

REVISION

**2.83**

**KoamTac**  
*A New Wave in Auto ID*

# User Manual KDC300

July, 2009

## TABLE OF CONTENTS

<b>LISTING OF FIGURES.....</b>	<b>4</b>
<b>LISTING OF TABLES .....</b>	<b>4</b>
<b>1. INTRODUCTION .....</b>	<b>6</b>
<b>2. INSTALLATION &amp; OPERATION .....</b>	<b>7</b>
2.1 KDC Package .....	7
2.2 KDC Characteristics .....	8
2.3 Installation.....	10
Verify System Requirements.....	10
Affix Neck Strap to KDC .....	10
Copy CD to PC .....	10
Connect KDC to PC.....	11
Charge KDC Battery.....	11
Configure KDC .....	12
2.4 Basic Operation .....	13
Reading Barcodes .....	13
Upload Barcode Data to PC .....	13
2.5 KDC Menus .....	14
KDC Mode Menu .....	16
View Data Menu .....	16
Set Barcodes Menu.....	16
Code Options Menu.....	16
Scan Options Menu .....	16
Data Process Menu.....	17
Bluetooth Menu - KDC200 / KDC200P / KDC300.....	18
System Menu.....	19
2.6 LED Status.....	20
2.7 Empty Battery .....	20
2.8 Buffer Full .....	20
2.9 Reset Feature .....	21
2.10 Replace Battery .....	22
<b>3. BLUETOOTH - KDC200 / KDC200P / KDC300 .....</b>	<b>23</b>
3.1 Power .....	23
3.2 Pairing .....	23
3.2 Auto Connect.....	24
3.3 Auto Power On .....	24
3.4 Auto Power Off .....	24
3.5 Beep Warning.....	25
3.6 PWR OFF Time.....	25
<b>4. SYNCHRONIZATION.....</b>	<b>26</b>
4.1 Connect to KDC.....	27
4.2 Synchronization Settings .....	28
Destination of Data .....	28
Synchronization Methods .....	29
KDC Wedge Method.....	30

Synchronization Options.....	30
4.3 Barcode & KDC Settings .....	31
4.4 Others .....	33
<b>5. APPLICATION GENERATION TOOL .....</b>	<b>34</b>
5.1 Launching Application Generation Tool.....	34
5.2 Application Settings .....	35
5.3 Predefined Application.....	36
5.4 Custom Applications .....	38
Generate Application .....	38
Data Filter Settings .....	39
Application Download and Execution .....	41
<b>6. TROUBLESHOOTING .....</b>	<b>42</b>
<b>7. WARRANTY .....</b>	<b>43</b>
<b>8. CONTACT INFORMATION.....</b>	<b>44</b>
<b>APPENDIX A - BARCODE &amp; SCAN OPTIONS .....</b>	<b>45</b>
A.1 Symbologies .....	45
<b>APPENDIX B – FAQ .....</b>	<b>46</b>
B.1 Symbology.....	46
B.2 Host Interface .....	47
B.3 Battery .....	47
B.4 Memory .....	47
B.5 Programming.....	48
<b>APPENDIX C - SPECIAL BARCODES .....</b>	<b>49</b>
C.1 Set Symbologies .....	49
C.2 Barcode Options .....	49
C.3 Delete Last Scanned Barcode .....	49
C.4 Scan Options.....	50
C.5 Scan Timeout.....	50
C.6 Minimum Barcode Length .....	52
C.7 Data Process - Wedge/Store .....	56
C.8 Data Process - Data Format - Handshake.....	57
C.9 Data Process - Termination Character .....	58
C.10 Bluetooth .....	59
C.11 Bluetooth PWR Off Time.....	61
C.12 System .....	64
C.13 Sleep Timeout.....	66
C.14 Function .....	68
C.15 Number .....	69
C.16 Lower Case Alphabet.....	70
C.17 Upper Case Alphabet.....	73
C.18 Control Character.....	76
C.20 Symbol Character .....	77
<b>INDEX .....</b>	<b>81</b>

## LISTING OF FIGURES

Figure 1 - Contents of KDC Package	7
Figure 2 - Characteristics of KDC100	8
Figure 3 - Characteristics of KDC200 - KDC200P - KDC300	9
Figure 4 - Location of Scroll Buttons	12
Figure 5 - KDC Display	13
Figure 6 - Reset Function for KDC200 - KDC200P - KDC300	21
Figure 7 - Reset Function for KDC100	21
Figure 8 - Replacing KDC Battery	22
Figure 9 - KTSync® Synchronizer Menu	26
Figure 10 - COM Port Selection for KDC	27
Figure 11 - KTSync® Synchronization Settings	28
Figure 12 - Barcode & KDC Settings, Symbologies, and Scan Options	32
Figure 13 - KTSync® Confirmation Settings	33
Figure 14 - KTSync® Application Menu	34
Figure 15 – Application Settings Menu	35
Figure 16 - Predefined Application Settings	36
Figure 17 – Predefined Application Flow Chart	37
Figure 18 – Data Filter Settings	39

## LISTING OF TABLES

Table 1 - Features of KDC	6
Table 2 – Approximate Time to Charge KDC Battery	11
Table 3 – KDC Menu Options	15
Table 4 – Factory Default Settings for KDC	19
Table 5 - Explanation of LEDs	20
Table 6 - Troubleshooting Techniques	42
Table 7 - Symbologies Supported by KDC	45
Table 8 – Listing of Symbologies Supported by KDC	46

# COPYRIGHT, LICENSE, and WARNING PAGE

Copyright© 2009 by KoamTac, Inc. All rights reserved.

No part of this publication may be reproduced or used in any form, or by any electrical or mechanical means, without permission in writing from KoamTac, Inc. The material in this manual is subject to change without notices. KoamTac reserves the right to make changes to any product to improve reliability, function, or design. KoamTac doesn't assume any product liability arising out of, or in connection with, the application or use of any product, circuit, or application described herein. Follow all warnings and instructions marked on manual and units. Use only the power source specified in this manual or marked on the units.

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



## CAUTION:

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

## WARNING:

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

## INFORMATION TO USER:

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

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

## WARNING:

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

# 1. INTRODUCTION

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

FEATURES	KDC100	KDC200	KDC200P	KDC300
USB CONNECTIONS	2	1	1	1
RECHARGEABLE BATTERY	YES	YES	YES	YES
SCAN ENGINE	Laser	Laser	Laser	Imager
AUTOMATIC DATA UPLOAD	YES	YES	YES	YES
STORES 10,000+ BARCODES	YES	YES	YES	YES
KTSYNC® SOFTWARE	YES	YES	YES	YES
SDK FOR DEVELOPERS	YES	YES	YES	YES
SUPPORTS MICROSOFT® XP, VISTA, MOBILE 5.0+	YES	YES	YES	YES
BLUETOOTH ENABLED	NO	YES	YES	YES

Table 1 - Features of KDC

## 2. INSTALLATION & OPERATION

### 2.1 KDC Package

---

The standard KDC package contains:

1. One KDC barcode data collector
2. One USB cable
3. One neck strap
4. One KDC Laser Barcode Data Collector CD with
  - ✓ KTSync® for XP, Vista, and Mobile 5.0+
  - ✓ KDC device driver
  - ✓ User Manual

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



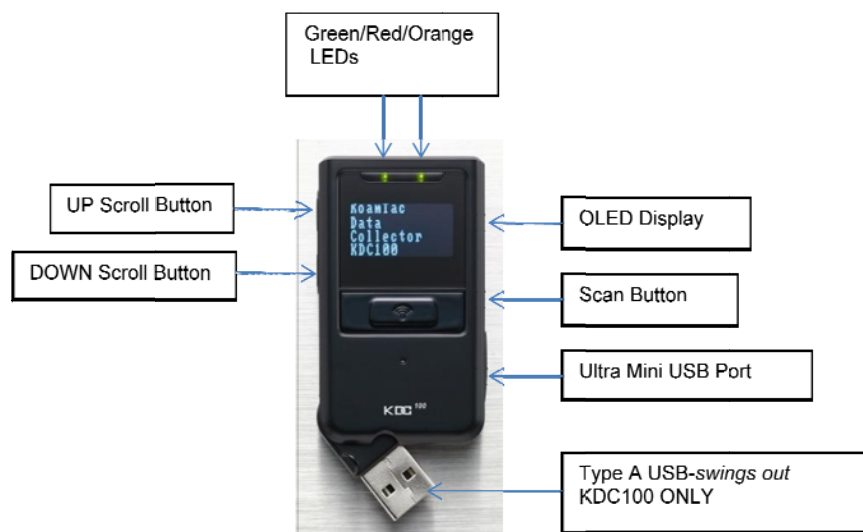
Figure 1 - Contents of KDC Package

## 2.2 KDC Characteristics

---

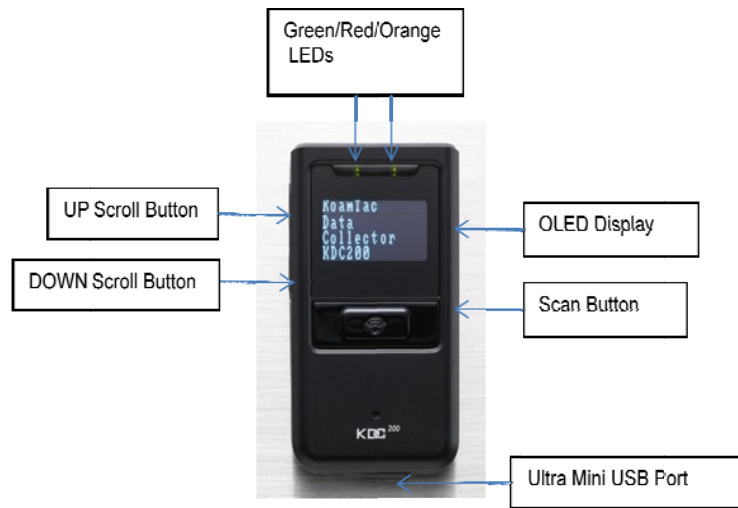
Before you use your KDC, please become familiar with its physical characteristics. For assistance, refer to Figure 2 and Figure 3 which shows the placement of buttons, display, LEDs, and ports on your KDC. All KDC models are similar except for the KDC100 which comes with an additional USB connector.

