# KOΛMTΛC▸

# KDC Reference Manual

# Rev 0.1

**Rev 2.85T.A5** (KDC20/30/410/411/415/420/421/425/430)

**3.x7.A5** (KDC100/200/250/270/280/300/350/450/470)

**A01.05.12** (KDC500)

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# COPYRIGHT, LICENSE, and WARNING PAGE

**Patents:**
Certain KDC Products may be covered by the following issued US patents numbers 7769917, 7954710, 8126399, 8295368, 8346979, 8347366, 8371506, 8483614, 8832323, 9411366; Korea patents numbers 101383407, 101354252; UK patents numbers GB2492615, GB2514746.

**CAUTION:**

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.

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

# Regulatory Compliance

## US



FCC ID: VH9KDC20, VH9KDC30, VH9KDC100, VH9KDC200, VH9KDC250, VH9KDC270, VH9KDC300, VH9KDC350, VH9KDC400, VH9KDC450, VH9KDC470, VH9KDCSLED-HF, VH9KDC500A

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

 2200  0983

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+A1:2010+A12:2011+A2:2013<br>EN62479:2010 | ESTCS1101-002<br>ETLS180307.0036 | Complies |
| Article 3.1(b) – EMC | EN 55022:2006+A1:2007<br>EN 55022:2010/AC:2011, EN 55024:2010<br>EN 55024:1998+A1:2001+A2:2003<br>ETSI EN 301 489-1 V1.8.1 (2008-04)<br>ETSI EN 301 489-a V1.9.2<br>ETSI EN 301 489-1 V2.2.0 (2017)<br>ETSI EN 301 489-3 V2.1.1 (2017)<br>ETSI EN 301 489-17 V2.1.1 (2009-05) | ESTCE0712-007(1)<br>ETLE 180306.0210 | Complies |
| Article 3.2 – Radio Spectrum Use | ETSI EN 300 328:V1.7.1 (2006-10)<br>ETSI EN 300 330 V2.1.1 (2017)<br>EN 50364:2010 | ESTR0801-018(1)<br>ETLT180307.0037 | 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

2014026493, 2014027753

## Korea

MSIP-CMM-A13-KDC20, MSIP-CMM-A13-KDC30, AI3-KDC100, AI3-KDC200, MSIP-CMM-A13-KDC250, MSIP-CMM-A13-KDC270, MSIP-CMM-A13-KDC300, MSIP-CMM-A13-KDC350, MSIP-CMM-A13-KDC400, MSIP-CMM-A13-KDC450, MSIP-CMM-A13-KDC470, KDCSLED-HF, MSIP-CMM-A13-KDC500A

# Laser Compliance
KDC20/100/200/250/270L/350L/410/411/415/470L



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.

# Maintaining Water and Dust Resistance
Whenever your device gets wet, dry it thoroughly with a clean, soft cloth. If your device has gotten wet, you should dry the inside of the charging port before inserting a power connector to charge your device. If the charging port is not fully dry, your device may operate abnormally. For example, it may charge more slowly or overheat.

# 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
Bluetooth Low Energy V4.1

# Apple®
Made for iPhone, Made for iPod, Made for iPad

# Samsung®
Compatible with Galaxy and Gear Series

# Warranty Policy

## 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.

## KOAMTAC ONE YEAR LIMITED WARRANTY

KOAMTAC products are warranted to be free from defects in materials or workmanship for one (1) year from the date of purchase from an authorized dealer of KOAMTAC products. Within this period, we will, at our sole discretion, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to you for parts and/or labor, provided that you shall be responsible for any transportation charges.  Replacement products may be new or refurbished at our discretion.

This warranty does not apply to: (i) cosmetic damage, such as scratches, nicks, stains and dents; (ii) consumable parts, such as batteries, unless product damage has occurred due to a defect in materials or workmanship; (iii) damage caused by accident, abuse, misuse, water (in excess of specifications), flood, fire, or other acts of nature or external causes; (iv) damage caused by service performed by anyone who is not an authorized service provider of KOAMTAC; or (v) damage to a product that has been modified or altered without the prior written permission of KOAMTAC.

Repairs have a ninety (90) day warranty.  If the unit sent in is still under its original warranty, then the new warranty will be the longer of ninety (90) days or the balance of the original one year warranty.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS, IMPLIED, OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. Subject to applicable law, in no event shall our liability exceed the purchase price of the Hardware.

## RETURN

For warranty returns, you must pack your KOAMTAC product in its original packaging and include all accessories and documentation. We reserve the right to charge for any damage to the KOAMTAC product, and missing part fees may apply.

Please contact Customer Service prior to returning any product to receive a return authorization form and RMA number. You will be responsible for, and pre-pay, all return shipping charges and shall assume all risk of loss or damage to product while in transit to us. We recommend that you use a traceable method of shipping for your protection. We will pay for shipping to return any product to you.

Email us at rma@koamtac.com to obtain an RMA number. Once you have obtained the RMA number, please send us your purchased KOAMTAC product with the RMA number clearly marked on the outside of the package and on the shipping slip if you choose to use traceable carriers such as UPS or FEDEX. Shipping fees for returns are your responsibility. Return shipping instructions and return address will be included in your RMA document provided by KOAMTAC.

# 1. Introduction

Congratulations on purchasing a revolutionary KOAMTAC KDC. KOAMTAC's KDC works with a wide variety of portable applications. Use it independently or as a PC, PDA, Smart Watch, Smart Glass, smartphone, and tablet accessory.

| FEATURES | KDC20 | KDC30 | KDC100 | KDC200 | KDC250 | KDC270 | KDC280 | KDC300 | KDC350 | KDC400 | KDC450 | KDC470 | KDC500 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USB CONNECTIONS | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 |
| RECHARGEABLE BATTERY | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| SCAN ENGINE | Laser/CCD | Imager | Laser | Laser | Laser | Laser/CCD/Imager | Imager | Imager | Laser/CCD/Imager | Laser/Imager | Imager | Laser/CCD/Imager | CCD/Imager |
| AUTOMATIC DATA UPLOAD | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| MAX STORED BARCODE (EAN13) | 6650 | 7160 | 409,600 | 409,600 | 409,600 | 409,600 | 409,600 | 409,600 | 409,600 | 4,096 | 409,600 | 409,600 | 153,600 |
| KTSync® SOFTWARE | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| SDK | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| SUPPORTS WINDOWS XP, 7, 8 & 10 | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| ANDROID, IOS, WINDOWS PHONE 8.1 & 10 | YES | YES | NO | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| TIZEN | NO | NO | NO | NO | NO | NO | YES | NO | NO | NO | NO | NO | NO |
| BLUETOOTH | YES | YES | NO | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| BLUETOOTH LE | NO | NO | NO | NO | NO | NO | YES | NO | NO | NO | NO | NO | NO |
| NFC (OPTIONAL) | NO | NO | NO | NO | NO | NO | NO | NO | YES | YES | NO | NO | YES |
| HF (OPTIONAL) | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | YES | YES | NO |
| UHF (OPTIONAL) | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | YES | YES | NO |
| MSR (OPTIONAL) | NO | NO | NO | NO | NO | NO | NO | NO | NO | YES | NO | NO | YES |
| IC CARD (OPTIONA| NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | YES |
| USB DISK | NO | NO | YES | YES | YES | YES | YES | YES | YES | NO | NO | NO | NO |
| USB HID | YES | YES | YES | YES | YES | YES | YES | YES | YES | NO | NO | NO | NO |
| WIFI (OPTIONAL) | NO | NO | NO | NO | NO | NO | NO | NO | YES | NO | NO | NO | NO |

*Table 1 - Features of KDC*

## 1.1 KDC Package Contents

The standard KDC package contains:

1. One KDC
2. USB Cable
   - KDC20/30 (N/A)
   - KDC100/200/250/300/350 (8pin Ultra-mini USB Cable)
   - KDC270/280/400/450/470/500 (5pin Micro USB Cable)
3. One Lanyard (KDC20/30/100/200/250/270/280/300/350) or One Hand Strap (KDC400/450/470/500)
4. One KDC Protective Rubber Boot for KDC100/200/250/270/280/300. This is optional for KDC20/30/350.
5. Quick Manual

The following KDC accessories are available to purchase at store.koamtac.com or by contacting a local reseller.

