

# KOAMTAC

KDC User Manual

Rev 2.85S.A3/2.86.A3/3.06.A3

KOAMTAC 

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Certain KDC products may be covered by the following issued US patents numbers 7769917, 7954710, 8126399, 8295368, 8346979, 8347366, 8371506, 8483614, 8832323; Korea patents numbers 10-1383407, 10-1354252; UK patent number GB2492615.

KDC® is a registered trademark and property of KOAMTAC, Inc.

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KTSync® is a registered trademark and property of KOAMTAC, Inc.

KoamTacON® is a registered trademark and property of KOAMTAC, Inc.

SmartSled® 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: VH9KDC20, VH9KDC30, VH9KDC100, VH9KDC200, VH9KDC250, VH9KDC300, VH9KDC350, VH9KDC400, VH9KDC450

This equipment has been tested and found to comply with the limits 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 may radiate radio frequency energy. It may cause harmful interference to radio communications if not installed and used in accordance with the instructions. 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 may be determined by turning the equipment off and on, the user is encouraged to try to correct the interference with 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 different circuit than the receiver.
4. Consult with 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.

## Europe



Certificate No.: EMC15688-07-01

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:**

- Radio and Telecommunications Terminal Equipment Directive 1999/5/EC

Scope of Opinion (Essential Requirements)	Applied Specifications/Standards	TCF Identification	Results
Article 3.1(a) – Health	EN 62311:2008	Statement	Complies
Article 3.1(a) - Safety	EN 60950-1:2006+A11:2009	ESTCS1101-002	Complies
Article 3.1(b) – EMC	EN 55022:2006+A1:2007 EN 55024:1998+A1:2001+A2:2003 ETSI EN 301 489-1 V1.8.1 (2008-04) ETSI EN 301 489-17 V2.1.1 (2009-05)	ESTCE0712-007(1)	Complies
Article 3.2 – Radio Spectrum Use	ETSI EN 300 328:V1.7.1 (2006-10)	ESTR0801-018(1)	Complies

**Japan**



003WWA080049, 003WWA090274, 208-120048, 208WW110041, 208-130029, 208-140011, 208-140049

Article 2-1-19, 2.4GHz Wide Band low power data communication system

**Japan**



2014026493, 2014027753

**Korea**



MSIP-CMM-A13-KDC20, MSIP-CMM-A13-KDC30, AI3-KDC100, AI3-KDC200, MSIP-CMM-A13-KDC250, MSIP-CMM-A13-KDC350, MSIP-CMM-A13-KDC350, MSIP-CMM-A13-KDC400, MSIP-CMM-A13-KDC450

**Laser Compliance**

KDC20/100/200/250/350L/410/415/430



Complies with US 21 CFR 1040.10 and 1040.11 except for deviations pursuant to laser notice no. 50, dated June 24, 2007 and IEC 60825-1 (Ed. 2.0)

Complies with IEC60825-1:1993 + A1:1997 + A2:2001

## Battery Warning

- This device contains a rechargeable NiMH. Never throw the battery into a fire, as that could cause the battery to explode.
- Never short-circuit the battery by bringing the terminals in contact with another metal object. This could cause personal injury, a fire, and/or damage to the battery.
- Never dispose of used batteries with other ordinary solid wastes. Batteries contain toxic substances.
- Dispose of used batteries 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

This 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 a revolutionary KOAMTAC Data Collector (KDC) barcode scanner!

KOAMTAC's KDC works with a wide variety of portable applications. Use it independently or as a PC, PDA, or smartphone/tablet accessory. To discover more about KOAMTAC, Inc., go to [koamtac.com](http://koamtac.com).

FEATURES	KDC20	KDC30	KDC100	KDC200	KDC250	KDC300	KDC350	KDC400	KDC450
USB CONNECTIONS	1	1	2	1	1	1	1	2	2
RECHARGEABLE BATTERY	YES	YES	YES	YES	YES	YES	YES	YES	YES
SCAN ENGINE	Laser	Imager	Laser	Laser	Laser	Imager	Laser/Imager	Laser/Imager	Imager
AUTOMATIC DATA UPLOAD	YES	YES	YES	YES	YES	YES	YES	YES	YES
STORES 10,000+ BARCODES	YES	YES	YES	YES	YES	YES	YES	No	No
KTSYNC® SOFTWARE	YES	YES	YES	YES	YES	YES	YES	YES	YES
SDK	YES	YES	YES	YES	YES	YES	YES	YES	YES
SUPPORTS WINDOWS XP, 7, 8 & MOBILE 5.0+	YES	YES	YES	YES	YES	YES	YES	YES	YES
ANDROID, BLACKBERRY, IOS	YES	YES	NO	YES	YES	YES	YES	YES	YES
BLUETOOTH	YES	YES	NO	YES	YES	YES	YES	YES	YES
GPS	NO	NO	NO	NO	YES	NO	YES	NO	NO
NFC/RFID	NO	NO	NO	NO	NO	NO	YES	YES	YES
MSR	NO	NO	NO	NO	NO	NO	NO	YES	NO
USB DISK	NO	NO	YES	YES	YES	YES	YES	NO	NO
USB HID	YES	YES	YES	YES	YES	YES	YES	NO	NO

Table 1 - Features of KDC



## 1.1 KDC Package Contents

The standard KDC package contains:

1. One KDC Barcode Data Collector
2. USB Cable
  - KDC20/30 (N/A)
  - KDC100/200/250/300/350 (8pin Ultra mini USB Cable)
  - KDC400/450 (5pin Micro USB cable)
3. One Lanyard (KDC20/30/100/200/250/300/350) or One Hand Strap (KDC400/450)
4. One KDC Protective Rubber Boot (KDC100/200/250/300).

The following KDC accessories are available to purchase at [koamtac.com](http://koamtac.com) or by contacting a local reseller.

- Protective Silicone Boots for KDC20/30/350.
- SmartSled Cases for KDC200/250/300/400/450.
- Charging Cradles for KDC20/30/100/200/250/300/350/411/421/430/450
- Finger Trigger Gloves and KDC200/350/300 Finger Trigger Glove Adaptor
- KDC350 Hardpack Battery Charging Adaptor
- KDC Batteries

### Note

KDC400/450 SmartSled cases are sold separately.

*Depending on the distributor, package contents may vary.*



KDC20/30  
Package Contents



KDC100/200/250/300  
Package Contents



KDC350  
Package Contents



KDC400/450  
Package Contents

## 1.2 KDC Characteristics

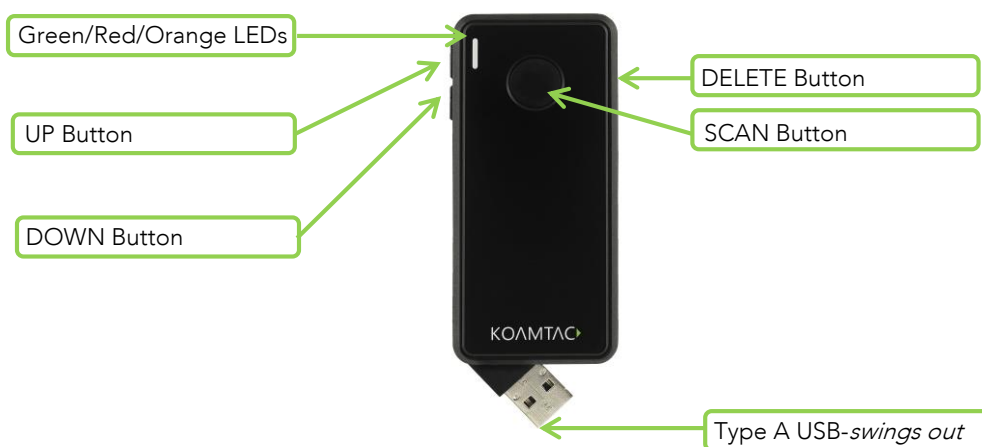
Before using the KDC, the user should become familiar with its physical characteristics. Refer to Figure 2, Figure 3, 4, and 5 below. These figures indicate the placement of the SCAN, UP, and DOWN buttons, OLED display, LED, and ports on the KDC.

Although KDC models consist of similar buttons and LEDs, each model has different characteristics for its own purpose of use. The KDC20/30/100 include a swing-out USB connector and the KDC350 has a keypad.

### KDC20/30 Barcode Reader and Data Collector

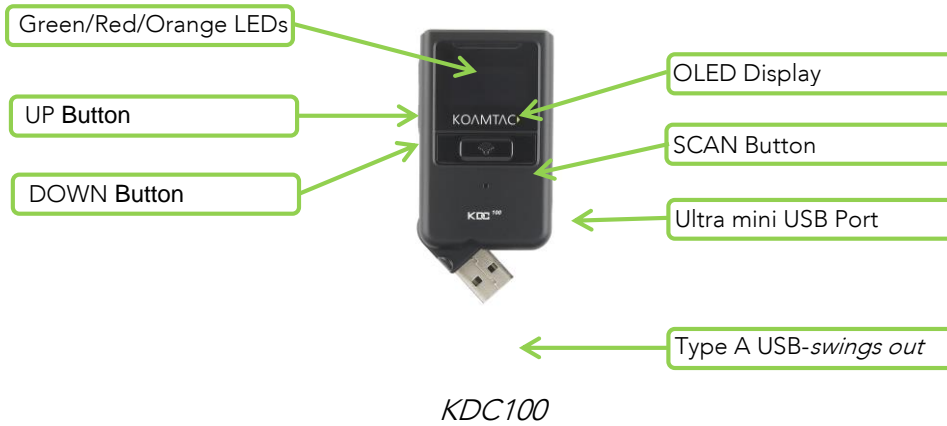


*KDC20*

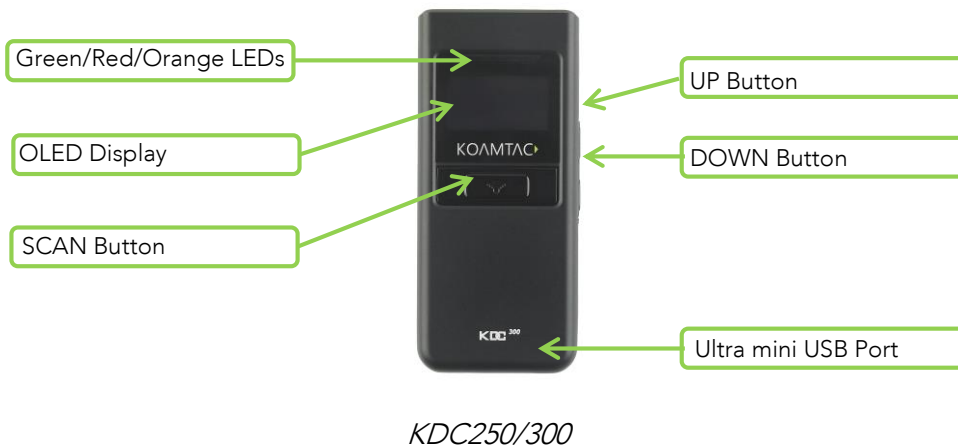


*KDC30*

### KDC100 Barcode Reader and Data Collector



### KDC200/250/300/350 Barcode Reader and Data Collector










*KDC350*

### KDC400/450 Barcode Reader and Data Collector



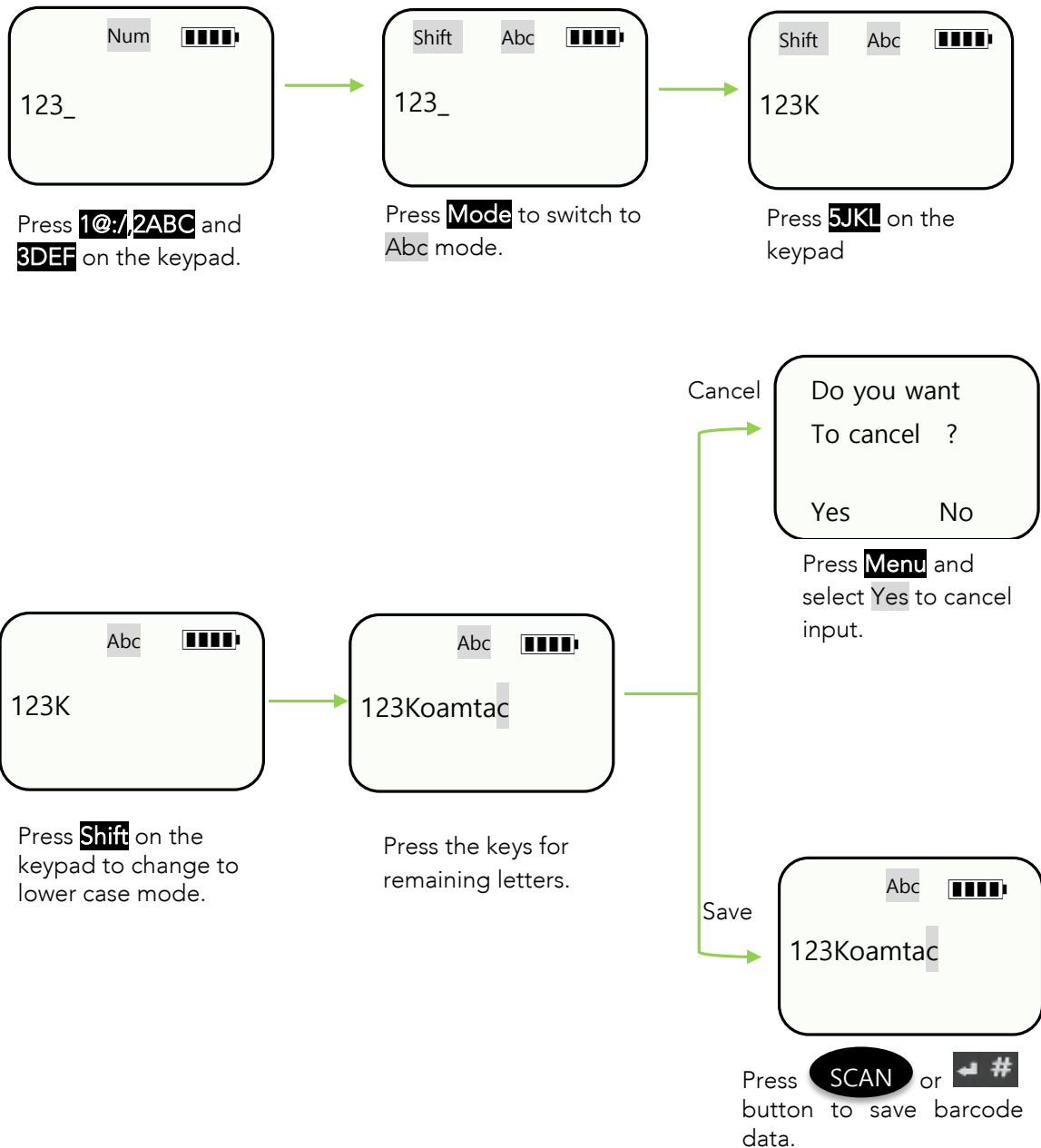
*KDC400/450*

## 1.3 Keypad Functionality for KDC350

<b>Menu</b>	Enables the user to enter or exit the KDC Menu. While in menu mode, press once to exit.														
<b>Shift</b>	Enables the user to change character input mode from capital letters to small letters, and vice versa.														
<b>Mode</b>	Enables the user to switch between ABC and number input mode.														
 (UP button)	While in the KDC menu, press this button to go up on the selection bar. While on the main screen, press this button and the KDC will try to connect to a BT host device.														
 (DOWN button)	While in the KDC menu, press this button to go down on the selection bar. While on the main screen, press this button to toggle the iOS soft keyboard (if the KDC is connected in HID-iOS mode).														
 (Number button)	Input numbers or characters														
 (Enter button)	Press to finish data input (if "Enter Key" option is disabled). Press to finish data input and move cursor to next line (if "Enter Key" option is enabled).														
 (Delete button)	Press to delete the last character or number input														
<b>Fn</b> (Function button)	<p>This button may be used in conjunction with a number key to control the KDC settings shown below.</p> <table border="1"> <tr> <td>FN + 1</td> <td>Keypad light On/Off</td> </tr> <tr> <td>FN + 2</td> <td>GPS Power On/Off (KDC350G series only)</td> </tr> <tr> <td>FN + 3</td> <td>NFC Power On/Off (KDC350N series only)</td> </tr> <tr> <td>FN + 4</td> <td>Enter Bluetooth Pairing Mode</td> </tr> <tr> <td>FN + 5</td> <td>Bluetooth Power On/Off</td> </tr> <tr> <td>FN + 6</td> <td>Change Bluetooth profile</td> </tr> <tr> <td>FN + 0</td> <td>Factory Default</td> </tr> </table>	FN + 1	Keypad light On/Off	FN + 2	GPS Power On/Off (KDC350G series only)	FN + 3	NFC Power On/Off (KDC350N series only)	FN + 4	Enter Bluetooth Pairing Mode	FN + 5	Bluetooth Power On/Off	FN + 6	Change Bluetooth profile	FN + 0	Factory Default
FN + 1	Keypad light On/Off														
FN + 2	GPS Power On/Off (KDC350G series only)														
FN + 3	NFC Power On/Off (KDC350N series only)														
FN + 4	Enter Bluetooth Pairing Mode														
FN + 5	Bluetooth Power On/Off														
FN + 6	Change Bluetooth profile														
FN + 0	Factory Default														

## 1.4 Input data by using a keypad (KDC350)

- When the KDC350 shows a blank main screen, you may start pressing numbers or characters of the barcode data that needs to be input.
- See an example below: How to save the barcode data "123Koamtac".



## 1.5 Turn on the power of KDC20/30/400

Figure 1 - How to turn on the power in KDC20/30/400

KDC20/30/400 have power on/off switch. Please turn on the power first before using the device.



### KDC400





## 2. Installation

### 2.1 Bluetooth Pairing

The KDC may read and store barcode data independently, but it may also be used in conjunction with a PC, PDA, or smart device.

In order to read barcode data with your KDC wirelessly, the user must first pair the KDC and smart device via Bluetooth. If previously paired and no changes have been made in the smart device's Bluetooth settings, the smart device will always recognize the KDC that has previously been paired. However, if changes have been made, the user may need to go through the pairing process again. The user may also refer to **Chapter 4. Bluetooth** for more information about Bluetooth pairing.

#### Preparing for Pairing

Select a Bluetooth profile. There are two ways to set up a Bluetooth profile. The user may establish a Bluetooth profile manually (on the scanner) or by scanning a programming barcode as shown below.

#### KDC 20/100/200/250/350L/410/415 (1D)

Bluetooth Profile SPP



Bluetooth Profile HID iOS



Bluetooth Profile MFi



Bluetooth Profile SPP2.0



Bluetooth Profile HID normal



KDC30/300/350C/420/425/450 (2D)



Some KDCs are equipped with an LCD screen (KDC100/200/250/300/350), the user may select a Bluetooth profile from the **ConnectDevice** menu as shown below.

*Figure 2 - Selecting a Bluetooth device type from the KDC menu*



## Pairing

### First Option: Connect the KDC from a host (PC or Smart Device)

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

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

- Select the correct pairing barcode and scan below for your KDC model, or

KDC 20/100/200/250/350L/410/415 (1D)



KDC30/300/350C/420/425 (2D)



Pairing

- Select **Pairing** from the KDC menu.



Figure 3 - Selecting Pairing mode in KDC

- For the KDC20/30, press the Scan button for three seconds in order to enter into Pairing mode. For the KDC 400, press the Up button immediately after turning the power on in order to enter into Pairing mode.

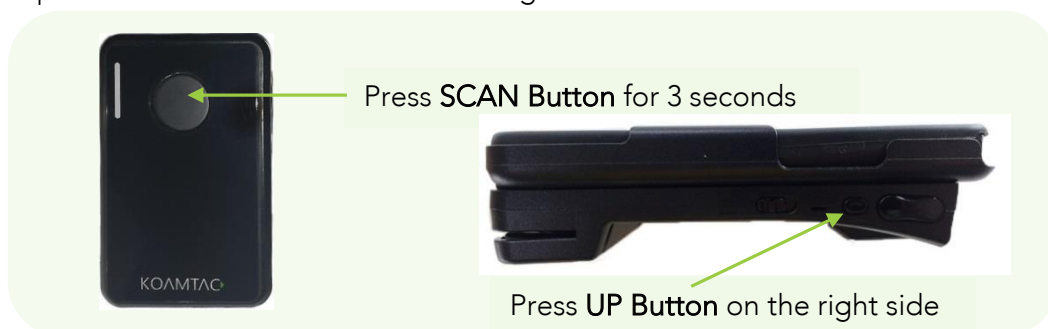
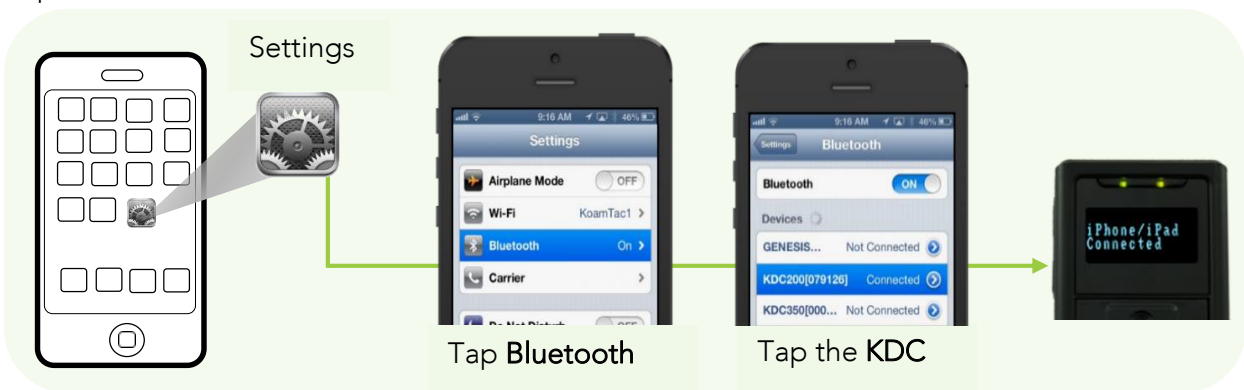


Figure 4 - Pairing mode button in KDC20/30/400

2. On the host device, go to **Settings -> Bluetooth**, and select the KDC that needs to be paired. The KDC and host device will now communicate with each other.



3. After it has been installed, open KTSync and it will automatically find and connect to the KDC. (Refer to **2.2 KOAMTAC Installation Wizard** for more information about installing KTSync)

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

This method is recommended for advanced users or when the application or process requires the pairing of multiple KDCs to multiple host devices on a regular basis.

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



Figure 5 - Finding Bluetooth MAC Address

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

Bluetooth MAC Address: **1234567890AB**

Barcode Type (Symbology): **Code 128**

Contents: For KDC20/200/250/410/415, type **^FNC3651234567890AB**

For KDC30/300/420/425, type **SYNMCRKDC651234567890AB**

Options: **includetext parsefnc**

3. Print the **Bluetooth MAC Address**

Note: 2D image-based barcode readers such as the KDC30, KDC300, KDC350C, and KDC420 series models may read barcodes that have been printed QR barcodes that are on a LCD screen.

Laser scanners such as the KDC20, KDC100, KDC200, KDC350L, and KDC410 series models are not designed to read barcodes from a LCD screen and will only read printed barcodes.

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

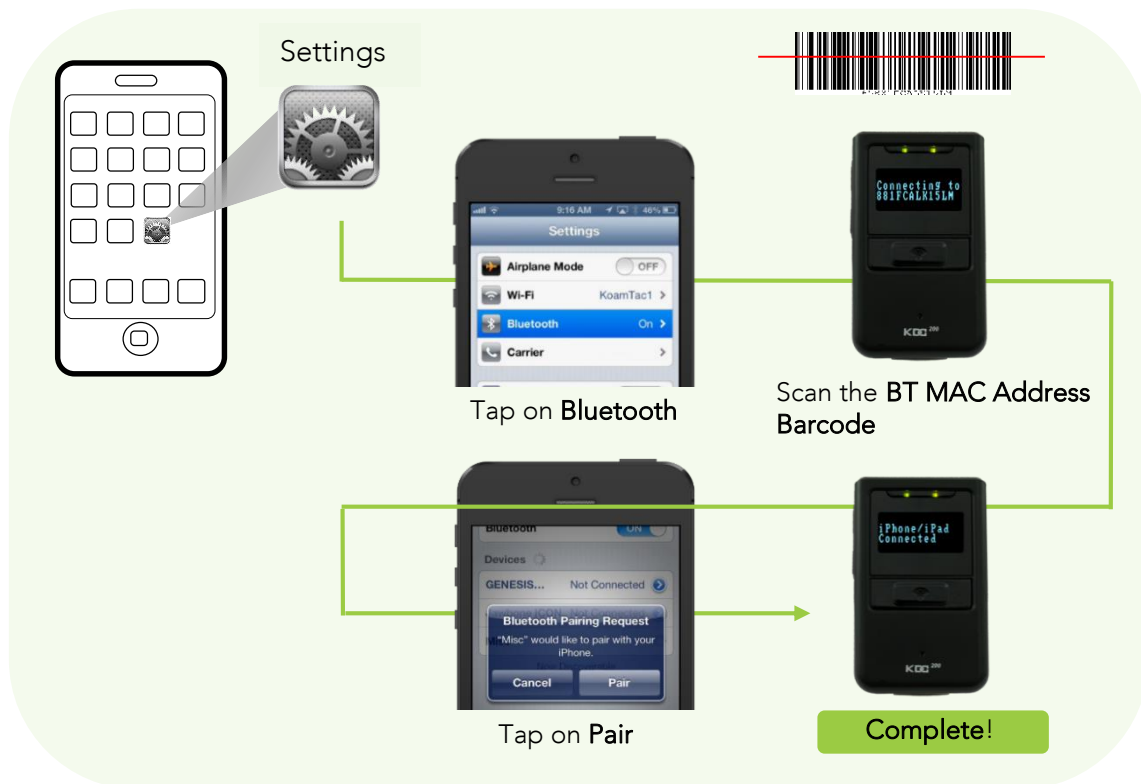


Figure 6 - Connecting KDC with a smart phone by scanning Bluetooth MAC Address Barcode

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

### Windows 7 & 8

#### WARNING: DO NOT CONNECT KDC TO USB PORT PRIOR TO DRIVER INSTALLATION

1. Insert KOAMTAC Installation CD into the computer's CD drive.
2. Click **Start** icon then **My Computer** icon. A list of devices on the computer will be displayed, including the disk drive containing the KOAMTAC Installation CD.
3. Click on the KOAMTAC Installation CD icon, then the Setup directory. Click on the PC\_Setup.exe file, which will execute the KTSync Setup Wizard.

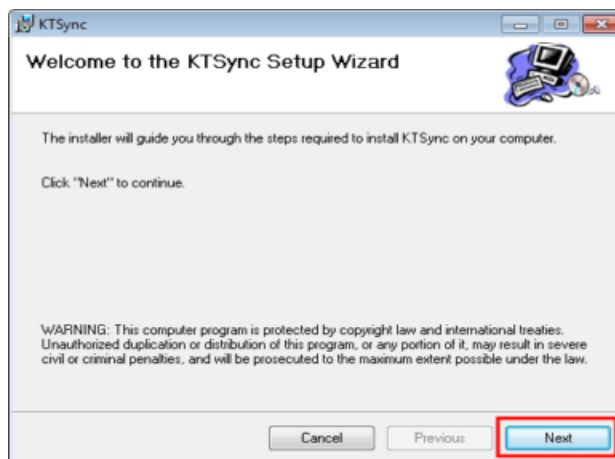
#### Note

- If the KTSync Setup Wizard locates an older version of KTSync on the computer, the user 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 there are any problems, please refer to [2.3 Manual Installation](#).

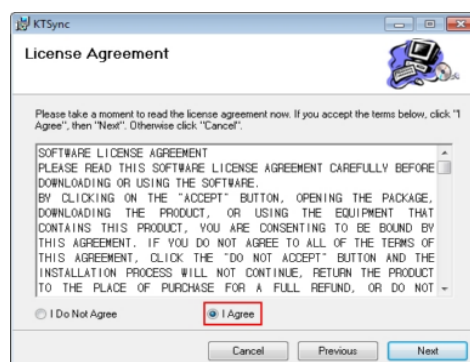
### KTSync Setup Wizard

To install KTSync, follow the steps shown in the images below.

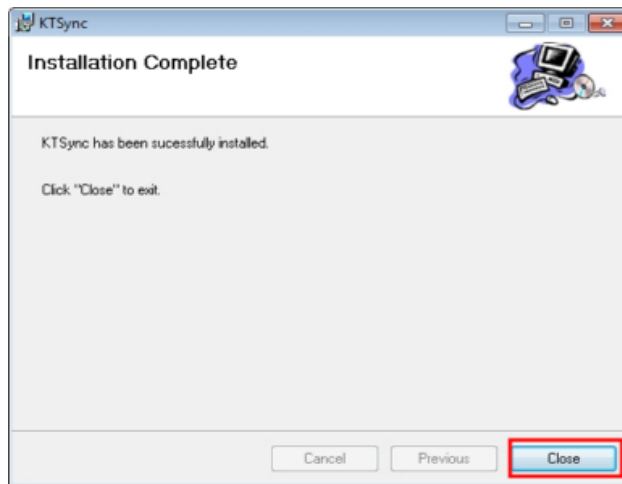
1. In the KTSync Setup Wizard window, click **Next**.



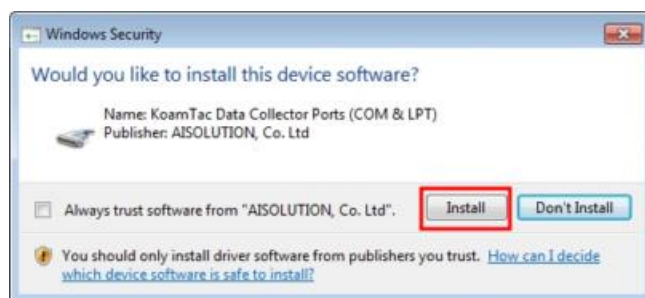
2. In the License Agreement window, select "I Agree" and click **Next**.



3. In the KTSync Installation Complete window, click **Close** and wait for the Device Driver Installation Wizard.



4. In the Windows Security window, click **Install** to complete installation.



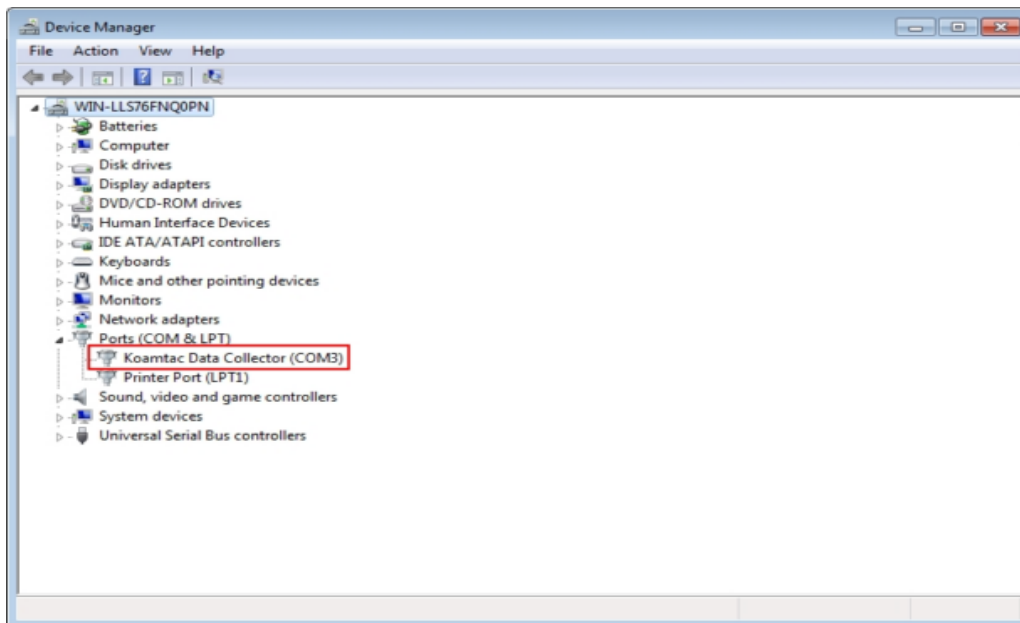
## Connect KDC to Computer

Using the USB cable included with the KDC or built-in swing out USB connector, follow the directions below.