### *KDC100 Barcode Reader and Data Collector*

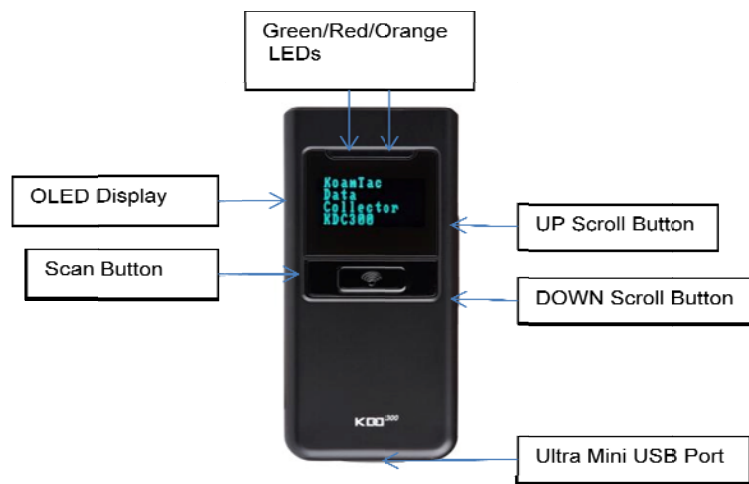


*Figure 2 - Characteristics of KDC100*

*KDC200 - KDC200P - KDC300  
Barcode Reader and Data Collector*



*(KDC200 and KDC200P)*



*(KDC300)*

*Figure 3 - Characteristics of KDC200 - KDC200P - KDC300*

## 2.3 Installation

---

### *Verify System Requirements*

Prior to connecting the KDC to your computer, please verify that your system meets the minimum system requirements.

- ✓ Microsoft Windows XP or Vista
- ✓ Accessible USB port or serial port for connecting KDC to your computer

### *Affix Neck Strap to KDC*

We **strongly** recommend attaching the neck strap to the KDC. Wear the KDC securely around your neck to prevent potential damage to the device if dropped. DO NOT swing the product with the neck strap. Contact with another object may damage the KDC causing it to malfunction. To install the neck strap,

1. Fit small thin cord of the strap around the pillar of the KDC.
2. Loop the thick cord of the strap through the thin loop.
3. Pull the strap tight.

### *Copy CD to PC*

Please create a directory in PC and copy CD files.

- Insert the CD into your PC's disk drive.
- Create a directory in PC and copy XP.Vista and Mobile5.0\_6.0 folders from CD.
- XP.Vista directory contains KTSync<sup>®</sup> program, User Manual, and KTReader.inf files
- Mobile5.0\_6.0 contains KTSync<sup>®</sup> programs for Microsoft<sup>®</sup> Windows Pocket PC 2003, Mobile 5.0, Mobile 6.0 Standard, and Mobile6.0 Professional.

## Connect KDC to PC

The KDC is equipped with one ultra mini USB port. **If you have the KDC100, it has two ports, Ultra Mini and standard Type A which swings out. See Figure 2 for more details.** The USB port is used to upload barcode data and to charge the KDC battery. Prior to using the KDC, you must install the KDC device driver on your PC. Using the USB cable included with the KDC, follow the directions below.

1. Connect the cable's ultra mini USB connector to the KDC.
2. Connect the cable's Type A USB connector to your PC.
3. Wait until your computer beeps and/or displays the message *New Hardware Found*.
4. Follow the prompts to search for the KDC device driver.
5. Select *KTReader.inf* file in XP.Vista directory and continue with the hardware installation procedure.
6. *KTReader.inf* is the device driver for 32bit Microsoft® Windows XP and Vista. 64bit device driver can be downloaded from KoamTac home page.

## Charge KDC Battery

After installing the KDC, you must charge its battery. To charge the battery, follow these directions.

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

<b><i>KDC100</i></b>	<b><i>KDC200</i></b>	<b><i>KDC200P</i></b>	<b><i>KDC300</i></b>
<i>2 Hours</i>	<i>2 Hours</i>	<i>2 Hours</i>	<i>4 Hours</i>

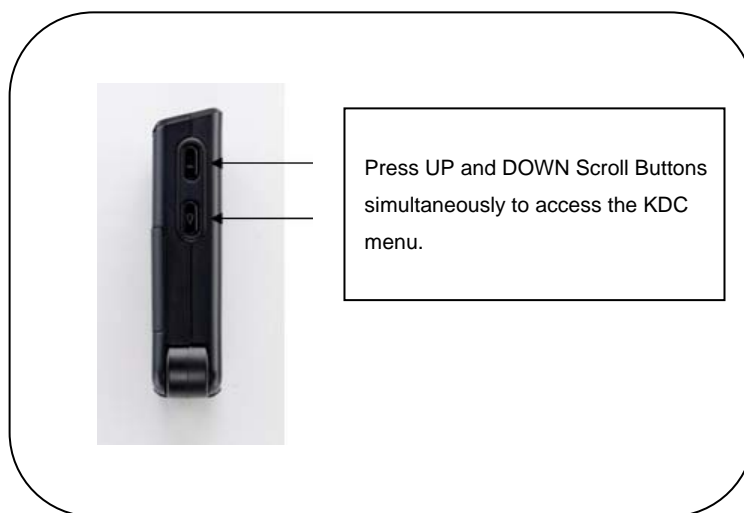
*Table 2 – Approximate Time to Charge KDC Battery*

## Configure KDC

The KDC is designed to meet the data collection requirements of many different industries in a variety of dynamic situations. To perform well in these diverse environments, the KDC is designed to be configured easily and quickly. For the KDC 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. The KDC can be configured in three different methods which are explained in Chapter 2.5 KDC Menu, Chapter 4. Synchronization, and Appendix C – Special Barcodes. Please refer to Honeywell 5x80 user's manual or Honeywell 2D handheld scanner user manual for KDC300 configuration special barcodes.

### CONFIGURATION METHODS FOR THE KDC

- KDC Menu
- KTSync® Software
- Special Barcodes



*Figure 4 - Location of Scroll Buttons*

## 2.4 Basic Operation

### *Reading Barcodes*

Reading a barcode is simply. Point the KDC at a barcode and press the scan button. Be sure to point the scan engine at the barcode, not at your face, making 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 display along with scan time and battery level. *Depending on the configuration of your KDC, other information may also display.*

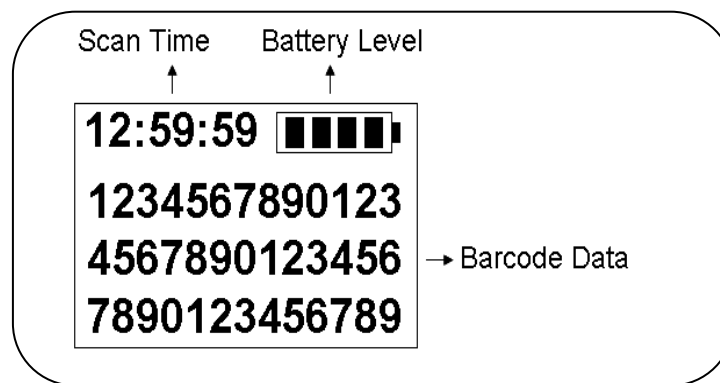


Figure 5 - KDC Display

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

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

### *Upload Barcode Data to PC*

Use the KTSync® synchronization program to upload barcode data from the KDC to your PC. Please refer to Chapter 4. Synchronization for details.

## 2.5 KDC Menus

Top Menu	Sub Menu / Option	Option / Note
<b>KDC Mode</b>	Normal	Default
	Application	Custom Application
<b>View Data</b>	View/Delete	View/Delete Data
<b>Set Barcodes</b>	<b>1D</b>	
	Codabar	Enable/Disable
	Code 11	Enable/Disable
	Code 39	Enable/Disable
	Code93	Enable/Disable
	Code128	Enable/Disable
	EAN8	Enable/Disable
	EAN13	Enable/Disable
	EANUCC	Enable/Disable
	I2of5	Enable/Disable
	Matrix2of5	Enable/Disable
	MSI	Enable/Disable
	Plessey	Enable/Disable
	PosiCode	Enable/Disable
	RSS-14	Enable/Disable
	RSSLimit	Enable/Disable
	RSSExpand	Enable/Disable
	S2of5ID	Enable/Disable
	S2of5IA	Enable/Disable
	TLC39	Enable/Disable
	Telepen	Enable/Disable
	Trioptic	Enable/Disable
	UPCA	Enable/Disable
	UPCE0	Enable/Disable
	UPCE1	Enable/Disable
	<b>2D</b>	
	AztecCode	Enable/Disable
	AztecRunes	Enable/Disable
	CodablockF	Enable/Disable
	Code 16K	Enable/Disable
	Code49	Enable/Disable
	DataMatrix	Enable/Disable
	MaxiCode	Enable/Disable
	MicroPDF	Enable/Disable
	PDF417	Enable/Disable
	QRCode	Enable/Disable
	HanXin Code	Enable/Disable
	<b>Postal Codes</b>	
	Postnet	Enable/Disable
	PlanetCode	Enable/Disable
	UKPost	Enable/Disable
	CanadaPost	Enable/Disable
	KixPost	Enable/Disable
	AusPost	Enable/Disable
	JapanPost	Enable/Disable
ChinaPost	Enable/Disable	
KoreaPost	Enable/Disable	
<b>OCR Fonts</b>		
OCR OFF	Enable/Disable	
OCR A	Enable/Disable	
OCR B	Enable/Disable	
OCR US Currency	Enable/Disable	
OCR MICRE13B	Enable/Disable	
OCR Semi Font	Enable/Disable	