- Protective Rubber Boots for KDC20/30/100/200/250/270/280/300/350
- SmartSled® cases for KDC400/450/470/500
- Charging Cradles for KDC20/30/100/200/250/270/280/300/350/411/421/430/450/470/500
- Finger Trigger Gloves for KDC200/250/270/280/300/350
- Finger Trigger Glove Adaptor for KDC200/250/300
- ezCharging Adaptor for KDC350
- Ring Scanner for KDC200/270/280
- Hardpack Battery Charging Adaptor for KDC350/470/500
- KDC500 SmartSled® Adaptor
- KDC Batteries

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

KDC20/30
Package Contents

KDC100/200/250/300
Package Contents

KDC270/KDC280/KDC350
Package Contents

KDC400/450/470/475
Package Contents

KDC500
Package Contents

*Figure 1 – KDC Contens*

## 1.2 KDC Characteristics

Before using the KDC, the user should become familiar with its physical characteristics. Refer to the figures below. These figures indicate the placement of the SCAN, UP, DOWN and DELETE 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 includes a swing-out USB connector and the KDC350/500 has a keypad.

### KDC20/30 Barcode Reader and Data Collector

Green/Red/Orange LEDs

UP Button

DOWN Button

DELETE Button

SCAN Button

Type A USB Swing Out

*KDC20*

Green/Red/Orange LEDs

UP Button

DOWN Button

DELETE Button

SCAN Button

Type A USB Swing Out

*KDC30*

### KDC100 Barcode Reader and Data Collector

Green/Red/Orange LEDs

UP **Button**

DOWN **Button**

OLED Display

SCAN Button

Ultra-mini USB Port

Type A USB Swing Out

*KDC100*

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## KDC200/250/270/280/300/350 Barcode Reader and Data Collector

Green/Red/Orange LEDs

UP Button

DOWN Button

OLED Display

SCAN Button

Ultra-mini USB Port

*KDC200*

Green/Red/Orange LEDs

OLED Display

SCAN Button

UP Button

DOWN Button

Ultra-mini USB Port

*KDC250/300*

Green/Red/Orange LEDs

OLED Display

Scan Button

UP Button

DOWN Button

Micro USB Port

*KDC270/280*

Green/Red/Orange LEDs

Menu Button

UP Button

Shift Button

Keypad

Function Button

DOWN Button

SCAN Button

Mode Button

Ultra-mini USB Port

*KDC350*

## KDC400/450/470 Barcode Reader and Data Collector



SCAN Button

DOWN Button

Ultra-mini USB

Micro USB

SCAN Button

UP Button

Buzzer Hole

LED

Power Switch

*KDC400/450*

Left Scan Button

Right Scan Button

DOWN Button

UP Button

Micro USB Port

Green/Red/Orange LEDs
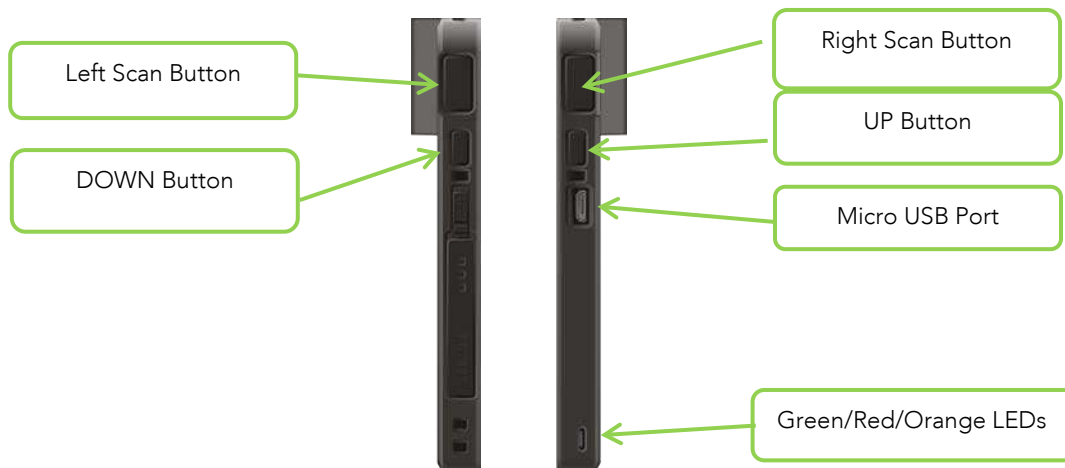
*KDC470/475*

## KDC500 Mobile POS

1D/2D Barcode Scanner

Left SCAN Button

Right SCAN Button

OLED Display

Green/Red/Orange LEDs

NFC Reader

Magnetic-Stripe
Card Reader

Secure Touch Keypad

ICCR (IC Card Reader)

Micro USB

*KDC500*

*Figure 2 – KDC Characteristics*

# 1.3 Keypad Functionality for KDC350

| | |
|---|---|
| **Menu** | Enables the user to enter or exit the KDC Menu. While in menu mode, press once to exit. |
| **Shift** | Enables the user to change character input mode from capital letters to small letters, and vice versa. |
| **Mode** | 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). |
| 1.@:/ 2ABC 3DEF (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 |
| Scan + (Power On/Off button) | Press both Scan button and Down button for more than 5 seconds at the same time to turn KDC350 power on and off. |

**Fn**

(Function button)

This button may be used in conjunction with a number key to control the KDC settings shown below.

| 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 | Bluetooth Power On/Off |
| FN + 5 | Enter Bluetooth Pairing Mode |
| FN + 6 | Change Bluetooth profile |
| FN + 0 | Factory Default |

## 1.4 Keypad Functionality for KDC500

| | |
|---|---|
| **↓ MENU** <br> (Menu/Down button) | While in the KDC500 menu, press this button to scroll down the selection bar. While on the main screen, press this button for 5 seconds then the KDC500 will enter the KDC500 menu mode. |
| **↑ FN** <br> (FN/Up button) | While in the KDC500 menu, press this button to scroll up the selection bar. While on the main screen, press this button for 5 seconds then the KDC500 will enter the KDC500 BT Service menu. <br><br> While the KDC500 waits for Alpha-Numeric key entry, this button allows the user to switch between ABC and number input mode. |
| **1 2 3** <br> @:/  ABC  DEF <br> (Number button) | Input numbers or characters |
| **↵ ENTER** <br> (Enter button) | Press to finish data input. |
| **← CLEAR** <br> (Delete button) | Press to delete the last character or number input. |
| **✕ CANCEL** <br> (Cancel button) | If cancel is pressed while menu is active it should return to the parent menu directory |

# 1.5 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".

```
Num  [||||]

123_
```
Press 1@:/,2ABC and 3DEF on the keypad.

```
Shift    Abc  [||||]

123_
```
Press Mode to switch to Abc mode.

```
Shift    Abc  [||||]

123K
```
Press 5JKL on the keypad

```
Abc  [||||]

123K
```
Press Shift on the keypad to change to lower case mode.

```
Abc  [||||]

123Koamtac
```
Press the keys for remaining letters.

Cancel

```
Do you want
To cancel ?

Yes        No
```
Press Menu and select Yes to cancel input.

```
Abc  [||||]

123Koamtac
```
Save

Press SCAN or ↵ # button to save barcode data.

*Figure 3 – KDC350 Keypad Input*

# 1.6 Turn ON/OFF KDC20/30/270/280/350/400/470/475/500 power

KDC20/30/270/350/400/470/500 have power on/off switch. Please turn on the power first before using the device.

### KDC20/30/350

Press SCAN and DOWN buttons simultaneously for 5 seconds. The user will hear a beep sound when it is turned ON or OFF

SCAN Button

DOWN Button

### KDC270/280

Press SCAN button for 5 seconds. The user will hear a beep sound when it is turned ON or OFF

SCAN Button

### KDC400

Slide POWER switch to the right.

### KDC470/475

Press any SCAN button for 5 seconds. The user will hear a beep sound when it is turned ON or OFF

SCAN Button

## KDC500

Press Left and Right SCAN buttons simultaneously for 5 seconds. The user will see a KOAMTAC logo in the display and hear a beep sound when it is turned on.

Press Left and Right SCAN buttons simultaneously for 5 seconds to power OFF.

Right SCAN Button

Left SCAN Button



*Figure 4 - How to turn on the power in KDC20/30/270/280/350/400/470/500*

# 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. Please refer Chapter 20 Appendix J for KDC280C.

### 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. (iOS and MFi are for Apple products and others are for Android products).

User needs to disable MFi mode ("i" models) in the system config model first to enable HID mode.