1. Connect KDC to PC.
2. Wait until the computer beeps and/or displays the message *Found New Hardware*.

## Verify COM Port Address

- The installed COM Port may be verified in Device Manager.



## Android

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

## Blackberry

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

## iPad/iPhone/iPod Touch

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





# 3. Operating your KDC

## 3.1 Getting Started

### Attaching a Lanyard or Hand Strap to a KDC

To prevent possible damage to the KDC, we STRONGLY recommend wearing it around the neck or hand, using the included lanyard or hand strap. In addition, the user should not swing the KDC by its lanyard or hand strap. Impact with another object may cause the KDC to malfunction or damage.

To attach a lanyard:

	KDC20/30	KDC100/200/300/350/400
<b>1</b> Fit the thin end of the Lanyard through the pillar of the KDC.		
<b>2</b> Guide the thick end of strap through the thin loop.		
<b>3</b> Pull the strap tight to secure.		

## Charge KDC Battery

Prior to using the KDC, the user should charge the battery. Follow the instructions below.

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

KDC100	KDC20/200	KDC30/250/300	KDC350	KDC400
2 Hours	2 Hours	4 Hours	5 Hours	5 Hours

Table 2 - Number of hours required to fully charge a 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 deliver the best performance in these diverse environments, the KDC is designed to be configured quickly and easily.

However, to perform at its optimum level, the KDC must be configured properly. Until the user is familiar with the KDC configuration settings, it is recommended that the user DOES NOT modify the KDC settings. The KDC may be configured by using three different methods, which are explained in [Section 3.3 – KDC Menus](#), [Chapter 5 – Synchronization](#), and [Appendix C/D – Special Barcodes](#).

### CONFIGURATION METHODS FOR THE KDC100/200/250/300/350

- KDC Menu
- KTSync® Software
- Special Barcodes



Figure 7 - Location of KDC Menu and use of buttons (KDC100/200/250/300)

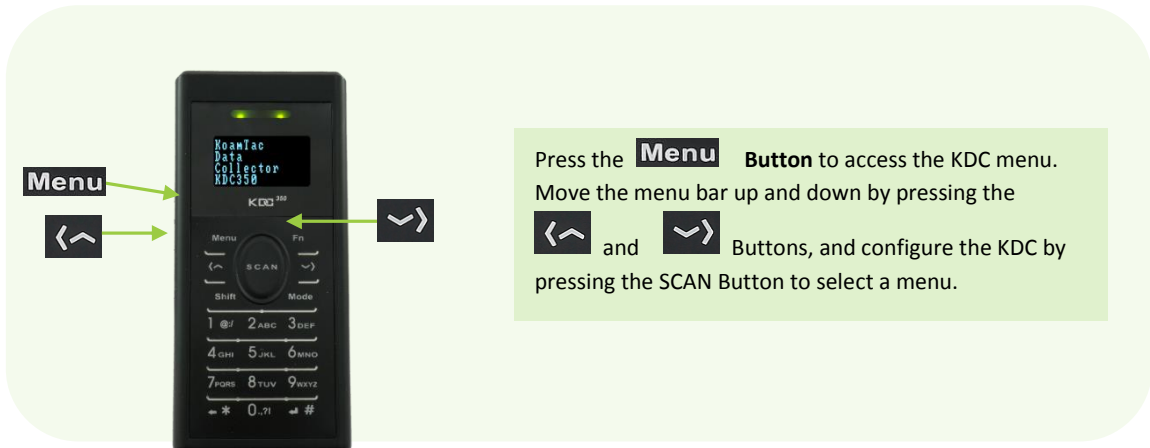


Figure 8 - Location and use of buttons on a keypad (KDC350)

#### CONFIGURATION METHODS FOR THE KDC20/30/400

- KTSync® Software
- Special Barcodes

## 3.2 Basics

### Reading Barcodes

To read a barcode using the KDC, simply point the KDC at a barcode and press the scan button. Be sure to point the scan engine window at the barcode, not at the user's face, and make sure to position the light beam on the barcode.

If a barcode has been successfully scanned, the user will hear one short beep and the LEDs will illuminate green. The scanned barcode data will be displayed on the KDC screen, along with the scan time and battery level. *Depending on the configuration of the KDC, other information may also be displayed.*

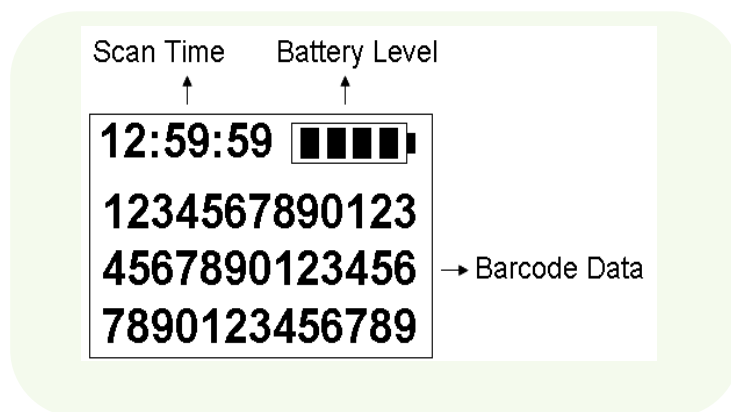


Figure 9 - KDC Display

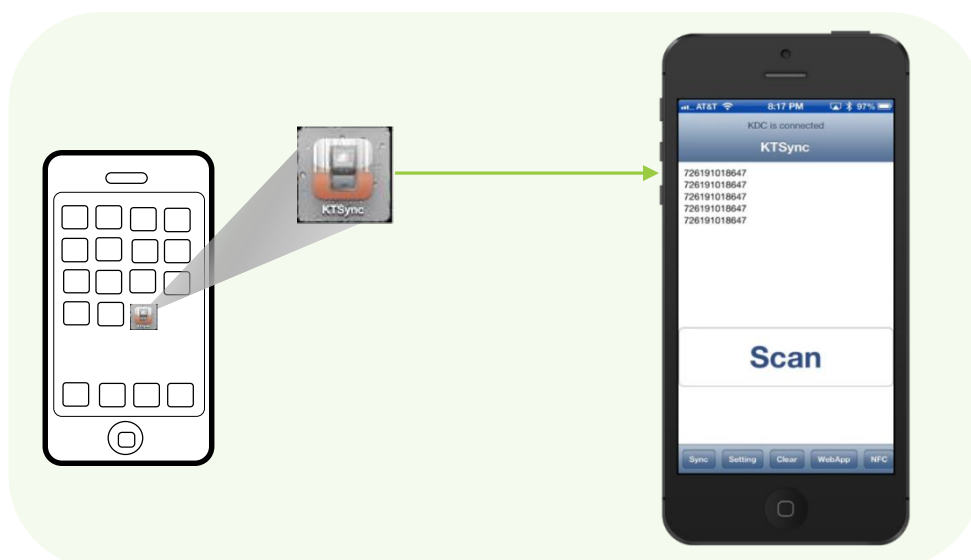


Figure 10 - Scanning barcodes using KTSync

If scanning was unsuccessful, the user will hear two short beeps, the LEDs will illuminate red, and the message *Failed reading...* will display. If this is the case, the user should point the KDC at the barcode and press the scan button while trying the following suggestions:

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

### Read Barcodes with GPS Coordinates (KDC350G)

The KDC350G may add GPS coordinates after the barcode data. To do so, the user may follow the below instructions.

#### Note

Because of the characteristics of GPS, this function is only available when outdoors.

1. Go to **GPS Power** in GPS Menu and select **Enable**.
2. Check to see if the KDC is successfully acquiring GPS data by selecting **Acquire Test** in GPS Menu.

When the user selects the Acquire Test, an *'Acquiring'* message will appear on the screen. If this is the first test, check to make sure the *'Acquired'* message appears within 90 seconds of acquiring GPS signal.

3. Go to **System Config** in the KDC Menu and select **GPS data** in **Display Format**.
4. After finishing the configuration, scan a barcode as explained in **3.2.1 Reading Barcodes**.

When the user has successfully scanned a barcode, the barcode data and GPS coordinate will appear on the KDC screen.

For more information, refer to 3.3 Menu - **GPS Config (350G)**.

## Reading NFC Tags (KDC350N/400N)

1. Enable the **NFC Power** option in the **NFC Config** menu.
2. Touch the NFC tag to the back of the KDC350N/400N case, and make sure the tag and case are within 5cm of each other.



*Figure 11 - Location for reading NFC Tag*

3. The KDC will show the NFC tag UID and the user will hear a short beep if it has been read successfully.
4. The KDC350N/400N may process "Mifare Ultra Light" and "Mifare Ultra Light C" data only. Other types of tags should be processed in the host application.

## Reading HF RFID Tags (KDC450)

The KDC450 may virtually read any ISO/IEC 14443 A or B compliant smartcards, or ISO/IEC 15693 compliant HF RFID tags.

To read a HF RFID tag, touch the RFID card to the back of the KDC450 case, and make sure the tag and case are within 5cm of each other. The user will hear a short beep if it has been read successfully.

## Inputting Data by Using a Keypad (KDC350)

The KDC350 Enables users to input barcode data by using its keypad. The user may switch between Num mode and Abc mode by using the Mode button.

To switch between uppercase and lowercase letters, the user may press the Shift button while in Abc mode. To save the data input, press the Enter or SCAN button. For data input, press the Menu button. Refer to [1.4 Input data by using a keypad \(KDC350\)](#) for more detailed information about the process.

## Synchronizing data to the host device

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

### 3.3 KDC Menu

Top Menu	Sub Menu	Options	KDC20	KDC30	KDC100	KDC200	KDC250	KDC300	KDC350L (opticon)
<b>KDC Mode</b>	Normal		Default	Default	Default	Default	Default	Default	Default
	Application		N/A	N/A	Custom Application	Custom Application	Custom Application	Custom Application	Custom Application
<b>View Data</b>	View/Delete		N/A	N/A	View/Delete Data	View/Delete Data	View/Delete Data	View/Delete Data	View/Delete Data
<b>Set Barcodes (20/100/200/250/350L/KD C410/KD C415)</b>	EAN13	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
	EAN8	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
	UPCA	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
	UPCE	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
	CODE39	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
	ITF14	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
	CODE128	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
	I2of5	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
	CODABAR	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
	GS1-128	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
	CODE93	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
	CODE35	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
	BooklandEAN	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled
	EAN13withAddon	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled
	EAN8withAddon	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled
UPCAwithAddon	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled	
UPCEwithAddon	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled	
<b>Set Barcodes (30/300/350C/420/425/450)</b>	1D Symbology	Codabar	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		Code 11	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		Code 32	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		Code 39	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		Code 93	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		Code 128	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		EAN-8	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		EAN-13	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		GS1 Composit	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		I2of5	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		Matrix 2of5	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		MSI	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		Plessey	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		PosiCode	N/A	N/A	N/A	N/A	N/A	Enabled	N/A
		GS1 Omni	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		GS1 Limited	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		GS1 Expanded	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		S2of5 Ind	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		S2of5 IATA	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		TLC39	N/A	N/A	N/A	N/A	N/A	Enabled	N/A
		Telepen	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		Trioptic	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		UPCA	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
	UPCE0	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A	
	UPCE1	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A	
	2D Symbology	AztecCode	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		AztecRunes	N/A	N/A	N/A	N/A	N/A	Enabled	N/A
		CodablockF	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		Code16K	N/A	N/A	N/A	N/A	N/A	Enabled	N/A
		Code49	N/A	N/A	N/A	N/A	N/A	Enabled	N/A
		DataMatrix	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		MaxiCode	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		MicroPDF	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
PDF417		N/A	Enabled	N/A	N/A	N/A	Enabled	N/A	
QRCode		N/A	Enabled	N/A	N/A	N/A	Enabled	N/A	
HanXin Code	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A		

	Postal Codes	Postnet	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		PlanetCode	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		UK Post	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		Mayada Post	N/A	N/A	N/A	N/A	N/A	Enabled	N/A
		Kix Post	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		Australia Post	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		Japan Post	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		China Post	N/A	N/A	N/A	N/A	N/A	Enabled	N/A
	OCR	Korea Post	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		OCR Off	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		OCR A	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		OCR B	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		OCR USC	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		OCR MICR	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
	OCR SEMI	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A	
<b>Barcode Options (20/100 /200/250 /350L/410/415)</b>	CodaBar_NoStartStop Chars	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled
	UPCE_as_UPCA	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled
	EAN8_as_EAN13	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled
	UPCE_as_EAN13	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled
	ReturnCheckDigit	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled
	VerifyCheckDigit	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled
	UPCA_as_EAN13	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled
	I2of5_VerifyCheckDigit	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled
	Code39_VerifyCheckDigit	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled
	I2of5_ReturnCheckDigit	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled
	Code39_ReturnCheckDigit	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	Disabled	N/A	Disabled
	UPCE_ReturnCheckDigit	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
	UPCA_ReturnCheckDigit	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
	EAN8_ReturnCheckDigit	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled
EAN13_ReturnCheckDigit	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	Enabled	N/A	Enabled	
<b>Barcode Options (30/300 /350C /420/425 /450)</b>	Codabar	Tx StartStop(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		Check Digit(DoNotVerify/Verify/DONotTX/VerifyDoTx)	N/A	DoNotVerify	N/A	N/A	N/A	DoNotVerify	N/A
		Concatenate(Disabled/Enabled/Required)	N/A	N/A	N/A	N/A	N/A	Enabled	N/A
	Code39	Tx StartStop(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		Check Digit(DoNotVerify/Verify/DONotTX/VerifyDoTx)	N/A	DoNotVerify	N/A	N/A	N/A	DoNotVerify	N/A
		Append(Enabled/Disabled)	N/A	N/A	N/A	N/A	N/A	Disabled	N/A
		Full ASCII(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
	I2of5	Check Digit(DoNotVerify/Verify/DONotTX/VerifyDoTx)	N/A	DoNotVerify	N/A	N/A	N/A	DoNotVerify	N/A
	Code11	Check Digit(2 digits/1 digit)	N/A	2 digits	N/A	N/A	N/A	2 digits	N/A
	Code128	Concatenate(Disabled/Enabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
	Telepen	Output(Original/AIM)	N/A	Always AIM	N/A	N/A	N/A	AIM	N/A
	UPCA	VerifyChkDgt(Enabled/Disabled)	N/A	Always Enabled	N/A	N/A	N/A	Enabled	N/A
		NumberSys(Enabled/Disabled)	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A



		2DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		5DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		Req. Addenda(Enabled/Disabled)	N/A	N/A	N/A	N/A	N/A	Disabled	N/A
		Sep. Addenda(Enabled/Disabled)	N/A	N/A	N/A	N/A	N/A	Enabled	N/A
		Coupon Code(Enabled/Disabled)	N/A	N/A	N/A	N/A	N/A	Enabled	N/A
	UPCE	Expand(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		Req. Addenda(Enabled/Disabled)	N/A	N/A	N/A	N/A	N/A	Disabled	N/A
		Sep. Addenda(Enabled/Disabled)	N/A	N/A	N/A	N/A	N/A	Enabled	N/A
		Check Digit(Enabled/Disabled)	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		NumberSys(Enabled/Disabled)	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		2DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		5DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
	EAN-13 EAN-8	VerifyChkDgt(Enabled/Disabled)	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		2DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		5DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		Req. Addenda(Enabled/Disabled)	N/A	N/A	N/A	N/A	N/A	Disabled	N/A
		Sep. Addenda(Enabled/Disabled)	N/A	N/A	N/A	N/A	N/A	Enabled	N/A
		ISBN Trans.(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		VerifyChkDgt(Enabled/Disabled)	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
		2DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		5DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		Req. Addenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
		Sep. Addenda(Enabled/Disabled)	N/A	Enabled	N/A	N/A	N/A	Enabled	N/A
	MSI	Tx CheckChar(Enabled/Disabled)	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
	PosiCode	A and B/A&B LimitedA/A&B LimitedB	N/A	N/A	N/A	N/A	N/A	A&B LimitedB	N/A
	GS1	UPCEAN Ver.(Enabled/Disabled)	N/A	N/A	N/A	N/A	N/A	Disabled	N/A
		GS1 Emulation(No Emulate/GS1 128 Emul/GS1 Emulate)	N/A	N/A	N/A	N/A	N/A	No Emulate	N/A
	PostNet	Tx CheckChar(Enabled/Disabled)	N/A	N/A	N/A	N/A	N/A	Disabled	N/A
	PlanetCode	Tx CheckChar(Enabled/Disabled)	N/A	N/A	N/A	N/A	N/A	Disabled	N/A
<b>Scan Options</b>	Scan Angle	Narrow/Wide	Wide	N/A	Wide	Wide	Wide	N/A	Wide
	Filter	Normal/High	Normal	N/A	Normal	Normal	Normal	N/A	Normal
	Time Out	.5 seconds to 10 seconds	2 second(s)	2 second(s)	2 second(s)	2 second(s)	2 second(s)	2 second(s)	2 second(s)
	Min. Barcode Length	2 to 36 characters	4 chars	N/A	4 chars	4 chars	4 chars	N/A	4 chars
	Min. Barcode Length	2 to 48 characters	N/A	N/A	N/A	N/A	N/A	4 chars	N/A
	Security Level	1 to 4 level	2 level	N/A	2 level	2 level	2 level	N/A	2 level
	Image Capture	Enabled/Disabled	N/A	N/A	N/A	N/A	N/A	Disabled	N/A
	Auto Trigger	Enabled/Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
Reread Delay	Continuous, Short, Medium, Long, Extra Long	Medium	Medium	Medium	Medium	Medium	Medium	Medium	

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

		^+Character, Replace to							
<b>BT Service</b>	Power	Enabled/Disabled	Enabled	Enabled	N/A	Enabled	Enabled	Enabled	Enabled
	Pairing	Pairing neighboring Bluetooth devices			N/A				
	Discovering	Discovering neighboring Bluetooth devices			N/A				
	Connecting to HID Sync	View Connect to Bluetooth device			N/A				
<b>USB Config-USB Serial Mode (M model)</b>	USB Mode	USB Serial/USB Disk/USB HID	USB Serial	USB Serial	USB Serial	USB Serial	USB Serial	USB Serial	USB Serial
<b>USB Config-USB Disk Mode (M model)</b>	USB Mode	USB Serial/USB Disk/USB HID	N/A	N/A	USB Disk	USB Disk	USB Disk	USB Disk	USB Disk
	Disk Format	Format KDC USB Disk	N/A	N/A					
	Data Format	Data,DataTime,DataType,DataTimeType	N/A	N/A	Data	Data	Data	Data	Data
<b>USB Config-USB HID (M model)</b>	USB Mode	USB Serial/USB Disk/USB HID	USB HID	USB HID	USB HID	USB HID	USB HID	USB HID	USB HID
<b>NFC Config (N model)</b>	NFC Power	Enabled/Disabled	N/A	N/A	N/A	N/A	N/A	N/A	Enabled
	Data Format	Barcode only/Packet Data	N/A	N/A	N/A	N/A	N/A	N/A	Packet Data
	UID Only	Enabled/Disabled	N/A	N/A	N/A	N/A	N/A	N/A	Disabled
<b>GPS Config (G model)</b>	GPS Power	Enabled/Disabled	N/A	N/A	N/A	N/A	Disabled	N/A	Disabled
	Power Mode	Normal/Power Save	N/A	N/A	N/A	N/A	Normal	N/A	Normal
	Bypass Data	Enabled/Disabled	N/A	N/A	N/A	N/A	Disabled	N/A	Disabled
	Acquire Test		N/A	N/A	N/A	N/A		N/A	
	Reset GPS		N/A	N/A	N/A	N/A		N/A	
<b>System Config</b>	Memory Size(3.0 only)	0.5/3.5, 1/3, 2/2, 3/1, 4/0	N/A	N/A	0.5M/3.5M	0.5M/3.5M	0.5M/3.5M	0.5M/3.5M	0.5M/3.5M
	Memory Status	No. of Stored Barcodes							
		Free Memory Available							
	Reset Memory	Memory(Empties Data)							
		Application Memory							
		BT Registry(KDC100 Not use)							
	Auto Erase	Enabled/Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
	Sleep Time out	Disabled, 1sec to 10minute(s)	5 second(s)	5 second(s)	5 second(s)	5 second(s)	5 second(s)	5 second(s)	5 second(s)
	Date / Time	YYYY:MM:DD & HH:MM:SS							
	Battery	% of Battery Charge Available							
	Version	Firmware Version & Serial No.							
	Button Lock	Enabled/Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
	Beep Alert /Beep Sound	Enabled/Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled
	Beep Alert /Power On Beep	Enabled/Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled
	Beep Alert /Beep On Connect	Enabled/Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled
	Beep Alert /Beep On Scan	Enabled/Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled
	Beep Volume	Low/High	Low	Low	Low	Low	Low	Low	Low
	Mfi (i-chip installed)	Enabled/Disabled	Enabled	Enabled	N/A	Enabled	Enabled	Enabled	Enabled
	Auto Exit	Enabled/Disabled	N/A	N/A	Enabled	Enabled	Enabled	Enabled	Enabled
	Port Status	Enabled/Disabled	N/A	N/A	Enabled	Enabled	Enabled	Enabled	Enabled
Display Format	Time & Battery / Type & Time / Type & Battery / Memory Status / GPS Data(KDC250 only)/Barcode Only	N/A	N/A	Time & Battery	Time & Battery	Time & Battery	Time & Battery	Time & Battery	

	Menu Barcode	Enabled/Disabled	N/A	Disabled	N/A	N/A	N/A	Disabled	N/A
	Scrolling	Enabled/Disabled	N/A	N/A	Enabled	Enabled	Enabled	Enabled	Enabled
	Brightness	1 to 15 level(8 level)	N/A	N/A	8 level	8 level	8 level	8 level	8 level
	Factory Default	Restores Default Settings							
<b>MSR Config</b>	Data Format	MSR Data Only	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Packet Data	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Use Track1		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Use Track2		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Use Track3		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Beep on error reading	Enabled/Disabled	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Encrypt MSR Data	Enabled/Disabled	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	AES Key Length	128bit/192bit/256bit	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Card Type	ISO/OTHER 1/AAMVA	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Track Separator	None/Space/Comma/ Semicolon/CR/LF/CR &LF/Tab	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Attach Start/End Sentinel		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Partial Data Start Position		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Partial Data Length		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Partial Data Action	Erase/Select	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Top Menu	Sub Menu	Options	KDC350L (N4303/SE96 0)	KDC350C	KDC410	KDC415	KDC420	KDC425	KDC430	KDC450
<b>KDC Mode</b>	Normal		Default	Default	Default	Default	Default	Default	Default	Default
	Application		Custom Application	Custom Application	N/A	N/A	N/A	N/A	N/A	N/A
<b>View Data</b>	View/Delete		View/Delete Data	View/Delete Data	N/A	N/A	N/A	N/A	N/A	N/A
<b>Set Barcodes (20/100/200/250 /350L/KDC410/K DC415)</b>	EAN13	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A
	EAN8	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A
	UPCA	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A
	UPCE	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A
	CODE39	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A
	ITF14	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A
	CODE128	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A
	I2of5	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A
	CODABAR	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A
	GS1-128	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A
	CODE93	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A
	CODE35	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A
	BooklandEAN	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A
	EAN13withAdd on	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A
	EAN8withAddo n	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A
UPCAwithAddo n	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A	
UPCEwithAddo n	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A	
<b>Set Barcodes (30/300/350C/ 420/425/450)</b>	1D Symbology	Codabar	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		Code 11	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		Code 32	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		Code 39	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		Code 93	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		Code 128	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		EAN-8	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		EAN-13	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		GS1 Composi t	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		I2of5	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		Matrix 2of5	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		MSI	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		Plessey	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		PosiCode	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		GS1 Omni	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		GS1 Limited	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		GS1 Expanded	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		S2of5 Ind	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		S2of5 IATA	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		TLC39	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
	Telepen	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
	Trioptic	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
	UPCA	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
	UPCE0	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
	UPCE1	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
	2D Symbology	AztecCode	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		AztecRunes	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		CodablockF	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		Code16K	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		Code49	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		DataMatrix	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		MaxiCode	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		MicroPDF	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
PDF417		N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
QRCode		N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
HanXin Code		N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
Postal Codes		Postnet	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
		PlanetCode	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
	UK Post	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
	Mayada Post	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	

		Kix Post	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
		Australia Post	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
		Japan Post	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
		China Post	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
		OCR	Korea Post	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
			OCR Off	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled
			OCR A	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled
			OCR B	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled
			OCR USC	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled
			OCR MICR	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled
			OCR SEMI	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled
<b>Barcode Options (20/100/200/250 /350L/410/415)</b>	CodaBar_NoStartStopChars	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A	
	UPCE_as_UPCA	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A	
	EAN8_as_EAN13	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A	
	UPCE_as_EAN13	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A	
	ReturnCheckDigit	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A	
	VerifyCheckDigit	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A	
	UPCA_as_EAN13	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A	
	I2of5_VerifyCheckDigit	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A	
	Code39_VerifyCheckDigit	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A	
	I2of5_ReturnCheckDigit	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A	
	Code39_ReturnCheckDigit	Enabled/Disabled	Disabled	N/A	Disabled	Disabled	N/A	N/A	N/A	N/A	
	UPCE_ReturnCheckDigit	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A	
	UPCA_ReturnCheckDigit	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A	
	EAN8_ReturnCheckDigit	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A	
EAN13_ReturnCheckDigit	Enabled/Disabled	Enabled	N/A	Enabled	Enabled	N/A	N/A	N/A	N/A		
<b>Barcode Options (30/300/350C/42 0/425/450)</b>	Codabar	Tx StartStop(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		Check Digit(DoNotVerify/VerifyDONotTX/VerifyDoTx)	N/A	DoNotVerify	N/A	N/A	DoNotVerify	DoNotVerify	N/A	DoNotVerify	
		Concatenate(Disabled/Enabled/Required)	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
	Code39	Tx StartStop(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		Check Digit(DoNotVerify/VerifyDONotTX/VerifyDoTx)	N/A	DoNotVerify	N/A	N/A	DoNotVerify	DoNotVerify	N/A	DoNotVerify	
		Append(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		Full ASCII(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
	I2of5	Check Digit(DoNotVerify/VerifyDONotTX/VerifyDoTx)	N/A	DoNotVerify	N/A	N/A	DoNotVerify	DoNotVerify	N/A	DoNotVerify	
	Code11	Check Digit(2 digits/1 digit)	N/A	2 digits	N/A	N/A	2 digits	2 digits	N/A	2 digits	
	Code128	Concatenate(Disabled/Enabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
	Telepen	Output(Original/AIM)	N/A	AIM	N/A	N/A	AIM	AIM	N/A	AIM	
	UPCA	VerifyChkDgt(Enabled/Disabled)	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
		NumberSys(Enabled/Disabled)	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
		2DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		5DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		Req. Addenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		Sep. Addenda(Enabled/Disabled)	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
Coupon Code(Enabled/Disabled)		N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled		

	UPCE	Expand(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		Req. Addenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		Sep. Addenda(Enabled/Disabled)	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
		Check Digit(Enabled/Disabled)	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
		NumberSys(Enabled/Disabled)	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
		2DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		5DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
	EAN-13	VerifyChkDgt(Enabled/Disabled)	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
		2DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		5DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		Req. Addenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		Sep. Addenda(Enabled/Disabled)	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
		ISBN Trans.(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
	EAN-8	VerifyChkDgt(Enabled/Disabled)	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
		2DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		5DgtAddenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		Req. Addenda(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		Sep. Addenda(Enabled/Disabled)	N/A	Enabled	N/A	N/A	Enabled	Enabled	N/A	Enabled	
	MSI	Tx CheckChar(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
	PosiCode	A and B/A&B LimitedA/A&B LimitedB	N/A	A&B LimitedB	N/A	N/A	A&B LimitedB	A&B LimitedB	N/A	A&B LimitedB	
	GS1	UPCEAN Ver.(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
		GS1 Emulation(No Emulate/GS1 128 Emul/GS1 Emulate)	N/A	No Emulate	N/A	N/A	No Emulate	No Emulate	N/A	No Emulate	
	PostNet	Tx CheckChar(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
	PlanetCode	Tx CheckChar(Enabled/Disabled)	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
	<b>Scan Options</b>	Scan Angle	Narrow/Wide	N/A	N/A	Wide	Wide	N/A	N/A	N/A	N/A
		Filter	Normal/High	N/A	N/A	Normal	Normal	N/A	N/A	N/A	N/A
		Time Out	.5 seconds to 10 seconds	2 second(s)	2 second(s)	2 second(s)	2 second(s)	2 second(s)	2 second(s)	N/A	2 second(s)
Min. Barcode Length		2 to 36 characters	4 chars	N/A	4 chars	4 chars	N/A	N/A	N/A	N/A	
Min. Barcode Length		2 to 48 characters	N/A	4 chars	N/A	N/A	4 chars	4 chars	N/A	4 chars	
Security Level		1 to 4 level	2 level	N/A	2 level	2 level	N/A	N/A	N/A	N/A	
Image Capture		Enabled/Disabled	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
Auto Trigger		Enabled/Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	N/A	Disabled	
Reread Delay		Continuous, Short, Medium, Long, Extra Long	Medium	Medium	Medium	Medium	Medium	Medium	N/A	Medium	
Finger Trigger		Enabled/Disabled	Enabled	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Partial Display		Start Position	1	1	N/A	N/A	N/A	N/A	N/A	N/A	
		No. of Char(s)	0 chars	0 chars	N/A	N/A	N/A	N/A	N/A	N/A	
	Action	Select	Select	N/A	N/A	N/A	N/A	N/A	N/A		
<b>Data Process</b>	Wedge / Store	Wedge Only									
		Wedge & Store Always	Default	Default	Default	Default	Default	Default	Default	Default	
		Store Only									
		Save if Sent									
		Save if Not Sent									
Data Format	Barcode only	Default	Default	Default	Default	Default	Default	N/A	Default		