Top Menu	Sub Menu / Option	Option / Note
<b>Code Options</b>	<i>Codabar</i>	
	TxStartStop	Enable/Disable
	Check Digit	<ul style="list-style-type: none"> <li>DoNotVerify</li> <li>VerifyDoNotTx</li> <li>VerifyDoTx</li> </ul>
	Concatenate	<ul style="list-style-type: none"> <li>Disabled</li> <li>Enabled</li> <li>Required</li> </ul>
	<i>Code39</i>	
	Tx StartStop	Enable/Disable
	Check Digit	<ul style="list-style-type: none"> <li>DoNotVerify</li> <li>VerifyDoNotTx</li> <li>VerifyDoTx</li> </ul>
	Append	Enable/Disable
	FullASCII	Enable/Disable
	<i>I2of5</i>	
	Check Digit	<ul style="list-style-type: none"> <li>DoNotVerify</li> <li>VerifyDoNotTx</li> <li>VerifyDoTx</li> </ul>
	<i>Code11</i>	
	Check Digit	<ul style="list-style-type: none"> <li>1 digit</li> <li>2 digits</li> </ul>
	<i>Code128</i>	
	Concatenate	Enable/Disable
	<i>Telepen</i>	
	Output	<ul style="list-style-type: none"> <li>AIM</li> <li>Original</li> </ul>
	<i>UPCA</i>	
	VerifyChkDgt	Enable/Disable
	NumberSys	Enable/Disable
	2DgtAddenda	Enable/Disable
	5DgtAddenda	Enable/Disable
	Req. Addenda	Enable/Disable
	Sep. Addenda	Enable/Disable
	Coupon Code	Enable/Disable
	<i>UPCE</i>	
	Expand	Enable/Disable
	Req. Addenda	Enable/Disable
	Sep. Addenda	Enable/Disable
	Check Digit	Enable/Disable
	NumberSys	Enable/Disable
	2DgtAddenda	Enable/Disable
	5DgtAddenda	Enable/Disable
	<i>EAN-13</i>	
	VerifyChkDgt	Enable/Disable
	2DgtAddenda	Enable/Disable
	5DgtAddenda	Enable/Disable
	Req. Addenda	Enable/Disable
	Sep. Addenda	Enable/Disable
	ISBN Trans.	Enable/Disable
	<i>EAN-8</i>	
	VerifyChkDgt	Enable/Disable
	2DgtAddenda	Enable/Disable
	5DgtAddenda	Enable/Disable
	Req. Addenda	Enable/Disable
	Sep. Addenda	Enable/Disable
	<i>MSI</i>	
	Tx CheckChar	Enable/Disable
	<i>PosiCode</i>	
	A and B	Enable/Disable
A&B Limited A	Enable/Disable	
A&B Limited B	Enable/Disable	
<i>EAN-UCC</i>		
UPCEAN VER.	Enable/Disable	
Emulation	<ul style="list-style-type: none"> <li>RSS Emulate</li> <li>128 Emulate</li> <li>No Emulate</li> </ul>	
<i>POSTNET</i>		
Tx CheckDgt	Enable/Disable	
<i>PlanetCode</i>		
Tx CheckDgt	Enable/Disable	

## KDC 300 Menu Options – continued

<b>Scan Options</b>	Time Out	0.5 to 10 seconds
	Minimum Length	2 to36 characters
<b>Data Process</b>	Wedge / Store	<ul style="list-style-type: none"> <li>• Wedge Only</li> <li>• Wedge &amp; Store</li> <li>• Store Only</li> <li>• Wedge &amp; Store if Sent</li> <li>• Wedge &amp; Store if Not Sent</li> </ul>
	Data Format	<ul style="list-style-type: none"> <li>• Barcode only</li> <li>• Packet data</li> </ul>
	Handshake	Enable/Disable
	Terminator	<ul style="list-style-type: none"> <li>• None</li> <li>• CR</li> <li>• LF</li> <li>• CR+LF</li> <li>• Tab</li> </ul>
<b>Bluetooth</b>	Power	Enable/Disable
	Pairing	Enter Pairing Mode
	Auto Connect	Enable/Disable
	Auto PowerOff	Enable/Disable
	Auto PowerOn	Enable/Disable
	Beep Warning	Enable/Disable
	PWR OFF Time	1min – 30min
<b>System</b>	Memory Status	# of Stored Barcode & Amount of Remaining Memory
	Reset Memory	Empty Data Memory
	Sleep Timeout	Disabled to 10 minutes
	Date / Time	YYYY:MM:DD or HH:MM:SS
	Battery	% of Battery Left
	Version	FW Version & Serial Number
	Button Lock	Enabled/Disabled
	Beep Sound	Enabled/Disabled
	Auto Menu Exit	Enabled/Disabled
	Port Status	Enabled/Disabled
	Display Format	<ul style="list-style-type: none"> <li>• Time &amp; Battery</li> <li>• Type &amp;Time</li> <li>• Type &amp;Battery</li> </ul>
	Menu Barcode	Enable/Disable Honeywell Special Barcode
	Factory Default	Restore to Factory Default Settings

Table 3 – KDC Menu Options

## *KDC Mode Menu*

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

- Normal: This is the default mode which provides basic barcode scanning. In Normal mode barcode data can be manipulation directly through the KDC or using KTSync® during the synchronization process.
- Application: This mode allowing you to run user application created by Application Generation Tool described in Chapter 4.

## *View Data Menu*

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

## *Set Barcodes Menu*

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

## *Code Options Menu*

Your KDC supports various Code Options including Transmission of Start and Stop Characters, Symbology Conversion, Verification of Optional Check Character, Transmission of Check Digit, and Concatenate. Please refer to **Error! Reference source not found.** for a detailed listing of Code Options for the symbologies upported by the KDC.

## *Scan Options Menu*

- Timeout: Allows you to set the length of time before the KDC will stop scanning a barcode from .5 second up to 10 seconds. The default is 2 seconds.
- Minimum Barcode Length: Allows you to set a barcode length from 2 characters to 36 characters. It is strongly recommended that you maximize the minimum barcode length setting to prevent possible errors. The default is 4 characters.

## *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.
- Wedge & Store if Sent: If data transmission is successful, barcode data is stored in memory.
- Wedge & Store 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<sup>®</sup> operates in Packet Data mode ONLY.
  - If you are using KTSync<sup>®</sup> Data Format mode must be set to Packet Data.

**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>.

## *Bluetooth Menu - KDC200 / KDC200P / KDC300*

The KDC supports Bluetooth, a robust wireless protocol that allows connectivity between a Bluetooth enabled KDC and a Microsoft compatible host device running a Bluetooth environment. Before utilizing the advantages of Bluetooth functionality with the KDC, you should become familiar with Bluetooth connectivity and its impact on your host environment.

To configure your KDC for Bluetooth functionality, you must use the KDC Menus. To access the menus, simultaneously press the UP and DOWN scroll buttons on the side of the KDC for about 5 seconds until the KDC Menus display. Use the DOWN button to scroll to Bluetooth then press the Scan button.

Below is a listing of the Bluetooth options and their settings. The default settings for these options have been set to increase the usability of Bluetooth technology without compromising the KDC battery usage. **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 Bluetooth Menu - KDC200 / KDC200P / KDC300.

- Power - Enabled or Disabled
- Pairing Mode
- Auto Connect - Enabled or Disabled
- Auto Power On - Enabled or Disabled
- Auto Power Off - Enabled or Disabled
- Beep Warning - Enabled or Disabled
- PWR Off Time - 1 to 30 Minutes

## System Menu

- Memory Status: Checks the number of stored barcodes and memory usage.
- Reset Memory: Resets KDC memory by erasing all stored barcodes.
- 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 Sound: Enables or disables KDC beep sound.
- Port Status: Enables or disables KDC port messages.
- Display Format: Selection of display format - Time & Battery, Type & Time, or Type & Battery
- Menu Barcode: Enables or disables Honeywell special barcodes.
- Factory Default: Resets certain KDC options to factory defaults. Factory defaults for the KDC are listed below.

### Defaults for KDC300

<p><b>1D Symbologies</b></p> <p>Codabar Code 11 Code 39 Code93 Code128 EAN8 EAN13 EANUCC I2of5 Matrix2of5 MSI Plessey PosiCode RSS-14 RSSLimit RSSExpand S2of5ID S2of5IA TLC39 Telepen Trioptic UPCA UPCE0 UPCE1</p>	<p><b>2D Symbologies</b></p> <p>AztecCode AztecRunes CodablockF Code16K Code49 DataMatrix MaxiCode MicroPDF PDF417 QRCode</p> <p><b>Postal Codes</b></p> <p>Postnet PlanetCode UK Post CanadaPost Kix Post Aus Post Japan Post China Post Korea Post</p> <p><b>OCR Fonts</b></p> <p>OCR Off</p>	<p><b>SCAN OPTIONS</b></p> <p>Timeout – 2 seconds Minimum Length – 4 Characters</p> <p><b>DATA PROCESS</b></p> <p>Wedge/Store – Wedge &amp; Store Always Data Format – Barcode Only Handshake- Disabled Terminator - &lt;CR&gt; + &lt;LF&gt;</p> <p><b>BLUETOOTH</b></p> <p>Power – Disabled Auto Connect – Disabled Auto Power On –Disabled Auto Power Off- Enabled Beep Warning – Enabled Power Off Time – 5 minutes</p> <p><b>System</b></p> <p>Sleep Timeout – 5 seconds Button Lock – Disabled Beep Sound – Enabled Auto Exit –Enabled Port Status –Enabled Display Format – Time &amp; Battery Menu Barcode - Disabled</p>
--	---	--

Table 4 – Factory Default Settings for KDC

## 2.6 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></ul>
Orange	<ul style="list-style-type: none"><li>• Low battery</li><li>• USB is connected and battery is charging</li></ul>
Red	<ul style="list-style-type: none"><li>• No reading</li><li>• Empty battery</li></ul>

Table 5 - Explanation of LEDs

## 2.7 Empty Battery

---

The KDC will display the message **Empty Battery Connect USB** when the battery is empty. Synchronize the KDC IMMEDIATELY to prevent loss of collected data.