**KDC 20/100/200/250/270L/270D/350L/410/411/415/470L/470D/475L/475D/500L (1D)**

Bluetooth Profile SPP | Bluetooth Profile HID iOS | Bluetooth Profile MFi

6A000 | 6A001 | 6A002

Bluetooth Profile SPP2.0 | Bluetooth Profile HID normal

6A003 | 6A004

**Note** For PCI PTS compliance, KDC500L supports only Bluetooth Profile SPP and MFi.

KDC30/300/270C/350C/420/421/425/450/470C/500C (2D)

Bluetooth Profile SPP

<!-- barcode -->

$_T$MKDC6A000.

Bluetooth Profile HID iOS

<!-- barcode -->

$_T$MKDC6A001.

Bluetooth Profile MFi

<!-- barcode -->

$_T$MKDC6A002.

Bluetooth Profile SPP2.0

<!-- barcode -->

$_T$MKDC6A003.

Bluetooth Profile HID normal

<!-- barcode -->

$_T$MKDC6A004.

**Note**    For PCI PTS compliance, KDC500C supports only Bluetooth Profile SPP and MFi.

Some KDCs are equipped with an LCD screen (KDC100/200/250/270/280/300/350/500), the user may select a Bluetooth profile from the **ConnectDevice** menu as shown below.

| KDC Menu | BT Config | Connect Device | MFi | Save & Exit |
|---|---|---|---|---|

*Figure 5 - Selecting a Bluetooth device type from the KDC menu*

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## 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 20/100/200/250/270L/270D/350L/410/411/415/470L/470D/500L (1D)

KDC30/300/270C/350C/420/421/425/470C/500C (2D)

Pairing Special Barcode

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

| From the **KDC Menu** | Select **BT Service** | Select **Pairing** |
|---|---|---|

*Figure 6 - Selecting Pairing mode in KDC*

   - Press the Scan button for five seconds in order to enter into Pairing mode.

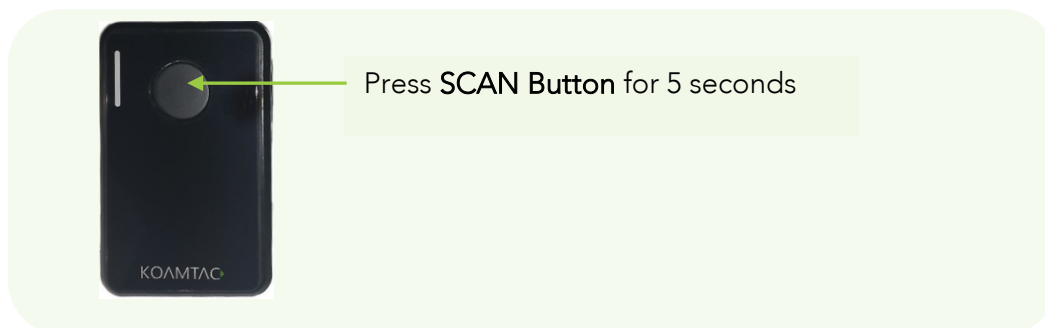Press **SCAN Button** for 5 seconds

*Figure 7 - Pairing mode button*

- For the KDC500, press the FN button for five seconds in order to directly enter the BT Service menu while it is not in the sleep mode.
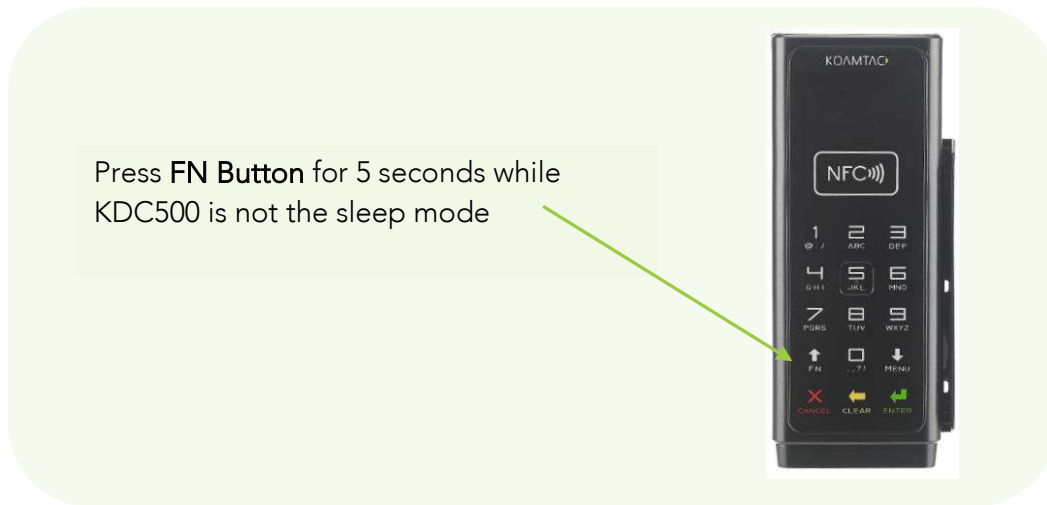
Press **FN Button** for 5 seconds while KDC500 is not the sleep mode

*Figure 8 - Pairing menu shortcut button in KDC500*

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.

Settings

Tap **Bluetooth**        Tap the **KDC**

**Note**   For PCI PTS compliance, KDC500 requires Numeric Comparison method.

If the host device and KDC500 shows the same 6digit number, press Pair/YES button on each device.

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).

**Second Option: 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 9 - Finding Bluetooth MAC Address*

**2.** Create the **Bluetooth MAC Address Barcode** according to the format below as an example based on "http://www.terryburton.co.uk/barcodewriter/generator/".

For 1D scanners like KDC20/200/250/270L/270D/350L/410/411/415/470L/470D/500L,
Bluetooth MAC Address: **1234567890AB**
Barcode Type (Symbology): **Code 128**
Contents: **^FNC36**5**1234567890AB**
Options: **parsefnc**

For 2D scanners like KDC30/300/270C/350C/420/421/425/450/470C/500C,
Bluetooth MAC Address: **1234567890AB**
Barcode Type (Symbology): **QR Code**
Contents: **^022M^013KDC65**1234567890AB.
Options: **eclevel=M parse**

**3.** Print the **Bluetooth MAC Address**

Note:

2D barcode scanners such as the KDC30/270C/300/350C/420/421/425/450/470C/500C models may read barcodes that have been printed QR barcodes that are on a LCD screen.

1D CCD barcode scanners may read barcodes that have been printed barcodes that are on a LCD screen.

1D laser barcode scanners such as the KDC20/100/200/250/270L/270D/350L/410/411/415/470L/470D/500L models are not designed to read barcodes from a LCD screen and will only read printed barcodes.

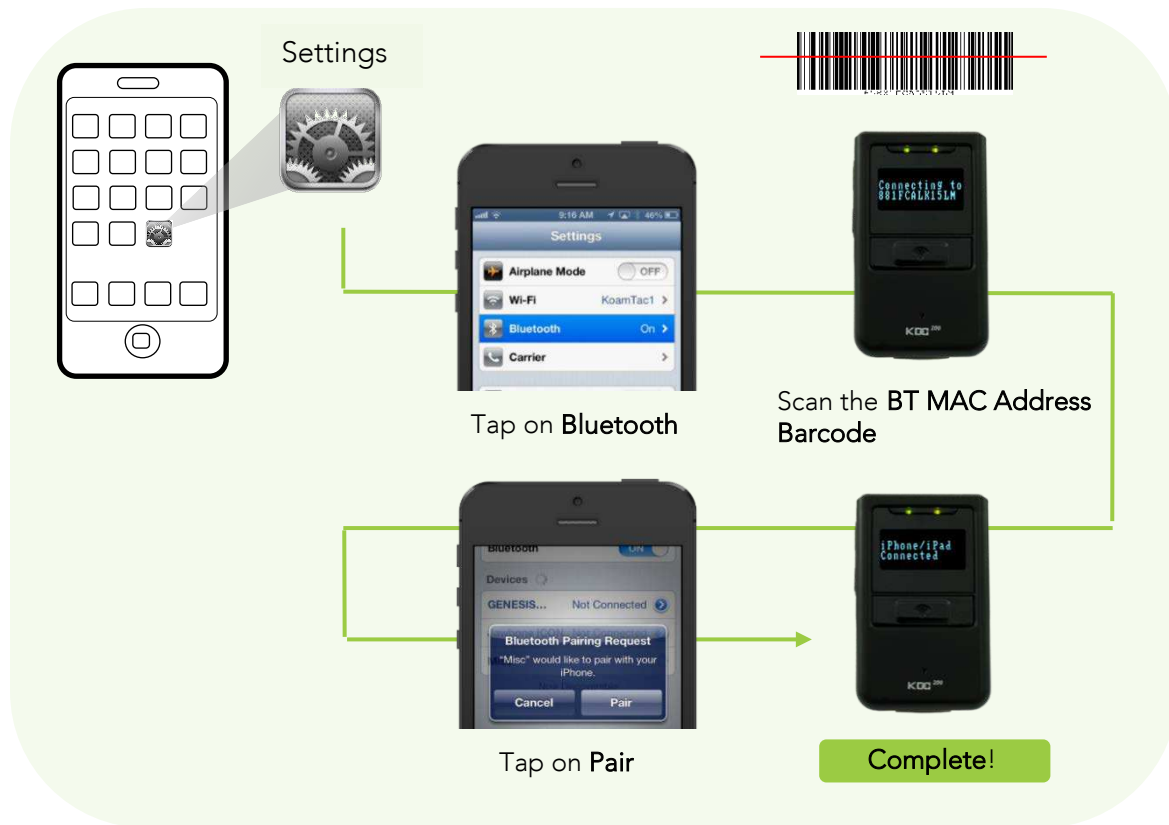4. Connect the KDC to the host device by scanning the Bluetooth MAC Address Barcode.

