty battery	<ul style="list-style-type: none"> <li>● Connect USB immediately.</li> <li>● Synchronize the collected data and charge KDC</li> </ul>
Abnormal KTSync Operation on DELL P	Quickset Utility	<ul style="list-style-type: none"> <li>● Disable Quickset Utility before using KTSync.</li> <li>● Dell Quickset utility interrupts normal KTSync operation</li> </ul>
	WSED Utility	<ul style="list-style-type: none"> <li>● Disable WSED Wireless enable/disable utility</li> <li>● delete the folder C:\Program Files\WSED, which contains a file WSED.exe, with the same icon as in the taskbar</li> <li>● Delete the registry entry KEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Run\WSED</li> </ul>

Table 4 - Troubleshooting Techniques

## 7. WARRANTY

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### 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.



## 8.Contact Information

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### CORPORATE HEADQUARTERS

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**For more information, visit our website - [www.koamtac.com](http://www.koamtac.com)**