## 2.8 Buffer Full

---

The KDC will display the message **Buffer Full** when the size of collected data reaches 200KB 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.

## 2.9 Reset Feature

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

1. Connect the KDC to your PC.
  - KDC100 - Connect to your PC directly using the *swing out*, Type A USB connector. See Figure 7 - Reset Function for KDC100.
  - KDC200 / KDC200P / KDC300 - Connect to your PC using the included cable, attaching the ultra mini USB connector to your KDC and the standard, Type A connector to your PC's USB port. See Figure 6 - Reset Function for KDC200 - KDC200P - KDC300.
2. Press DOWN scroll button and SCAN button simultaneously for 5 seconds.
3. When the LEDs illuminate yellow, release the buttons.
4. The KDC initial screen, **KoamTac Data Collector KDC** displays when reset is complete.

### Note:

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



Figure 7 - Reset Function for KDC100



Figure 6 - Reset Function for KDC200 - KDC200P - KDC300

## 2.10 Replace Battery

The KDC battery has a lifetime of at least 300 charges. However, when the battery is no longer chargeable, it needs to be replaced. You can purchase a replacement battery from your distributor. The steps for replacing the battery are as follows.

1. Disassemble the KDC back cover by unscrewing the middle screw.
2. Remove old battery and replace with new battery.
3. Reassemble the back cover.

1



Unscrew the screw (1.7 x 4 x 3) which is pointed by the arrow.

2



Remove the battery cover by pulling it down.

3



Remove the battery.  
Pull out the 2 pin connector gently.

Figure 8 - Replacing KDC Battery

## 3. BLUETOOTH - KDC200 / KDC200P / KDC300

The KDC supports a generic Bluetooth COM port and is compatible with following Bluetooth stacks. However, the KDC supports SPP (Serial Port Profile) and may support other Bluetooth stacks than those listed below.

- BlueSoleil
- Broadcom (Widcomm)
- Microsoft Windows XP SP2, Vista, and Mobile5.0+
- Toshiba

### 3.1 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, when set to Enable, will search constantly to connect with a Bluetooth host. Constant searching uses battery power. Unless you are using Bluetooth with your KDC, this option should be set to Disabled.

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

### 3.2 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.

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

1. Select Pairing from the Bluetooth menu. The message "**Pairing started...**" will displayed.
  2. When prompted by the host device, enter the Security PIN "0000".
  3. The "**Pairing success**" message will display when the Bluetooth connection is successfully established. The connection must be established before the pairing timeout which is 60 seconds.
- If "**Pairing failed...**" message displays, the Bluetooth connection with the host device failed. If the message "**Connected**" displays, a Bluetooth connection was established.
- It is possible for the message "**Pairing failed...**" to display on the KDC while the host device displays "**Connected**" message. If this occurs, a Bluetooth connection is established.

## 3.2 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 Disabled because a host device that does not support this feature can cause problems such as power loss or upload delays.

[Note] KDC tries to connect automatically to the host 10 times during two minutes if system sleep timeout is set to 10 seconds.

## 3.3 Auto Power On

---

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

## 3.4 Auto Power Off

---

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

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

## 3.5 Beep Warning

---

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

1. One (1) high short beep when Bluetooth is connected.
2. One (1) low short when Bluetooth is disconnected.
3. Five (5) short beeps if:
  - “Beep Warning is ENABLED”
  - “Auto Power Off is DISABLED”
  - “KDC200/200P/300 is DISCONNECTED from HOST”
  - “Bluetooth power is ON”

## 3.6 PWR OFF Time

---

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

## 4. SYNCHRONIZATION

When barcode data is collected, it must be uploaded to your application. KTSync<sup>®</sup>, which is bundled with the KDC, is software that allows barcode data to be uploaded to any PC, PDA, or smartphone running Windows XP, Vista, or Mobile 5.0+. It has two major functions - Synchronization and Keyboard Emulation.

- Synchronization - Provides data upload functionality to your applications.
- Keyboard Emulator - Allows scanned data to upload directly into your application as if the data were being entered manually on a keyboard.
- Application Generation - Allows user to create custom applications.
- Additional functions include:
  - Prefixes and suffixes add-on functions to scanned barcodes eliminating manual data entry.
  - Symbology and Scan Option selections.
  - Barcode Wedging options.

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

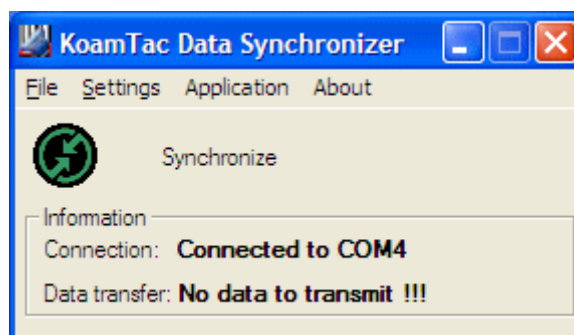


Figure 9 - KTSync<sup>®</sup> Synchronizer Menu

### File Menu

- Connect: Select the KDC port assignment. This information can be found in Windows Device Manager. The port assignment is used by KTSync<sup>®</sup> when synchronizing data from the KDC.
- Synchronize: This option tells the KDC to synchronize data with the host manually.

### Settings Menu

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

### Application Menu

- Import: Import existing application.

- Import & Download: Import existing application and download into KDC.
- Export: Export created application.
- Settings: Create or modify application.

### About Menu - KTSync® - Version Information

## 4.1 Connect to KDC

---

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

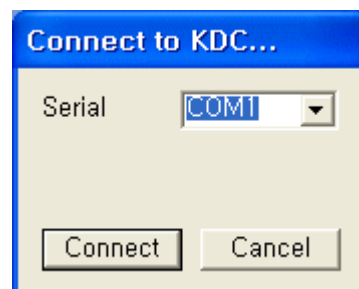


Figure 10 - COM Port Selection for KDC

- The COM port assignment is found in the Windows Device Manager.
- KTSync® will not connect to the KDC if it is in KDC Mode Menu.  
You must EXIT the KDC from the Menu before KTSync® will connect to the KDC.
- 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®.

## 4.2 Synchronization Settings

The KDC Menus provides several synchronization options for synchronizing host devices such as your PC, PDA, or smartphone. KTSync® is included with the KDC for synchronizing host devices running Windows XP, Vista, or Mobile 5.0+. You can also configure various Synchronization and Keyboard Emulation functions in the Synchronization Settings option.

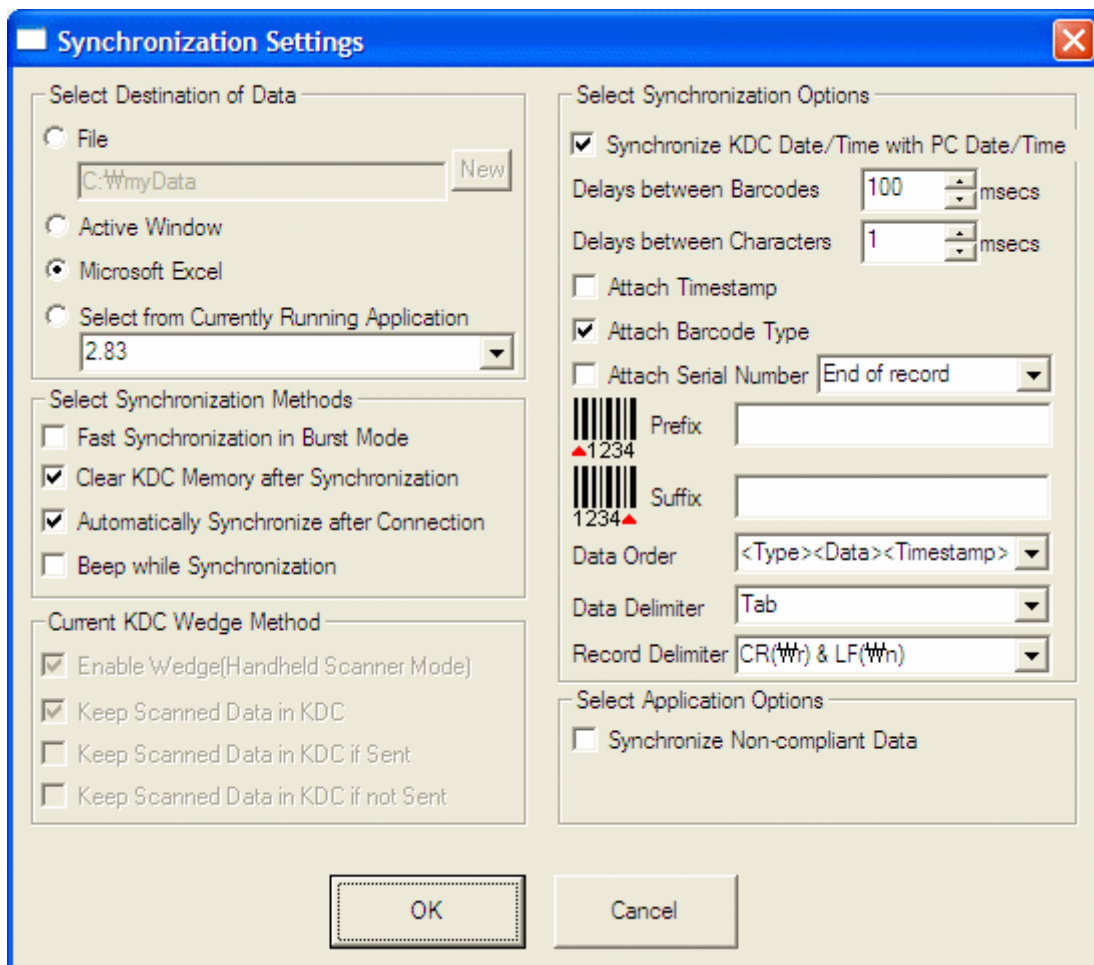


Figure 11 - KTSync® Synchronization Settings

### *Destination of Data*

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

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

- Active Window - This option means scanned barcode data is sent directly to the active program running on your device as if the data was being entered directly from a keyboard.
- Microsoft Excel - This option means barcode data is being imported directly into Microsoft's Excel. Various parameters can be set when uploading data to Excel.
- Select from Current Running Application – This option allows you to select a currently running application for data synchronization.