Settings

Tap on **Bluetooth**

Scan the **BT MAC Address Barcode**

Tap on **Pair**

Complete!

*Figure 10 - 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 KTSync Setup Wizard** for more information about installing KTSync)

## 2.2 KTSync Setup Wizard

### Windows 7, 8 & 10

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

1. Download KTSync from https://koamtac.com/downloads/applications/.

2. Extract the zip folder.

3. Run Setup.exe 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. |
|---|---|

**KTSync Setup Wizard**

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

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



44

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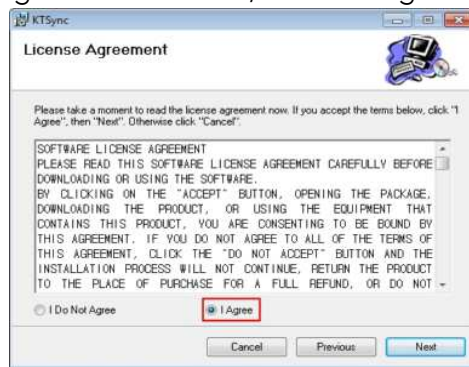


**3.** In the KTSync Installation Complete window, click **Close** and wait for the Device Driver Installation Wizard.
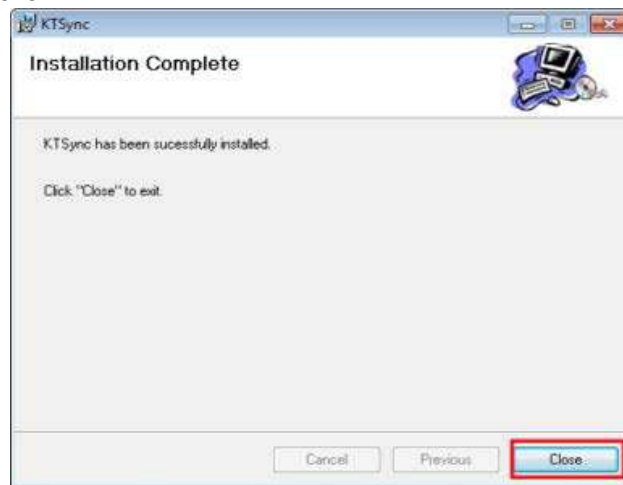


**4.** In the Windows Security window, click **Install** to complete installation.

**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.
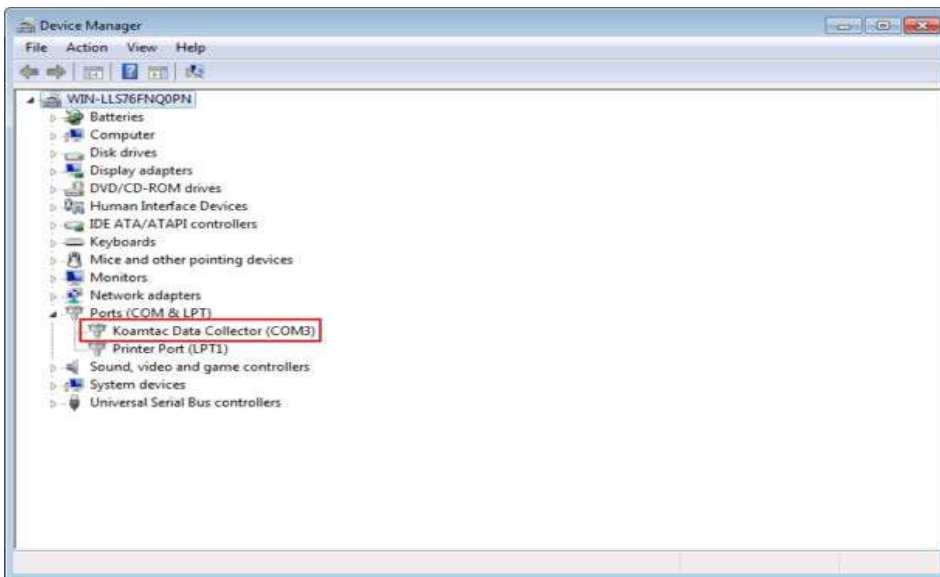


## Android

- Download and install KTSync from the Android Play Store.

  https://play.google.com/store/apps/details?id=com.koamtac.ktsync&hl

## iPad/iPhone/iPod Touch

- Download and install KTSync 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/hand strap:

| | KDC20/30 | KDC100/200/270/280/300/350/400/470 | KDC500 |
|---|---|---|---|
| **1**<br><br>Fit the thin end of the lanyard through the pillar of the KDC. |  |  |  |
| **2**<br><br>Guide the thick end of strap through the thin loop. |  |  |  |
| **3**<br><br>Pull the strap tight to secure. |  |  |  |

## How to Attach a Hand Strap to Tablet Sled Case

**1**

**Identify your mounting location, located on the four corners of the sled case.**

Identify corners A, B, C & D.

A  B

C D

**2**

**Detach both clasps from your hand strap.**



**3**

**Choose which hand you would like to use with your hand strap.**

To hold with your **RIGHT** hand, insert the detached elastic bands into corners B & C.

To hold with your **LEFT** hand, insert the detached elastic bands into corners A & D.

After making your selection and inserting the detached elastic bands, pull the clasps through the elastic band to make a knot around the small hole.







**4**

**Reinsert the hand strap to both clasps.**

Place your hand through the strap and adjust accordingly.

## 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 (three LEDs in case of KDC500) on the front panel will illuminate orange. When the battery is fully charged, the LEDs will illuminate green.

| KDC100 | KDC20/200 | KDC30/250/300/270/280 | KDC350 | KDC400/470 | KDC500 |
|--------|-----------|----------------------|--------|-----------|--------|
| 2 Hours | 2 Hours | 3 Hours | 4 Hours | 4 Hours | 4 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 KDC100/200/250/270/280/300/350/500

- KDC Menu
- KTSync Software
- Special Barcodes



Press the **Up and DOWN Buttons** simultaneously to access the KDC menu. Move the menu bar up and down by pressing Up and Down Buttons.

Select one of the menus by pressing the **Scan Button**.