		Packet Data								
	Data Editor/Prefix	Delete	Delete	Delete	Delete	Delete	Delete	Delete	N/A	Delete
	Data Editor/Suffix	Delete	Delete	Delete	Delete	Delete	Delete	Delete	N/A	Delete
	Data Editor/AIM ID	None/In Prefix/In Suffix	None	None	None	None	None	None	N/A	None
	Data Editor/Partial Data	Start Position	1	1	1	1	1	1	N/A	1
		No. of Char(s)	0 chars	0 chars	0 chars	0 chars	0 chars	0 chars	N/A	0 chars
		Action	Select	Select	Select	Select	Select	Select	N/A	Select
	Handshake	Enable/Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	N/A	Disabled
	Terminator	None, CR, LF, CR+LF, Tab, Right Arrow, Left Arrow, Down Arrow, Up Arrow	CR+LF	CR+LF	CR+LF	CR+LF	CR+LF	CR+LF	CR+LF	CR+LF
	Chk Duplicate	Enabled/Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	N/A	Disabled
	Enter Key	Enabled/Disabled	Disabled	Disabled	N/A	N/A	N/A	N/A	N/A	N/A
<b>BT Config</b>	ConnectDevice (Non Mfi mode)	SPP	Default	Default	Default	Default	Default	Default	Default	Default
		HID iOS								
		SPP2.0								
		HID normal								
	ConnectDevice (Mfi mode)	SPP								
		MFi	Default	Default	Default	Default	Default	Default	Default	Default
	Auto Connect	Enabled/Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
	Auto Reconnect	Enabled/Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
	Auto Power On	Enabled/Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
	Auto Power On/Power On Time	disabled, 1sec to 10second(s)	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
	Auto Power Off	Enabled/Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
	Auto Power Off/Beep Warning	Enabled/Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
	Auto Power Off/Power Off Time	1 to 30 minutes	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
	PowerOff Msg	Enabled/Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
	MAC Address									
	BT FW Version									
	WakeUp Nulls	Enabled/Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
	Connect Alert	Enabled/Disabled	Disabled	Disabled	N/A	N/A	N/A	N/A	N/A	N/A
	BT Toggle	Enabled/Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled
	DisconnectBtn	Enabled/Disabled	Enabled	Enabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
	HID AutoLock	disabled,1,2,3,4,5,10,15 minutes	1 minutes	1 minutes	1 minutes	1 minutes	1 minutes	1 minutes	1 minutes	1 minutes
	HID Keyboard	US,German,French,Italian,Spanish	US	US	US	US	US	US	US	US
	HID Delay/Initial	Disabled, 1,2,3,5,10 secs	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
HID Delay/Inter char	Disabled,10, 20, 30, 50, 100msec	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	
HID Ctrl Char	Disabled, Alt+Numpad, ^+Character, Replace to	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	
<b>BT Service</b>	Power	Enabled/Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled
	Pairing									
	Discovering									
	Connecting to									
	HID Sync									
<b>USB Config-USB Serial Mode (M model)</b>	USB Mode	USB Serial/USB Disk/USB HID	USB Serial	USB Serial	USB Serial	USB Serial	USB Serial	USB Serial	USB Serial	USB Serial
<b>USB Config-USB Disk Mode (M model)</b>	USB Mode	USB Serial/USB Disk/USB HID	USB Disk	USB Disk	N/A	N/A	N/A	N/A	N/A	N/A
	Disk Format	Format KDC USB Disk			N/A	N/A	N/A	N/A	N/A	N/A
	Data Format	Data,DataTime, DataType,DataTimeType	Data	Data	N/A	N/A	N/A	N/A	N/A	N/A
<b>USB Config-USB HID Mode (M model)</b>	USB Mode	USB Serial/USB Disk/USB HID	USB HID	USB HID	N/A	N/A	N/A	N/A	N/A	N/A
<b>NFC Config (N model)</b>	NFC Power	Enabled/Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	N/A	N/A
	Data Format	Barcode only/Packet Data	Packet Data	Packet Data	Packet Data	Packet Data	Packet Data	Packet Data	N/A	N/A



	UID Only	Enabled/Disabled	N/A	N/A	N/A	N/A	N/A	Disabled	N/A	N/A	
<b>GPS Config (G mode)</b>	GPS Power	Enabled/Disabled	Disabled	Disabled	N/A	N/A	N/A	N/A	N/A	N/A	
	Power Mode	Normal/Power Save	Normal	Normal	N/A	N/A	N/A	N/A	N/A	N/A	
	Bypass Data	Enabled/Disabled	Disabled	Disabled	N/A	N/A	N/A	N/A	N/A	N/A	
	Acquire Test				N/A	N/A	N/A	N/A	N/A	N/A	
	Reset GPS				N/A	N/A	N/A	N/A	N/A	N/A	
<b>System Config</b>	Memory Size(3.0 only)	0.5/3.5, 1/3, 2/2, 3/1, 4/0	0.5M/3.5M	0.5M/3.5M	N/A	N/A	N/A	N/A	N/A	N/A	
	Memory Status	No. of Stored Barcodes									
		Free Memory Available									
	Reset Memory	Memory(Empties Data)									
		Application Memory				N/A	N/A	N/A	N/A	N/A	
		BT Registry(KDC100 Not use)				N/A	N/A	N/A	N/A	N/A	
	Auto Erase	Enabled/Disabled	Disabled	Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	
	Sleep Timeout	Disabled, 1sec to 10minute(s)	5 second(s)	5 second(s)	5 second(s)	5 second(s)	5 second(s)	5 second(s)	5 second(s)	5 second(s)	
	Date / Time	YYYY:MM:DD & HH:MM:SS									
	Battery	% of Battery Charge Available									
	Version	Firmware Version & Serial No.									
	Button Lock	Enabled/Disabled	Disabled	Disabled	N/A	N/A	N/A	N/A	N/A	N/A	
	Beep Alert /Beep Sound	Enabled/Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	
	Beep Alert /Power On Beep	Enabled/Disabled	Enabled	Enabled							
	Beep Alert /Beep On Connect	Enabled/Disabled	Enabled	Enabled							
	Beep Alert /Beep On Scan	Enabled/Disabled	Enabled	Enabled							
	Beep Volume	Low/High	Low	Low	Low	Low	Low	Low	Low	Low	
	Mfi (i-chip installed)	Enabled/Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	
	Auto Exit	Enabled/Disabled	Enabled	Enabled	N/A	N/A	N/A	N/A	N/A	N/A	
	Port Status	Enabled/Disabled	Enabled	Enabled	N/A	N/A	N/A	N/A	N/A	N/A	
	Display Format	Time & Battery / Type & Time / Type & Battery / Memory Status / GPS Data(KDC250 only)/Barcode Only	Time & Battery	Time & Battery	N/A	N/A	N/A	N/A	N/A	N/A	
	Menu Barcode	Enabled/Disabled	N/A	Disabled	N/A	N/A	Disabled	Disabled	N/A	Disabled	
	Scrolling	Enabled/Disabled	Enabled	Enabled	N/A	N/A	N/A	N/A	N/A	N/A	
Brightness	1 to 15 level(8 level)	8 level	8 level	N/A	N/A	N/A	N/A	N/A	N/A		
Factory Default	Restores Default Settings										
<b>MSR Config</b>	Data Format	MSR Data Only	N/A	N/A	N/A	Default	N/A	Default	Default	N/A	
		Packet Data	N/A	N/A	N/A		N/A			N/A	
	Use Track1		N/A	N/A	N/A	Yes	N/A	Yes	Yes	N/A	
	Use Track2		N/A	N/A	N/A	Yes	N/A	Yes	Yes	N/A	
	Use Track3		N/A	N/A	N/A	Yes	N/A	Yes	Yes	N/A	
	Beep on error reading	Enabled/Disabled	N/A	N/A	N/A	Disabled	N/A	Disabled	Disabled	N/A	
	Encrypt MSR Data	Enabled/Disabled	N/A	N/A	N/A	Disabled	N/A	Disabled	Disabled	N/A	
	AES Key Length	128bit/192bit/256bit	N/A	N/A	N/A	128bit	N/A	128bit	N/A	N/A	
	Card Type	ISO/OTHER 1/AAMVA	N/A	N/A	N/A	ISO	N/A	ISO	ISO	N/A	
	Track Separator	None/Space/Comma/Semicolon/CR /LF/CR&LF/Tab	N/A	N/A	N/A	None	N/A	None	None	N/A	
		Attach Start/End Sentinel		N/A	N/A	N/A	Enabled	N/A	Enabled	Enabled	N/A
		Partial Data Start Position		N/A	N/A	N/A	1	N/A	1	1	N/A
		Partial Data Length		N/A	N/A	N/A	0	N/A	0	0	N/A
		Partial Data Action	Erase/Select	N/A	N/A	N/A	Select	N/A	Select	Select	N/A

Table 3 - KDC Menu

## KDC Mode Menu

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

### Normal

This is the default mode that provides basic barcode scanning. In normal mode, barcode data may be manipulated directly through the KDC or through KTSync® during the synchronization process.

### Application

This mode enables the user to run the user application created by the Application Generation Tool, as described in [Chapter 7 Application Generation](#).

## View Data Menu

This menu option enables the user to view and/or delete barcodes stored in the KDC. In the case of the KDC20/30, you may delete the last scanned barcode by pressing the DELETE button on the right side of the unit.

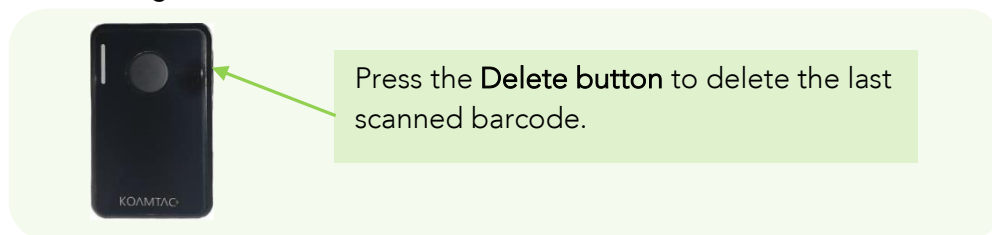


Figure 12 - Delete Function in KDC20/30

## Set Barcodes Menu

This menu lists all the barcode symbologies supported by the KDC and enables the user to select the barcode symbologies to be scanned. For maximum scan performance, you should select only the symbologies that you will be scanning. Please refer to [11. Appendix – 11.1 Symbologies](#) for a detailed listing of symbologies supported by the KDC.

## Code Options Menu

The 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.

## Scan Options Menu

### Scan Angle (Opticon model only)

This option enables the user 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)

This menu enables the user to change the Filter mode from Normal to High for poor quality barcodes. The default is Normal.

### Timeout

In this menu, you may set the interval between scans. The timeout options are from 5 seconds up to 10 seconds. The default is 2 seconds.

### Minimum Barcode Length

This option enables the user to set a barcode length from 2 characters to 36 characters (KDC20/100/200/250/350L/410/415) or 2 characters to 48 characters (KDC30/300/350C/420/450). It is strongly recommended that you maximize the minimum barcode length setting to prevent possible errors.

- The default minimum barcode length of KDC20/100/200/250/350L/410/415 is 4 characters.
- The default minimum barcode length of KDC30/300/350C/420/450 is as follows:

		Minimum (Default)	Maximum (Default)
1D Symbology	Codabar	2(4)	60(60)
	Code 11	1(4)	80(80)
	Code 32		
	Code 39	0(0)	48(48)
	Code 93	0(0)	80(80)
	Code 128	0(0)	80(80)
	EAN-8		
	EAN-13		
	GS1 Composite		
	I2of5	2(4)	80(80)
	Matrix 2of5	1(4)	80(80)
	MSI	4(4)	48(48)
	Plessey	4(4)	48(48)
	PosiCode	2(4)	80(48)
	GS1 Omni		
	GS1 Limited		
	GS1 Expanded	4(4)	74(74)
	S2of5 Ind	1(4)	48(48)
	S2of5 IATA	1(4)	48(48)
	TCL39		
Telepen	1(1)	60(60)	
Trioptic			
UPCA			
UPCE0			
UPCE1			
2D Symbology	AztecCode	1(1)	3750(3750)

	AztecRunes		
	CodablockF	1(1)	2048(2048)
	Code16K	0(1)	160(160)
	Code49	1(1)	81(81)
	DataMatrix	1(1)	1500(1500)
	MaxiCode	1(1)	150(150)
	MicroPDF	1(1)	366(366)
	PDF417	1(1)	2750(2750)
	QRCode	1(1)	3500(3500)
	HanXin Code		
Postal Codes	Postnet		
	PlanetCode		
	UK Post		
	Mayada Post		
	Kix Post		
	Australia Post		
	Japan Post		
	China Post	2(4)	80(80)
Korea Post	2(4)	80(48)	
OCR	OCR Off		
	OCR A		
	OCR B		
	OCR USC		
	OCR MICR		
	OCR SEMI		

Table 4 - KDC30/300/350C/420/450 Minimum Barcode Length

**Image Capture** (KDC30/300/350C/420/425/450)

This option enables the user to capture an image in JPEG format in C:\myData folder. You should enable the image capture option first, and then press the Scan button to start the aiming. A green aiming light will illuminate and an image will be taken upon release of the Scan button. KDC will disable the image capture option if the user presses the scan button for 10 seconds.

**Security Level** (KDC20/100/200/250/350L/410/415)

This menu enables the user 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 readings are more reliable; however, some performance degradation is likely. For poor quality barcodes, we recommend increasing the security level. The default is 2.

**Auto Trigger**

Once enabled, Auto Trigger enables the user to scan a barcode automatically. You may adjust reread delay from continuous to extra-long. Auto Trigger mode always enables the duplicate check option.

**Note**

- *USB cable insertion requirement is removed from FW2.85/86.O and FW 3.02.*
- *You may exit the auto trigger mode by pressing the scan button for 3 seconds.*

### Reread Delay

You may adjust the reread delay from continuous to extra-long. Auto Trigger mode always enables the duplicate check option.

### Partial Display

This option enables the user to display partial data. You may define the start position and number of characters to be displayed.

## Data Process Menu

### Wedge/Store

The KDC provides five modes of data transmission in keyboard wedging mode.

- **Wedge Only:** Barcode data is NOT stored in memory but transmitted to the host.
- **Wedge & Store Only:** Barcode data is stored in memory and transmitted to the host.
- **Store Only:** Barcode data is stored in memory but NOT transmitted to the host.
- **Save if Sent:** If data transmission is successful, barcode data is stored in memory.
- **Save if Not Sent:** If data transmission is NOT successful, barcode data is stored in memory.

### Data Format

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

- **Barcode Only:** The KDC transmits scanned barcodes only. You may incorporate appropriate data transmission error detection and correction mechanisms in this mode. KDC supports a selection of various termination characters for Barcode Only format. You may 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.
  - You may change **Data Format** to **Barcode Only** if you would prefer to use the Barcode Only mode. However, the KDC would stay in Packet Data mode if KTSync is aborted abnormally. If this is the case, you may have to change the KDC back to Barcode Only mode manually.
  - **Barcode Index:** KDC20i/30i/200i/250i/300i/350i/400i add 4 bytes barcode index to maintain last synchronized barcode information.

**Note**

- This optional index would be added if data format is "Packet Data".
- 4 bytes index would be added before "@" when responding to "p" command.
- 4 bytes index plus "@" character would be added after checksum byte if the user scans a barcode and wedges to the host.

**Data Editor**

The KDC provides various data editing options.

- **Prefix** - Enables you to add a prefix to scanned data that may then be stored in the KDC memory or wedged to the host. The Prefix format must be defined in the Data Format menu section of KTSync. The maximum length for a Prefix is 11 characters.

**Note**

This Prefix option is different from the Prefix option in KTSync, which attaches the prefix to data during synchronization.

**Note**

The user may also define the prefix by scanning characters defined in Appendix C. as shown below in the special barcodes.

➔ KDC 20/100/200/250/300/350L/410/415

Prefix Enter Start



Prefix/Suffix Enter Finish



➔ KDC30/350C/420/425

Prefix Enter Start



Prefix/Suffix Enter Finish



**Note**

Users may also delete or display current prefixes by scanning the following special barcodes.

➔ KDC20/100/200/250/300/350L/410/415

Delete Prefix



Display Prefix



➔ KDC30/350C/420/425

Delete Prefix



Display Prefix





- **Suffix** - Enables the user to add a suffix to scanned data, which may then be stored in the KDC or wedged to the host. The suffix must be defined in the Data Format menu section of KTSync. The maximum length for a suffix is 11 characters.

**Note**

- This Suffix option is different from the Suffix option in KTSync, which appends the suffix to data during synchronization.

**Note**

- The user may also define a suffix by scanning characters defined in Appendix C.27 ~ C.28 (KDC350L) and Appendix D.27 ~ D.28 (KDC350C) by scanning the following special barcodes:

➔ KDC20/100/200/250/300/350L/410/415

Suffix Enter Start



Prefix/Suffix Enter Finish



➔ KDC30/350C/420/425

Suffix Enter Start



Prefix/Suffix Enter Finish



**Note**

The user may also delete or display a current suffix by scanning the following special barcodes.

➔ KDC20/100/200/250/300/350L/410/415

Delete Suffix



Display Suffix



➔ KDC30/350C/420/425

Delete Suffix



Display Suffix



- **AIM ID** - Enables the user to add AIM ID to scanned data, which may then be stored in the KDC or wedged to the host. AIM ID must be defined in the Data Format menu section of KTSync. AIM ID is added to the end of a Prefix or Suffix.
- **Partial Data**: Enables the user to store and/or transfer partial data. The 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  $0$  selects 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  $0$  erases 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

The KDC supports various termination characters when the Data Format mode is set to barcode only. Select <NONE>, <CR>, <LF>, <CR+LF>, or <TAB> as the termination character. The default terminator is <CR+LF>. The Up/Down/Left/Right arrow terminator is also available for HID mode.

### Chk Duplicate

This option prevents you from collecting duplicate data.

### Enter Key (KDC350 Only)

This option determines the behavior of the '#' key on the KDC350 keypad.

- If this option is enabled, the '#' key acts as a keyboard enter key.
  - The '#' key finishes the current data input, and stores/sends input data according to the menu settings of **Wedge/Store**.
  - The cursor moves to next line after the current data input is complete, regardless of whether there is an data input or not.
  - The screen is scrolled up one line if the '#' key is pressed on the last line of KDC screen.
  - If 'Shift' is enabled, remember that the '#' key will input the '#' character.
  - When the KDC sends input data to the host, it attaches a terminator selected in the menu "**Data Process → Terminator**". This option may be enabled by scanning a special barcode, as shown in 13.8(KDC350L) and 14.8(KDC350C)
  - If this option is disabled, the '#' key acts as a scan button (when 'Shift' is not enabled).

## BT Config Menu – KDC20/30/200/250/300/400

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

To configure your KDC for Bluetooth functionality, you may 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 the user has 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

You may choose the Bluetooth device type in this option.

- HID normal - KDC20(i)/30(i)/200(i)/250(i)/300(i)/350(i)/400(i)/450(i)
- HID iOS - KDC20(i)/30(i)/200(i)/250(i)/300(i)/350(i)/400(i)/450(i)
- SPP2.0 - KDC20(i)/30(i)/200(i)/250(i)/300(i)/350(i)/400(i)/450(i)
- SPP - KDC20(i)/30(i)/200(i)/250(i)/300(i)/350(i)/400(i)/450(i)
- MFi (KDC20i/30i/200i/250i/300i/350i/400i/450i)

### Auto Connect

Enabled or Disabled

### Auto Reconnect

Enabled or Disabled (MFi, 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 (KDC250/350 should use option in system menu)

### Beep Warning

Enabled or Disabled

**PWR Off Time**

1 to 30 Minutes

**PowerOff Msg**

Enabled or Disabled

**MAC Address**

When users select this option, KDC displays 12 characters *Bluetooth* MAC Address.

**FW Version**

This option displays *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 MFi 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**

Users may select a keyboard language in HID mode. KDC supports five languages: English, German, French, Spanish, and Italian.

**HID Initial Delay**

In this menu, users may define the initial delay between 1 second to 10 seconds before data transmission in HID mode

**HID Inter-character Delay**

This option Enables users to define the inter-character delay between 10msec to 100msec in HID mode

**HID Control Character**

This option helps users to map control characters to either **ALT+Numlock** or **^+Character**.

## BT Service – KDC20/30/200/250/300/350/400

### Power

Users may choose to turn Bluetooth Power on or off. Select between Enable and Disable.

### Pairing Mode

This option Enables user to enter pairing mode by simply selecting this menu.

- The KDC enters into pairing mode so that the host *Bluetooth* device may search for it.
- The KDC may exit pairing mode if the user presses the SCAN button or if it fails to pair with the *Bluetooth* host device within 90 seconds.

### Discovering

When users choose this menu, KDC searches for nearby *Bluetooth* devices.

### Connecting To

This option enables the user to inquire to a registered *Bluetooth* device.

### HID Sync

KDC transmits all stored data to the host over HID profile if HID Sync option is enabled.

## GPS Config - 350G

### Barcode and GPS data format

The KDC350 adds the GPS coordinate after the barcode data, if GPS data is available. The GPS data starts with "<G|P/S]" and ends with ":". For example, the KDC250 would record barcode "1234567890" , GPS coordinate "4354.45275,N;07925.81993,W" and Altitude data "208.7,M" as "1234567890<G|P/S]4354.45275,N;07925.81993,W ,208.7,M:" in the barcode data field.

### GPS Menu

- **GPS Power:** Turning GPS Power on or off
  - Users may enable or disable the GPS Power.
  - The GPS module consumes extensive battery power. To conserve battery power, it is strongly recommended to turn off the GPS option when the KDC350 is not being used for an extended period of time.
  - It is also recommended to use the GPS Auto Power Off option in the System menu. This option automatically turns off the GPS power if a barcode is not scanned for a period of time.

- **Power Mode:** The user may choose the type power consumption for the GPS function.
  - Users may extend the battery life of the KDC350 in Power Save mode.
  - Users should use normal mode if accurate GPS data is required.
  - The KDC350 will last about 15 hours in normal non-bypass data mode and 18 hours in power save non-bypass data mode.
  - The KDC350 will last about 7 hours in normal bypass data mode and 8 hours in power save bypass data mode.
- **Bypass Data:** Enabled or Disabled
  - This option should be disabled if users wish to record the GPS data with a scanned barcode data.
  - The KDC350 will bypass GPS data to the host if the bypass option is enabled.
  - The KDC350 becomes a Bluetooth GPS receiver if this bypass data option is selected.
- **Acquire Test:** Time test to see how long it takes to acquire GPS signal.
- **Reset GPS:** Reset GPS parameters

### *GPS Hot Key*

The KDC350 provides the following hot keys for convenient GPS operations:

- **GPS Power Enable**
  - If Auto Power Off is enabled and GPS power is disabled, users may turn on the GPS power by pressing the SCAN button.
  - Users should hold the SCAN button for more than 3 seconds to turn on the GPS power.
- **GPS Bypass mode Enable/Disable**
  - If GPS power is enabled, users may toggle GPS Bypass mode by pressing the SCAN button.
  - Users should hold the SCAN button for more than 3 seconds to toggle GPS bypass mode.
- **GPS Acquire Test Cancellation**
  - Users may cancel the GPS acquire test by pressing the SCAN button during the test.
- **GPS Data Append Cancellation**
  - Users may cancel GPS data append by pressing SCAN button if GPS data is not available immediately.
  - Users should hold the SCAN button for more than 3 seconds to cancel GPS data append.

## USB Disk - 100M/200M/250M/300M/350

### USB Mode

KDC100M/200M/250M/300M/350 may be used as USB Disk with 4MB space.

### USB Serial

When this option is enabled, KDC enters into USB Serial mode.

### USB HID

When this option is enabled, KDC enters into USB HID mode.

### USB Disk

This option enables the user to change to USB Disk mode and barcode data that KDC scanned is stored into a file in flash disk when this option is selected.

### Disk Format

This option is available in USB Disk mode and Enables users to format KDC USB Disk.

### Data Format

This option is available in USB Disk mode.

- Data
- Data Time
- Data Type
- Data Time Type

#### Note

- Changing the "USB Mode" option will erase all data in KDC memory. Make sure to back up your data before changing this option.
- KTSync may not recognize the KDC if the KDC is in "USB DISK" mode.
- It is required for the user to run "Verify Disk" on Disk Utility before using it.



## NFC Config – KDC350N/KDC400N

### NFC Power

- Turning NFC Power on or off
- Options: Enable/Disable

### Data Format

- Options: Data only/Packet data

### UID Only

- Enable or Disable UID Only menu
- The KDC only sends UID data to the host device when the KDC is in UID Only mode. If Data format is 'Data Only' or HID mode, the KDC changes the UID hex values to ascii string and sends this data to the host device. If Data format is 'Packet Data', the KDC only sends UID hexa values with NFC/RFID packet format.

- KDC350N/400N supports the following card types.
  - 1) Mifare Desfire read.
  - 2) Mifare 1K read.
  - 3) Mifare Ultralight / Ultralight C
  - 4) ISO 15693

### Note

## System Menu

### Memory Size (3.0 version only)

The user may select how much memory to divide between normal data memory and application database memory.

- The KDC will erase all stored data upon changing the partition size.
- The user should enter the following key sequence to change the partition.
- UP button + UP button + DOWN button + DOWN button + SCAN button

### Memory Status

In this option, users may check the number of stored barcodes and memory usage.

### Reset Memory

In this option, users may reset KDC memory by erasing all stored barcodes, applications, and BT registry.

### Auto Erase

If enabled, this feature erases stored barcodes on the KDC once the 'Buffer Full' condition is reached.

### Sleep Timeout

This option enables users to set the amount of time the KDC waits before going to *sleep* (when not being used).

### Auto Power Off (KDC250/350)

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

### Date/Time

In this option, users may set the date and time of the KDC, which may also be set using KTSync®.

### Battery

This option shows the current status of battery power level.

### Version

This option shows the KDC firmware version and serial number.

### Button Lock

This option enables the user to lock or unlock the 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 the host.
- **Beep On Scan:** Enables or disables beep sound when KDC is scanning.

### Beep Volume

This option enables the user to adjust the beep volume from High to Low.

### MFi Mode (KDC20i, 30i, 200i, 250i, 300i, 350i, 400i)

This option Enables user to enable or disable MFi mode. MFi mode supports SPP and MFi Bluetooth profiles. Non-MFi mode supports SPP, SPP2.0, HID iOS and HID normal.

### Vibrator

Enables or disables KDC vibrator.

### Auto Exit

This option enables KDC to automatically exit KDC Menus.

### Port Status

This option enables users to enable or disable KDC port messages.

### Display Format

There are various selection of display format; Time & Battery, Type & Time, Type & Battery, Memory Status and Barcode only.

### Menu Barcode

This option enables users to enable or disable Honeywell special barcodes (KDC300/350C only).

### Scrolling

This option enables users to enable or disable display scrolling for a barcode with more than 40 characters.

### Brightness

This option enables users to adjust brightness of display.

### Factory Default

By selecting this option, users may reset KDC options to factory default settings.

## Pair and connect KDC20i/30i/200i/250i/300i/350i/400i and iOS4.0+ in HID iOS mode

### Note

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

Follow the below steps in order 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 ConnectDevice to HID iOS mode
4. Remove previous KDC connection and RESET the device
5. Change KDC to Pairing mode
6. The iPhone/iPad/iPod touch will find a new device as *Keyboard*
7. Click *Keyboard* device

## iOS Soft Keyboard Toggling using BT Toggle Option

Users need to select the option to use this feature in **BT Config>BT Toggle**. Press the DOWN button to toggle a soft keyboard.

## 3.4 LED Status

### KDC100/200/250/300/350

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>

### KDC20/30/400

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>• MFi 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 is in pairing mode.</li></ul>
Red	<ul style="list-style-type: none"><li>• No reading</li><li>• SPP mode is in pairing mode.</li></ul>

Table 5 - Explanation of LEDs

## 3.5 Empty Battery

### KDC100/200/250/300/350

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

### KDC20/30/400

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

## 3.6 Buffer Full

The KDC will display the message *Buffer Full* when the size of collected data reaches 160KB (85 version) / 60KB (86 version) or the number of collected barcodes reaches 10,240. To prevent the loss of data, you should synchronize the data then reset the memory when this message is displayed.

The 4MB version KDC reaches the Buffer Full condition in the following situations:

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

## 3.7 Reset Feature (100/200/250/300/350) or Power-on/off (KDC20/30)

The Reset feature enables the user to restart the KDC100/200/250/300/350/400 if necessary, without losing any stored barcode data or option settings. To reset the KDC, follow the below steps.

1. Press the DOWN and SCAN buttons simultaneously for 5 seconds.
2. When the LEDs illuminate orange, release the buttons.
3. The KDC initial screen, **KoamTac Data Collector KDC**, displays when reset is complete.

### Note

The KDC stores collected data into flash memory and will not lose data nor the KDC settings during the reset process.

However, if you are using the KDC20/30, you may turn the power on and off by pressing the DOWN and SCAN button simultaneously for 5 seconds. When the LED light is green, you may release the buttons and the power will be on. When you turn off the KDC20/30, you will hear a beep sound after pressing the DOWN and SCAN buttons simultaneously.

## 3.8 Replace Battery

Each KDC comes with a rechargeable, Lithium-polymer (KDC20/30/100/200) or Lithium-ion (KDC300/350/400) battery. The battery may be recharged from any USB port or KDC charging cradle, and may be recharged about 300 times before it needs to be replaced. KOAMTAC recommends replacing the battery annually, as a declining battery will cause noticeable performance degradation in the KDC. Replacement batteries may be purchased from a KDC reseller. Batteries should be disposed of properly as according to the WEEE regulation. The steps for replacing a battery are as follows.

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

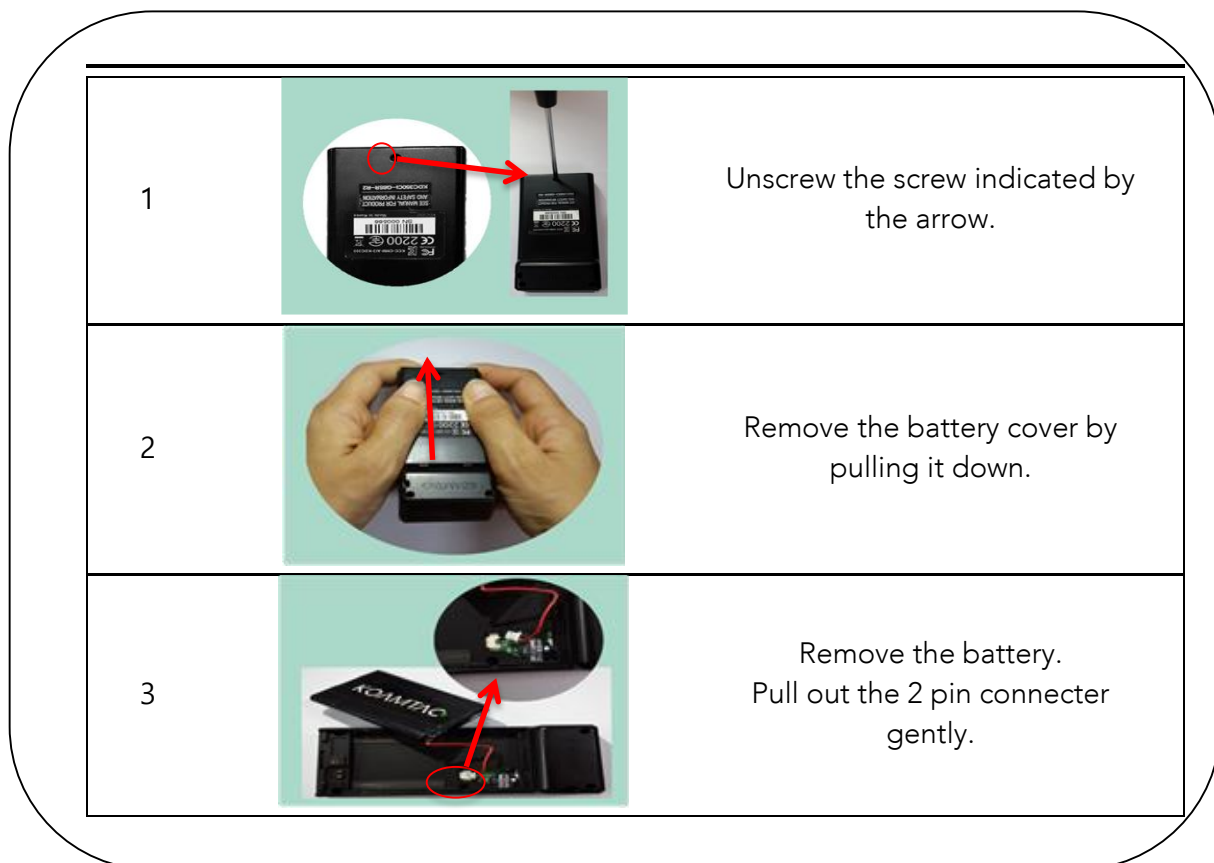


Figure 13 - Replacing a Battery



## 4. Bluetooth -KDC20/30/200/250/300/350/400

The KDC20/30/200/250/300/350/400 supports HID (Human Interface Device) normal, HID iOS, SPP (Serial Port Profile) and SPP2.0 profiles. The KDC20i/30i/200i/250i/300i/350i/400i supports MFi (Made for iPhone/iPad/iPod touch) profiles too. They are compatible with the following Bluetooth stacks:

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

The KDC200/250/300/350's *Bluetooth* options may be configured by using the KDC menu and special barcodes. The KDC20/30/400's Bluetooth options may be configured by using the PC KTSync and special barcodes.