#### Note:

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

## Synchronization Methods

### **Fast Synchronization in Burst Mode**

The KDC can synchronize data to a host device in Burst mode or Handshake mode. Burst mode provides the fastest synchronization process when the Destination of Data option is set to File.

### **Clear KDC Memory after Synchronization**

The stored barcode data is cleared from the KDC memory after synchronization if this option is selected. The KDC can store a total of 10,240 barcodes or 200KB 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 PC immediately when the KDC is connected to the host.

- IMPORTANT: Remember to configure all options properly before performing an automatic synchronization process.
- 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.

## *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.
- Wedge & Store if Sent - Scanned data is stored in the KDC ONLY if transmission to the host is successfully.
- Wedge & Store if Not Sent - Scanned data is stored in the KDC ONLY if transmission to the host is unsuccessfully.

### ***Enable Wedge (Handheld scanner mode)***

- Marked if either Wedge only or Wedge & Store option are selected.

### ***Keep Scan Data in KDC***

- Marked if either Store only or Wedge & Store option are selected.

## *Synchronization Options*

### ***Synchronize KDC Time with PC Time when Connected***

This option enables you to synchronize the KDC date and time with host device 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.

### ***Prefix and Suffix***

- Enter the characters you want appended to the front or back of the barcode in the prefix and/or suffix fields.
- The character set is any combination of ASCII characters including alphanumeric, line feed (“\n”), and carriage return (“\r”).

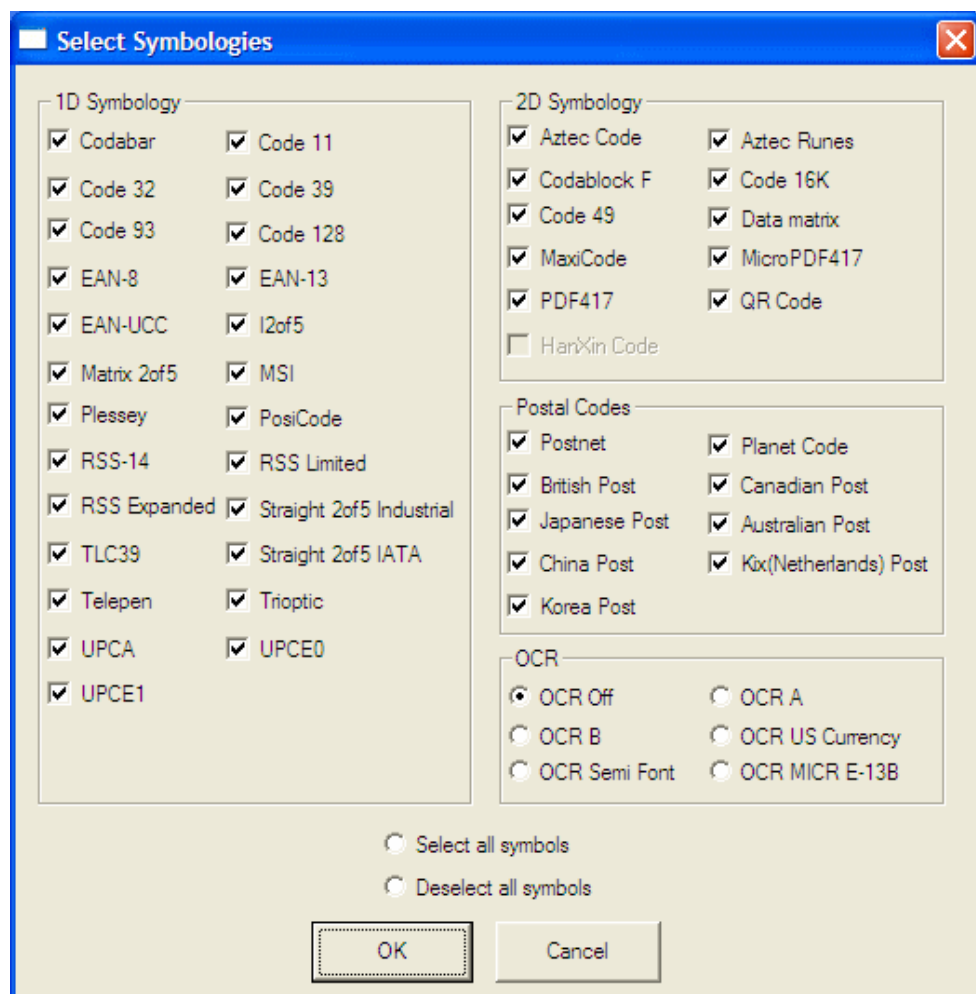
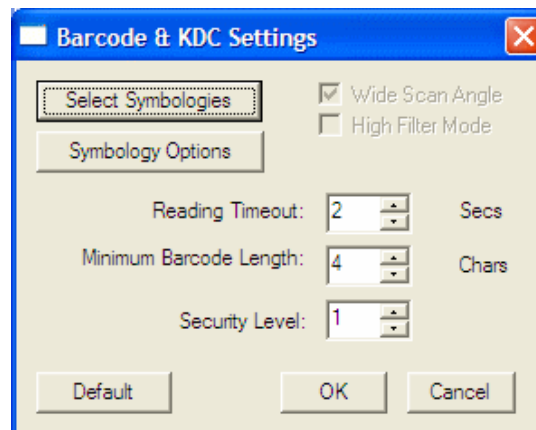
### ***Order and Delimiter***

- 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>

## 4.3 Barcode & KDC Settings

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

**IMPORTANT: You must configure barcode options properly for the best performance.**



**Symbology Options**

**Codabar**

Concatenation On  
 Concatenation Off  
 Concatenation require

Do not verify check character  
 Verify check digit and transmit  
 Verify check digit but do not transmit  
 Transmit start/stop character

**Code 39**

Append  
 Full ASCII  
 Transmit start/stop character

Do not verify check character  
 Verify check digit and transmit  
 Verify check digit but do not transmit

**UPCA**

Verify check digit  
 Number system  
 2 digit addenda  
 Addenda separator

5 digit addenda  
 Addenda required  
 Extended coupon code

**UPCE**

Check digit  
 Number system  
 2 digit addenda  
 Expand

Addenda required  
 5 digit addenda  
 Addenda separator

**EAN-8**

Verify check digit  
 2 digit addenda  
 5 digit addenda

Addenda required  
 Addenda separator

**EAN-13**

Verify check digit  
 2 digit addenda  
 5 digit addenda

Addenda required  
 Addenda separator  
 ISBN Translate

**Interleave 2 of 5**

Do not verify check digit  
 Verify check digit and transmit  
 Verify check digit but do not transmit

**Code 11**

Verify check digit(s)

**Code 128**

ISBT Concatenation

**Telepen**

AM Output  
 Original Output

**EAN/UCC**

UPC/EAN Version  
 RSS Emulation  
 128 Emulation  
 Emulation off

**MSI**

Verify check digit and transmit

**PosiCode**

A and B On  
 A and B and Limited A On  
 A and B and Limited B On

**Postnet**

Check digit and transmit

**PlanetCode**

Check digit and transmit

OK Cancel

Figure 12 - Barcode & KDC Settings, Symbologies, and Scan Options

## 4.4 Others

---

Others option under the Settings menu allows you to select four additional settings.

- Ask confirmation before trying auto connection
- Ask confirmation before starting auto synchronization
- Minimize KTSync on start
- Keep checking *Bluetooth* connection.

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.

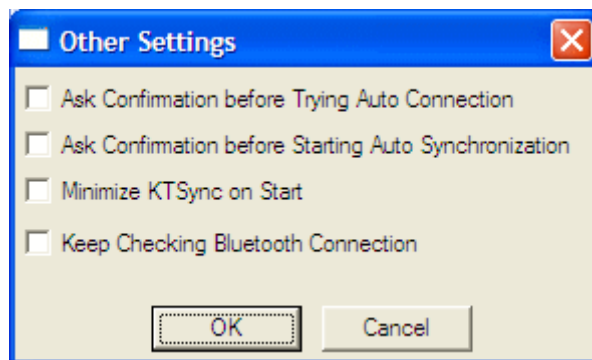


Figure 13 - KTSync® Confirmation Settings

## 5. APPLICATION GENERATION TOOL

KoamTac's application generation tool enables you to create custom applications for collection and management of scanned barcode data. With this tool, KDC users create custom applications that include:

- User defined prompts displayed on the KDC.
- Predefined quantities that the user can modify after scanning barcode data.
- Programmable steps for managing scanned data more efficiently.

KDC Application Generation Tool is easy to use with the same look and feel of KTSync<sup>®</sup>, KoamTac's synchronization software, making custom application generation simple and easy.

### 5.1 Launching Application Generation Tool

---

To begin creating your own applications, connect the KDC to your PC and launch KTSync<sup>®</sup>. From the main menu, select Application.