*Figure 11 - Location of KDC Menu and use of buttons (KDC100/200/250/270/280/300)*

Press the ![Menu] **Button** to access the KDC menu. Move the menu bar up and down by pressing the ![up] and ![down] **Buttons**, and configure the KDC by pressing the SCAN Button to select a menu.
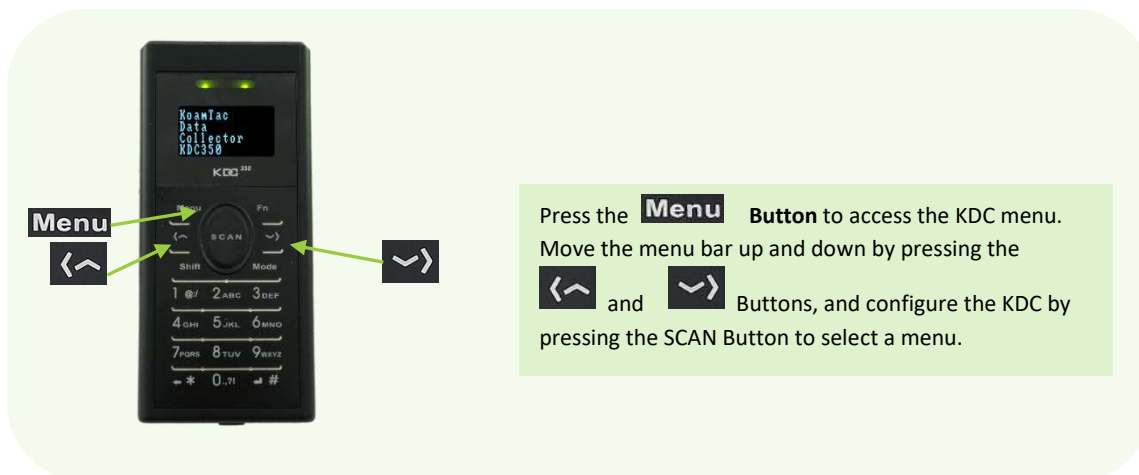
*Figure 13 - Location and use of buttons on a keypad (KDC350)*



Press the ![MENU] **Button for 5 seconds** to access the KDC menu. Move the menu bar up and down by pressing the ![FN] and ![MENU] **Buttons**, and configure the KDC by pressing the SCAN Button to select a menu.

*Figure 12 - Location and use of buttons on a keypad (KDC500)*

## CONFIGURATION METHODS FOR KDC20/30/400/470

- KTSync Software
- Special Barcodes

# Abbreviation

| ABBR. | CODE | DESCRIPTION |
|---|---|---|
| i | MFi - Made For iPhone/iPod/iPad | Used for two-way Bluetooth communication on iOS devices (KTSync or app integrated with SDK) |
| M | 8MB flash memory | Storage space for bar codes and application database |
| SR | Standard range | (2D) Honeywell Gen5 scan engine for reading standard bar code sizes |
| SF | Special focus | (2D) Honeywell Gen5 scan engine for reading very small bar codes |
| L | Laser | Laser for reading 1D bar codes |
| D | CCD Engine | Charged Coupled Device, for reading 1D bar codes |
| MO | Zebra (Motorola)'s laser scan engine | Better performance than the OP engine (KDC350 only) |
| OP | Opticon's laser scan engine | Found in most KDC 1D scanners |
| G6SR-R2 | Honeywell Gen6 scan engine | (2D) Improved performance compared to Gen5 |
| C | Camera | Imager scan engine for reading 2D and 1D bar codes |
| W | WiFi | Transmit data over WiFi via TCP, UDP, HTTP GET/POST protocols |
| N | NFC | Near Field Communication for reading RFID tags (13.56 MHz) |
| G | GPS | Attaches location coordinates to each scan (outdoors only) |
| 3K | 3 Key | 3-key, no full keypad |
| T | MSR track | For reading card swipes |
| U | Ultra High Frequency | For reading Ultra-High Frequency RFID tags (900Mhz) |

**Note** Both the laser and CCD engine can only read 1D barcodes

CCD can read off of an LCD screen, while the laser cannot.

Following KDC Abbrebiations are used in this manual.

## 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.*
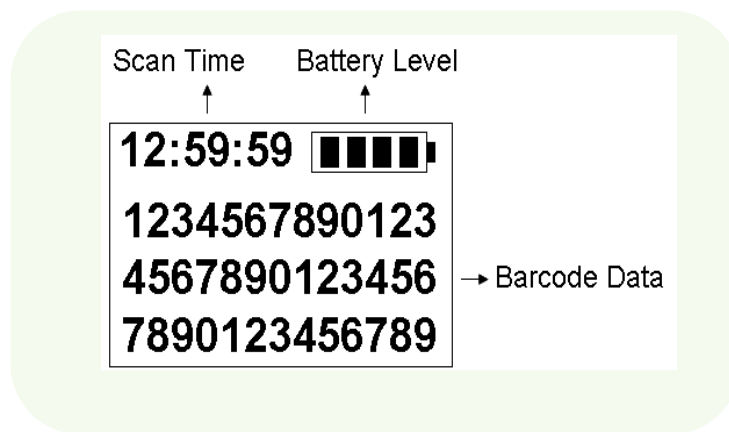


*Figure 14 - KDC Display*
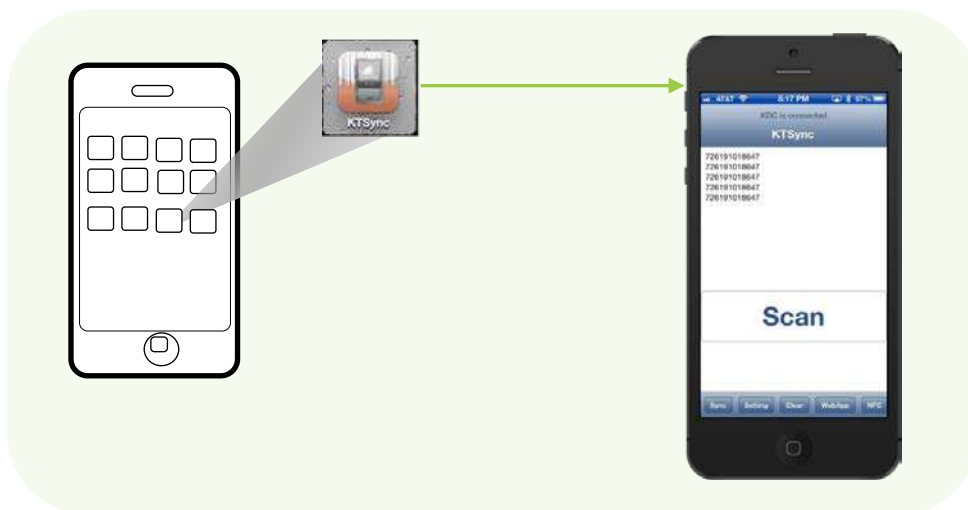


*Figure 15 - Scanning barcodes using KTSync*

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. (Laser Model)

- 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 (KDC250G/350G)

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. GPS model is discontinued in 2017.

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 **SystemConfig** in the KDC Menu and select **GPS data** in **Display Format**.

4. After finishing the configuration, scan a barcode as explained in 3.2 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 (KDC250G/350G).

## Reading NFC Tags (KDC350N/400N/KDC500)

1. Enable the **NFC Power** option in the **NFC Config** menu.

2. Touch the NFC tag to the back of the KDC350N/400N case (or NFC logo on the front of the KDC500 case), and make sure the tag and case are within 5cm of each other.



*Figure 16 - 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.


## Reading HF RFID Tags (KDC450/470)

The KDC450/470 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 KDC450/470 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 1.5 Input data by using a keypad (KDC350) for more detailed information about the process.


## Read Magnetic-Stripe (MS) Card(KDC500)

1. The paired host application sends a command to enable the MS Card Reader.

2. Swipe MS Card either top to bottom or bottom to top. Make sure the magnetic stripe of the

card face to the KDC500.

3. The KDC500 will send the MS card data to the paired host application and the user will hear a short beep if it has been read successfully.


## Read Integrated Chip (IC) Card(KDC500)

1. The paired host application sends a command to enable the IC Card Reader.

2. Insert IC Card into the IC Card slot located in the left side of KDC500. Make sure the IC of the card face to up.

3. The KDC500 will send the IC card data read to the paired host application.


## Synchronizing data to the host device

Use the KTSync program to synchronize barcode data from the KDC to the host device. Please refer to Chapter 5. Synchronization for details.

# 3.3 KDC Device Driver and Firmware

## Firmware Upgrade

1. Download KDC driver at:  [https://www.koamtac.com/downloads/drivers/](https://www.koamtac.com/downloads/drivers/)

   - Extract the folder, run Setup.exe only.
   - Follow the instructions on the installation wizard.

2. Download KDC Firmware at:  [https://koamtac.com/downloads/firmware/](https://koamtac.com/downloads/firmware/)

   - Choose your KDC model &  firmware.
   - Extract the folder, open the firmware upgrade application.

3. Confirm the KDC Driver installed  properly.

   - Plug in KDC to PC via USB.
   - Navigate to Device Manager [Start > Control Panel > System and Security > System

> Device Manager].