### 4.1 Bluetooth Config

#### Connect Device

The KDC supports both Serial Port Profile (SPP) and Human Interface Device Profile (HID). The user may choose amongst SPP2.0, SPP (2.1), HID normal, or HID iOS profiles to communicate with the host device. An additional MFi (Made for iPhone/iPad/iPod touch) option is available for KDC20i/30i/200i/250i/300i/350i/400i models.

If the **BT Toggle** option in **BT Config** is enabled, the user may connect and disconnect the Bluetooth connection with the host device by pressing the UP and DOWN buttons. It normally takes 3 seconds to connect and 1 second to disconnect. This is a very useful feature for iPhone and iPad applications.

The user may also enable and disable the iPhone and iPad soft keyboard instantly by using this BT Toggle option.

The UP button shows the Bluetooth connection status and the DOWN button shows the time when the KDC is connected via SPP profile.

#### Note

The user should first un-pair the KDC from the Bluetooth host to change the Connect Device setting on the scanner to a different Bluetooth profile.

## Auto Connect

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

**IMPORTANT:** Until the host device and the 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 could cause problems, such as power loss or upload delays.

### Note

The KDC automatically tries to connect to the host 10 times within the duration of two minutes when *Bluetooth* power is ON, *Bluetooth* is disconnected, Auto Connect is enabled, and system Sleep Timeout is set to 5 seconds.

## Auto Reconnect

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

**IMPORTANT:** This feature is available when KDC Connect Device options are MFi, HID iOS, or HID Normal.

### Note

The KDC tries to connect automatically to the host 10 times within the duration of two minutes if Bluetooth is disconnected.

## Auto Power On

The Auto Power On option Enables the KDC to automatically power on Bluetooth when the SCAN button is pressed. The default setting is Disabled.

### Note

Users should press the scan button for the duration defined in the **BT Config** Power-on time option. The host program may have to open the COM port again in order to be reconnected with the KDC.

## PWR ON Time

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

## Auto Power Off

The Auto Power Off option works in conjunction with the PWR Off Time option. This option Enables 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 may be manually powered off before the specified time in the PWR off time option.

## 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!`
  - `!KDC20/30/200/250/300/400 is DISCONNECTED from HOST!`
  - `!Bluetooth power is ON!`

## 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 duration of time 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.

## PowerOFF Msg

The KDC sends a Bluetooth power off message `!BTOFF!` to the host if the PowerOFF message option is enabled.

## MAC Address

The user may verify the KDC Bluetooth MAC Address.

## FW Version

The user may verify the KDC Bluetooth firmware version in BT FW menu.

## Wakeup Nulls

The KDC sends three leading Null bytes to wake up the *Bluetooth* connected device. This feature may be disabled if the *Bluetooth* connected device does not require additional bytes to wake up.

## Autolock Time

The iPhone/iPad/iPod touch loses incoming Bluetooth data while in sleep mode. To prevent data loss, you may set the KDC Autolock time to the same Autolock time of your iPhone/iPad/iPod touch, to use the automatic wakeup feature in HID mode.

If the Autolock time is set to more than one minute and the barcode scan interval is larger than the auto-lock time, there will be a one second delay of barcode transmission. The auto-lock time would be set as 0, 1, 2, 3, 4, 5, 10, 15 minutes. 0 means the iPhone/iPad/iPod touch never enters sleep mode.

## HID Keyboard

The user may select an international keyboard – English, German, French, Spanish, or Italian.

## HID Initial and Inter-Character Delay

Certain applications may not process HID input fast enough and may lose some characters during transmission. Users should increase initial and inter-character delay to prevent data loss during HID transmission.

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

## Control Character Transmission in HID mode

Control characters between ASCII values 0x00 and 0x1F may be replaced by the 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 shown in the 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	^\		

## Function Key Transmission in HID mode

The user may send F1 to F12 function keys by scanning special barcodes in HID mode.

## Disconnect/Reconnect/BT(HID) Toggle

The user may disconnect or reconnect the Bluetooth connection, and toggle the soft keyboard using side buttons.

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

## 4.2 Bluetooth Service

### Power

The POWER option enables the user 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 constantly search 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.

### Pairing

Before you are able to use Bluetooth, the KDC must be paired with the host device. This pairing process needs to be completed only 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 may be paired to the KDC.

#### Note

KDC with Bluetooth Spec2.1+EDR does not prompt Pin code entry menu.

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

1. Select Pairing from the Bluetooth menu. The message **"Pairing started..."** will be 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 of 60 seconds.
- If **"Pairing failed..."** message displays, the Bluetooth connection with the host device failed. If the message **"Connected"** displays, a Bluetooth connection is established.
  - It is possible for the message **"Pairing failed..."** to display on the KDC while the host device displays the **"Connected"** message. If this occurs, a Bluetooth connection has been established.

## Discovering

KDC20/30/200/250/300/350/400 starts to search for neighboring *Bluetooth* devices if the Discovering menu is executed. It will take about 30 seconds to finish searching and to list available neighboring *Bluetooth* devices. Another option is to enter the corresponding Bluetooth MAC address in the KTSync Bluetooth menu, instead of waiting for the KDC to search for neighborhood *Bluetooth* devices.

## Connect To

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

### Note

There could be an interoperability issue depending on the corresponding device Bluetooth stack. The master Bluetooth device may request that you to follow the master Bluetooth device's security procedures, if the KDC tries to connect to the master Bluetooth device.

## HID Sync

The user may synchronize stored barcode data over HID using the HID Sync option. The KDC will start to transmit all stored barcode data upon execution of the 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 Enables 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** - Enables scanned data to be uploaded directly into your application as if the data were being entered manually with a keyboard.
- **Application Generation** - Enables users to create custom applications or download predefined applications such as Master-Slave, Pick/Bin, DB Lookup and Inventory.

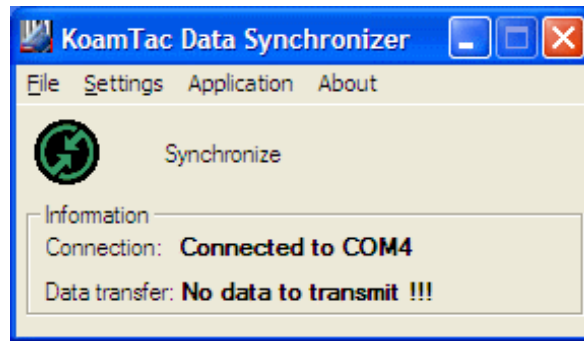
Additional functions include:

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

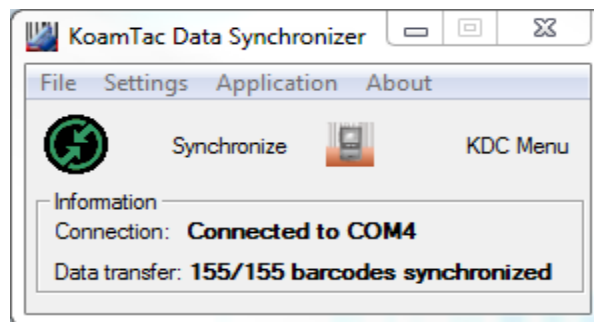


## 5.1 KTSync Menu

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



KDC100/200/250/300/350



KDC20/30/400

Figure 14 - KTSync® Synchronizer Menu

## File Menu

- Connect: This option displays the Serial port (COM#) assigned to KDC. You may also use this option to manually assign the Serial port. The Serial port assigned to KDC may be found under Windows Device Manager. The port assignment is used by KTSync® for synchronizing data from the KDC to the host.
- Synchronize: This option manually tells the KDC to synchronize data with the host. While data is being synchronized, KTSync menu options are unavailable

### Note

Please do not use your computer during data synchronization.

- Bluetooth: This option is not available on KDC100. Users may register a MAC address to be directly connected by KDC20/30/200/250/300/350/400.
- Configuration: This option Enables 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 may synchronize data on the KDC.

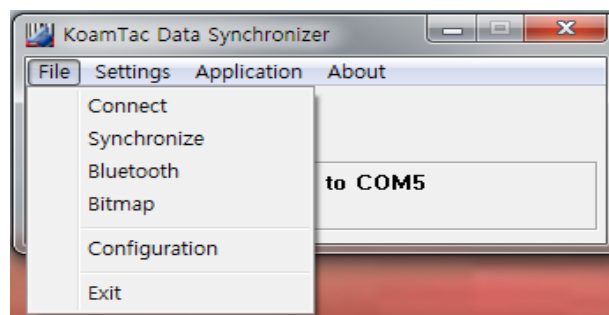


Figure 15 - File Menu

## Settings Menu

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



Figure 16 – Setting Menu

## Application Menu

- Generation: Create user application or download predefined application.
- DB Lookup: Enables users to download DB into KDC and display barcode description field.
- Master/Slave: The user defines a master barcode for comparison with one or more slave barcodes.
- Pick/BIN: The user defines Pick ID and the barcode symbology for comparison with a defined Bin.
- Inventory: Users may count inventories. Inventory description will be displayed if inventory DB is downloaded into the KDC.

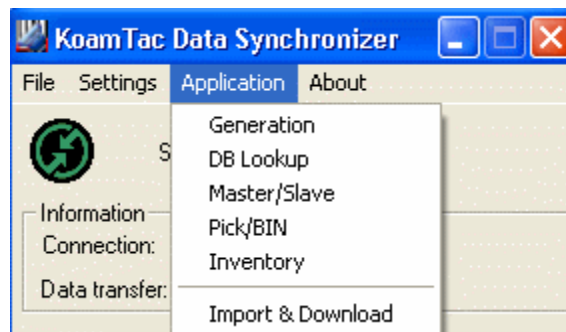


Figure 17 - Application Menu

## About Menu - KTSync® - Version Information

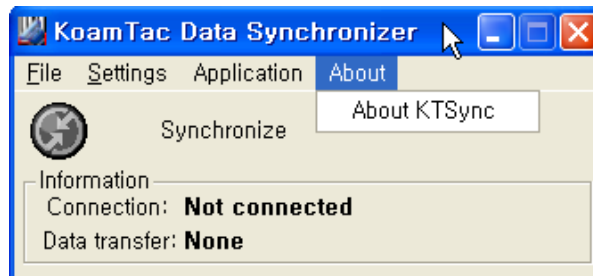


Figure 18 - About Menu

## 5.2 File Menu

### Connect to KDC

The KDC automatically connects to a COM port when connected to the PC's USB port. If needed, the user may manually assign the KDC COM port by using the KTSync® Connection submenu under the File menu.

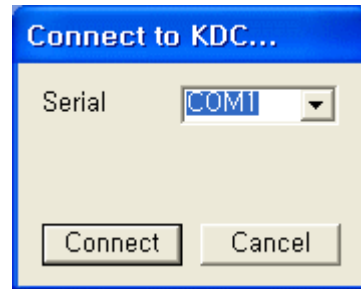


Figure 19 - COM Port Selection for KDC

- The COM port assignment is found in the Windows Device Manager.
- KTSync® will not connect to the KDC if it is in the KDC Menu. You must EXIT from the KDC Menu.
- If KTSync® fails to connect automatically to the KDC, please follow these steps:
  1. Exit KTSync®.
  2. Check to make sure that you have connected the KDC to a USB port on your PC.
  3. Make sure that the user is using the cable provided with the KDC.
  4. Check to make sure that the KDC is not in KDC Mode Menu.
  5. Restart KTSync®.

#### Note

You may manually assign the COM port using KTSync® Connect option under the File menu.

## Synchronize

Located under the File Menu, this option enables the user 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.

## Bluetooth

This menu option enables the user 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 a *Bluetooth* printer. The user should choose a *Bluetooth* device to be connected in "Connect to" menu in KDC *Bluetooth* Service menu.

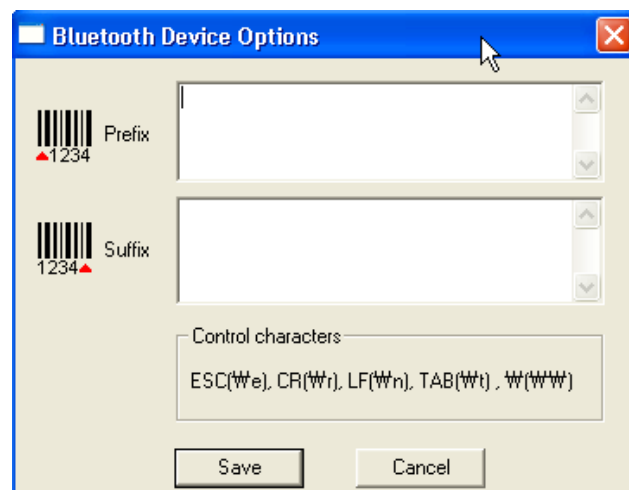
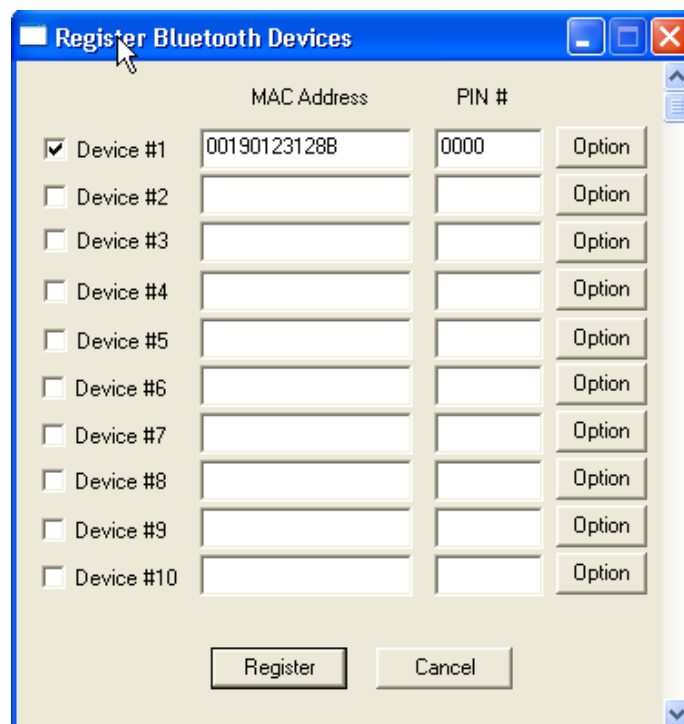
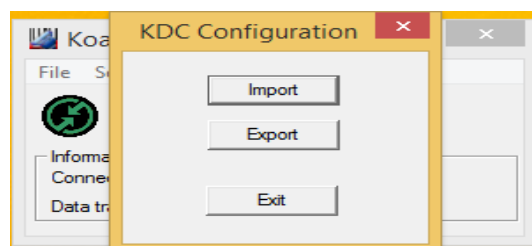


Figure 20 - Bluetooth Device Registry

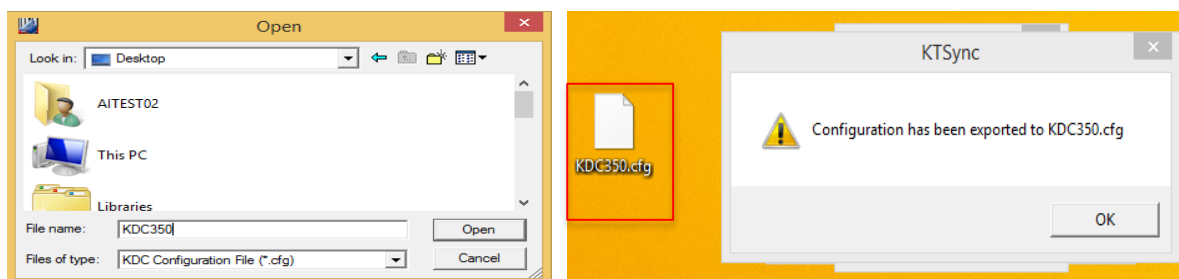
## Configuration

This menu is useful for the users who need to configure different KDCs with same settings. In this menu, you may 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

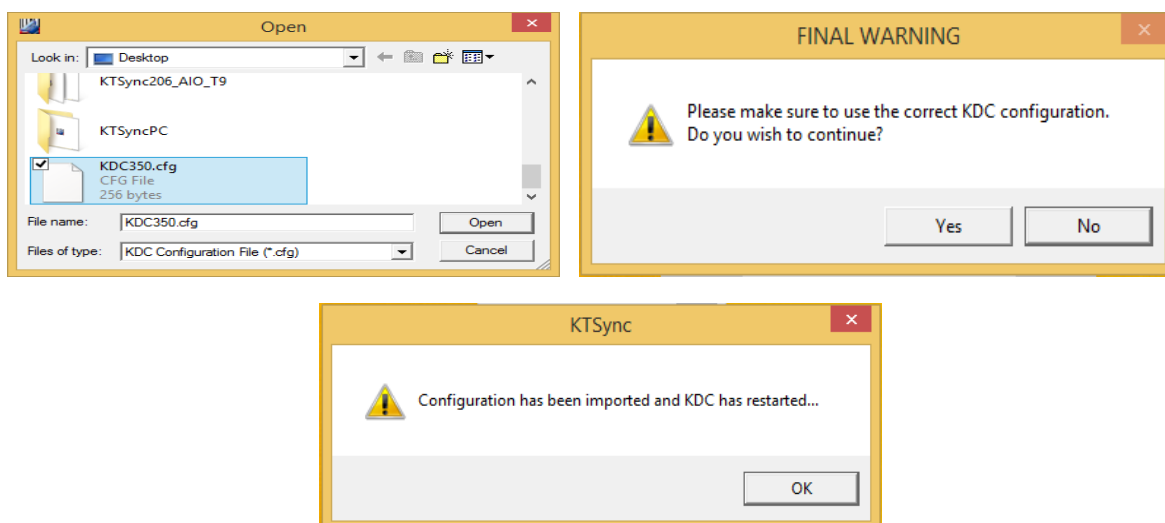


Figure 21 – Configuration

## 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+.

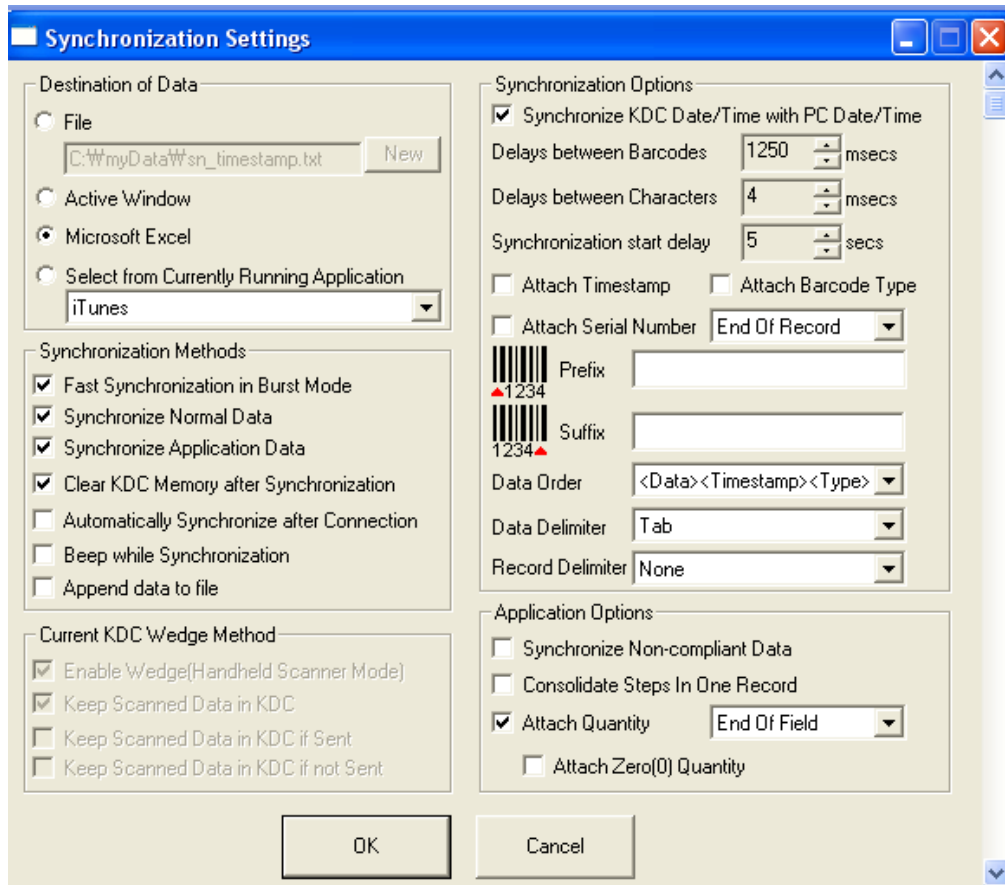


Figure 22 - KTSync® Synchronization Settings

## 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 may select a different target directory by clicking the New icon. The default directory is C:\MyData\sn\_timestamp.txt. If this directory is not created, you will be prompted to create it before data may 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 is being entered directly from a keyboard.
- Microsoft Excel - This option means barcode data is being imported directly into Microsoft's Excel. Various parameters may be set when uploading data to Excel.
- Select from Current Running Application – This option enables the user 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 may interrupt the process causing unreliable results.



## Synchronization Methods

### Fast Synchronization in Burst Mode

The KDC may 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

If Synchronize Normal Data option is selected, the KDC will synchronize only Normal Data in KDC memory. If the user wants all data in KDC memory synchronized, the user should select Synchronize Normal Data and Synchronize Application Data.

### Synchronize Application Data

If Synchronize Application Data option is selected, the KDC will synchronize only Application Data in KDC memory. If the user want all data in KDC memory synchronized, the user should select Synchronize Normal Data and Synchronize Application Data.

### Clear KDC Memory after Synchronization

If this option is selected, the stored barcode data is cleared from the KDC memory after synchronization. The KDC20/30/100/200/250 may 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 a Buffer Full message. Buffer Full prevents the KDC from storing additional data. Stored barcode data may also be deleted using the Reset Memory feature on the KDC.

### Automatically Synchronize after Connection

This option lets the user automatically synchronize collected data immediately to the computer when the KDC is connected to the host.

- IMPORTANT: Before selecting this option, remember to configure all options properly.
- Data synchronization may be done manually by clicking the synchronize icon if this option is not selected.

### Beep while Synchronization

The user may enable or disable the beep tone during the synchronization process. If this option is selected, a beep is sounded every time barcode data is synchronized. The KDC beeps 5 times when the synchronization process is complete.

### Append Data to File

If the user has specified a file name and Append data to File option is enabled, KTSync will append data to the existing file instead of creating a new file.

## Current KDC Wedge Method

The KDC may be configured in one of five wedge/store modes:

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

### Enable Wedge (Handheld Scanner Mode)

This option will be checked if Wedge Only or Wedge & Store option is selected.

### Keep Scan Data in KDC

This option will be checked if Store Only or Wedge & Store option is selected.

## Synchronization Options

### Synchronize KDC Time with PC Time when Connected

This option enables the user 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

The user may 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 may be attached to the scanned barcode by selecting these options. The Serial Number of the KDC may be attached to the Start or End of Record.

### Prefix and Suffix

- Enter the characters the user wants to attach to the front (Prefix) or back (Suffix) of the barcode in the Prefix and Suffix fields.
- The character set is any combination of ASCII characters including alphanumeric, line feed (“\n”), and carriage return (“\r”).

### Order and Delimiter

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

## Application Options

### Synchronize Non-Compliant Data

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

### Consolidate Steps in One Record

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

### Attach Quantity

If this option is enabled, quantity will be attached to the left or right of the data.

## 5.3 Barcode & KDC Settings

KTSync enables the user 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 the application.

**Note**

The user must configure barcode and scan options properly for optimal KDC performance.

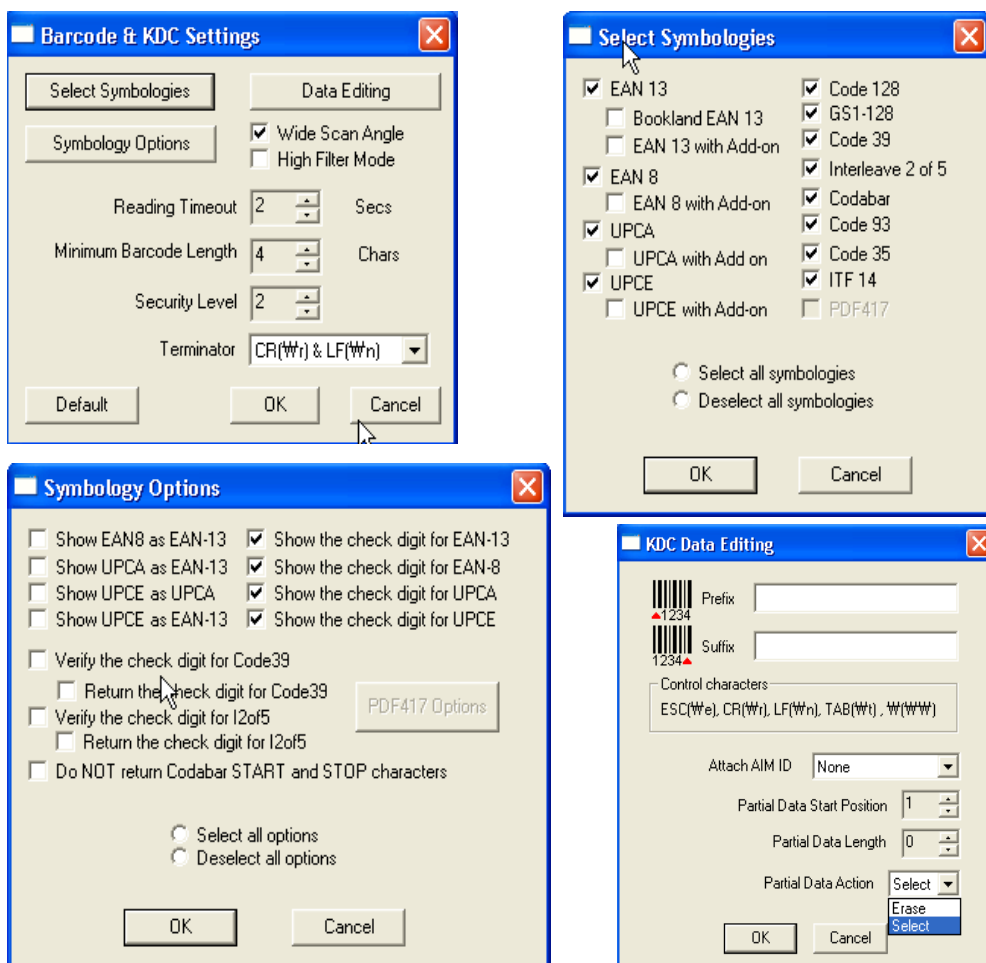


Figure 23 - Barcode & KDC Settings, Symbologies, Data Editing and Scan Options

## Select Symbologies and Symbology Options

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

## Data Editing Option

***Prefix*** - Enables the user to add a prefix to scanned data that may 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 that appends the prefix to data during synchronization.

***Suffix*** - Enables the user to add a suffix to scanned data, which may 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 that appends the suffix to data during synchronization.

***AIM ID*** - Enables the user to add AIM ID to scanned data, which may 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***: Enables the user to display and store partial data. The 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* selects 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* erases all characters from *y* position.

## 5.4 Other Settings

Other options under the Settings menu allow the user 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 it to the tray upon execution.
- **Keep Checking Bluetooth Connection** Enables reconnection of KDC once *Bluetooth* signal is detected. This feature is useful when moving to or from *Bluetooth* host device frequently. KTSync will automatically reconnect *Bluetooth* connection when the user enter an effective *Bluetooth* network range. *(Not Available on KDC100)*

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

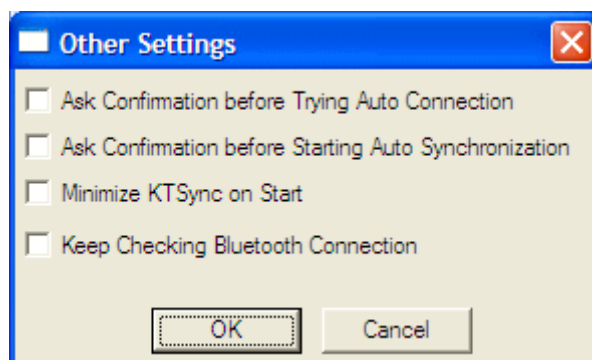


Figure 24 - KTSync® Confirmation Settings

## 5.5 KDC Menu in KTSync (KDC20/30/400)

After connecting KDC20/30/400 to PC with a USB cable, run KTSync on your PC and you will see **KDC Menu** on the right side of KTSync window. Click **KDC Menu**, and you may configure your KDC20/30/400 in KDC Menu window, as shown below.

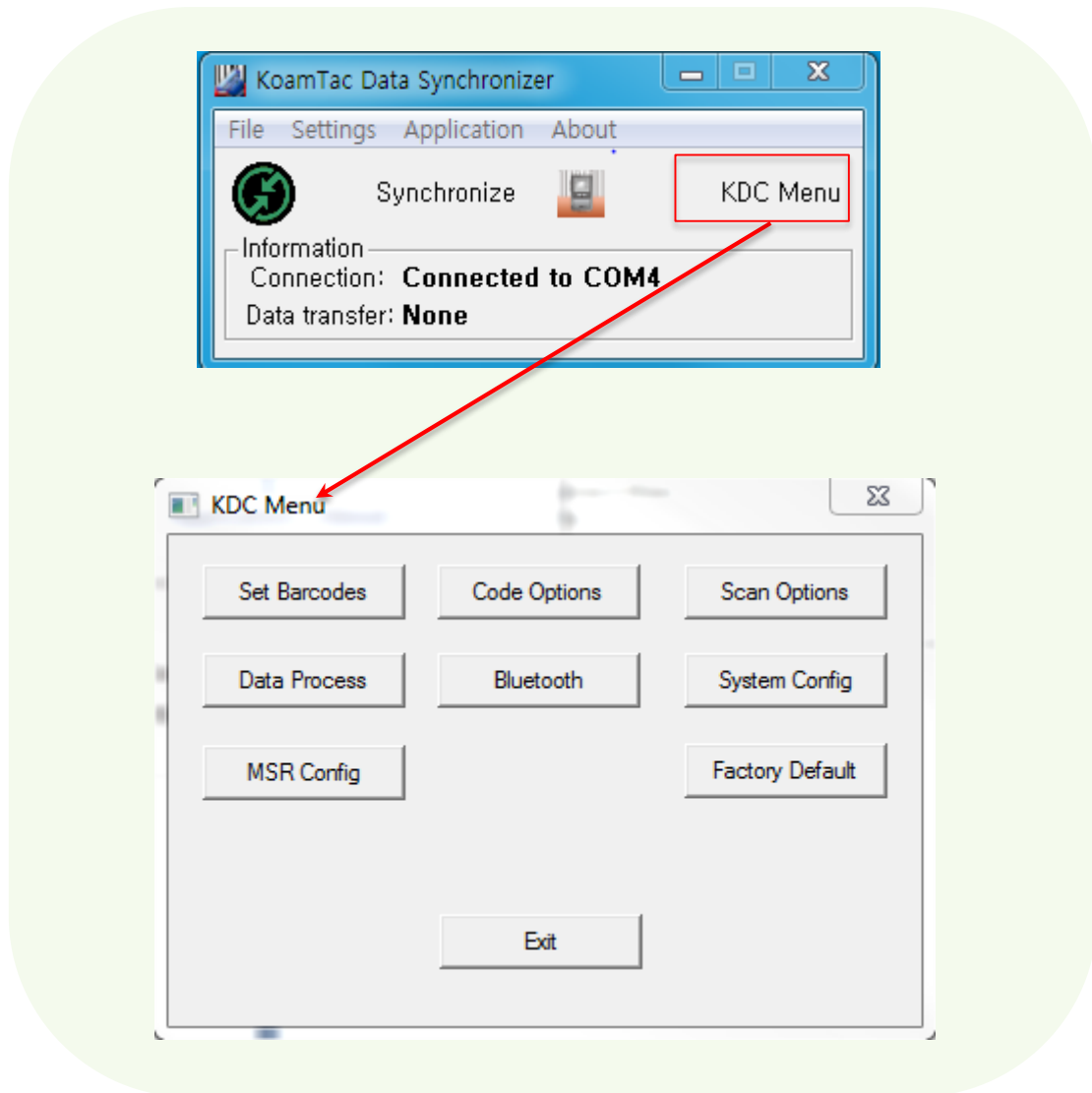


Figure 25 - KDC Menu in KTSync (KDC20/30/400)

## 5.6 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 - Enables 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 before using pKTSync. Please refer to the mobile device manual for details on Bluetooth pairing and COM port assignment methods.