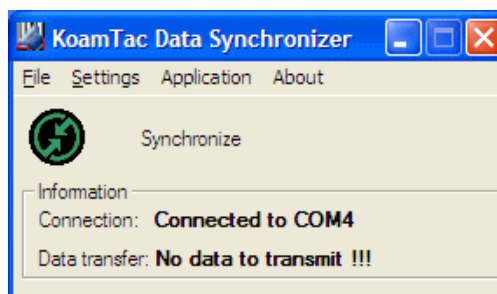


Figure 14 - KTSync<sup>®</sup> Application Menu

Application main menu has four submenus.

- Import – Import existing application.
- Import & Download – Import existing application and download to KDC.
- Export – Export application to a file.
- Settings – Create and modify application. User can also download predefined applications such as Master/Slave Compare application.

## 5.2 Application Settings

When you select the Settings submenu, KDC will beep once to acknowledge a connection between the KDC and Application generation tool. User can choose the following four options from Setting submenu.

- Predefined application - Loads the Master-Slave Barcode Compare Application.
- Import existing application - Loads existing Application from a file.
- Create application – Creates application from step 1.
- Download created or modified application – Current application will be downloaded into KDC.

The screenshot shows the 'Application Generation' dialog box. It features a blue title bar with the text 'Application Generation' and a close button (X). Below the title bar, there are three main sections for configuring steps:

- Step 1:** This section is active, indicated by a checked checkbox 'Generate Step 1'. It includes an 'Import' button, an 'Export' button, and a 'Predefined Application' button. The 'First Line (~ 13 chars)' field contains 'STEP1', and the 'Second Line (~ 13 chars)' field contains 'SCAN BARCODE'. The 'Starting Quantity' is set to 1, and 'Waiting After Scan' is 0 secs. There is also an 'Enable Data Filtering' checkbox (checked) and a 'Settings' button.
- Step 2:** This section is inactive, with a unchecked checkbox 'Generate Step 2'. It includes 'First Line' and 'Second Line' input fields, 'Starting Quantity' (0) and 'Waiting After Scan' (0) spinners, an 'Enable Data Filtering' checkbox (unchecked), a 'Settings' button, and a 'Repeat Step' checkbox (unchecked).
- Step 3:** This section is inactive, with a unchecked checkbox 'Generate step 3'. It includes 'First Line' and 'Second Line' input fields, 'Starting Quantity' (0) and 'Waiting After Scan' (0) spinners, an 'Enable Data Filtering' checkbox (unchecked), a 'Settings' button, and a 'Repeat Step' checkbox (unchecked).

At the bottom of the dialog, there are 'Download' and 'Cancel' buttons.

Figure 15 – Application Settings Menu

## 5.3 Predefined Application

The Predefined application is the Master-Slave Barcode Compare application previously included as an option in the KDC Menu program. To load this application, click the Predefined application box after selecting Application from the Settings Menu in KTSync.

When you select Predefined Application, the Select predefined application screen displays. This screen allows you to define a **master** barcode for comparison with one or more **slave** barcodes. The predefined application can be run once or continuously and within either setting, you can define a substring for comparison of master and slave barcodes.

- **Master/Slave Onetime**  
Define one **master** barcode and compare it with one **slave** barcode.
- **Master/Slave Continuous**  
Define one **master** barcode and compare it with multiple **slave** barcodes.
- **Collation Options**  
Works in either Onetime or Continuous Mode to compare a substring within the master and slave barcodes.
  - Master start position - Numeric position of start substring in Master barcode. Select the position of start substring character in Master barcode - 1 to 255
  - Slave start position - Numeric position of start substring in Slave barcode. Select the position of start substring character in Slave barcode - 1 to 255
  - Number of characters - Number of characters in substring. 0 to 255 characters.

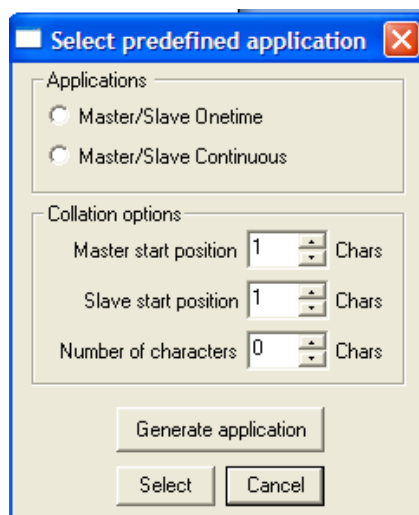


Figure 16 - Predefined Application Settings

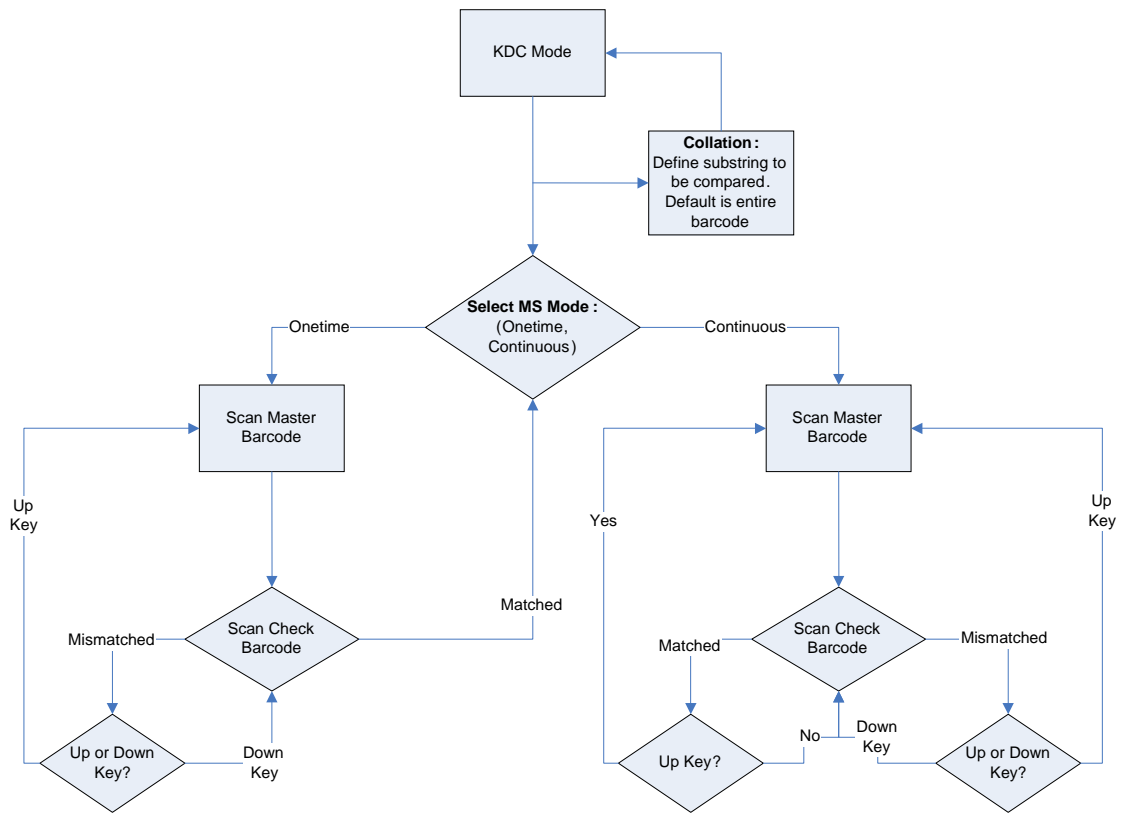


Figure 17 – Predefined Application Flow Chart

## 5.4 Custom Applications

---

KDC Application Generation Tool is a robust application generation tool that allows you to create custom applications for collecting and managing barcode data. To create a custom application, select the Settings submenu from the Application menu in KTSync®. *Make sure your KDC is connected to your PC before launching KTSync®.*

### *Generate Application*

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

**NOTE: Your custom application can include only Step 1.**

- **First line**  
Enter up to 13 characters which will display on the first line of the KDC
- **Second line**  
Enter up to 13 characters which will display on the second line of the KDC
- **Starting quantity**  
Enter a predefined start quantity for each scanned barcode. The start quantity can be defined from 1 to 128 and is modifiable up or down prior to data synchronization.
- **Waiting to scan**  
Enter the number of seconds the KDC pauses before the user prompts display. During this timeout period, the user can modify the quantity. If this field is set to zero, the quantity field cannot be adjusted. This field can be defined from “-1” to “30” seconds. “-1” second enables infinite waiting of user quantity input.
- **Enable data filter**  
Click on this box to enable the Settings box. Data filtering allows you to predefine different aspects of the barcode data you are collecting.

## Data Filter Settings

When you select Enable data filtering, you must click on the Settings box to select the Data filter setting. The option for the data filter settings are the same for Step 1, Step 2, and Step 3.

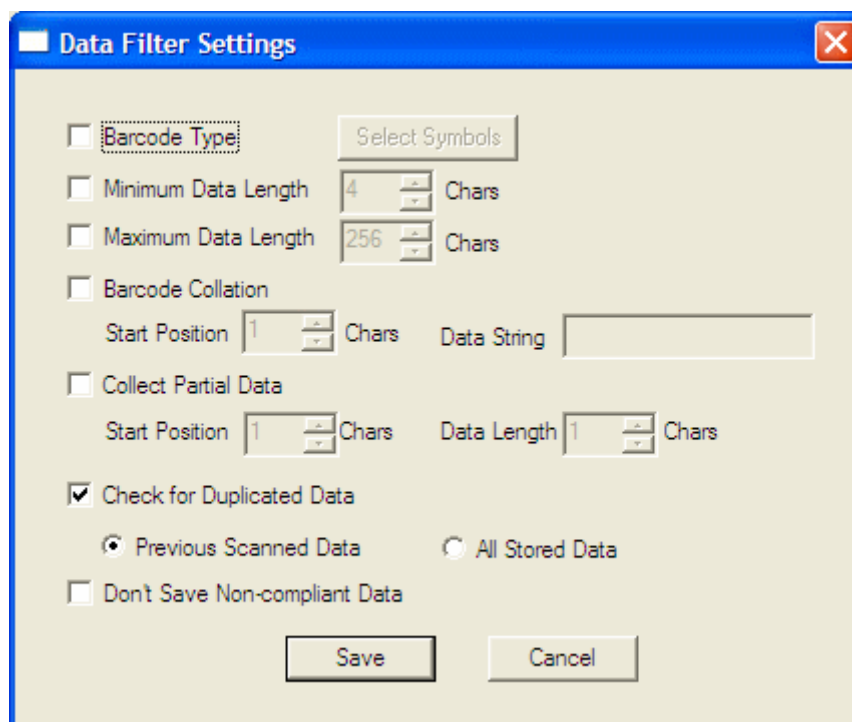


Figure 18 – Data Filter Settings

- **Barcode Type**

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

- **Minimum Data Length**

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

- **Maximum Data Length**

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

- **Barcode Collation**

This option enables you to define a data string that the KDC will use to compare scanned barcodes.