   - Click on Ports (COM & LPT).  The KDC should be listed as **Koamtac Data Collector**.
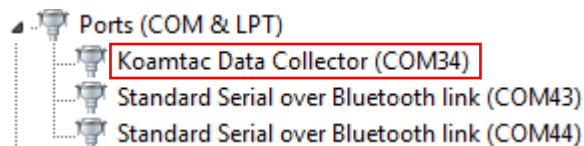


4. In the upgrade application, click 'Step 1: Select  Serial Port'

   - Make sure **all** programs are closed & KDC is not connected to any device via Bluetooth.
   - This should automatically detect the COM port the KDC is using.
   - If a blank dropdown appears, plug the KDC into a different USB port.

5. Click 'Step 2:  Check KDC'

   - This will verify the current firmware of the KDC as well as ensure

compatibility with the new firmware to be downloaded.

6. Click 'Step 3: Download New  F/W'

- Do NOT remove KDC during this  process.

- Once the 'Firmware Updated Successfully' notification appears, the KDC is safe to

remove.

7. Factory Default the scanner



Factory Default (1D)



Factory Default (2D)

## Firmware Version

- 2.85 firmware refers to scanners without memory for the application database.
- 2.86 firmware refers to scanners with memory for the application database.
- 3.0x firmware refers to scanners with 4 MB or 8 MB of external flash memory.
- 2.8x firmware cannot be upgraded to 3.0x firmware.

## 3.4 KDC Beep Sounds

The KDC beep sound can be change using a special bar code, using the KDC menu, or using KTSync.

The beep sound can be turned off entirely by disabling the **Beep Sound**.
- KDC Menu > System Config > Beep Alert > Beep Sound > Disable > Save & Exit.

Alternatively, beeps can be toggled individually for the following:
- Beep on powering up
- Beep on connection to host device
- Beep on scanning (success & failure)
- (MSR) Beep on card swipe
- (RFID) Beep on RFID tag reading

The beep pitch can be toggled using the Beep Volume(Tone) settings.
- Set to *Low* by default, can be changed to *Low, High*.
- Set to *High* by default for KDC500 only, can be set to *Low, High*.

For the KDC350 and KDC500, the **Key Tone** refers to the sound from a keypad press.
- KDC350: Set to *Disabled* by default, can be changed to *Disabled, Low, Medium, High*.
- KDC500: Set to *High* by default, can be changed to *Disabled, Low, Medium, High*.

# 3.5 KDC Menu

| Top Menu | Sub Menu | Options | KDC20 | KDC30 | KDC100 | KDC200 | KDC250 | KDC300 | KDC350L | KDC350C |
|---|---|---|---|---|---|---|---|---|---|---|
| KDC Mode | Normal | | Default | Default | Default | Default | Default | Default | Default | Default |
| | Application | | N/A | N/A | Custom Application | Custom Application | Custom Application | Custom Application | Custom Application | Custom Application |
| View Data | View/Delete | | N/A | N/A | View/Delete Data | View/Delete Data | View/Delete Data | View/Delete Data | View/Delete Data | View/Delete Data |
| Set Barcodes (20/ 100/ 200/ 250/ 350L) | EAN13 | Enabled/ Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | EAN8 | Enabled/ Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | UPCA | Enabled/ Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | UPCE | Enabled/ Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | CODE39 | Enabled/ Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | ITF14 | Enabled/ Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | CODE128 | Enabled/ Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | I2of5 | Enabled/ Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | CODABAR | Enabled/ Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | GS1-128 | Enabled/ Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | CODE93 | Enabled/ Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | CODE35 | Enabled/ Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | BooklandEAN | Enabled/ Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | EAN13withAddon | Enabled/ Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | EAN8withAddon | Enabled/ Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | UPCAwithAddon | Enabled/ Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | UPCEwithAddon | Enabled/ Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | GS1 Omni | Enable/ Disable | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | GS1 Limited | Enable/ Disable | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | GS1 Expanded | Enable/ Disable | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| Set Barcodes (30/300/ 350C) | 1D Symbology | Codabar | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Code 11 | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Code 32 | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Code 39 | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Code 93 | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Code 128 | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | EAN-8 | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | EAN-13 | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | GS1 Composit | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | I2of5 | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Matrix 2of5 | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | MSI | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Plessey | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | PosiCode | N/A | Enable | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | GS1 Omni | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | GS1 Limited | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | GS1 Expanded | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | S2of5 Ind | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | S2of5 IATA | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | TLC39 | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Telepen | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Trioptic | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | UPCA | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | UPCE0 | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | UPCE1 | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | 2D Symbology | AztecCode | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | AztecRunes | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Codablock | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |

| Category | Subgroup | Item | Setting | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | | | | | | | | | |
| | | Code16K | | N/A | N/A | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Code49 | | N/A | N/A | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | DataMatrix | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | MaxiCode | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | MicroPDF | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | PDF417 | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | QRCode | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | HanXin Code | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | Postal Codes | Postnet | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | PlanetCode | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | UK Post | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Mayada Post | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Kix Post | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Australia Post | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Japan Post | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | China Post | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Korea Post | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | OCR | OCR Off | | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | OCR A | | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | OCR B | | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | OCR Passport | | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | OCR MICR | | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | OCR SEMI | | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| **Barcode Options (20/100/200/250/350L)** | CodaBar_NoStartStop Chars | | Enabled/Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | UPCE_as_UPCA | | Enabled/Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | EAN8_as_EAN13 | | Enabled/Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | UPCE_as_EAN13 | | Enabled/Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | ReturnCheckDigit | | Enabled/Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | VerifyCheckDigit | | Enabled/Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | UPCA_as_EAN13 | | Enabled/Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | I2of5_VerifyCheckDigit | | Enabled/Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | Code39_VerifyCheckDigit | | Enabled/Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | I2of5_ReturnCheckDigit | | Enabled/Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | Code39_ReturnCheckDigit | | Enabled/Disabled | Disabled | N/A | Disabled | Disabled | Disabled | N/A | Disabled | N/A |
| | UPCE_ReturnCheckDigit | | Enabled/Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | UPCA_ReturnCheckDigit | | Enabled/Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | EAN8_ReturnCheckDigit | | Enabled/Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | EAN13_ReturnCheckDigit | | Enabled/Disabled | Enabled | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| **Barcode Options (30/300/350C)** | Codabar | | Tx StartStop (Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | | Check Digit (DoNotVerify/VerfyDONotTX/VerifyDoTx) | N/A | DoNotVerify | N/A | N/A | N/A | DoNotVerify | N/A | DoNotVerify |
| | | | Concatenate(Disabled/Enabled/Required) | N/A | N/A | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | Code39 | | Tx StartStop (Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | | Check Digit(DoNotVerify/VerfyDONotTX/VerifyDoTx) | N/A | DoNotVerify | N/A | N/A | N/A | DoNotVerify | N/A | DoNotVerify |
| | | | Append (Enabled/Disabled) | N/A | N/A | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | | Full ASCII(Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | I2of5 | | Check Digit (DoNotVerify/VerfyDO | N/A | DoNotVerify | N/A | N/A | N/A | DoNotVerify | N/A | DoNotVerify |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | NotTX/VerifyDoTx) | | | | | | | | |
| | Code11 | Check Digit (2 digits/1 digit) | N/A | 2 digits | N/A | N/A | N/A | 2 digits | N/A | 2 digits |
| | Code128 | Concatenate(Disabled/Enabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | Telepen | Output(Original/AIM) | N/A | Always AIM | N/A | N/A | N/A | AIM | N/A | AIM |
| | UPCA | VerifyChkDgt(Enabled/Disabled) | N/A | Always Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | NumberSys (Enabled/Disabled) | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | 2DgtAddenda(Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | 5DgtAddenda(Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | Req. Addenda (Enabled/Disabled) | N/A | N/A | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | Sep. Addenda (Enabled/Disabled) | N/A | N/A | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Coupon Code (Enabled/Disabled) | N/A | N/A | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | UPCE | Expand (Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | Req. Addenda (Enabled/Disabled) | N/A | N/A | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | Sep. Addenda (Enabled/Disabled) | N/A | N/A | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | Check Digit (Enabled/Disabled) | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | NumberSys (Enabled/Disabled) | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | 2DgtAddenda(Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | 5DgtAddenda(Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | EAN-13 EAN-8 | VerifyChkDgt(Enabled/Disabled) | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | 2DgtAddenda(Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | 5DgtAddenda(Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | Req. Addenda (Enabled/Disabled) | N/A | N/A | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | Sep. Addenda (Enabled/Disabled) | N/A | N/A | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | ISBN Trans. (Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | VerifyChkDgt(Enabled/Disabled) | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | | 2DgtAddenda(Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | 5DgtAddenda(Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | Req. Addenda (Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | Sep. Addenda (Enabled/Disabled) | N/A | Enabled | N/A | N/A | N/A | Enabled | N/A | Enabled |
| | MSI | Tx CheckChar (Enabled/Disabled) | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | 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 | A&B LimitedB |
| | GS1 | UPCEAN Ver.(Enabled/Disabled) | N/A | N/A | N/A | N/A | N/A | Disabled | N/A | Disabled |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | GS1 Emulation (No Emulate/ GS1 128 Emul/GS1 Emulate) | N/A | N/A | N/A | N/A | N/A | No Emulate | N/A | No Emulate |
| | PostNet | Tx CheckChar(Enabled/Disabled) | N/A | N/A | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | PlanetCode | Tx CheckChar(Enabled/Disabled) | N/A | N/A | N/A | N/A | N/A | Disabled | N/A | Disabled |
| **Scan Options** | Scan Angle | Narrow/Wide | Wide (Laser only) | N/A | Wide | Wide | Wide | N/A | Wide (Opticon Laser only) | N/A |
| | Filter | Normal/High | Normal (Laser only) | N/A | Normal | Normal | Normal | N/A | Normal (Opticon Laser only) | 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) | 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 | N/A |
| | Min. Barcode Length | 2 to 48 characters | N/A | N/A | N/A | N/A | N/A | 4 chars | N/A | 4 chars |
| | Security Level | 1 to 4 level | 2 level | N/A | 2 level | 2 level | 2 level | N/A | 2 level | N/A |
| | Image Capture | Enabled/Disabled | N/A | N/A | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | Auto Trigger | Enabled/Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled |
| | Reread Delay | Continuous, Short, Medium, Long, Extra Long | Medium | Medium | Medium | Medium | Medium | Medium | Medium | Medium |
| | Finger Trigger | Enabled/Disabled | N/A | N/A | Enabled | Enabled | Enabled | N/A | Enabled | N/A |
| | Partial Display | Start Position | 1 | 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 | 0 chars |
| | | Action | Select | Select | Select | Select | Select | Select | Select | Select |
| **Data Process** | 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 | Default | Default |
| | | Packet Data | | | | | | | | |
| | Data Editor/ Prefix | | | | | | | | | |
| | Data Editor/ Suffix | | | | | | | | | |
| | Data Editor/ AIM ID | None/In Prefix/In Suffix | None | None | None | None | None | None | None | None |
| | Data Editor/ Partial Data | Start Position | 1 | 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 | 0 chars |
| | | Action | Select | Select | Select | Select | Select | Select | Select | Select |
| | Handshake | Enable/Disabled | 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 | CR+LF |
| | Chk Duplicate | Enabled/Disabled | 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 | Disabled |
| | Extend Key | Enabled/Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Disabled | Disabled |
| | Age Verify | Verification Enabled/Disabled | N/A | Disabled | N/A | N/A | N/A | Disabled | N/A | Disabled |
| | | Age Default | N/A | 21 | N/A | N/A | N/A | 21 | N/A | 21 |
| **BT Config** | Connect Device (Non Mfi mode) | SPP | Default | Default | N/A | Default | 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 | Default |
| | Auto Connect | Enabled /Disabled | Disabled | Disabled | N/A | Disabled | Disabled | Disabled | Disabled | Disabled |