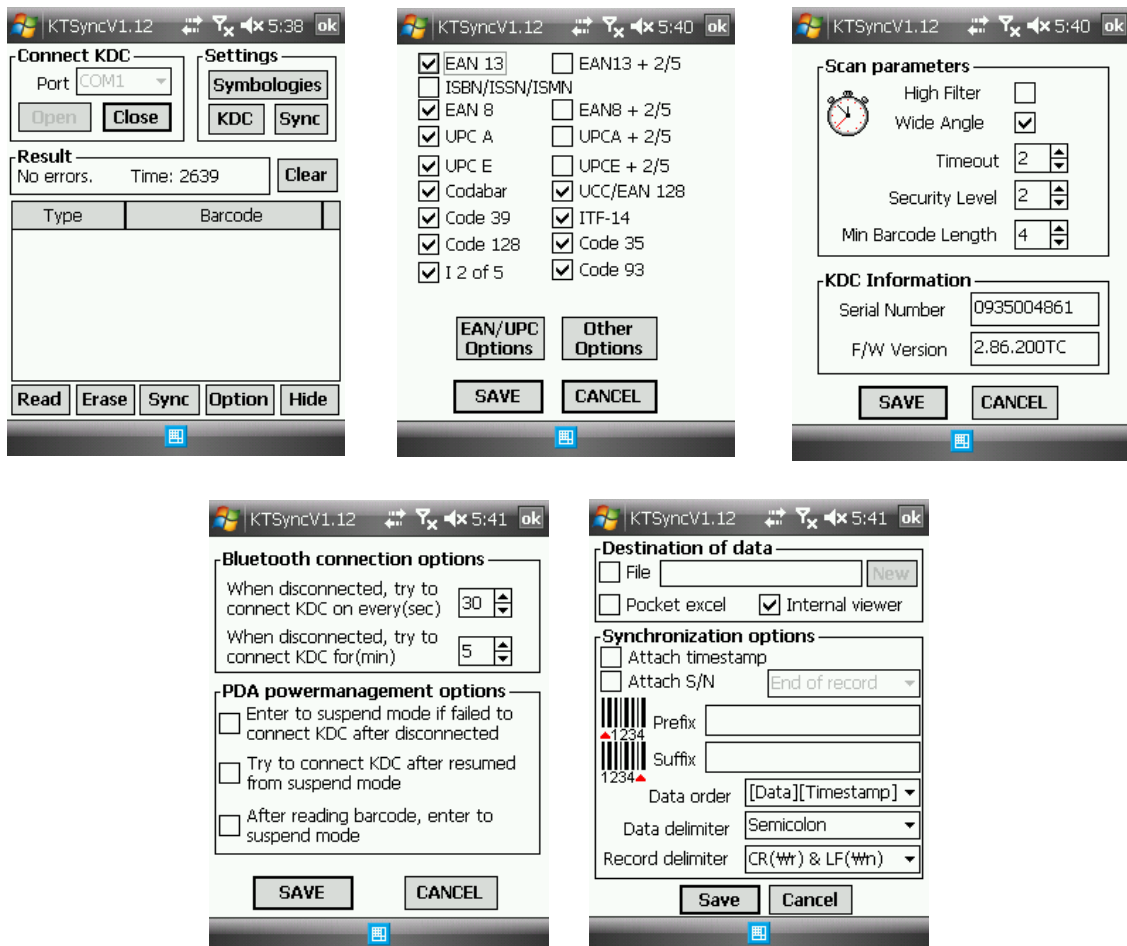


Figure 26 - Mobile pKTSync



## 5.7 Android aKTSync

The KTSync provides limited functionality of PC aKTSync 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.

### KDC and Android Pairing

1. Pairing
  - Select **SPP** Bluetooth profile from the KDC **ConnectDevice** submenu in **BT Config** menu.
  - Search KDCxxx from Android and pair the two devices.
  - If SPP2.0 is selected, KDCxxx PIN code is "0000".
2. Connection
  - Click **Connect** icon in aKTSync.
  - Android will list paired *Bluetooth* devices and the user should select the target KDC.
3. Synchronization: Provides data upload functionality to the applications.
4. Settings: The user may change various Synchronization options in the settings menu.
5. Wedging: The user may wedge barcode data to any Android application. Press the home key and launch the target application.

### Launch KTSync

1. Download and install aKTSync from the Android Play Store.
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!!!" and then "Bluetooth Connected".
- E. Select **Settings** option on the bottom left to change KTSync setting.

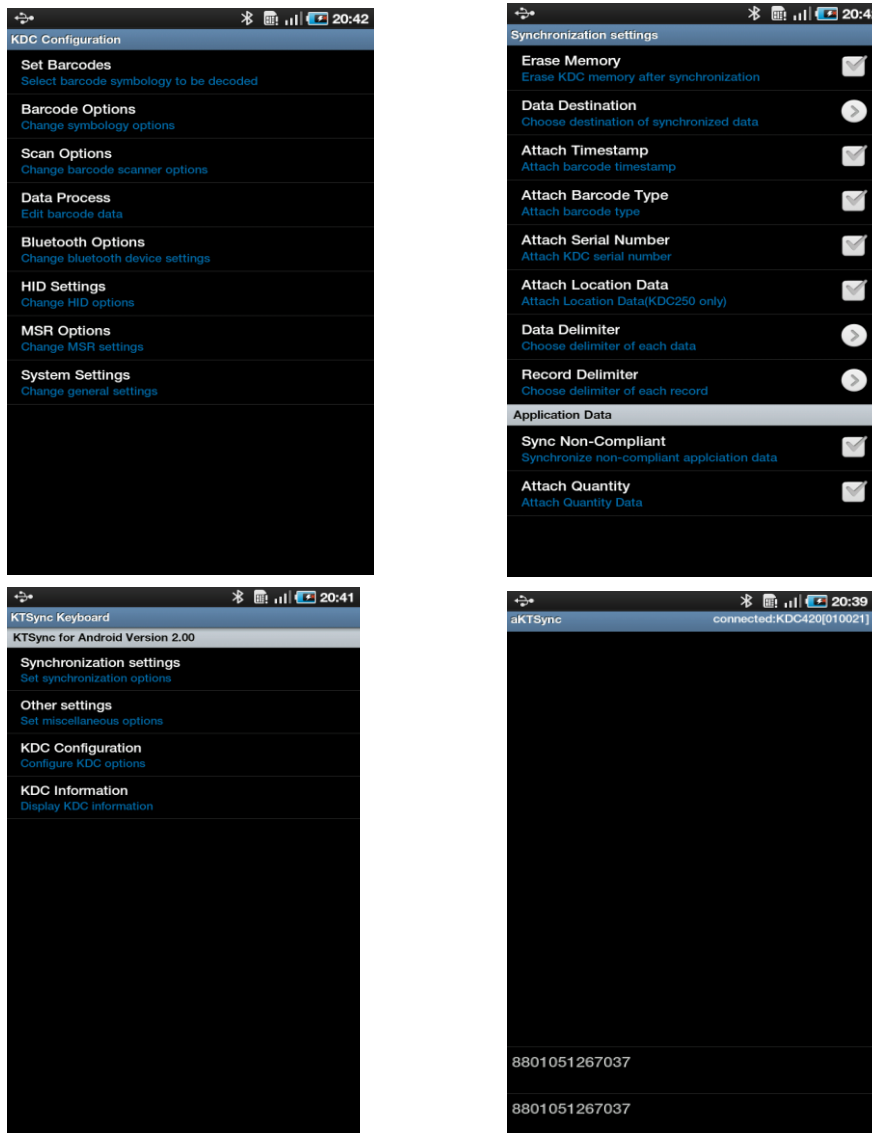


Figure 27 - Android aKTSync

## Keyboard Wedge

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

## 5.8 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 **MFi** Bluetooth profiles.
2. The iPhone/iPad/iPod touch should use **MFi** Bluetooth profiles. **MFi** 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.

- Users have to disable MFi option in System > MFi menu to use HID Bluetooth profiles.

### Note

- Users have to RESET the iPhone/iPad/iPod touch to change "HID to MFi mode" or "vice versa" after removing previous KDC connection. KDC with Bluetooth Spec2.1+EDR does not prompt Pin code entry menu.

### KDC20i/30i/200i/250i/300i/350i/400i connection using MFi 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 simultaneously 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/iPad Connected" message will be displayed.
7. Launch KTSync and configure Settings.

## iKTSync Settings

iKTSync provides following Settings menu.

- Synchronization - The user may configure Synchronization options, such as destination of data, data formation and delimiters.
- Other settings - Users may configure KDC350 GPS module, disconnection options and soft trigger button.
- 

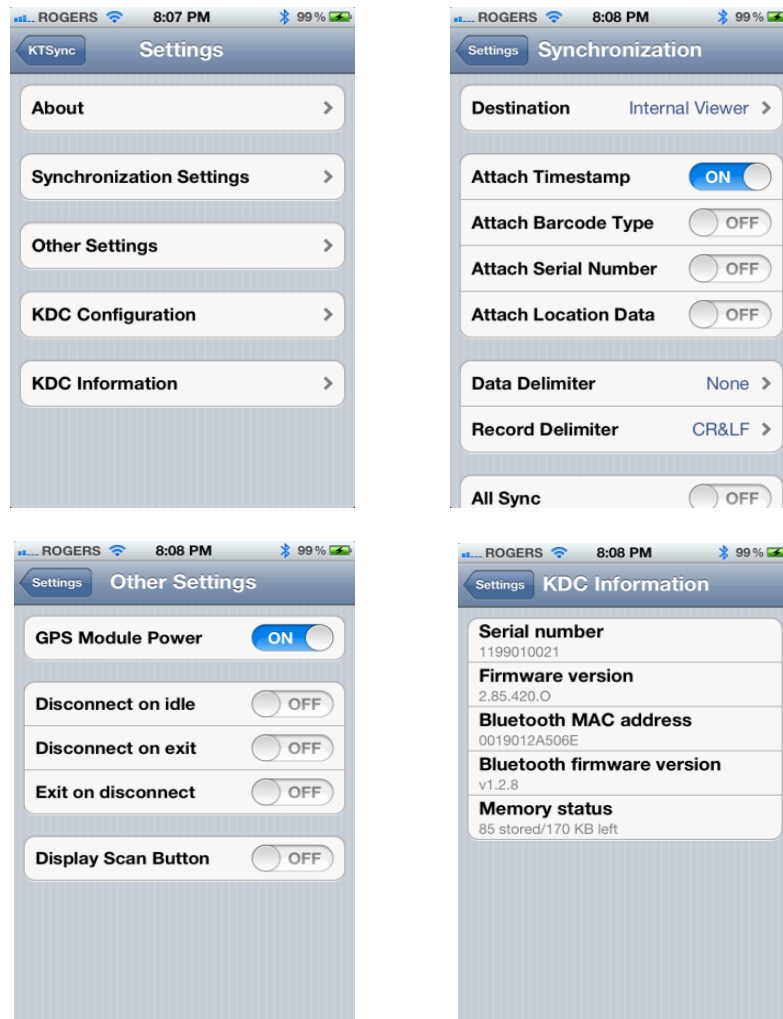


Figure 28 - iPad/iPhone/iPod touch KTSync

## How to Connect and Reconnect MFi Mode using UP Keys

1. The user 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.

## 5.9 Blackberry bKTSync

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

### Note

KDC with Bluetooth Spec2.1+EDR does not 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 will 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" and then "complete."
  - F. Close the Blackberry Bluetooth manager.
5. Go to Downloads folder and execute KTSync.
6. The user may 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 the user want to send. The user may 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.

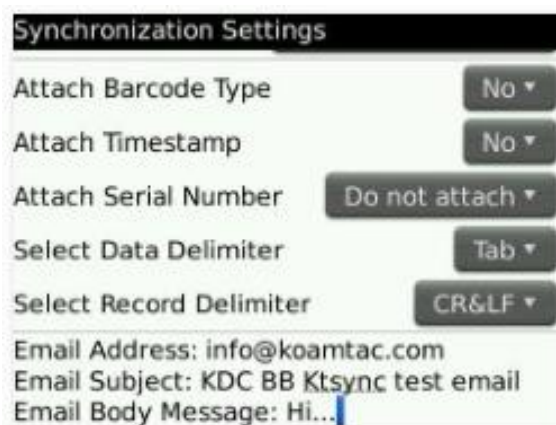
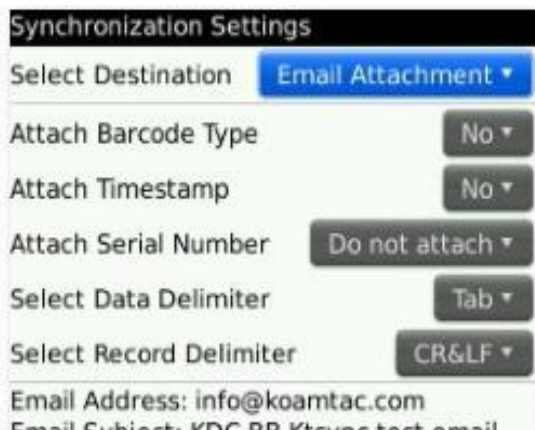
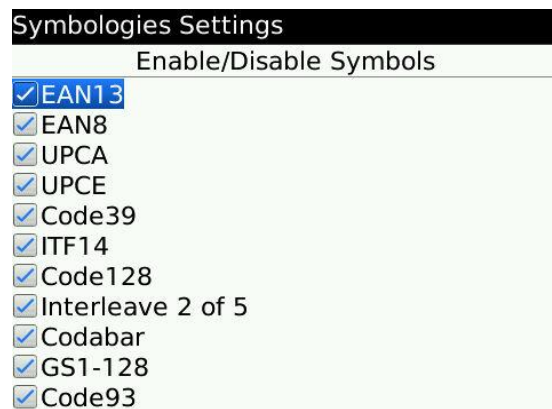


Figure 29 - Blackberry bKTSync

## 5.10 KTSync for Mac OS X

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

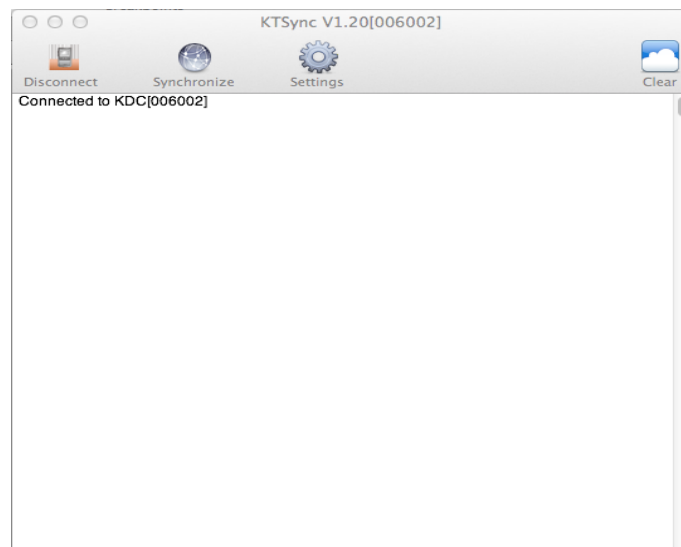
### Note

- KTSync for Mac OS X version supports both Bluetooth SPP profile and USB connection. The 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.

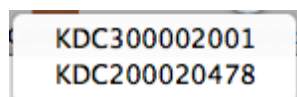
The user will see the following initial KTSync screen upon launching the program. KTSync will connect automatically if KDC is plugged in a USB port or if KDC is paired.



### Connect Button

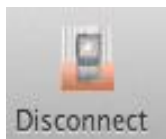


The user may connect the Mac with the KDC that is paired or plugged into the USB port by clicking the Connect button. The following screen will be displayed when this button is pressed, and KTSync will start to connect to the selected KDC.

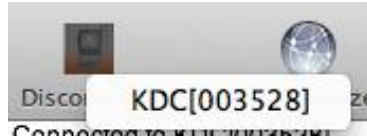




## Disconnect Button



KTSync changes Connect button to Disconnect button once the KDC is connected. The user may disconnect the KDC manually by selecting connected KDC on the following screen.



## Synchronize Button



The user may start the synchronization process by pressing the Synchronize button. The user may select the destination of barcode data in the settings menu. There are 4 selectable destinations: File, Internal viewer, Active window, and User application.

## Clear Button

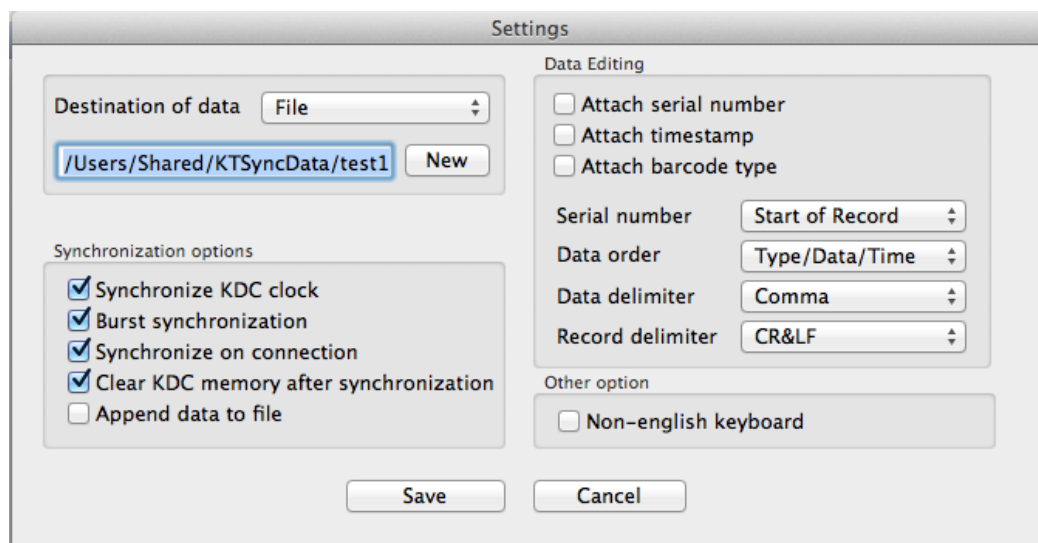


The user may press this button to clear the KTSync internal viewer.

## Settings Button

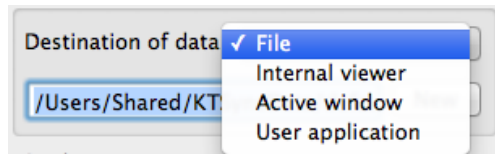


The user may configure synchronization options on the following screen by pressing the Settings button.



## Destination of Data

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



- **File:** The KTSync makes a file name based on 3.11 if file name is specified as an "sn\_timestamp.txt". The default directory is /Users/Shared/KTSyncData directory. The user may define another directory or another filename by clicking the "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:** The user may define the target application by pressing the "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 burst mode. Otherwise, KTSync would synchronize barcode data one by one. This option is enabled by default and maynot be disabled.
- **Synchronization on Connection**  
KTSync will automatically synchronize barcode data from the KDC when the KDC is connected, if this option is enabled.
- **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 does not exist then KTSync creates a new file.

### Data Edition

- **Attach Serial Number**  
The KTSync will add a KDC serial number to barcode data. This option is enabled by default and maynot be disabled.
- **Attach Time Stamp**  
The KTSync would add timestamp to barcode data. This option is enabled by default and maynot be disabled.
- **Attached Barcode Type**  
The KTSync would add barcode type to barcode data. This option is enabled by default and maynot 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 may select one of the following: **None, Tab, Space, Comma** and **Semicolon** as the data delimiter. The **Comma** is selected as the data delimiter by default.
- **Record Delimiter**  
This option is used to select a character to be added at the end of the barcode record. The user may select one of **None, CR, LF, TAB,** and **CR&LF** as the record delimiter. The **CR&LF** is selected as the record delimiter by default.

### Other Options

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

## 6. Application Generation

### Note

KDC FW2.85.200.x does not support the Application Generation feature. Users should upgrade FW2.85.200.x to FW2.86.200.x to use Application Generation feature.

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

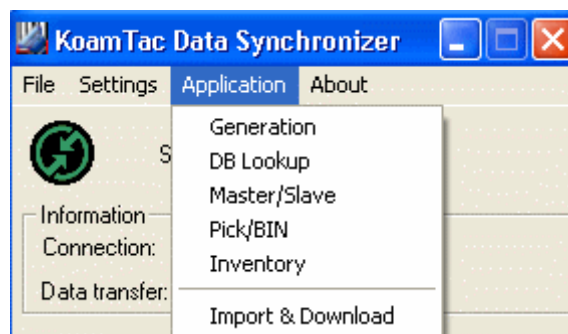


Figure 30 - Application Menu

When the Application tool is selected, the KDC will beep once to acknowledge a connection between the KDC and the Application tool. The following KTSync warning window will pop up if the downloaded application in KDC does not match with KTSync application tool.

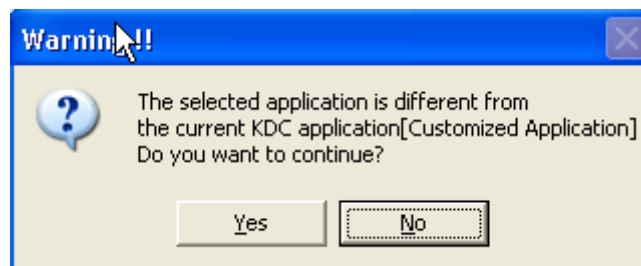


Figure 31 - Application Warning Window

### Note

KDC will wedge barcode data to the host in application mode if "wedge and store always" option in data process menu is selected and KDC firmware version is higher than 2.86.xxx.G.

## 6.1 Application Generation

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

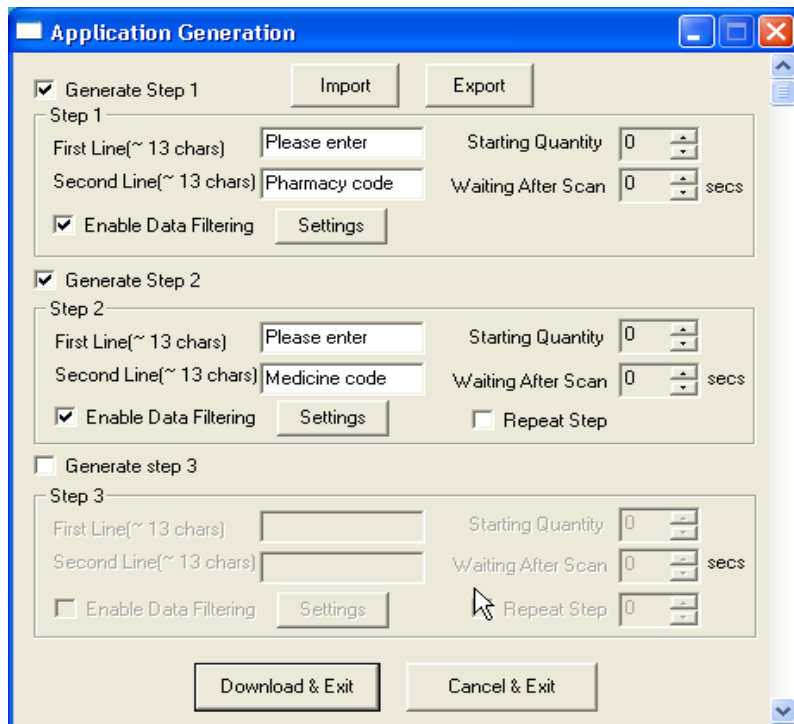


Figure 32 - Application Generation Menu

### Generate Application

**Generate step 1** - To generate a custom application, click on the Generate Step 1 box. This enables the user to define the user prompts and data collection settings for Step 1 of

**Note**

*the custom application. Below is a description of each field. These prompts are the same when selecting Generate step 2 and Generate step 3.*

The custom application may include only Step 1.

- **First line**  
Enter up to 13 characters; these will display on the first line of the KDC.
- **Second line**  
Enter up to 13 characters; these will display on the second line of the KDC.
- **Starting quantity**  
Enter a predefined start quantity for each scanned barcode. The start quantity may be defined from 1 to 128. Use the up or down side key to choose the desired quantity.
- **Waiting to scan**  
Enter the number of seconds the KDC pauses before the user prompts display. During this timeout period, the user may modify the quantity. If this field is set to zero, the quantity field may not be adjusted. This field may be defined from "-1" to "30" seconds. "-1" second enables infinite waiting of user quantity input.
- **Enable data filter**  
Check this box to enable the data filtering option. Data filtering enables the user to predefine different aspects of the barcode data the user are collecting.

## Data Filter Settings

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

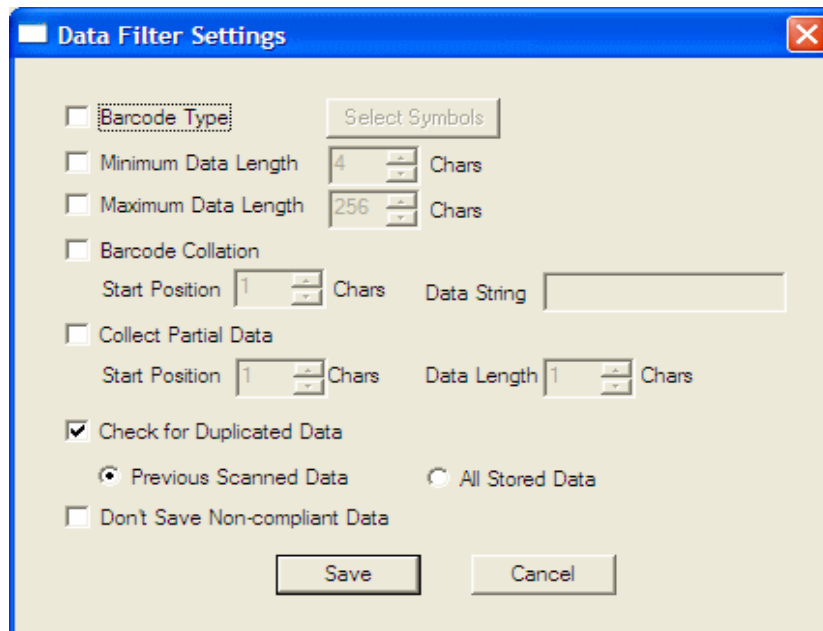


Figure 33 - Data Filter Settings

- **Barcode Type**

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

- **Minimum Data Length**

This field enables the user to define the minimum length of the scanned barcode. The length may be between 2 and 36 (KDC350L), 2 and 48 (KDC350C) characters. If the user scans a barcode that has a length of less than the defined length, the barcode data is not collected.

**Note**

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

- **Maximum Data Length**

This field enables the user to define the maximum length of a scanned barcode. The defined length may be between 2 and 256 characters. If the user scans a barcode that has a length is greater than the defined length, the barcode data is not collected.

- **Barcode Collation**

This option enables the user 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 may be up to 32 characters.

- **Collect Partial Data**

This option enables the user 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 enables the user to prevent the collection of duplicate data.

- Previous Scanned Data – This option enables the user to compare the scanned barcode with the previously scanned barcode and treat it as non-compliant data if the user scanned the same barcode twice.
- All Stored Data – This option enables the user to compare the scanned barcode with stored barcode data and treat it as non-compliant data if the same barcode already scanned and stored.



- **Do not 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 the data collection process, click the box, Generate step 2. This step has the same options as Step 1. In this step, the user have the option of repeating step 2 by clicking the box, Repeat Step.

**Note**

This field is disabled when the 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. In this step, the user has the option to repeat steps 2 or 3.

## Application Download and Execution

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

1. Click the "Download" icon from Application Generation Window.
2. Change KDC from Normal mode to Application mode.
  - A. Press two side buttons simultaneously to enter menu mode.
  - B. Select KDC mode and enter scan button.
  - C. Change to Application mode.
  - D. Save and exit from menu mode.
3. KDC will run in normal mode if you do not change to Application mode after downloading the application.
4. If you want to delete the downloaded application in your KDC, select App. Data in Reset Memory after you go to System Config in KDC Menu.

## 6.2 Predefined Applications

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

### Master/Slave

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

#### Master/Slave Onetime

Define one *master* barcode and compare it with one *slave* barcode.

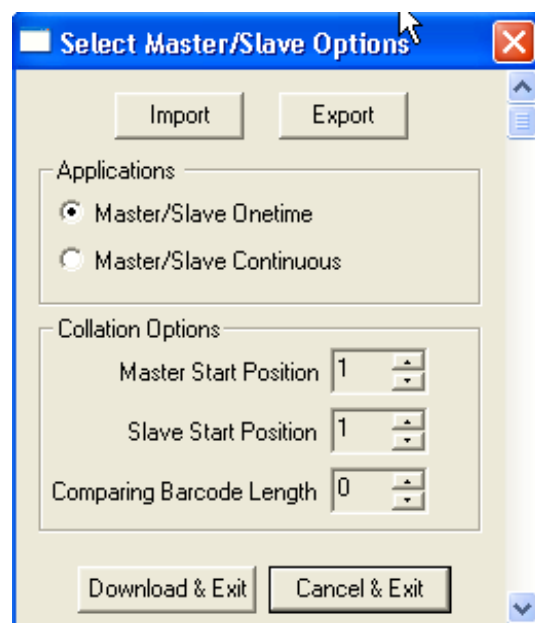
#### Master/Slave Continuous

Define one *master* barcode and compare it with multiple *slave* barcodes.