- Starting Position – This is the start position of the scanned barcode data to be compared with the defined data string.
  - Data String – This is the defined value to be compared with scanned barcode data. This value can be up to 32 characters
- **Collect Partial Data**

This option allows you to define partial barcode data to be collected when a barcode is scanned. Only the partial data will be stored in the KDC.

    - Start position – This is the starting position that the KDC will use when collecting scanned barcode data.
    - Data Length – This is the length of partial data to be stored by the KDC
- **Check for Duplicated Data**

This option allows you to prevent collecting duplicated data.

    - Previous Scanned Data – This option allows you to compare the scanned barcode with previously scanned barcode and treat it as non-compliant data if scanned same barcode twice.
    - All Stored Data – This option allows you to compare the scanned barcode with stored barcode data and treat it as non-compliant data if the same barcode already scanned and stored.
- **Don't Save Non-Compliant Data**

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

### **Generate step 2**

To include another step in your data collection process, click the box, Generate step 2. This step has the same options as Step 1. In this step, you have the option of repeating step 2 by clicking the box, Repeat Step. NOTE: This field is disabled when your application has three steps.

### **Generate step 3**

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

## *Application Download and Execution*

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

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

## 6. TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
<b>KDC not working</b>	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>
<b>KDC not charging</b>	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 - Charge KDC using a different USB port on your PC</li> </ul>
<b>Failed reading</b>	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>
<b>KDC reads wrong barcode</b>	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>
<b>Can't communicate with PC, PDA, or smartphone</b>	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>
<b>LED blinks yellow</b>	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>
<b>Buffer Full Message</b>	Full Memory	<ul style="list-style-type: none"> <li>● Clear the Memory using Synchronization program</li> </ul>
<b>Empty Battery Message</b>	Empty battery	<ul style="list-style-type: none"> <li>● Connect USB immediately.</li> <li>● Synchronize the collected data and charge KDC</li> </ul>

Table 6 - Troubleshooting Techniques

# 7. WARRANTY

## LIMITED WARRANTY AND DISCLAIMERS

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

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

### Serial Number

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

### Warranty/Warranty Period/Liability

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

### Warranty Coverage and Procedure

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

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

## 8. CONTACT INFORMATION

***KoamTac***  
A New Wave in Auto ID

**CORPORATE HEADQUARTERS**

116 Village Boulevard, Suite 200

Princeton, NJ 08540, USA

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

email: [support@koamtac.com](mailto:support@koamtac.com)

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

## APPENDIX A - BARCODE & SCAN OPTIONS

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

### A.1 Symbologies

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

	<i>KDC100</i>	<i>KDC200</i>	<i>KDC200P</i>	<i>KDC300</i>
<i>1D Barcodes</i>	EAN13, EAN8, UPCA, UPCE Bookland EAN, EAN13 with Addon, EAN8 with Add-on, UPCA with Add-on, UPCE with Add-on, Interleave 2 of 5, ITF14, Code128, Codabar, EAN128, Code39, Code93, & Code35	EAN13, EAN8, UPCA, UPCE Bookland EAN EAN13 with Add-on, EAN8 with Add-on, UPCA with Add-on, UPCE with Add-on, Interleave 2 of 5, ITF14, Code128, Codabar, EAN128, Code39, Code93, & Code35	EAN13, EAN8, UPCA, UPCE Bookland EAN EAN13 with Add-on, EAN8 with Add-on, UPCA with Add-on, UPCE with Add-on, Interleave 2 of 5, ITF14, Code128, Codabar, EAN128, Code39, Code93, & Code35	Codabar, Code11, Code32, Code39, Code128, EAN8, EAN13, EANUCC, I2of5, MSI, Plessey, PosiCode, RSS-14, RSSLimit, RSSExpand, S2of5IA, S2of5I, TLC39, Telepen, Trioptic, UPCA, & UPCE
<i>2D Barcodes</i>	N/A	N/A	PFD417	AztecCode, AztecRunes, CodablockF, Code16K, CodeDataMatrix, MaxiCode, MicroPDF, PDF417, & QRCode
<i>Postal Barcodes</i>	N/A	N/A	N/A	AusPost, CanadaPost, ChinaPost, JapanPost, KoreaPost, KixPost, Planet Code, Postnet (US), & UKPost
<i>OCR Fonts</i>	N/A	N/A	N/A	OCR-A, OCR-B, OCRUSCurrency, OCRMICRE13B, & OCRSEMIFONT

Table 7 - Symbologies Supported by KDC

# APPENDIX B – FAQ

## B.1 Symbology

### Q: What barcode symbologies are supported by the KDC300?

A: The KDC300 supports most major 1D, 2D barcode symbologies and OCR.

<b>KDC300</b>	<b>KDC100 / KDC 200 / KDC200P*</b>
<p><u>2D Barcodes</u></p> <p>AztecCode, AztecRunes, CodablockF, Code16K, Code49, DataMatrix, MaxiCode, MicroPDF, PDF417, and QRCode</p>	
<p><u>1D Barcodes</u></p> <p>Codabar, Code11, Code32, Code39, Code128, EAN8, EAN13, EANUCC, I2of5, MSI, Plessey, PosiCode, RSS-14, RSSLimit, RSSExpand, S2of5IA, S2of5ID, TLC39, Telepen, Trioptic, UPCA, and UPCE</p>	<p><u>1D Barcodes</u></p> <p>EAN13 EAN8 UPCA UPCE Bookland EAN EAN13 with Add-on EAN8 with Add-on UPCA with Add-on UPCE with Add-on Interleave 2 of 5 ITF14 Code128 Codabar EAN128 Code39 Code93 Code35</p>
<p><u>Postal Barcodes</u></p> <p>AusPost, CanadaPost, ChinaPost, JapanPost, KoreaPost, KixPost, Planet Code, Postnet (US), and UKPost</p>	
<p><u>OCR Fonts</u></p> <p>OCR-A, OCR-B, OCRUSCurrency, OCRMICRE13B, and OCRSEMIFONT</p>	<p><u>2D Barcodes</u></p> <p>PFD417 - KDC200P only</p>

Table 8 – Listing of Symbologies Supported by KDC

## B.2 Host Interface

---

**Q: What interface ports are supported by the KDC300?**

A: The KDC300 has one ultra mini USB port which supports serial and USB-Serial. It also supports *Bluetooth* SPP.

**Q: What *Bluetooth* protocol stacks are supported by KDC300?**

A: The KDC300 supports all major *Bluetooth* stacks such as Toshiba®, Widcomm®, BlueSoleil® and Microsoft®. The KDC300 can also connect to other *Bluetooth* stacks supporting SPP (Serial Port Profile).

## B.3 Battery

---

**Q: How long will the KDC300 battery last before it needs to be replaced?**

A: The battery on the KDC300 can be charged at least 300 times before it needs to be replaced.

**Q: How long does it take to charge the KDC300?**

A: It takes about 4 hours to fully charge the KDC300 from an empty battery status to a fully charged status.

**Q: How many barcodes can a fully charged KDC300 scan?**

A: The KDC300 can scan more than 20,000 barcodes with *Bluetooth* connection.

**Q: How long will the KDC300 battery lasts in the sleep mode?**

A: The KDC300 lasts more than 10 days in sleep mode. If *Bluetooth* is powered ON and connected to a host device, it will last for more than five days.

**Q: Can I replace the KDC300 battery?**

A: Yes. The KDC300 has a separate compartment for the battery which can be opened easily with a screw driver. Contact your distributor for a replacement battery.

## B.4 Memory

---

**Q: How many barcodes can be stored in the KDC300?**

A: The KDC300 has 200KB of data memory and is able to store over 10,000 UPC barcodes.

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

A: Yes. KTSync® is synchronization and wedging software included with the KDC300 which supports host applications running on *Microsoft*® Windows XP, Vista, and Mobile5.0+.

**Q: Does the KDC300 support *Blackberry*®, *Symbian*®, *Apple*®, and *Palm*® devices?**

A: KTSync® supports devices running *Microsoft*® Windows XP, Vista, and Mobile5.0+. Applications for *Blackberry*, *Symbian*, *Apple*, *Palm*, and others can be developed using KoamTac's software development kit. Contact KoamTac if you are interested in our SDK.

## B.5 Programming

---

**Q: Can the KDC300 be programmed by a KoamTac Business Partner?**

A: Currently, the KDC doesn't support a programming environment for its partners. However, an application generator utility is scheduled for release in 2009.

**Q: Does KoamTac provide customization services for the KDC300?**

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

**Q: Can a partner develop a PC or PDA application for the KDC300?**

A: Yes. A software development kit for devices or applications running *Microsoft*<sup>®</sup> Windows XP, Vista, and Mobile5.0+ is available to our partners. Partners can use DLL and our demo source code included in the SDK for custom applications.