| Category | Setting | Options | Col1 | Col2 | Col3 | Col4 | Col5 | Col6 | Col7 | Col8 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Auto Reconnect | Enabled/ Disabled | Disabled | Disabled | N/A | Disabled | Disabled | Disabled | Disabled | Disabled |
| | Auto Power On | Enabled/ Disabled | Disabled | Disabled | N/A | Disabled | Disabled | Disabled | Disabled | Disabled |
| | Auto Power On/Power On Time | disabled, 1sec to 10second(s) | Disabled | Disabled | N/A | Disabled | Disabled | Disabled | Disabled | Disabled |
| | Auto Power Off | Enabled/ Disabled | Disabled | Disabled | N/A | Disabled | Disabled | Disabled | Disabled | Disabled |
| | Auto Power Off/Beep Warning | Enabled/ Disabled | Disabled | Disabled | N/A | Disabled | Disabled | Disabled | Disabled | Disabled |
| | Auto Power Off/Power Off Time | 1 to 30 minutes | Disabled | Disabled | N/A | Disabled | Disabled | Disabled | Disabled | Disabled |
| | PowerOff Msg | Enabled/Disabled | Disabled | Disabled | N/A | Disabled | 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 | Disabled |
| | Connect Alert | Enabled/Disabled | Disabled | Disabled | N/A | Disabled | Disabled | Disabled | Disabled | Disabled |
| | BT Toggle | Enabled/Disabled | Enabled | Enabled | N/A | Enabled | Enabled | Enabled | Enabled | Enabled |
| | DisconnectBtn | Enabled/Disabled | Enabled | Enabled | N/A | Enabled | 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 | 1 minutes |
| | HID Keyboard | US,German, French,Italian,Spanish | US | US | N/A | US | US | US | US | US |
| | HID Delay/Initial | Disabled, 1,2,3,5,10 secs | Disabled | Disabled | N/A | Disabled | Disabled | Disabled | Disabled | Disabled |
| | HID Delay/Inter char | Disabled,10, 20, 30, 50, 100msec | Disabled | Disabled | N/A | Disabled | Disabled | Disabled | Disabled | Disabled |
| | HID Ctrl Char | Disabled, Alt+Numpad, ^+Character, Replace to \| | Disabled | Disabled | N/A | Disabled | Disabled | Disabled | Disabled | Disabled |
| BT Service | Power | Enabled/ Disabled | Enabled | Enabled | N/A | Enabled | Enabled | Enabled | Enabled | Enabled |
| | Pairing | Pairing neighboring Bluetooth devices | | | N/A | | | | | |
| | Discovering | Discovering neighboring Bluetooth devices | | | N/A | | | | | |
| | Connecting to | View Connect to Bluetooth device | | | N/A | | | | | |
| | HID Sync | | | | N/A | | | | | |
| | Auto Pairing | Enabled/Disabled | Enabled | Enabled | N/A | Enabled | Enabled | Enabled | Enabled | Enabled |
| USB Config (M model) | USB Mode | Disabled/ USB Disk/ USB HID | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled |
| NFC Config (N model) | NFC Power | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Enabled | Enabled |
| | Data Format | Barcode only/Packet Data | N/A | N/A | N/A | N/A | N/A | N/A | Packet Data | Packet Data |
| | UID Only | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| GPS Config (G model) | GPS Power | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A | Disabled | Disabled |
| | Power Mode | Normal/Power Save | N/A | N/A | N/A | N/A | Normal | N/A | Normal | Normal |
| | Bypass Data | Enabled/ Disabled | N/A | N/A | N/A | N/A | Disabled | N/A | Disabled | Disabled |
| | Acqurie Test | | N/A | N/A | N/A | N/A | | N/A | | |
| | Reset GPS | | N/A | N/A | N/A | N/A | | N/A | | |
| System Config | Memory Size(3.0+ only) | 0.5/6.5, 1/6, 2/5, 3/4, 4/3, 5/2, 6/1, 70 | N/A | N/A | 0.5M/6.5M | 0.5M/6.5M | 0.5M/6.5M | 0.5M/6.5M | 0.5M/6.5M | 0.5M/6.5M |
| | 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 | Disabled |
| | 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 | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled |
| | Beep Alert /Beep Sound | Enabled/Disabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled |
| | Beep Alert /Power On Beep | Enabled/Disabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled |
| | Beep Alert /Beep On Connect | Enabled/Disabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled |
| | Beep Alert /Beep On Scan | Enabled/Disabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled |
| | Beep Volume | Low/High | Low | Low | Low | Low | Low | Low | Low | Low |
| | Mfi ( i-chip installed) | Enabled/Disabled | Enabled | Enabled | N/A | Enabled | Enabled | Enabled | Enabled | Enabled |
| | Vibrator | Enabled/Disabled/Config | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | Disabled |
| | Auto Exit | Enabled/Disabled | N/A | N/A | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled |
| | Port Status | Enabled/Disabled | N/A | N/A | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled |
| | Display Format | Time & Battery / Type & Time / Type & Battery / Memory Status / GPS Data(KDC250 only)/Barcode Only/Graphic | N/A | N/A | Time & Battery | 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 | Disabled |
| | Scrolling | Enabled/Disabled | N/A | N/A | Enabled | 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 | 8 level |
| | Keypad | Enabled/Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Enabled | Enabled |
| | Language (FW Version 3.x only) | None/US(English)/French/Italian/Spanish/Korean/Japanese | N/A | N/A | None | None | None | None | None | None |
| | Factory Default | Restores Default Settings | | | | | | | | |
| MSR Config | Data Format | MSR Data Only | N/A | 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 | N/A |
| | Use Track1 | Enabled/Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Use Track2 | Enabled/Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | UseTrack3 | Enabled/Disabled | N/A | 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 | N/A |
| | Encrypt MSR Data | Enabled/Disabled | N/A | 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 | N/A |
| | Card Type | ISO/OTHER1/AAMVA | N/A | 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 | N/A |
| | Attach Start/End Sentinel | | N/A | 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 | N/A |
| | Partial Data Length | | N/A | 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 | N/A |
| WIFI Config | Power | | N/A | N/A | N/A | N/A | N/A | N/A | Enable | Enable |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| AP | SSID | N/A | N/A | N/A | N/A | N/A | N/A | Empty | Empty |
| | Passcode | N/A | N/A | N/A | N/A | N/A | N/A | Empty | Empty |
| Server | IP Address | N/A | N/A | N/A | N/A | N/A | N/A | 0.0.0.0 | 0.0.0.0 |
| Server | URL Address | N/A | N/A | N/A | N/A | N/A | N/A | Empty | Empty |
| Server | Port Number | N/A | N/A | N/A | N/A | N/A | N/A | 80 | 80 |
| Server > Protocol | UDP/TCP/ HTTP GET/ HTTP Post | N/A | N/A | N/A | N/A | N/A | N/A | HTTP Post | HTTP Post |
| Server > SSL | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Disabled | Disabled |
| Server | Server Page | N/A | N/A | N/A | N/A | N/A | N/A | Empty | Empty |
| Resp. Timeout | 1/2/3/4/5/6/ 7/8/9/10 sec | N/A | N/A | N/A | N/A | N/A | N/A | 10 sec | 10 sec |
| Connect | Connecting to AP | N/A | N/A | N/A | N/A | N/A | N/A | | |
| Auto Connect | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Disabled | Disabled |
| Send Stored | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Enabled | Enabled |
| Version | APP MAC | N/A | N/A | N/A | N/A | N/A | N/A | | |