#### Collation Options

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

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



## Pick/Bin

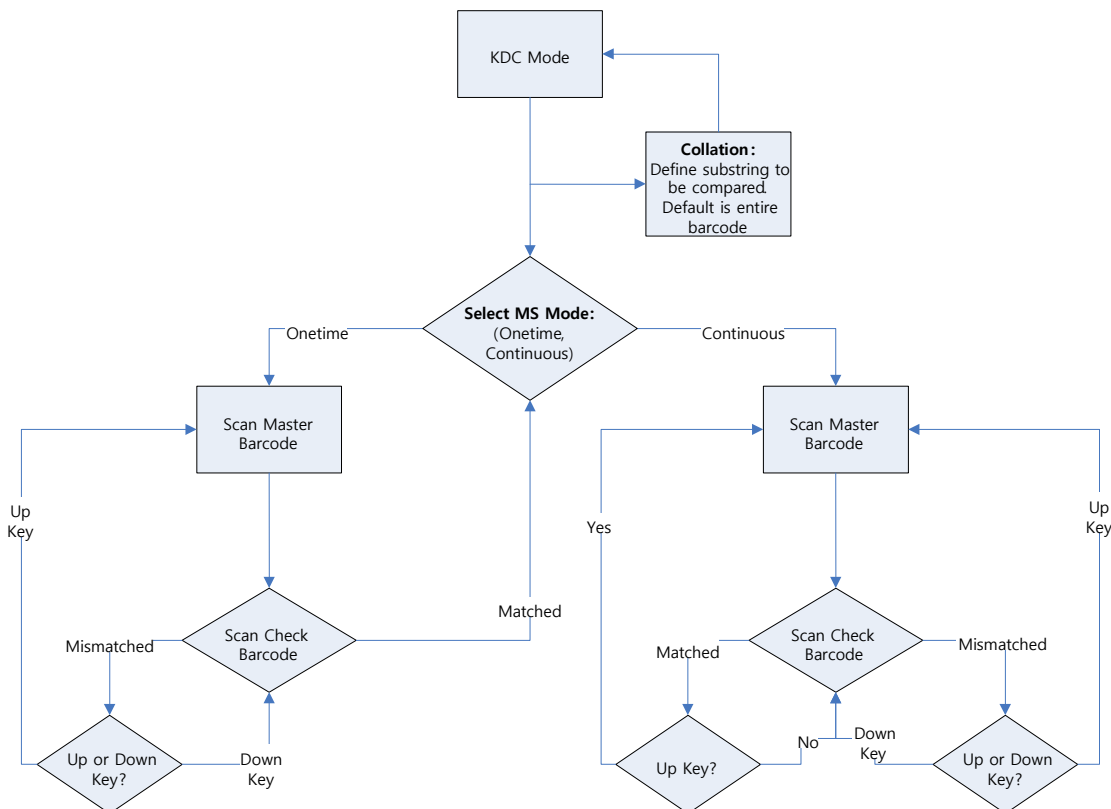
The Pick/Bin predefined application is a special version of the Master/Slave predefined application. The Pick/Bin application enables you to define the Pick ID and the barcode symbology for comparison with a defined Bin.

- **Number of ID and Symbology**

Define Pick ID characters from 1 to 32 and the barcode symbology.

*Figure 34 - Master/Slave Application Settings*

- **Pick Start position and symbology**



*Figure 35 - Master/Slave Application Flow Chart*

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

- **Bin Start Position and Symbology**  
Select the numeric position of start substring character in Bin barcode from 1 to 255 and the barcode symbology.
- **Comparing Barcode Length**  
Select the number of characters to be compared from 0 to 255. 0 means all characters.

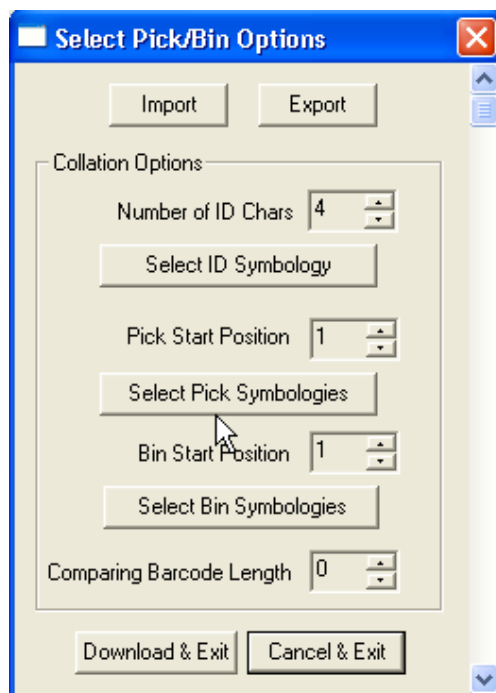


Figure 36 - Pick/BIN Application Menu

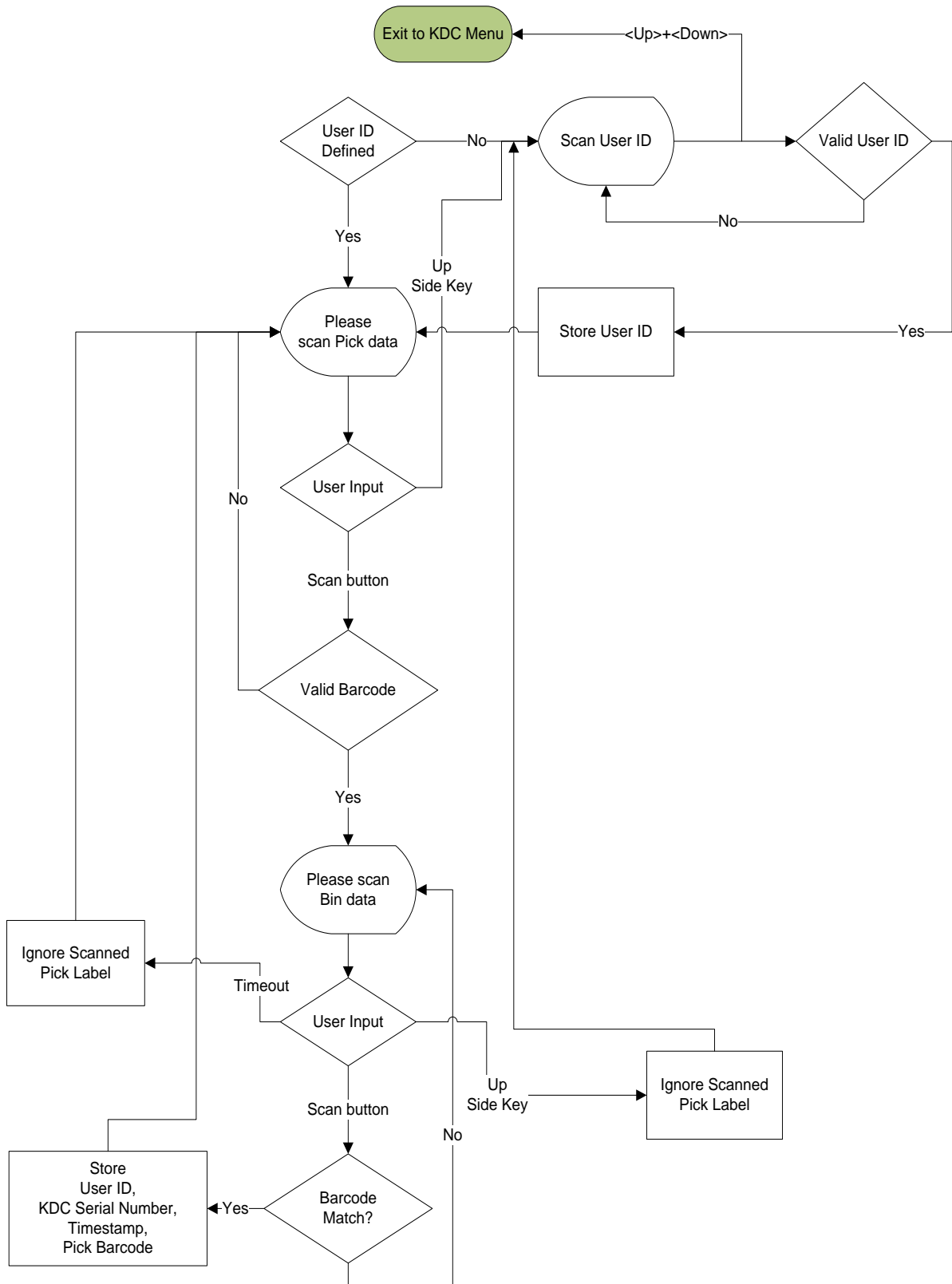


Figure 37 - Pick/BIN Application Flow Chart

## DB Lookup Application

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

### Functionality of DB Lookup Application

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

### DB Lookup Fields and Settings

- **Download DB to KDC** - Downloads user created database to KDC.
- **Starting Quantity** - Enter predefined start quantity for each scanned barcode. The start quantity may be defined from 1 to 128 and may be adjusted using UP or DOWN buttons.
- **Barcode Field** - Select the position of barcode field in database from 1 to 4.
- **Stored Barcode Start Position** - Select the numeric position of start substring character of barcode in database from 1 to 39.
- **Scanned Barcode Start Position** - Select the numeric position of start substring character of scanned barcode from 1 to 39.
- **Comparing Barcode Length** - Number of characters to be compared from 0 to 255 where 0 is all characters.
- **Display on KDC** - Define database fields to be displayed on KDC. KDC may display one to three fields. KDC will display one field in two or three lines, if same field is specified in line entering option.

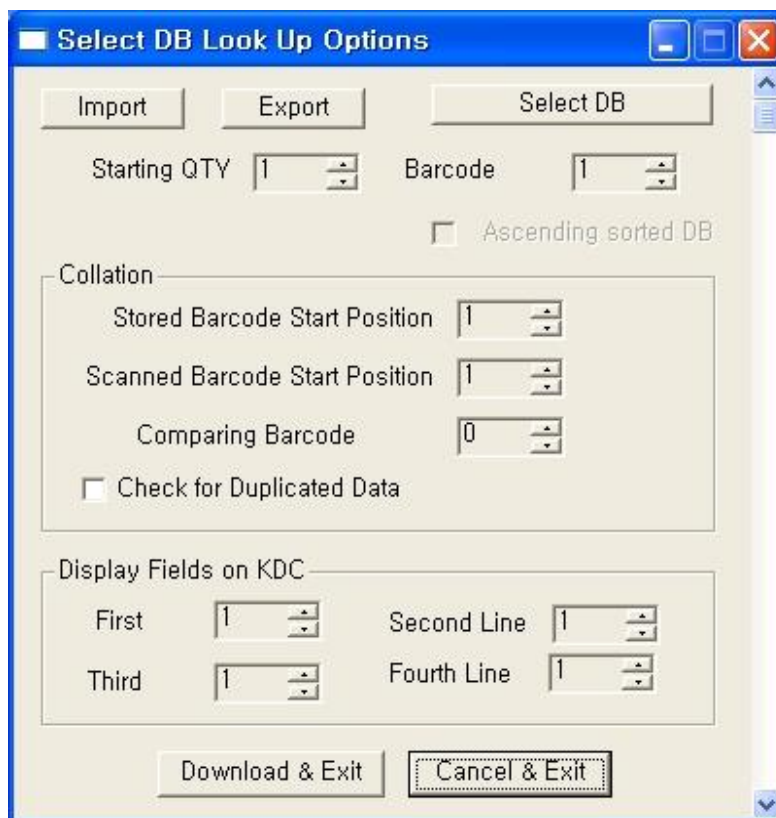


Figure 38 - DB Lookup Application Menu



## Inventory Application

The Inventory application enables the user to count inventories by scanning inventory barcodes. This application will increase inventory item count if the same item is scanned. Users may also download an inventory database to the KDC. If inventory DB is downloaded, KDC will display inventory description.

### Functionality of Inventory Application

- The inventory may not exceed 800 items.
- The maximum record size is 128 bytes.
- Each record may have up to 4 fields, including the barcode, which is the primary key.
- The maximum field size is 39 characters.
- Quantities 1 to 32786 may be entered by pressing the UP or DOWN buttons after inventory is scanned.
- Starting Quantity may be 1 to 128.
- Min/Max. Data Length is between 2 to 256 (KDC100/200/250/350L) or 4 to 256 (KDC300/350C).
- Barcode Collation Start Position is between 1 to 256.
- The length of Collation Data String is between 1 to 30.
- Collect Partial Data Start Position is between 1 to 256.
- Collect Partial Data Length is between 1 to 256.
- Users may create an inventory database using Microsoft Excel.
  - Excel file must be saved as .txt.
  - Click **User Inventory DB** option to display inventory description.
  - Click **Do not add non-existing item into DB** if one do not wish to add new items into inventory DB.
  - The number of Barcode Data Field is between 1 to 4.
  - The position of Display Filed is between 1 to 4.

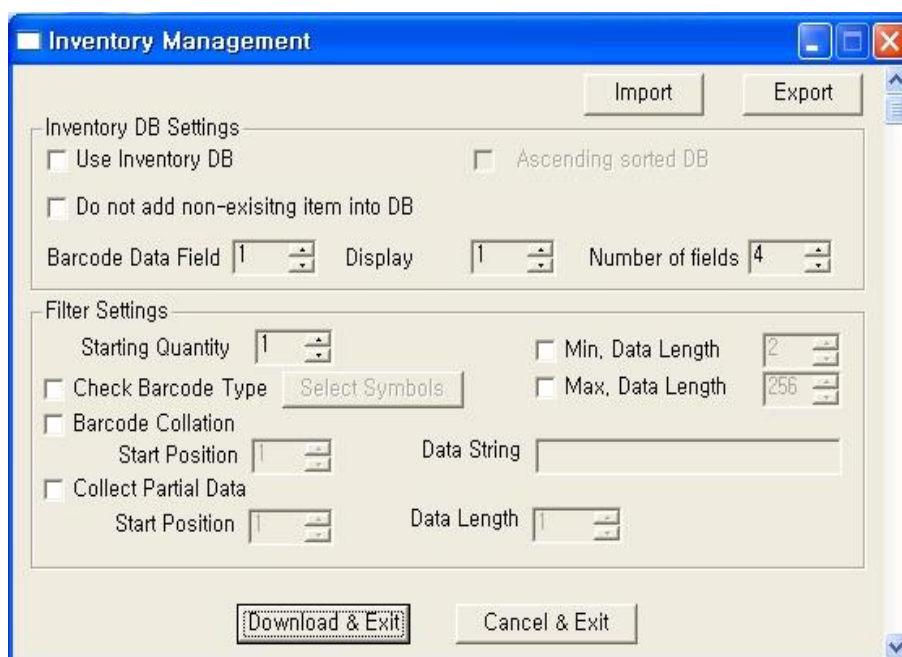


Figure 39 - Inventory Application

## 7. Troubleshooting

ISSUE	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               <ul style="list-style-type: none"> <li>- Charge KDC using a different USB port on your PC</li> </ul> </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>May'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>
<b>Abnormal KTSync Operation on DELL PC</b>	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 6 - Troubleshooting Techniques*

## 8. Warranty

### LIMITED WARRANTY AND DISCLAIMERS

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

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

#### Serial Number

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

#### Warranty/Warranty Period/Liability

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

#### Warranty Coverage and Procedure

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

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

## 9. Contact Information



CORPORATE HEADQUARTERS

116 Village Blvd., Suite 305

Princeton, NJ 08540, USA

Phone: 609-256-4700, 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)

# 10. Appendix A – Barcode & Scan Options

The process for scanning and reading barcodes is delicate and complicated. Although the 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.

## 10.1 Symbologies

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

	<i>KDC20/100/200/250/350L/410/415</i>	<i>KDC30/300/350C/420/425/450</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, GS1-128, Code39, Code93, & Code35	Codabar, Code11, Code32, Code39, Code128, EAN8, EAN13, GS1-128, I2of5, MSI, Plessey, PosiCode, GS1 DATABAR OMNI, GS1 Limited, GS1 Expanded, S2of5IA, S2of5ID, TLC39, Telepen, Trioptic, UPCA, & UPCE
<i>2D Barcodes</i>	N/A	AztecCode, AztecRunes, CodablockF, Code 16K, Code49, DataMatrix, MaxiCode, MicroPDF, PDF417, & QRCode and HanXin Code
<i>Postal Barcodes</i>	N/A	AusPost, MayadaPost, ChinaPost, JapanPost, KoreaPost, KixPost, Planet Code, Postnet (US), & UKPost
<i>OCR Fonts</i>	N/A	OCR-A, OCR-B, OCRUSCurrency, OCRMICRE13B, & OCRSEMIFONT

Table 7 - Symbologies Supported by KDC

## Bookland EAN vs. EAN-13

Bookland EAN, which includes ISBN, ISSN, and ISMN, is supported by the KDC. This group of symbologies is essentially an EAN-13 barcode with fixed prefixes; 977 for ISSN, 978 for ISBN, and 979 for ISMN. If EAN-13 and Bookland EAN are both enabled, Bookland EAN takes precedence. Bookland EAN does not have any options. The Bookland EAN barcode does not contain any groupings – that is, there are no hyphens or separators. Thus, the ISBN 957-630-239-0 is transmitted as 9576302390.

## Add-on Symbologies

By default, the 2 or 5 digit add-on symbols with a UPCE, UPCA, EAN-8, and EAN-13 barcode are neither decoded nor transmitted. Transmission for these specific symbologies is enabled by setting the appropriate *withAddon* options. There are 4 *withAddon* options, one for each symbology:

- `UPCEwithAddon`
- `UPCAwithAddon`
- `EAN8withAddon`
- `EAN13withAddon`

The decoding of add-on symbols are defined by the following table, which explains the process for EAN-13 symbols.

Mode	Behavior	Value of flags	
<b>Auto-discrimination</b>	If add-on symbol is present, then it is also decoded; otherwise, only the EAN-13 symbol is decoded.	true	true
<b>With add-on</b>	Only EAN-13 barcodes with 2 or 5 add-on symbols are decoded.	false	true
<b>Without add-on</b>	The add-on symbol is ignored.	true	false

*Table 8 - Add-on for EAN-13 Symbology*

The add-on symbol is appended to the EAN-13 barcode. The process is similar for UPCE, UPCA, and EAN-8 barcodes. Note that all the UPCE, UPCA, EAN-8, and EAN-13 formatting and conversion options are in effect. The following table should help explain the effect of various options for EAN-8 barcode 12345670 + 12.



Barcode	EAN8_as_EAN13	EAN8_Return CheckDigit	EAN13_ReturnCheckDigit
1234567012	False	True	N/A
123456712		False	
00000123456712	True	N/A	False
000001234567012			True

Table 9 - Add-on for EAN-8 Symbology

The add-on symbol contains neither a check digit nor a terminating guard band. Every effort has been made to reduce the decoding error; however, it is likely to decode a partial scan of a 5-digit add-on symbol as a 2-digit add-on symbol. It is strongly recommended that the minimum security level be set at 2 while decoding add-on symbols. Since the decoder takes a conservative view on the add-on symbols, it is likely that the add-on symbol will be missed in the auto-discrimination mode. Auto-discrimination mode should then be avoided.

## 10.2 Code Options (KDC20/30/100/200/250/410/415)

The KDC supports the following barcode options:

- Transmission of start and stop characters
- Reverse direction
- Symbology conversion
- Verification of optional check character
- Transmission of check digit
- Transmission of Start and Stop Characters

For Codabar symbols, the user may choose not to transmit the start and stop symbols, the NOTIS Editing. By default, they are transmitted. Setting the field `CodaBar_NoStartStopChars` to true disables the transmission.

### Reverse Direction

This option may be selected if direction oriented symbologies are designated, such as Code35.

## Symbology Conversion

By default the EAN-8, UPCE, and UPCA symbols are transmitted in their native format. However, it is possible to show them in a different format. The user may choose to display UPCE symbols as either UPC-A or EAN-13 symbols, EAN-8 symbols as EAN-13 symbols, or UPC-A symbols as EAN-13 symbols. The following table shows the effect of setting various options.

Option	EAN-8	UPC-A	UPC-E	All others
EAN8_as_EAN13	Converted to EAN-13	No effect	No effect	No effect
UPCA_as_EAN13	No effect	Converted to EAN-13	No effect	
UPCE_as_EAN13	No effect	No effect	Converted to EAN-13	
UPCE_as_UPCA	No effect	No effect	Converted to UPC-A	

Table 10 - Symbology Conversion

## Verification of Optional "Check Digit"

Code39 and Interleave 2 of 5 have an optional check digit, which, by default, is not verified. Changing the option **VerifyCheckDigit** to true may enable their verification, or the user may enable the verification for individual symbologies. If the check digit verification fails, the barcode is not transmitted.

Option Selected	Verify Code39 check digit	Verify I2of5 check digit
VerifyCheckDigit	Yes	Yes
Code39_VerifyCheckDigit	Yes	No effect
I2of5_VerifyCheckDigit	No effect	Yes

Table 11 - Verification of Optional "Check Digit"

## Transmission of "Check Digit"

By default, the check digit – optional or mandatory – is not transmitted. Its transmission may be enabled for all symbologies by enabling **ReturnCheckDigit** option.

Option Selected	Is the check digit returned?					
	Yes	Yes	Yes	Yes	Yes	Yes
ReturnCheckDigit	Yes	Yes	Yes	Yes	Yes	Yes
EAN13_ReturnCheckDigit	Yes	No effect	No effect	No effect	No effect	No effect
EAN8_ReturnCheckDigit	No effect	Yes	No effect	No effect	No effect	No effect
UPCA_ReturnCheckDigit	No effect	No effect	Yes	No effect	No effect	No effect
UPCE_ReturnCheckDigit	No effect	No effect	No effect	Yes	No effect	No effect
Code39_ReturnCheckDigit	No effect	No effect	No effect	No effect	Yes	No effect
I2of5_ReturnCheckDigit	No effect	No effect	No effect	No effect	No effect	Yes

Table 12 - Transmission of "Check Digit"

## Resolution of Inconsistencies

Three types of inconsistencies could arise in the assignment of symbology options. The decoder has pre-defined strategies to resolve these inconsistencies: If **UPCE\_as\_EAN13** is true, then **UPCE\_as\_UPCA** is ignored.

If symbology conversion is selected but the target symbology is not enabled, then the decoder still outputs the symbol in the target symbology. For example, suppose UPC-E is enabled and **UPCE\_as\_EAN13** is true but EAN-13 is disabled. All UPC-E symbols will be shown as EAN-13 and EAN-13 options (if specified) will be applied. For the two symbologies that have optional check digits, Code39 and Interleave 2 of 5, the decoder will always transmit the check digit if the verification is disabled.

Verify Check Digit	Return Check Digit	Description
Disabled	Enabled or Disabled	Check digit is not verified but is transmitted
Enabled	Disabled	Check digit is verified but is not transmitted
Enabled	Enabled	Check digit is verified and is transmitted

*Table 13 - Resolution of Inconsistencies*

## 10.3 Miscellaneous Barcode Information

### Height of a Linear Barcode

Industry standards suggest a height of either 6.5mm or 15% of the symbol length, whichever is greater. Symbols of less than recommended heights may cause recognition problems.

### Check Characters

Yes, we recommend the use of check-characters in barcodes. Operating without check-characters is not safe and will lead to errors that are costly to correct. Using check-characters positively affects data integrity, especially when character density is at the limits and/or image quality is not at its best.

### Prevent Interleave 2 of 5 Partial Reading

A partial scan of an Interleave 2 of 5 symbols may decode and cause incorrect data to be read. To prevent partial scans on long symbols, the user should include bearer bars. These bars run along the top and bottom edges of the barcode in the scanning direction. If a partial scan of the barcode occurs, the scanning beam will hit the bearer bar and will not decode. The bearer bar must touch the top and bottom of all the bars and must be at least 3 times as wide.

Another solution for the short scanning problem is to fix all Interleave 2 of 5 symbols to a set number of digits. Zeros may be used to pad the data to the set number of digits. The application program would then be set to only accept scans of the correct number of digits.

Finally, a check digit may be used. The Interleave 2 of 5 symbology has an optional check character that uses a weighted Modulo 10 scheme. The check character is the last character in the symbol and should be checked by the decoder and then transmitted with the data. Since Interleave 2 of 5 must always have an even number of digits, the leftmost character may need to be a zero when the check character is added. The standard check digit is calculated by assigning alternating 3,1,3,1... weights to respective data digits. These weights are then multiplied by their respective data digits and the products are summed. The check digit is the digit that needs to be added to the sum to make it an even multiple of 10. An example would be if the sum of the products was 37, then the check digit would be 3.

## Equation to Determining Potential Number of Stored Barcodes

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

***Example:** If only UPCA barcodes are scanned and the check digit is not transmitted, then each barcode takes up 11 (barcode data) + 2 (added bytes) + 2 (length and type) + 4 (time stamp) = 19 bytes. The maximum number of UPCA barcodes that may be saved is  $204,800/19 = 10,778$ . However, KDC has limited the maximum number of barcode to 10,240 and users maynot store more than 10,240 barcodes in 2.85/86 version. 3.0x version Enables the user to store maximum 204,800 barcodes.*

## Data Buffer Full

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

# 11. Appendix B –FAQ

## 11.1 Symbology

**Q: What barcode symbologies are supported by the KDC?**

A: The KDC20/100/200/250/350L/410/415 support 1D barcode only.

KDC30/300/350C/420/425/450 support most major 1D, 2D barcode symbologies and OCR.

<b><i>KDC30/300/420/425</i></b>	<b><i>KDC20/100/200/250/410/415</i></b>
<b><u>2D Barcodes</u></b>	<b><u>1D Barcodes</u></b>
AztecCode, AztecRunes, CodablockF, Code16K, Code49, DataMatrix, MaxiCode, MicroPDF, PDF417, QRCode, and HanXin Code	EAN13 EAN8 UPCA UPCE Bookland EAN EAN13 with Add-on EAN8 with Add-on UPCA with Add-on UPCE with Add-on Interleave 2 of 5 ITF14 Code128 Codabar GS1-128 Code39 Code93 Code35
<b><u>1D Barcodes</u></b>	
Codabar, Code11, Code32, Code39, Code128, EAN8, EAN13, GS1-128, I2of5, MSI, Plessey, PosiCode, GS1 DATABAR OMNI, GS1 Limited, GS1 Expanded, S2of5IA, S2of5ID, TLC39, Telepen, Trioptic, UPCA, and UPCE	
<b><u>Postal Barcodes</u></b>	
AusPost, CanadaPost, ChinaPost, JapanPost, KoreaPost, KixPost, Planet Code, Postnet (US), and UKPost	
<b><u>OCR Fonts</u></b>	
OCR-A, OCR-B, OCRUSCurrency, OCRMICRE13B, and OCRSEMIFONT	

Table 14 – Symbologies supported by KDC

## 11.2 Host Interface

### Q: What interface ports are supported by the KDC?

A: The KDC100 has two USB ports: Swing-out Type A and ultra mini USB ports that support USB to Serial protocol. KDC200/250/300/350/400 have one ultra mini USB port that supports USB to Serial protocol and Bluetooth that supports HID/SPP/MFi *Bluetooth* profiles. KDC20/30 have one Swing-out Type A USB port which supports USB to Serial protocol and Bluetooth with HID, SPP and MFi *Bluetooth* profiles.

## 11.3 Battery

### Q: How long will the KDC battery last before it needs to be replaced?

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

### Q: How long does it take to charge the KDC?

A: It takes about 2 hours to charge the KDC20/100/200, 4 hours to charge the KDC30/250/300, and 5 hours to charge the KDC350/400.

### Q: How many barcodes may a fully charged KDC scan?

A: If the user scans a barcode every 1 seconds, KDC100 scans more than 15,000 barcodes, KDC20 scans more than 9,000 barcodes, KDC200 scans more than 7,500 barcodes, KDC250 scans more than 25,000 scans, KDC30/300 scans more than 20,000 scans and KDC350/400 scan more than 40,000.

### Q: How long will the KDC battery lasts in the sleep mode?

A: **KDC100** lasts more than 75 days. **KDC20/200** lasts more than 2 days while connected in Bluetooth and 60 days if not connected in Bluetooth. **KDC250** lasts 7 days while connected in Bluetooth and 120 days if not connected in Bluetooth. **KDC30/300** last more than 25 days while connected in Bluetooth and 5 days if not connected in Bluetooth. **KDC350** lasts more than 12 hours while GPS is active and Bluetooth is connected, 7 days while GPS is not active and Bluetooth is connected, and 20 days while GPS is not active and Bluetooth is not connected. **KDC410/415/420/425/430** last more than 8 days while connected in Bluetooth and 20 days while if not connected in Bluetooth. **KDC450** lasts more than 4 hours while reading RFID tag continuously every second and Bluetooth is connected, 5 days if reading RFID tag casually and Bluetooth is connected.

### Q: May I replace the KDC battery?

A: Yes. The KDC has a separate compartment for the battery that may be opened easily with a driver. KDC batteries may be purchased at [www.KOAMTACstore.com](http://www.KOAMTACstore.com) or from local KDC reseller.



## 11.4 Memory

**Q: How many barcodes may be stored in the KDC?**

A: KDC100M/200M/250M/300M/350 have 4MB data memory which may store maximum of 204,800 barcodes. KDC20/30 have 160KB data memory which may store maximum 10,240 barcodes. KDC400 has 100KB data memory.

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

A: Yes. KTSync® is keyboard wedging, application generation, DB look up, and inventory program bundled with the KDC200/250/300/350, which supports host devices running on Android®, iPhone/iPad/iPod touch, Blackberry®, Windows® XP/Vista/7/Mobile5.0+. KTSync® provides keyboard wedging program only for KDC20/30/400 and KDC100 only supports Windows XP/Vista/7 version.

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

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

## 11.5 Programming

**Q: May the KDC be programmed by a KOAMTAC partner?**

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

1. KDC supports, at most, three step data collection processes, including the ability to perform various data functionality features.
2. KDC's database lookup function provides enhanced data processes, enabling the KDC to display database results with or without scanned barcode data.
3. KDC may display a message from the Host by enabling two-way communications and a messaging application.

**Q: Does KOAMTAC provide customization services for the KDC?**

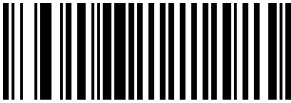



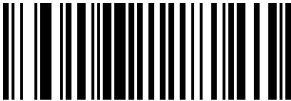
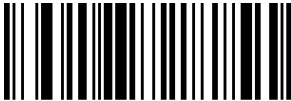




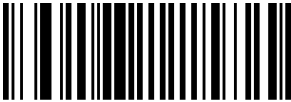

A: Yes. Custom applications or projects may be developed by KOAMTAC engineers. This service is provided for an additional fee to KOAMTAC. For more information regarding this service, please contact KOAMTAC.

