# APPENDIX C - SPECIAL BARCODES

## C.1 Set Symbologies

---

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

## C.2 Barcode Options

---

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

## C.3 Delete Last Scanned Barcode

---



†MKDC80001.

## C.4 Scan Options

---

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

## C.5 Scan Timeout

---

Timeout = 500msec



Timeout = 1sec



Timeout = 2sec



Timeout = 3sec



Timeout = 4sec



Timeout = 5sec



Timeout = 6sec



Timeout = 7sec



Timeout = 8sec



Timeout = 9sec



Timeout = 10sec



## C.6 Minimum Barcode Length

---

Minimum Length = 2



Minimum Length = 3



Minimum Length = 4



Minimum Length = 5



Minimum Length = 6



Minimum Length = 7



Minimum Length = 8



Minimum Length = 9



Minimum Length = 10



Minimum Length = 11



Minimum Length = 12



Minimum Length = 13



Minimum Length = 14



Minimum Length = 15



Minimum Length = 16



Minimum Length = 17



Minimum Length = 18



Minimum Length = 19



Minimum Length = 20



Minimum Length = 21



Minimum Length = 22



Minimum Length = 23



Minimum Length = 24



Minimum Length = 25



Minimum Length = 26



Minimum Length = 27



Minimum Length = 28



Minimum Length = 29



Minimum Length = 30

Minimum Length = 31



┌MKDC01E.



┌MKDC01F.

Minimum Length = 32

Minimum Length = 33



┌MKDC020.



┌MKDC021.

Minimum Length = 34

Minimum Length = 35



┌MKDC022.



┌MKDC023.

Minimum Length = 36



┌MKDC024.

## C.7 Data Process - Wedge/Store

---

### Wedge Only



### Wedge & Store



### Store Only



### Wedge & Store if Sent



### Wedge & Store if Not Sent



## C.8 Data Process - Data Format - Handshake

---

Data format - Barcode only



Data format - Packet data



Enable Handshake



Disable Handshake



## C.9 Data Process - Termination Character

---

None



CR



LF



CR+LF



Tab



## C.10 Bluetooth

---

Enable Bluetooth Power



Disable Bluetooth Power



Enter Pairing Mode



Enable Auto Connect



Disable Auto Connect



Enable Auto Power Off



Disable Auto Power Off



Enable Auto Power On



Disable Auto Power On



Enable Beep Warning



┘MKDC68001.

Disable Beep Warning



┘MKDC68010.

## C.11 Bluetooth PWR Off Time

---

1min



2min



3min



4min



5min



6min



7min



8min



9min



10min



11min



†MKDC6900B.

12min



†MKDC6900C.

13min



†MKDC6900D.

14min



†MKDC6900E.

15min



†MKDC6900F.

16min



†MKDC69010.

17min



†MKDC69011.

18min



†MKDC69012.

19min



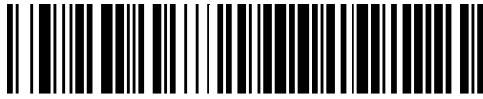
†MKDC69013.

20min



†MKDC69014.

21min



†MKDC69015.

22min



†MKDC69016.

23min



†MKDC69017.

24min



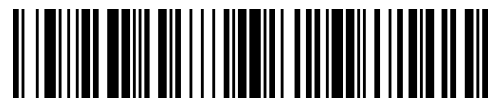
†MKDC69018.

25min



†MKDC69019.

26min



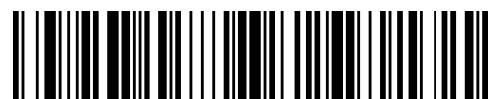
†MKDC6901A.

27min



†MKDC6901B.

28min



†MKDC6901C.

29min



†MKDC6901D.

30min



†MKDC6901E.

## C.12 System

---

### Memory Status



### Reset Memory



### Data/Time



### Battery



### Version



### Button Lock



### Button Unlock



Enable Auto Menu Exit



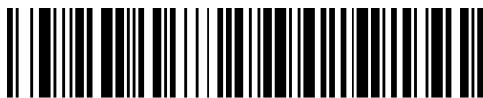
┘MKDC58001.

Disable Auto Menu Exit



┘MKDC58010.

Enable Port Status



┘MKDC58100.

Disable Port Status



┘MKDC58101.

Time & Battery



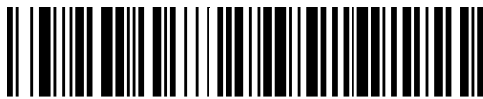
┘MKDC58200.

Type & Time



┘MKDC58201.

Type & Battery



┘MKDC58202.

Factory Default



┘MKDC57001.

## C.13 Sleep Timeout

---

Disable



1sec



2sec



3sec



4sec



5sec



10sec



20sec



30sec



1min



2min



†MKDC51078.

5min



†MKDC5112C.

10min



†MKDC51258.

## C.14 Function

---

F1



┌MKDC7002.

F2



┌MKDC7001.

F3



┌MKDC7003.

F4



┌MKDC7004.

F5



┌MKDC7005.

F6



┌MKDC7006.

F7



┌MKDC7007.

F8



┌MKDC7008.

F9



┌MKDC7009.

F10



┌MKDC700A.

F11



┌MKDC700B.

F12



┌MKDC700C.

## C.15 Number

---

0



1



2



3



4



5



6



7



8



9



## C.16 Lower Case Alphabet

---

a



b



c



d



e



f



g



h



i



j



k



┌MKDC716B.

l



┌MKDC716C.

m



┌MKDC716D.

n



┌MKDC716E.

o



┌MKDC716F.

p



┌MKDC7170.

q



┌MKDC7171.

r



┌MKDC7172.

s



┌MKDC7173.

t



┌MKDC7174.

u



┘MKDC7175.

v



┘MKDC7176.

w



┘MKDC7177.

x



┘MKDC7178.

y



┘MKDC7179.

z



┘MKDC717A.

## C.17 Upper Case Alphabet

---

A



┌MKDC7141.

B



┌MKDC7142.

C



┌MKDC7143.

D



┌MKDC7144.

E



┌MKDC7145.

F



┌MKDC7146.

G



┌MKDC7147.

H



┌MKDC7148.

I



┌MKDC7149.

J



┌MKDC714A.

K



L



M



N



O



P



Q



R



S



T



U



┌MKDC7155.

V



┌MKDC7156.

W



┌MKDC7157.

X



┌MKDC7158.

Y



┌MKDC7159.

Z



┌MKDC715A.

## C.18 Control Character

---

BS



TAB



LF



VT



CR



ESC



Space



DEL



## C.20 Symbol Character

---

!



┌MKDC7121.

“



┌MKDC7122.

#



┌MKDC7123.

\$



┌MKDC7124.

%



┌MKDC7125.

&amp;



┌MKDC7126.

‘



┌MKDC7127.

(



┌MKDC7128.

)



┌MKDC7129.

\*



┌MKDC712A.

+



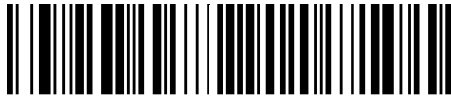
┌MKDC712B.

,



┌MKDC712C.

-



┌MKDC712D.

.



┌MKDC712E.

/



┌MKDC712F.

:



┌MKDC713A.

;



┌MKDC713B.

<



┌MKDC713C.

=



┌MKDC713D.

>



┌MKDC713E.

?



@



[



\



]



^



\_



,



{



|



}

~



}MKDC717D.



~MKDC717E.

Start-String

Stop-String



Start-String.



Stop-String.

#### Note:

- You can compose a string up to 16 characters.
- A string would be composed by scanning the “Start-String”, number/alphabet/special characters, and “Stop-String” special barcodes.
- The KDC will abort string composition if you do not scan “Stop-String” in one minute after scanning “Start-String” and number/alphabet/special characters.

# INDEX

- 1D ..... 14, 19
- 2D ..... 14, 19
- Auto..... 15, 59
- barcode scanner ..... 6
- Battery..... 11, 15, 19, 64, 65
- Beep..... 15, 19, 29, 60
- Bluetooth** ..... 15, 59
- Button..... 15, 19
- Clear ..... 29, 42
- Connect..... 15, 59
- Data** ..... 15
- data collectorSee barcode scanner
- Date ..... 15, 19
- Delay ..... 30
- Delete..... 14
- Delimiter ..... 30
- EAN128..... 45, 46
- EAN13..... 45, 46
- EAN8..... 45, 46
- Factory ..... 15
- Factory Default..... 19, 65
- File.....26, 27, 28
- Format .....15, 17
- Full** .....20, 42
- Handshake .....15, 17
- ITF14 .....45, 46
- KDC .....14, 15
- KDC300 .....19
- Keyboard .....26, 28
- KoamTac6, 21, 42, 43, 46, 47, 48
- KTSync® 13, 17, 19, 26, 27, 28, 31, 47
- LED.....13, 20, 21, 42
- Memory.....15, 19, 42, 47
- Menu..... 15, 16, 17, 26, 27
- Minimum .....16
- Option** ..... 15, 16, 26, 30, 45
- Order .....30
- Pairing .....15, 59
- PDA .....28, 42, 48
- Power .....15, 59
- Prefix .....26, 30
- Process** ..... 15, 17
- Reset..... 15, 19
- Scan** 15, 16, 26, 30, 31, 42, 45
- Serial..... 15, 43
- Sleep..... 15, 19
- Special Barcodes ..... 12
- Status..... 15, 19, 20
- Store ..... 15, 17, 30
- Suffix ..... 30
- Symbology ..... 26, 46
- Synchronization 13, 26, 28, 29, 30, 42
- Terminator..... 15, 17
- Time ..... 15, 16, 19, 30
- UPCA ..... 45, 46
- UPCE ..... 45, 46
- USB..... 20, 21, 27, 42
- Version..... 15, 19
- View ..... 16
- Website .....See Koamtac
- Wedge..... 15, 17, 30