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


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

# 12. Appendix C – 1D Special Barcodes (KDC20/100/200/250/350L/410/415)

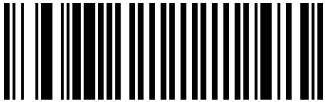

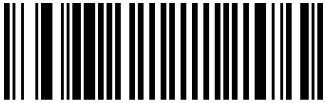











## 12.1 Set Symbolologies

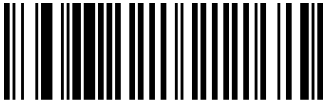















<p>Enable EAN13</p>  <p>2000001</p>	<p>Disable EAN13</p>  <p>2100001</p>
<p>Enable EAN8</p>  <p>2000002</p>	<p>Disable EAN8</p>  <p>2100002</p>
<p>Enable UPCA</p>  <p>2000004</p>	<p>Disable UPCA</p>  <p>2100004</p>
<p>Enable UPCE</p>  <p>2000008</p>	<p>Disable UPCE</p>  <p>2100008</p>
<p>Enable Code39</p>  <p>2000010</p>	<p>Disable Code39</p>  <p>2100010</p>
<p>Enable ITF14</p>  <p>2000020</p>	<p>Disable ITF14</p>  <p>2100020</p>

<p>Enable Code128</p>  <p>2000040</p>	<p>Disable Code128</p>  <p>2100040</p>
<p>Enable I2 of 5</p>  <p>2000080</p>	<p>Disable I2 of 5</p>  <p>2100080</p>
<p>Enable Codabar</p>  <p>2000100</p>	<p>Disable Codabar</p>  <p>2100100</p>
<p>Enable GS1-128</p>  <p>2000200</p>	<p>Disable GS1-128</p>  <p>2100200</p>
<p>Enable Code93</p>  <p>2000400</p>	<p>Disable Code93</p>  <p>2100400</p>
<p>Enable Code35</p>  <p>2000800</p>	<p>Disable Code35</p>  <p>2100800</p>
<p>Enable Bookland EAN</p>  <p>2001000</p>	<p>Disable Bookland EAN</p>  <p>2101000</p>
<p>Enable EAN13 with Addon</p>  <p>2002000</p>	<p>Disable EAN13 with Addon</p>  <p>2102000</p>

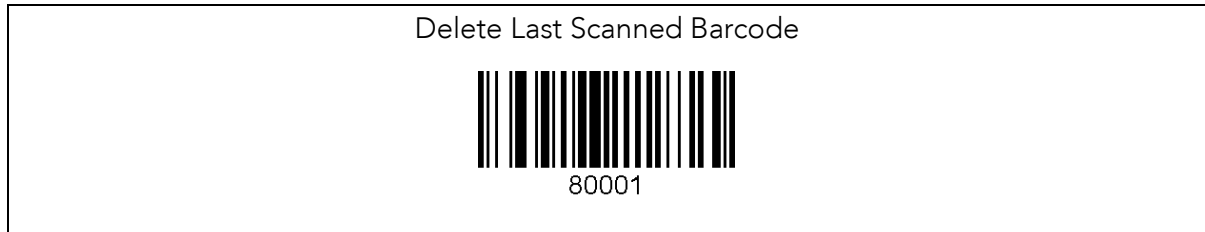
<p>Enable EAN8 with Addon</p>  <p>2004000</p>	<p>Disable EAN8 with Addon</p>  <p>2104000</p>
<p>Enable UPCA with Addon</p>  <p>2008000</p>	<p>Disable UPCA with Addon</p>  <p>2108000</p>
<p>Enable UPCE with Addon</p>  <p>2010000</p>	<p>Disable UPCE with Addon</p>  <p>2110000</p>

## 12.2 Barcode Options

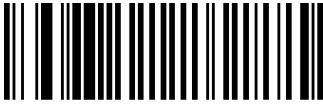










<p>Codabar - do NOT transmit start/stop</p>  <p>3000000001</p>	<p>Codabar - transmit start/stop</p>  <p>3100000001</p>
<p>Convert UPCE to UPCA</p>  <p>3000000200</p>	<p>Do NOT convert UPCE to UPCA</p>  <p>3100000200</p>
<p>Convert EAN8 to EAN13</p>  <p>3000000400</p>	<p>Do NOT convert EAN8 to EAN13</p>  <p>3100000400</p>
<p>Convert UPCE to EAN13</p>  <p>3000000800</p>	<p>Do NOT convert UPCE to EAN13</p>  <p>3100000800</p>
<p>Return Check Digit</p>  <p>3000001000</p>	<p>Do NOT Return Check Digit</p>  <p>3100001000</p>
<p>Verify Check Digit</p>  <p>3000002000</p>	<p>Do NOT Verify Check Digit</p>  <p>3100002000</p>
<p>Convert UPCA to EAN13</p>  <p>3000080000</p>	<p>Do NOT Convert UPCA to EAN13</p>  <p>3100080000</p>

<p>Verify check digit for I2of5</p>  <p>3000400000</p>	<p>Do NOT verify check digit for I2of5</p>  <p>3100400000</p>
<p>Verify check digit for Code39</p>  <p>3000800000</p>	<p>Do NOT verify check digit for Code39</p>  <p>3100800000</p>
<p>Return check digit for I2of5</p>  <p>3004000000</p>	<p>Do NOT return check digit for I2of5</p>  <p>3104000000</p>
<p>Return check digit for Code39</p>  <p>3008000000</p>	<p>Do NOT return check digit for Code39</p>  <p>3108000000</p>
<p>Return check digit for UPCE</p>  <p>3010000000</p>	<p>Do NOT return check digit for UPCE</p>  <p>3110000000</p>
<p>Return check digit for UPCA</p>  <p>3020000000</p>	<p>Do NOT return check digit for UPCA</p>  <p>3120000000</p>
<p>Return check digit for EAN8</p>  <p>3040000000</p>	<p>Do NOT return check digit for EAN8</p>  <p>3140000000</p>
<p>Return check digit for EAN13</p>  <p>3080000000</p>	<p>Do NOT return check digit for EAN13</p>  <p>3180000000</p>

## 12.3 Delete Last Scanned Barcode











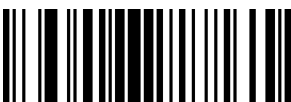


## 12.4 Scan Options















<p>Wide Scan Angle</p>  <p>3000004000</p>	<p>Narrow Scan Angle</p>  <p>3100004000</p>
<p>Normal Filter Mode</p>  <p>3100008000</p>	<p>High Filter Mode</p>  <p>3000008000</p>
<p>Enable Auto Trigger</p>  <p>5A001</p>	<p>Disable Auto Trigger</p>  <p>5A010</p>
<p>Reread Delay = Continuous</p>  <p>5B000</p>	<p>Reread Delay = Short</p>  <p>5B001</p>
<p>Reread Delay = Medium</p>  <p>5B002</p>	<p>Reread Delay = Long</p>  <p>5B003</p>
<p>Reread Delay = Extra Long</p>  <p>5B004</p>	


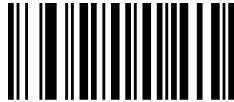
















## 12.5 Scan Timeout

Scan Timeout = 500msec  101F4	Scan Timeout = 1sec  103E8
Scan Timeout = 2sec  107D0	Scan Timeout = 3sec  10BB8
Scan Timeout = 4sec  10FA0	Scan Timeout = 5sec  11388
Scan Timeout = 6sec  11770	Scan Timeout = 7sec  11B58
Scan Timeout = 8sec  11F40	Scan Timeout = 9sec  12328
Scan Timeout = 10sec  12710	





## 12.6 Minimum Barcode Length

Minimum Length = 2  002	Minimum Length = 3  003
Minimum Length = 4  004	Minimum Length = 5  005
Minimum Length = 6  006	Minimum Length = 7  007
Minimum Length = 8  008	Minimum Length = 9  009
Minimum Length = 10  00A	Minimum Length = 11  00B
Minimum Length = 12  00C	Minimum Length = 13  00D
Minimum Length = 14  00E	Minimum Length = 15  00F



<p>Minimum Length = 16</p>  <p>010</p>	<p>Minimum Length = 17</p>  <p>011</p>
<p>Minimum Length = 18</p>  <p>012</p>	<p>Minimum Length = 19</p>  <p>013</p>
<p>Minimum Length = 20</p>  <p>014</p>	<p>Minimum Length = 21</p>  <p>015</p>
<p>Minimum Length = 22</p>  <p>016</p>	<p>Minimum Length = 23</p>  <p>017</p>
<p>Minimum Length = 24</p>  <p>018</p>	<p>Minimum Length = 25</p>  <p>019</p>
<p>Minimum Length = 26</p>  <p>01A</p>	<p>Minimum Length = 27</p>  <p>01B</p>
<p>Minimum Length = 28</p>  <p>01C</p>	<p>Minimum Length = 29</p>  <p>01D</p>
<p>Minimum Length = 30</p>  <p>01E</p>	<p>Minimum Length = 31</p>  <p>01F</p>

<p>Minimum Length = 32</p>  <p>020</p>	<p>Minimum Length = 33</p>  <p>021</p>
<p>Minimum Length = 34</p>  <p>022</p>	<p>Minimum Length = 35</p>  <p>023</p>
<p>Minimum Length = 36</p>  <p>024</p>	

## 12.7 Security Level

<p>Security level = 1</p>  <p>41</p>	<p>Security level = 2</p>  <p>42</p>
<p>Security level = 3</p>  <p>43</p>	<p>Security level = 4</p>  <p>44</p>

## 12.8 Data Process - Wedge/Store & Enter Key

<p>Wedge Only</p>  <p>82000</p>	<p>Wedge &amp; Store Always</p>  <p>82001</p>
<p>Store Only</p>  <p>82002</p>	<p>Save if Sent</p>  <p>82003</p>
<p>Save if Not Sent</p>  <p>82004</p>	
<p>Enable Enter Key (KDC350L Only)</p>  <p>8E001</p>	<p>Disable Enter Key (KDC350L Only)</p>  <p>8E000</p>

## 12.9 Data Process - Data Edit












<p>Start Prefix Enter</p>  <p>83000</p>	<p>Start Suffix Enter</p>  <p>83001</p>
<p>Finish Prefix/Suffix Enter</p>  <p>83002</p>	<p>Cancel Prefix/Suffix Enter</p>  <p>83003</p>
<p>Delete Prefix</p>  <p>83004</p>	<p>Delete Suffix</p>  <p>83005</p>
<p>Display Prefix</p>  <p>83006</p>	<p>Display Suffix</p>  <p>83007</p>
<p>AIM ID None</p>  <p>8B000</p>	<p>AIM ID In Prefix</p>  <p>8B001</p>
<p>AIM ID In Suffix</p>  <p>8B002</p>	

Figure 40 - Inventory Application

## 12.10 Data Process - Data Format & Handshake




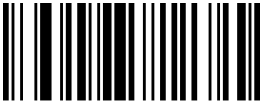
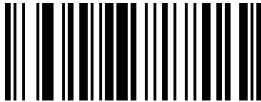







<p>Data format = Barcode only</p>  <p>84001</p>	<p>Data format = Packet data</p>  <p>84010</p>
<p>Enable Handshake</p>  <p>86001</p>	<p>Disable Handshake</p>  <p>86010</p>


























## 12.11 Data Process - Termination Character & Duplicate Check

Termination Character = None  88000	Termination Character = CR  88001
Termination Character = LF  88002	Termination Character = CR+LF  88003
Termination Character = Tab  88004	
Enable Duplicate Check  89001	Disable Duplicate Check  89010




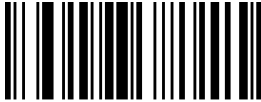







## 12.11 Bluetooth

Enable Bluetooth Power  60001	Disable Bluetooth Power  60010
Enter Pairing Mode  61001	
Enable Discovering  61101	Disable Discovering  61110
Connect To Last  61201	Connecting to  61301
Disconnect  6D000	
HID Sync  6E000	SPP Sync  6E001
Bluetooth Profile = SPP  6A000	Bluetooth Profile = HID iOS  6A001


<p>Bluetooth Profile = MFi</p>  <p>6A002</p>	<p>Bluetooth Profile = SPP2.0</p>  <p>6A003</p>
<p>Bluetooth Profile = HID Normal</p>  <p>6A004</p>	
<p>Enable Auto Connect</p>  <p>62001</p>	<p>Disable Auto Connect</p>  <p>62010</p>
<p>Enable Auto Reconnect</p>  <p>6R001</p>	<p>Disable Auto Reconnect</p>  <p>6R010</p>
<p>Enable Auto Power On</p>  <p>66001</p>	<p>Disable Auto Power On</p>  <p>66010</p>
<p>Enable Auto Power Off</p>  <p>64001</p>	<p>Disable Auto Power Off</p>  <p>64010</p>
<p>Enable Beep Warning</p>  <p>68001</p>	<p>Disable Beep Warning</p>  <p>68010</p>
<p>Enable Power Off Msg</p>  <p>63001</p>	<p>Disable Power Off Msg</p>  <p>63010</p>

<p>Display BT MAC Address</p>  <p>63100</p>	<p>Display BT FW Version</p>  <p>63200</p>
<p>Enable Wakeup Nulls</p>  <p>63401</p>	<p>Disable Wakeup Nulls</p>  <p>63410</p>
<p>Enable BT Toggle</p>  <p>6B001</p>	<p>Disable BT Toggle</p>  <p>6B010</p>
<p>Enable BT Disconnect Button</p>  <p>6B101</p>	<p>Disable BT Disconnect Button</p>  <p>6B110</p>

## 12.12 Bluetooth Auto Power On Time

Auto Power On Time = Disabled  67000	Auto Power On Time = 1sec  67001
Auto Power On Time = 2sec  67002	Auto Power On Time = 3sec  67003
Auto Power On Time = 4sec  67004	Auto Power On Time = 5sec  67005
Auto Power On Time = 6sec  67006	Auto Power On Time = 7sec  67007
Auto Power On Time = 8sec  67008	Auto Power On Time = 9sec  67009
Auto Power On Time = 10sec  6700A	

## 12.13 Bluetooth Power Off Time

BT Power Off Time = 1min  69001	BT Power Off Time = 2min  69002
BT Power Off Time = 3min  69003	BT Power Off Time = 4min  69004
BT Power Off Time = 5min  69005	BT Power Off Time = 6min  69006
BT Power Off Time = 7min  69007	BT Power Off Time = 8min  69008
BT Power Off Time = 9min  69009	BT Power Off Time = 10min  6900A
BT Power Off Time = 11min  6900B	BT Power Off Time = 12min  6900C
BT Power Off Time = 13min  6900D	BT Power Off Time = 14min  6900E






<p>BT Power Off Time = 15min</p>  <p>6900F</p>	<p>BT Power Off Time = 16min</p>  <p>69010</p>
<p>BT Power Off Time = 17min</p>  <p>69011</p>	<p>BT Power Off Time = 18min</p>  <p>69012</p>
<p>BT Power Off Time = 19min</p>  <p>69013</p>	<p>BT Power Off Time = 20min</p>  <p>69014</p>
<p>BT Power Off Time = 21min</p>  <p>69015</p>	<p>BT Power Off Time = 22min</p>  <p>69016</p>
<p>BT Power Off Time = 23min</p>  <p>69017</p>	<p>BT Power Off Time = 24min</p>  <p>69018</p>
<p>BT Power Off Time = 25min</p>  <p>69019</p>	<p>BT Power Off Time = 26min</p>  <p>6901A</p>
<p>BT Power Off Time = 27min</p>  <p>6901B</p>	<p>BT Power Off Time = 28min</p>  <p>6901C</p>
<p>BT Power Off Time = 29min</p>  <p>6901D</p>	<p>BT Power Off Time = 30min</p>  <p>6901E</p>

## 12.14 HID Auto Lock Time

HID Auto Lock Time = 0min (Never)  6C000	HID Auto Lock Time = 1min  6C001
HID Auto Lock Time = 2min  6C002	HID Auto Lock Time = 3min  6C003
HID Auto Lock Time = 4min  6C004	HID Auto Lock Time = 5min  6C005
HID Auto Lock Time = 10min  6C00A	HID Auto Lock Time = 15min  6C00F



## 12.15 HID Keyboard

<p>HID Keyboard = US</p>  <p>6F000</p>	<p>HID Keyboard = German</p>  <p>6F001</p>
<p>HID Keyboard = French</p>  <p>6F002</p>	<p>HID Keyboard = Italian</p>  <p>6F003</p>
<p>HID Keyboard = Spanish</p>  <p>6F004</p>	

## 12.16 HID Initial Delay

<p>HID Initial Delay = Disabled</p>  <p>H0000</p>	<p>HID Initial Delay = 1second</p>  <p>H0001</p>
<p>HID Initial Delay = 2seconds</p>  <p>H0002</p>	<p>HID Initial Delay = 3seconds</p>  <p>H0003</p>
<p>HID Initial Delay = 5seconds</p>  <p>H0005</p>	<p>HID Initial Delay = 10seconds</p>  <p>H000A</p>














## 12.17 HID Character Delay

<p>HID Character Delay = Disabled</p>  <p>H1000</p>	<p>HID Character Delay = 10msec</p>  <p>H100A</p>
<p>HID Character Delay = 20msec</p>  <p>H1014</p>	<p>HID Character Delay = 30msec</p>  <p>H101E</p>
<p>HID Character Delay = 50msec</p>  <p>H1032</p>	<p>HID Character Delay = 100msec</p>  <p>H1064</p>

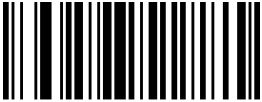
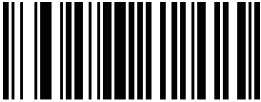













## 12.18 HID Control Character

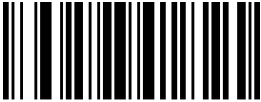


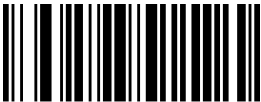










<p>HID Control Character = Disabled</p>  <p>H2000</p>	<p>HID Control Character = Alt+Numpad</p>  <p>H2001</p>
<p>HID Control Character = ^+Character</p>  <p>H2002</p>	<p>HID Control Character = Replace with ' '</p>  <p>H2003</p>

## 12.19 System














<p>Memory Size = 0.5M / 3.5M <sup>Note1</sup></p>  <p>5E000</p>	<p>Memory Size = 1M / 3M <sup>Note1</sup></p>  <p>5E001</p>
<p>Memory Size = 2M / 2M <sup>Note1</sup></p>  <p>5E002</p>	<p>Memory Size = 3M / 1M <sup>Note1</sup></p>  <p>5E003</p>
<p>Memory Size = 4M / 0M <sup>Note1</sup></p>  <p>5E004</p>	<p>Confirm Memory Size Change <sup>Note1</sup></p>  <p>5E100</p>
<p>Memory Status</p>  <p>50001</p>	<p>Reset Memory</p>  <p>50002</p>
<p>Erase Memory</p>  <p>50003</p>	<p>Reset App data</p>  <p>50004</p>
<p>Reset BT Registry</p>  <p>50005</p>	
<p>Enable Auto Erase</p>  <p>5F001</p>	<p>Disable Auto Erase</p>  <p>5F010</p>

※ Note 1. M Model Only

<p>Date/Time</p>  <p>52001</p>	<p>Battery</p>  <p>53001</p>
<p>Display Version</p>  <p>54001</p>	
<p>Lock Button</p>  <p>55001</p>	<p>Unlock Button</p>  <p>55010</p>
<p>Enable Beep Sound</p>  <p>56001</p>	<p>Disable Beep Sound</p>  <p>56010</p>
<p>High Beep Volume</p>  <p>5D001</p>	<p>Low Beep Volume</p>  <p>5D010</p>
<p>Enable Auto Menu Exit</p>  <p>58001</p>	<p>Disable Auto Menu Exit</p>  <p>58010</p>
<p>Enable MFi Mode</p>  <p>6M001</p>	<p>Disable MFi Mode</p>  <p>6M010</p>
<p>Enable Vibrator</p>  <p>5G001</p>	<p>Disable Vibrator</p>  <p>5G010</p>

<p>Enable Port Status</p>  <p>58101</p>	<p>Disable Port Status</p>  <p>58100</p>
<p>Display Format = Time &amp; Battery</p>  <p>58200</p>	<p>Display Format = Type &amp; Time</p>  <p>58201</p>
<p>Display Format = Type &amp; Battery</p>  <p>58202</p>	<p>Display Format = Memory Status</p>  <p>58203</p>
<p>Display Format = GPS Data (GPS Model)</p>  <p>58204</p>	<p>Display Format = Barcode Only</p>  <p>58205</p>
<p>Enable Scrolling</p>  <p>59001</p>	<p>Disable Scrolling</p>  <p>59010</p>
<p>Factory Default</p>  <p>57001</p>	<p>KDC Reset</p>  <p>A0000</p>
<p>Enable Backup Battery (KDC20 Only)</p>  <p>5R001</p>	<p>Disable Backup Battery (KDC20 Only)</p>  <p>5R010</p>

## 12.20 Sleep Timeout













Sleep Timeout = Disable  51000	Sleep Timeout = 1sec  51001
Sleep Timeout = 2sec  51002	Sleep Timeout = 3sec  51003
Sleep Timeout = 4sec  51004	Sleep Timeout = 5sec  51005
Sleep Timeout = 10sec  5100A	Sleep Timeout = 20sec  51014
Sleep Timeout = 30sec  5101E	Sleep Timeout = 1min  5103C
Sleep Timeout = 2min  51078	Sleep Timeout = 5min  5112C
Sleep Timeout = 10min  51258	






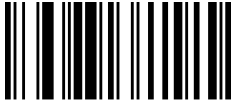






## 12.21 ETC

<p>Enable Reverse Direction</p>  <p>3000000002</p>	<p>Disable Reverse Direction</p>  <p>3100000002</p>
<p>Enable Verify check digit</p>  <p>3002000000</p>	<p>Disable Verify check digit</p>  <p>3102000000</p>
<p>Enable Return check digit</p>  <p>3001000000</p>	<p>Disable Return check digit</p>  <p>3101000000</p>







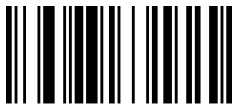







## 12.22 Function



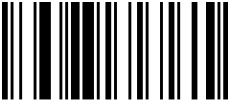





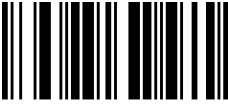

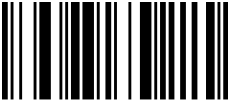

F1  7001	F2  7002
F3  7003	F4  7004
F5  7005	F6  7006
F7  7007	F8  7008
F9  7009	F10  700A
F11  700B	F12  700C

## 12.23 Number















0  7130	1  7131
2  7132	3  7133
4  7134	5  7135
6  7136	7  7137
8  7138	9  7139









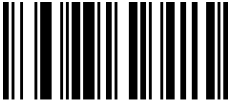

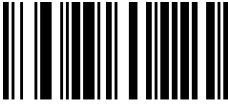

## 12.24 Lower Case Alphabet

a  7161	b  7162
c  7163	d  7164
e  7165	f  7166
g  7167	h  7168
i  7169	j  716A
k  716B	l  716C
m  716D	n  716E










<p>o</p>  <p>716E</p>	<p>p</p>  <p>7170</p>
<p>q</p>  <p>7171</p>	<p>r</p>  <p>7172</p>
<p>s</p>  <p>7173</p>	<p>t</p>  <p>7174</p>
<p>u</p>  <p>7175</p>	<p>v</p>  <p>7176</p>
<p>w</p>  <p>7177</p>	<p>x</p>  <p>7178</p>
<p>y</p>  <p>7179</p>	<p>z</p>  <p>717A</p>

## 12.25 Upper Case Alphabet

A  7141	B  7142
C  7143	D  7144
E  7145	F  7146
G  7147	H  7148
I  7149	J  714A
K  714B	L  714C
M  714D	N  714E















<p>O</p>  <p>714F</p>	<p>P</p>  <p>7150</p>
<p>Q</p>  <p>7151</p>	<p>R</p>  <p>7152</p>
<p>S</p>  <p>7153</p>	<p>T</p>  <p>7154</p>
<p>U</p>  <p>7155</p>	<p>V</p>  <p>7156</p>
<p>W</p>  <p>7157</p>	<p>X</p>  <p>7158</p>
<p>Y</p>  <p>7159</p>	<p>Z</p>  <p>715A</p>

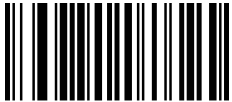


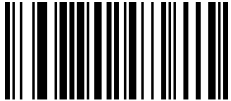


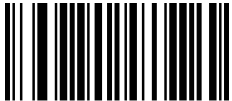

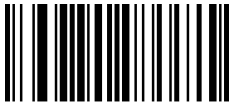







## 12.26 Control Character

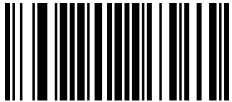



<p>BS</p>  <p>7108</p>	<p>TAB</p>  <p>7109</p>
<p>LF</p>  <p>710A</p>	<p>VT</p>  <p>710B</p>
<p>CR</p>  <p>710D</p>	<p>ESC</p>  <p>711B</p>
<p>Space</p>  <p>7120</p>	<p>DEL</p>  <p>717F</p>
<p>Shift + Tab</p>  <p>7111</p>	



## 12.27 Symbol Character

!	"
 7121	 7122
#	\$
 7123	 7124
%	&
 7125	 7126
'	(
 7127	 7128
)	*
 7129	 712A
+	,
 712B	 712C
-	.
 712D	 712E

<p style="text-align: center;">/</p>  <p style="text-align: center;">712F</p>	<p style="text-align: center;">:</p>  <p style="text-align: center;">713A</p>
<p style="text-align: center;">;</p>  <p style="text-align: center;">713B</p>	<p style="text-align: center;">&lt;</p>  <p style="text-align: center;">713C</p>
<p style="text-align: center;">=</p>  <p style="text-align: center;">713D</p>	<p style="text-align: center;">&gt;</p>  <p style="text-align: center;">713E</p>
<p style="text-align: center;">?</p>  <p style="text-align: center;">713F</p>	<p style="text-align: center;">@</p>  <p style="text-align: center;">7140</p>
<p style="text-align: center;">[</p>  <p style="text-align: center;">715B</p>	<p style="text-align: center;">\</p>  <p style="text-align: center;">715C</p>
<p style="text-align: center;">]</p>  <p style="text-align: center;">715D</p>	<p style="text-align: center;">^</p>  <p style="text-align: center;">715E</p>
<p style="text-align: center;">-</p>  <p style="text-align: center;">715F</p>	<p style="text-align: center;">`</p>  <p style="text-align: center;">7160</p>
<p style="text-align: center;">{</p>  <p style="text-align: center;">717B</p>	<p style="text-align: center;"> </p>  <p style="text-align: center;">717C</p>

}  717D	~  717E
Start String  7201	Stop String  7210

- The user may 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 the user do not scan "Stop-String" in one minute after scanning "Start-String" and number/alphabet/special characters.







## 12.28 GPS (GPS Model Only)

<p>Enable GPS Power</p>  <p>G0001</p>	<p>Disable GPS Power</p>  <p>G0010</p>
<p>Enable GPS Bypass Data</p>  <p>G1001</p>	<p>Disable GPS Bypass Data</p>  <p>G1010</p>
<p>Reset GPS Module</p>  <p>G2000</p>	<p>GPS Acquire Test</p>  <p>G2001</p>
<p>GPS Power Save Mode = Normal</p>  <p>G2002</p>	<p>GPS Power Save Mode = Power Saving</p>  <p>G2003</p>
<p>Enable GPS Auto Power Off</p>  <p>G3001</p>	<p>Disable GPS Auto Power Off</p>  <p>G3010</p>

## 12.29 GPS/BT Auto Power Off Timeou

Auto Power Off = 0min (Disabled)  G4000	Auto Power Off = 5min  G4005
Auto Power Off = 10min  G400A	Auto Power Off = 20min  G4014
Auto Power Off = 30min  G401E	Auto Power Off = 60min  G403C
Auto Power Off = 120min  G4078	

## 12.30 NFC (NFC Model Only)

<p>Enable NFC Power</p>  <p>N0001</p>	<p>Disable NFC Power</p>  <p>N0010</p>
<p>NFC Data Format = Data only</p>  <p>N1001</p>	<p>NFC Data Format = Packet data</p>  <p>N1000</p>
<p>UID Only = Enable</p>  <p>N3001</p>	<p>UID Only = Disable</p>  <p>N3000</p>

## 12.31 USB Disk (M Model Only)

<p>USB Serial Mode</p>  <p>U0000</p>	<p>USB Disk Mode</p>  <p>U0001</p>
<p>USB HID Mode</p>  <p>U0002</p>	<p>Format USB Disk</p>  <p>U1000</p>
<p>Data Format = Data</p>  <p>U2000</p>	<p>Data Format = Data, Time</p>  <p>U2001</p>
<p>Data Format = Data, Type</p>  <p>U2002</p>	<p>Data Format = Data, Time, Type</p>  <p>U2003</p>

# 13. Appendix D – 2D Special Barcodes (KDC30/300/350C/420 /425/450)

## 13.1 Set Symbologies

For KDC300/350C/420/425/450, please refer to Honeywell Adaptus® Technology enabled scanner user manual, such as 4600 or 4820.

## 13.2 Barcode Options

For KDC300/350C/420/425/450, please refer to Honeywell Adaptus® Technology enabled scanner user manual, such as 4600 or 4820.

## 13.3 Delete Last Scanned Barcode






























## 13.4 Scan Options

















<p>Enable Auto Trigger</p>  <p>┌MKDC5A001.</p>	<p>Disable Auto Trigger</p>  <p>┌MKDC5A010.</p>
<p>Reread Delay = Continuous</p>  <p>┌MKDC5B000.</p>	<p>Reread Delay = Short</p>  <p>┌MKDC5B001.</p>
<p>Reread Delay = Medium</p>  <p>┌MKDC5B002.</p>	<p>Reread Delay = Long</p>  <p>┌MKDC5B003.</p>
<p>Reread Delay = Extra Long</p>  <p>┌MKDC5B004.</p>	

## 13.5 Scan Timeout

Scan Timeout = 500msec  ┌MKDC101F4.	Scan Timeout = 1sec  ┌MKDC103E8.
Scan Timeout = 2sec  ┌MKDC107D0.	Scan Timeout = 3sec  ┌MKDC10BB8.
Scan Timeout = 4sec  ┌MKDC10FA0.	Scan Timeout = 5sec  ┌MKDC11388.
Scan Timeout = 6sec  ┌MKDC11770.	Scan Timeout = 7sec  ┌MKDC11B58.
Scan Timeout = 8sec  ┌MKDC11F40.	Scan Timeout = 9sec  ┌MKDC12328.
Scan Timeout = 10sec  ┌MKDC12710.	







## 13.6 Minimum Barcode Length (except KDC30)

<p>Minimum Length = 2</p>  <p>‡MKDC002.</p>	<p>Minimum Length = 3</p>  <p>‡MKDC003.</p>
<p>Minimum Length = 4</p>  <p>‡MKDC004.</p>	<p>Minimum Length = 5</p>  <p>‡MKDC005.</p>
<p>Minimum Length = 6</p>  <p>‡MKDC006.</p>	<p>Minimum Length = 7</p>  <p>‡MKDC007.</p>
<p>Minimum Length = 8</p>  <p>‡MKDC008.</p>	<p>Minimum Length = 9</p>  <p>‡MKDC009.</p>
<p>Minimum Length = 10</p>  <p>‡MKDC00A.</p>	<p>Minimum Length = 11</p>  <p>‡MKDC00B.</p>
<p>Minimum Length = 12</p>  <p>‡MKDC00C.</p>	<p>Minimum Length = 13</p>  <p>‡MKDC00D.</p>
<p>Minimum Length = 14</p>  <p>‡MKDC00E.</p>	<p>Minimum Length = 15</p>  <p>‡MKDC00F.</p>

<p>Minimum Length = 16</p>  <p>└MKDC010.</p>	<p>Minimum Length = 17</p>  <p>└MKDC011.</p>
<p>Minimum Length = 18</p>  <p>└MKDC012.</p>	<p>Minimum Length = 19</p>  <p>└MKDC013.</p>
<p>Minimum Length = 20</p>  <p>└MKDC014.</p>	<p>Minimum Length = 21</p>  <p>└MKDC015.</p>
<p>Minimum Length = 22</p>  <p>└MKDC016.</p>	<p>Minimum Length = 23</p>  <p>└MKDC017.</p>
<p>Minimum Length = 24</p>  <p>└MKDC018.</p>	<p>Minimum Length = 25</p>  <p>└MKDC019.</p>
<p>Minimum Length = 26</p>  <p>└MKDC01A.</p>	<p>Minimum Length = 27</p>  <p>└MKDC01B.</p>
<p>Minimum Length = 28</p>  <p>└MKDC01C.</p>	<p>Minimum Length = 29</p>  <p>└MKDC01D.</p>
<p>Minimum Length = 30</p>  <p>└MKDC01E.</p>	<p>Minimum Length = 31</p>  <p>└MKDC01F.</p>

<p>Minimum Length = 32</p>  <p>␣MKDC020.</p>	<p>Minimum Length = 33</p>  <p>␣MKDC021.</p>
<p>Minimum Length = 34</p>  <p>␣MKDC022.</p>	<p>Minimum Length = 35</p>  <p>␣MKDC023.</p>
<p>Minimum Length = 36</p>  <p>␣MKDC024.</p>	












## 13.7 Image Capture (except KDC30)

<p>Capture Now</p>  <p>┐MKDC90000.</p>	<p>Enable Image Capture</p>  <p>┐MKDC91001.</p>
<p>Image Format = JPEG</p>  <p>┐MKDC92006.</p>	<p>Image Format = BMP</p>  <p>┐MKDC92008.</p>
<p>Pixel Depth = 1 bit per pixel</p>  <p>┐MKDC93001.</p>	<p>Pixel Depth = 8 bit per pixel</p>  <p>┐MKDC93008.</p>

## 13.8 Data Process - Wedge/Store & Enter Key

<p>Wedge Only</p>  <p>┘MKDC82000.</p>	<p>Wedge &amp; Store Always</p>  <p>┘MKDC82001.</p>
<p>Store Only</p>  <p>┘MKDC82002.</p>	<p>Save if Sent</p>  <p>┘MKDC82003.</p>
<p>Save if Not Sent</p>  <p>┘MKDC82004.</p>	
<p>Enable Enter Key (KDC350C Only)</p>  <p>┘MKDC8E001.</p>	<p>Disable Enter Key (KDC350C Only)</p>  <p>┘MKDC8E000.</p>

## 13.9 Data Process - Data Edit

<p>Start Prefix Enter</p>  <p>┌MKDC83000.</p>	<p>Start Suffix Enter</p>  <p>┌MKDC83001.</p>
<p>Finish Prefix / Suffix Enter</p>  <p>┌MKDC83002.</p>	<p>Cancel Prefix / Suffix Enter</p>  <p>┌MKDC83003.</p>
<p>Delete Prefix</p>  <p>┌MKDC83004.</p>	<p>Delete Suffix</p>  <p>┌MKDC83005.</p>
<p>Display Prefix</p>  <p>┌MKDC83006.</p>	<p>Display Suffix</p>  <p>┌MKDC83007.</p>
<p>AIM ID None</p>  <p>┌MKDC8B000.</p>	<p>AIM ID In Prefix</p>  <p>┌MKDC8B001.</p>
<p>AIM ID In Suffix</p>  <p>┌MKDC8B002.</p>	















## 13.10 Data Process – Data Format & Handshake

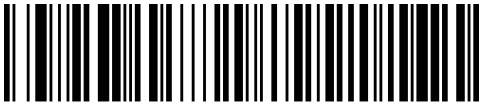














<p>Data format = Barcode only</p>  <p>⌘MKDC84001.</p>	<p>Data format = Packet data</p>  <p>⌘MKDC84010.</p>
<p>Enable Handshake</p>  <p>⌘MKDC86001.</p>	<p>Disable Handshake</p>  <p>⌘MKDC86010.</p>

## 13.11 Data Process - Termination Character & Duplicate Check

<p>Termination Character = None</p>  <p>␣MKDC88000.</p>	<p>Termination Character = CR</p>  <p>␣MKDC88001.</p>
<p>Termination Character = LF</p>  <p>␣MKDC88002.</p>	<p>Termination Character = CR+LF</p>  <p>␣MKDC88003.</p>
<p>Termination Character = Tab</p>  <p>␣MKDC88004.</p>	
<p>Enable Duplicate Check</p>  <p>␣MKDC89001.</p>	<p>Disable Duplicate Check</p>  <p>␣MKDC89010.</p>












## 13.12 Bluetooth

<p>Enable Bluetooth Power</p>  <p>‡MKDC60001.</p>	<p>Disable Bluetooth Power</p>  <p>‡MKDC60010.</p>
<p>Enter Pairing Mode</p>  <p>‡MKDC61001.</p>	
<p>Enable Discovering</p>  <p>‡MKDC61101.</p>	<p>Disable Discovering</p>  <p>‡MKDC61110.</p>
<p>Connect To Last</p>  <p>‡MKDC61201.</p>	<p>Connect To</p>  <p>‡MKDC61301.</p>
<p>Disconnect</p>  <p>‡MKDC6D000.</p>	
<p>HID Sync</p>  <p>‡MKDC6E000.</p>	<p>SPP Sync</p>  <p>‡MKDC6E001.</p>
<p>Bluetooth Profile = SPP</p>  <p>‡MKDC6A000.</p>	<p>Bluetooth Profile = HID iOS</p>  <p>‡MKDC6A001.</p>















<p>Bluetooth Profile = MFi</p>  <p>‡MKDC6A002.</p>	<p>Bluetooth Profile = SPP2.0</p>  <p>‡MKDC6A003.</p>
<p>Bluetooth Profile = HID Normal</p>  <p>‡MKDC6A004.</p>	
<p>Enable Auto Connect</p>  <p>‡MKDC62001.</p>	<p>Disable Auto Connect</p>  <p>‡MKDC62010.</p>
<p>Enable Auto Reconnect</p>  <p>‡MKDC6R001.</p>	<p>Disable Auto Reconnect</p>  <p>‡MKDC6R010.</p>
<p>Enable Auto Power Off</p>  <p>‡MKDC64001.</p>	<p>Disable Auto Power Off</p>  <p>‡MKDC64010.</p>
<p>Enable Auto Power On</p>  <p>‡MKDC66001.</p>	<p>Disable Auto Power On</p>  <p>‡MKDC66010.</p>
<p>Enable Beep Warning</p>  <p>‡MKDC68001.</p>	<p>Disable Beep Warning</p>  <p>‡MKDC68010.</p>
<p>Enable Power Off Msg</p>  <p>‡MKDC63001.</p>	<p>Disable Power Off Msg</p>  <p>‡MKDC63010.</p>

















<p>Display BT Mac Address</p>  <p>‡MKDC63100.</p>	<p>Display BT FW Version</p>  <p>‡MKDC63200.</p>
<p>Enable Wakeup Nulls</p>  <p>‡MKDC63401.</p>	<p>Disable Wakeup Nulls</p>  <p>‡MKDC63410.</p>
<p>Enable BT Toggle</p>  <p>‡MKDC6B001.</p>	<p>Disable BT Toggle</p>  <p>‡MKDC6B010.</p>
<p>Enable BT Disconnect Button</p>  <p>‡MKDC6B101.</p>	<p>Disable BT Disconnect Button</p>  <p>‡MKDC6B110.</p>

## 13.13 Bluetooth Auto Power On Time

Auto Power On Time = Disabled  └MKDC67000.	Auto Power On Time = 1sec  └MKDC67001.
Auto Power On Time = 2sec  └MKDC67002.	Auto Power On Time = 3sec  └MKDC67003.
Auto Power On Time = 4sec  └MKDC67004.	Auto Power On Time = 5sec  └MKDC67005.
Auto Power On Time = 6sec  └MKDC67006.	Auto Power On Time = 7sec  └MKDC67007.
Auto Power On Time = 8sec  └MKDC67008.	Auto Power On Time = 9sec  └MKDC67009.
Auto Power On Time = 10sec  └MKDC6700A.	

## 13.14 Bluetooth Power Off Time

BT Power Off Time = 1min  ‡MKDC69001.	BT Power Off Time = 2min  ‡MKDC69002.
BT Power Off Time = 3min  ‡MKDC69003.	BT Power Off Time = 4min  ‡MKDC69004.
BT Power Off Time = 5min  ‡MKDC69005.	BT Power Off Time = 6min  ‡MKDC69006.
BT Power Off Time = 7min  ‡MKDC69007.	BT Power Off Time = 8min  ‡MKDC69008.
BT Power Off Time = 9min  ‡MKDC69009.	BT Power Off Time = 10min  ‡MKDC6900A.
BT Power Off Time = 11min  ‡MKDC6900B.	BT Power Off Time = 12min  ‡MKDC6900C.
BT Power Off Time = 13min  ‡MKDC6900D.	BT Power Off Time = 14min  ‡MKDC6900E.






<p>BT Power Off Time = 15min</p>  <p>‡MKDC6900F.</p>	<p>BT Power Off Time = 16min</p>  <p>‡MKDC69010.</p>
<p>BT Power Off Time = 17min</p>  <p>‡MKDC69011.</p>	<p>BT Power Off Time = 18min</p>  <p>‡MKDC69012.</p>
<p>BT Power Off Time = 19min</p>  <p>‡MKDC69013.</p>	<p>BT Power Off Time = 20min</p>  <p>‡MKDC69014.</p>
<p>BT Power Off Time = 21min</p>  <p>‡MKDC69015.</p>	<p>BT Power Off Time = 22min</p>  <p>‡MKDC69016.</p>
<p>BT Power Off Time = 23min</p>  <p>‡MKDC69017.</p>	<p>BT Power Off Time = 24min</p>  <p>‡MKDC69018.</p>
<p>BT Power Off Time = 25min</p>  <p>‡MKDC69019.</p>	<p>BT Power Off Time = 26min</p>  <p>‡MKDC6901A.</p>
<p>BT Power Off Time = 27min</p>  <p>‡MKDC6901B.</p>	<p>BT Power Off Time = 28min</p>  <p>‡MKDC6901C.</p>
<p>BT Power Off Time = 29min</p>  <p>‡MKDC6901D.</p>	<p>BT Power Off Time = 30min</p>  <p>‡MKDC6901E.</p>



## 13.15 HID Auto Lock Time

HID Auto Lock Time = 0min (Never)  ‡MKDC6C000.	HID Auto Lock Time = 1min  ‡MKDC6C001.
HID Auto Lock Time = 2min  ‡MKDC6C002.	HID Auto Lock Time = 3min  ‡MKDC6C003.
HID Auto Lock Time = 4min  ‡MKDC6C004.	HID Auto Lock Time = 5min  ‡MKDC6C005.
HID Auto Lock Time = 10min  ‡MKDC6C00A.	HID Auto Lock Time = 15min  ‡MKDC6C00F.

## 13.16 HID Keyboard

<p>HID Keyboard = US</p>  <p>␣MKDC6F000.</p>	<p>HID Keyboard = German</p>  <p>␣MKDC6F001.</p>
<p>HID Keyboard = French</p>  <p>␣MKDC6F002.</p>	<p>HID Keyboard = Italian</p>  <p>␣MKDC6F003.</p>
<p>HID Keyboard = Spanish</p>  <p>␣MKDC6F004.</p>	

## 13.17 HID Initial Delay

<p>HID Initial Delay = Disabled</p>  <p>└MKDCH0000.</p>	<p>HID Initial Delay = 1second</p>  <p>└MKDCH0001.</p>
<p>HID Initial Delay = 2seconds</p>  <p>└MKDCH0002.</p>	<p>HID Initial Delay = 3seconds</p>  <p>└MKDCH0003.</p>
<p>HID Initial Delay = 5seconds</p>  <p>└MKDCH0005.</p>	<p>HID Initial Delay = 10seconds</p>  <p>└MKDCH000A.</p>














## 13.18 HID Character Delay
















<p>HID Character Delay = Disabled</p>  <p>┘MKDCH1000.</p>	<p>HID Character Delay = 10msec</p>  <p>┘MKDCH100A.</p>
<p>HID Character Delay = 20msec</p>  <p>┘MKDCH1014.</p>	<p>HID Character Delay = 30msec</p>  <p>┘MKDCH101E.</p>
<p>HID Character Delay = 50msec</p>  <p>┘MKDCH1032.</p>	<p>HID Character Delay = 100msec</p>  <p>┘MKDCH1064.</p>















## 13.19 HID Control Character

<p>HID Control Character = Disabled</p>  <p>┘MKDCH2000.</p>	<p>HID Control Character = Alt+Numpad</p>  <p>┘MKDCH2001.</p>
<p>HID Control Character = ^+Character</p>  <p>┘MKDCH2002.</p>	<p>HID Control Character = Replace with ' '</p>  <p>┘MKDCH2003.</p>

## 13.20 System














<p>Memory Size = 0.5M / 3.5M</p>  <p>‡MKDC5E000.</p>	<p>Memory Size = 1M / 3M</p>  <p>‡MKDC5E001.</p>
<p>Memory Size = 2M / 2M</p>  <p>‡MKDC5E002.</p>	<p>Memory Size = 3M / 1M</p>  <p>‡MKDC5E003.</p>
<p>Memory Size = 4M / 0M</p>  <p>‡MKDC5E004.</p>	<p>Confirm memory size</p>  <p>‡MKDC5E100.</p>
<p>Memory Status</p>  <p>‡MKDC50001.</p>	<p>Reset Memory</p>  <p>‡MKDC50002.</p>
<p>Erase Memory</p>  <p>‡MKDC50003.</p>	<p>Reset App data</p>  <p>‡MKDC50004.</p>
<p>Reset BT Registry</p>  <p>‡MKDC50005.</p>	
<p>Enable Auto Erase</p>  <p>‡MKDC5F001.</p>	<p>Disable Auto Erase</p>  <p>‡MKDC5F010.</p>

<p>Date/Time</p>  <p>‡MKDC52001.</p>	<p>Battery</p>  <p>‡MKDC53001.</p>
<p>Display Version</p>  <p>‡MKDC54001.</p>	
<p>Lock Button</p>  <p>‡MKDC55001.</p>	<p>Unlock Button</p>  <p>‡MKDC55010.</p>
<p>Enable Beep Sound</p>  <p>‡MKDC56001.</p>	<p>Disable Beep Sound</p>  <p>‡MKDC56010.</p>
<p>High Beep Volume</p>  <p>‡MKDC5D001.</p>	<p>Low Beep Volume</p>  <p>‡MKDC5D010.</p>
<p>Enable MFi Mode</p>  <p>‡MKDC6M001.</p>	<p>Disable MFi Mode</p>  <p>‡MKDC6M010.</p>
<p>Enable Vibrator</p>  <p>‡MKDC5G001.</p>	<p>Disable Vibrator</p>  <p>‡MKDC5G010.</p>
<p>Enable Auto Menu Exit</p>  <p>‡MKDC58001.</p>	<p>Disable Auto Menu Exit</p>  <p>‡MKDC58010.</p>













<p>Enable Port Status</p>  <p>‡MKDC58101.</p>	<p>Disable Port Status</p>  <p>‡MKDC58100.</p>
<p>Display Format = Time &amp; Battery</p>  <p>‡MKDC58200.</p>	<p>Display Format = Type &amp; Time</p>  <p>‡MKDC58201.</p>
<p>Display Format = Type &amp; Battery</p>  <p>‡MKDC58202.</p>	<p>Display Format = Memory Status</p>  <p>‡MKDC58203.</p>
<p>Display Format = GPS Data(GPS Model)</p>  <p>‡MKDC58204.</p>	<p>Display Format = Barcode Only</p>  <p>‡MKDC58205.</p>
<p>Enable Menu Barcode</p>  <p>‡MKDC52401.</p>	<p>Disable Menu Barcode</p>  <p>‡MKDC52410.</p>
<p>Enable Scrolling</p>  <p>‡MKDC59001.</p>	<p>Disable Scrolling</p>  <p>‡MKDC59010.</p>
<p>Factory Default</p>  <p>‡MKDC57001.</p>	<p>KDC Reset</p>  <p>‡MKDCA0000.</p>













## 13.21 Sleep Timeout

<p>Sleep Timeout = Disable</p>  <p>┘MKDC51000.</p>	<p>Sleep Timeout = 1sec</p>  <p>┘MKDC51001.</p>
<p>Sleep Timeout = 2sec</p>  <p>┘MKDC51002.</p>	<p>Sleep Timeout = 3sec</p>  <p>┘MKDC51003.</p>
<p>Sleep Timeout = 4sec</p>  <p>┘MKDC51004.</p>	<p>Sleep Timeout = 5sec</p>  <p>┘MKDC51005.</p>
<p>Sleep Timeout = 10sec</p>  <p>┘MKDC5100A.</p>	<p>Sleep Timeout = 20sec</p>  <p>┘MKDC51014.</p>
<p>Sleep Timeout = 30sec</p>  <p>┘MKDC5101E.</p>	<p>Sleep Timeout = 1min</p>  <p>┘MKDC5103C.</p>
<p>Sleep Timeout = 2min</p>  <p>┘MKDC51078.</p>	<p>Sleep Timeout = 5min</p>  <p>┘MKDC5112C.</p>
<p>Sleep Timeout = 10min</p>  <p>┘MKDC51258.</p>	


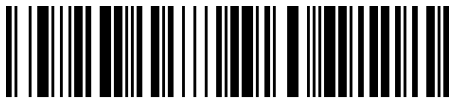












## 13.22 Function













F1  ‡MKDC7001.	F2  ‡MKDC7002.
F3  ‡MKDC7003.	F4  ‡MKDC7004.
F5  ‡MKDC7005.	F6  ‡MKDC7006.
F7  ‡MKDC7007.	F8  ‡MKDC7008.
F9  ‡MKDC7009.	F10  ‡MKDC700A.
F11  ‡MKDC700B.	F12  ‡MKDC700C.

## 13.23 Number















0  ┌MKDC7130.	1  ┌MKDC7131.
2  ┌MKDC7132.	3  ┌MKDC7133.
4  ┌MKDC7134.	5  ┌MKDC7135.
6  ┌MKDC7136.	7  ┌MKDC7137.
8  ┌MKDC7138.	9  ┌MKDC7139.













## 13.24 Lower Case Alphabet

a  T MKDC7161.	b  T MKDC7162.
c  T MKDC7163.	d  T MKDC7164.
e  T MKDC7165.	f  T MKDC7166.
g  T MKDC7167.	h  T MKDC7168.
j  T MKDC7169.	i  T MKDC716A.
k  T MKDC716B.	l  T MKDC716C.
m  T MKDC716D.	n  T MKDC716E.










<p style="text-align: center;">o</p>  <p style="text-align: center;">┌MKDC716F.</p>	<p style="text-align: center;">p</p>  <p style="text-align: center;">┌MKDC7170.</p>
<p style="text-align: center;">q</p>  <p style="text-align: center;">┌MKDC7171.</p>	<p style="text-align: center;">r</p>  <p style="text-align: center;">┌MKDC7172.</p>
<p style="text-align: center;">s</p>  <p style="text-align: center;">┌MKDC7173.</p>	<p style="text-align: center;">t</p>  <p style="text-align: center;">┌MKDC7174.</p>
<p style="text-align: center;">u</p>  <p style="text-align: center;">┌MKDC7175.</p>	<p style="text-align: center;">v</p>  <p style="text-align: center;">┌MKDC7176.</p>
<p style="text-align: center;">w</p>  <p style="text-align: center;">┌MKDC7177.</p>	<p style="text-align: center;">x</p>  <p style="text-align: center;">┌MKDC7178.</p>
<p style="text-align: center;">y</p>  <p style="text-align: center;">┌MKDC7179.</p>	<p style="text-align: center;">z</p>  <p style="text-align: center;">┌MKDC717A.</p>

## 13.25 Upper Case Alphabet

A  ‡MKDC7141.	B  ‡MKDC7142.
C  ‡MKDC7143.	D  ‡MKDC7144.
E  ‡MKDC7145.	F  ‡MKDC7146.
G  ‡MKDC7147.	H  ‡MKDC7148.
I  ‡MKDC7149.	J  ‡MKDC714A.
K  ‡MKDC714B.	L  ‡MKDC714C.
M  ‡MKDC714D.	N  ‡MKDC714E.















<p style="text-align: center;">O</p>  <p style="text-align: center;">†MKDC714F.</p>	<p style="text-align: center;">P</p>  <p style="text-align: center;">†MKDC7150.</p>
<p style="text-align: center;">Q</p>  <p style="text-align: center;">†MKDC7151.</p>	<p style="text-align: center;">R</p>  <p style="text-align: center;">†MKDC7152.</p>
<p style="text-align: center;">S</p>  <p style="text-align: center;">†MKDC7153.</p>	<p style="text-align: center;">T</p>  <p style="text-align: center;">†MKDC7154.</p>
<p style="text-align: center;">U</p>  <p style="text-align: center;">†MKDC7155.</p>	<p style="text-align: center;">V</p>  <p style="text-align: center;">†MKDC7156.</p>
<p style="text-align: center;">W</p>  <p style="text-align: center;">†MKDC7157.</p>	<p style="text-align: center;">X</p>  <p style="text-align: center;">†MKDC7158.</p>
<p style="text-align: center;">Y</p>  <p style="text-align: center;">†MKDC7159.</p>	<p style="text-align: center;">Z</p>  <p style="text-align: center;">†MKDC715A.</p>




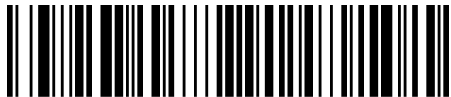












## 13.26 Control Character





<p>BS</p>  <p>‡MKDC7108.</p>	<p>TAB</p>  <p>‡MKDC7109.</p>
<p>LF</p>  <p>‡MKDC710A.</p>	<p>VT</p>  <p>‡MKDC710B.</p>
<p>CR</p>  <p>‡MKDC710D.</p>	<p>ESC</p>  <p>‡MKDC711B.</p>
<p>Space</p>  <p>‡MKDC7120.</p>	<p>DEL</p>  <p>‡MKDC717F.</p>
<p>Shift + Tab</p>  <p>‡MKDC7111.</p>	



## 13.27 Symbol Character

!	"
 ‡MKDC7121.	 ‡MKDC7122.
#	\$
 ‡MKDC7123.	 ‡MKDC7124.
%	&
 ‡MKDC7125.	 ‡MKDC7126.
'	(
 ‡MKDC7127.	 ‡MKDC7128.
)	*
 ‡MKDC7129.	 ‡MKDC712A.
+	,
 ‡MKDC712B.	 ‡MKDC712C.
-	.
 ‡MKDC712D.	 ‡MKDC712E.











<p style="text-align: center;">/</p>  <p style="text-align: center;">†MKDC712F.</p>	<p style="text-align: center;">:</p>  <p style="text-align: center;">†MKDC713A.</p>
<p style="text-align: center;">;</p>  <p style="text-align: center;">†MKDC713B.</p>	<p style="text-align: center;">&lt;</p>  <p style="text-align: center;">†MKDC713C.</p>
<p style="text-align: center;">=</p>  <p style="text-align: center;">†MKDC713D.</p>	<p style="text-align: center;">&gt;</p>  <p style="text-align: center;">†MKDC713E.</p>
<p style="text-align: center;">?</p>  <p style="text-align: center;">†MKDC713F.</p>	<p style="text-align: center;">@</p>  <p style="text-align: center;">†MKDC7140.</p>
<p style="text-align: center;">[</p>  <p style="text-align: center;">†MKDC715B.</p>	<p style="text-align: center;">\</p>  <p style="text-align: center;">†MKDC715C.</p>
<p style="text-align: center;">]</p>  <p style="text-align: center;">†MKDC715D.</p>	<p style="text-align: center;">^</p>  <p style="text-align: center;">†MKDC715E.</p>
<p style="text-align: center;">-</p>  <p style="text-align: center;">†MKDC715F.</p>	<p style="text-align: center;">`</p>  <p style="text-align: center;">†MKDC7160.</p>
<p style="text-align: center;">{</p>  <p style="text-align: center;">†MKDC717B.</p>	<p style="text-align: center;"> </p>  <p style="text-align: center;">†MKDC717C.</p>

<p style="text-align: center;">}</p>  <p style="text-align: center;">}MKDC717D.</p>	<p style="text-align: center;">~</p>  <p style="text-align: center;">~MKDC717E.</p>
<p style="text-align: center;">Start String</p>  <p style="text-align: center;">Start String MKDC7201.</p>	<p style="text-align: center;">Stop String</p>  <p style="text-align: center;">Stop String MKDC7210.</p>

**Note**

- The user may 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 the user do not scan "Stop-String" in one minute after scanning "Start-String" and number/alphabet/special characters.







## 13.28 GPS (GPS Model Only)

<p>Enable GPS Power</p>  <p>└MKDCG0001.</p>	<p>Disable GPS Power</p>  <p>└MKDCG0010.</p>
<p>Enable GPS Bypass Data</p>  <p>└MKDCG1001.</p>	<p>Disable GPS Bypass Data</p>  <p>└MKDCG1010.</p>
<p>Reset GPS Module</p>  <p>└MKDCG2000.</p>	<p>GPS Acquire Test</p>  <p>└MKDCG2001.</p>
<p>GPS Power Save Mode = Normal</p>  <p>└MKDCG2002.</p>	<p>GPS Power Save Mode = Power Saving</p>  <p>└MKDCG2003.</p>
<p>Enable GPS Auto Power Off</p>  <p>└MKDCG3001.</p>	<p>Disable GPS Auto Power Off</p>  <p>└MKDCG3010.</p>

## 13.29 GPS/BT Auto Power Off Timeout

Auto Power Off = 0min (Disabled)  └MKDCG4000.	Auto Power Off = 5min  └MKDCG4005.
Auto Power Off = 10min  └MKDCG400A.	Auto Power Off = 20min  └MKDCG4014.
Auto Power Off = 30min  └MKDCG401E.	Auto Power Off = 60min  └MKDCG403C.
Auto Power Off = 120min  └MKDCG4078.	

## 13.30 NFC (NFC Model Only)










<p>Enable NFC Power</p>  <p>┆MKDCN0001.</p>	<p>Disable NFC Power</p>  <p>┆MKDCN0010.</p>
<p>NFC Data Format = Data only</p>  <p>┆MKDCN1001.</p>	<p>NFC Data Format = Packet data</p>  <p>┆MKDCN1000.</p>
<p>UID Only = Enable</p>  <p>┆MKDCN3001.</p>	<p>UID Only = Disable</p>  <p>┆MKDCN3000.</p>

## 13.31 USB Disk (M Model Only)









<p>USB Serial Mode</p>  <p>‡MKDCU0000.</p>	<p>USB Disk Mode</p>  <p>‡MKDCU0001.</p>
<p>USB HID Mode</p>  <p>‡MKDCU0002.</p>	<p>Format USB Disk</p>  <p>‡MKDCU1000.</p>
<p>Data Format = Data</p>  <p>‡MKDCU2000.</p>	<p>Data Format = Data,Time</p>  <p>‡MKDCU2001.</p>
<p>Data Format = Data,Type</p>  <p>‡MKDCU2002.</p>	<p>Data Format = Data,Time,Type</p>  <p>‡MKDCU2003.</p>

# 14. APPENDIX E - MSR Special Barcodes (KDC415/425MSR)

## 14.1 KDC415MSR










Beep On Error	
No Beep On Error  M6000	Beep On Error  M6001
Data Format	
MSR Data Only  M1000	Packet data  M1001
Encrypt Mode	
Disabled  M2000	AES  M2001
Enable Track	
Enable Track1  M3001	Enable Track2  M3002
Enable Track3  M3004	

















Disable Track	
Disable Track1  M4001	Disable Track2  M4002
Disable Track3  M4004	
Track Separator	
Track Separator = None  M5000	Track Separator = Space  M5001
Track Separator = Comma  M5002	Track Separator = Semi Colon  M5003
Track Separator = CR  M5004	Track Separator = LF  M5005
Track Separator = CR+LF  M5006	Track Separator = Tab  M5007
AES Key Length	
AES Key Length = 128 bits  M8000	AES Key Length = 192 bits  M8001

<p>AES Key Length = 256 bits</p>  <p>M8002</p>	
<p>MSR Card Type</p>	
<p>MSR Card Type = ISO</p>  <p>MA000</p>	<p>MSR Card Type = Other 1</p>  <p>MA001</p>
<p>MSR Card Type = AAMVA</p>  <p>MA002</p>	

## 14.2 KDC425MSR

Beep On Error	
<p>No Beep On Error</p>  <p>‡MKDCM6000.</p>	<p>Beep On Error</p>  <p>‡MKDCM6001.</p>
Data Format	
<p>MSR Data Only</p>  <p>‡MKDCM1000.</p>	<p>Packet data</p>  <p>‡MKDCM1001.</p>
Encrypt Mode	
<p>Disabled</p>  <p>‡MKDCM2000.</p>	<p>AES</p>  <p>‡MKDCM2001.</p>
Enable Track	
<p>Enable Track1</p>  <p>‡MKDCM3001.</p>	<p>Enable Track2</p>  <p>‡MKDCM3002.</p>
<p>Enable Track3</p>  <p>‡MKDCM3004.</p>	
Disable Track	

<p>Disable Track1</p>  <p>┘MKDCM4001.</p>	<p>Disable Track2</p>  <p>┘MKDCM4002.</p>
<p>Disable Track3</p>  <p>┘MKDCM4004.</p>	
<p>Track Separator</p>	
<p>Track Separator = None</p>  <p>┘MKDCM5000.</p>	<p>Track Separator = Space</p>  <p>┘MKDCM5001.</p>
<p>Track Separator = Comma</p>  <p>┘MKDCM5002.</p>	<p>Track Separator = Semi Colon</p>  <p>┘MKDCM5003.</p>
<p>Track Separator = CR</p>  <p>┘MKDCM5004.</p>	<p>Track Separator = LF</p>  <p>┘MKDCM5005.</p>
<p>Track Separator = CR+LF</p>  <p>┘MKDCM5006.</p>	<p>Track Separator = Tab</p>  <p>┘MKDCM5007.</p>
<p>AES Key Length</p>	

<p>AES Key Length = 128 bits</p>  <p>┆MKDCM8000.</p>	<p>AES Key Length = 192 bits</p>  <p>┆MKDCM8001.</p>
<p>AES Key Length = 256 bits</p>  <p>┆MKDCM8002.</p>	
<p>MSR Card Type</p>	
<p>MSR Card Type = ISO</p>  <p>┆MKDCMA000.</p>	<p>MSR Card Type = Other 1</p>  <p>┆MKDCMA001.</p>
<p>MSR Card Type = AAMVA</p>  <p>┆MKDCMA002.</p>	

# 15. Appendix F – Multiple Special Barcodes

*This chapter explains how to make a multiple configuration barcode for the KDC to configure multiple KDC settings by scanning one barcode. The KDC provides special barcodes that enable changes to the KDC configuration; but, this current barcode changes only one configuration. New KDC firmware VersionR\_305 introduces a feature to enable the user to make one special barcode to change multiple KDC configurations.*

## 15.1 KDC20/KDC100/KDC250/KDC350L KDC410/KDC415

- Barcode type Code128 is used to make a single special barcode and its format is as follows:

<FNC3><Barcode String>

*Here, the <FNC3> is a Code 128 control character and the <Barcode String> is an ASCII string for each KDC configuration.*

- The multiple configuration Code128 barcode format is as follows and has a control character and series of barcode strings.

<FNC3><Barcode String 1>;...; <Barcode String N>

*Here, the <FNC3> is a Code 128 control character and the <Barcode String 1> and <Barcode String N> are an ASCII string for each KDC configuration. The ';' is a separator for each configuration's barcode string. Please see user manual for the <Barcode String> for KDC configuration.*

- Example: Assume the user is changing the following configurations with one barcode.
  - Change Wedge/Store to "Wedge Only" → <FNC3>82000
  - Change Termination Character to "None" → <FNC3>88000
  - Change Bluetooth "Auto PowerOff" to "Disabled" → <FNC3>64010

<FNC3>82000;88000;64010

## 15.2 KDC30/KDC300/KDC350C/KDC420

### KDC425/KDC450

- The following format is for a single configuration barcode format:

**<SYN> M <CR> KDC <Barcode String>.**

- *<SYN> is a control character 0x16 in hex format.*
- *M is an ASCII character 0x4D in hex format.*
- *<CR> is a control character 0x0d in hex format.*
- *KDC is an ASCII string 0x4B 0x44 0x43 in hex format.*
- *<Barcode String> is an ASCII string for each configuration*
- *. is an ASCII string 0x2E in hex format that indicates the end of barcode.*
- The multiple configuration barcode string uses a repeated barcode string of each configuration in the following format:

**<SYN>M<CR>KDC<Barcode String 1> ;;;;; <Barcode String N> .**

- *<SYN> is a control character 0x16 in hex format.*
- *M is an ASCII character 0x4D in hex format.*
- *<CR> is a control character 0x0d in hex format.*
- *KDC is an ASCII string 0x4B 0x44 0x43 in hex format.*
- *<Barcode String 1> and <Barcode String N> are an ASCII string for each configuration*
- *;; is a separator between each barcode strings.*
- *. is an ASCII string 0x2E in hex format that indicates the end of barcode.*

- Example: Assume the user is changing the following configurations with one barcode.

- *Change Wedge/Store to "Wedge Only" → <SYN>M<CR>KDC82000.*
- *Change Termination Character to "None" → <SYN>M<CR>KDC 88000.*
- *Change Bluetooth "Auto PowerOff" to "Disabled" → <SYN>M<CR>KDC 64010.*

**<SYN>M<CR>KDC82000;88000;64010.**

- Code 128



- QR code