| Top Menu | Sub Menu | Options | KDC410/411 | KDC415 | KDC420/421 | KDC425 | KDC430 | KDC450 | KDC500L | KDC500C |
|---|---|---|---|---|---|---|---|---|---|---|
| KDC Mode | Normal | | Default | Default | Default | Default | Default | Default | N/A | N/A |
| | Application | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| View Data | View/Delete | | N/A | N/A | N/A | N/A | N/A | N/A | View/Delete Data | View/Delete Data |
| Set Barcodes (410/411/415/500L) | EAN13 | Enabled/ Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | EAN8 | Enabled/ Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | UPCA | Enabled/ Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | UPCE | Enabled/ Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | CODE39 | Enabled/ Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | ITF14 | Enabled/ Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | CODE128 | Enabled/ Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | I2of5 | Enabled/ Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | CODABAR | Enabled/ Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | GS1-128 | Enabled/ Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | CODE93 | Enabled/ Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | CODE35 | Enabled/ Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | BooklandEAN | Enabled/ Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | EAN13withAddon | Enabled/ Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | EAN8withAddon | Enabled/ Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | UPCAwithAddon | Enabled/ Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | UPCEwithAddon | Enabled/ Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| Set Barcodes (420/421/425/450/500C) | 1D Symbology | Codabar | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Code 11 | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Code 32 | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Code 39 | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Code 93 | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Code 128 | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | EAN-8 | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | EAN-13 | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | GS1 Composit | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | I2of5 | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Matrix 2of5 | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | MSI | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Plessey | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | PosiCode | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | GS1 Omni | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | GS1 Limited | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | GS1 Expanded | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | S2of5 Ind | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | S2of5 IATA | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | TLC39 | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Telepen | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Trioptic | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | UPCA | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | UPCE0 | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | UPCE1 | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | 2D Symbology | AztecCode | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | AztecRunes | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Codablock F | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Code16K | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Code49 | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | DataMatrix | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | MaxiCode | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | MicroPDF | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | PDF417 | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | QRCode | | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | HanXin Code | | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | Postal Codes | Postnet | | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | PlanetCode | | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | UK Post | | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Mayada Post | | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Kix Post | | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Australia Post | | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Japan Post | | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | China Post | | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Korea Post | | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | OCR | OCR Off | | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | OCR A | | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | OCR B | | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | OCR USC | | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | OCR MICR | | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | OCR SEMI | | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| Barcode Options (410/411/415/500L) | CodaBar_NoStartStopChars | | Enabled/Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | UPCE_as_UPCA | | Enabled/Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | EAN8_as_EAN13 | | Enabled/Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | UPCE_as_EAN13 | | Enabled/Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | ReturnCheckDigit | | Enabled/Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | VerifyCheckDigit | | Enabled/Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | UPCA_as_EAN13 | | Enabled/Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | I2of5_VerifyCheckDigit | | Enabled/Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | Code39_VerifyCheckDigit | | Enabled/Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | I2of5_ReturnCheckDigit | | Enabled/Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | Code39_ReturnCheckDigit | | Enabled/Disabled | Disabled | Disabled | N/A | N/A | N/A | N/A | Disabled | N/A |
| | UPCE_ReturnCheckDigit | | Enabled/Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | UPCA_ReturnCheckDigit | | Enabled/Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | EAN8_ReturnCheckDigit | | Enabled/Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| | EAN13_ReturnCheckDigit | | Enabled/Disabled | Enabled | Enabled | N/A | N/A | N/A | N/A | Enabled | N/A |
| Barcode Options (KDC420/425/450/500C) | Codabar | Tx StartStop (Enabled/Disabled) | | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | Check Digit (DoNotVerify/VerfyDONotTX/VerifyDoTx) | | N/A | N/A | DoNotVerify | DoNotVerify | N/A | DoNotVerify | N/A | DoNotVerify |
| | | Concatenate(Disabled/Enabled/Required) | | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | Code39 | Tx StartStop (Enabled/Disabled) | | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | Check Digit(DoNotVerify/VerfyDONotTX/VerifyDoTx) | | N/A | N/A | DoNotVerify | DoNotVerify | N/A | DoNotVerify | N/A | DoNotVerify |
| | | Append (Enabled/Disabled) | | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | Full ASCII(Enabled/Disabled) | | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | I2of5 | Check Digit (DoNotVerify/VerfyDONotTX/VerifyDoTx) | | N/A | N/A | DoNotVerify | DoNotVerify | N/A | DoNotVerify | N/A | DoNotVerify |
| | Code11 | Check Digit (2 digits/1 digit) | | N/A | N/A | 2 digits | 2 digits | N/A | 2 digits | N/A | 2 digits |
| | Code128 | Concatenate(Disabled/Enabled) | | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | Telepen | Output(Original/AIM) | | N/A | N/A | AIM | AIM | N/A | AIM | N/A | AIM |
| | UPCA | VerifyChkDgt(Enabled/Disabled) | | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | NumberSys (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | 2DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | 5DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | Req. Addenda (Enabled/ Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | Sep. Addenda (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Coupon Code (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | UPCE | Expand (Enabled/ Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | Req. Addenda (Enabled/ Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | Sep. Addenda (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | Check Digit (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | NumberSys (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | 2DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | 5DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | EAN-13 | VerifyChkDgt(Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | 2DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | 5DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | Req. Addenda (Enabled/ Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | Sep. Addenda (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | ISBN Trans. (Enabled/ Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | EAN-8 | VerifyChkDgt(Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | | 2DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | 5DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | Req. Addenda (Enabled/ Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | Sep. Addenda (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | Enabled | N/A | Enabled |
| | MSI | Tx CheckChar (Enabled/ Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | PosiCode | A and B/A&B LimitedA/A &B LimitedB | N/A | N/A | A&B LimitedB | A&B LimitedB | N/A | A&B LimitedB | N/A | A&B LimitedB |
| | GS1 | UPCEAN Ver.(Enable d/Disabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | | GS1 Emulation (No Emulate/ GS1 128 Emul/GS1 Emulate) | N/A | N/A | No Emulate | No Emulate | N/A | No Emulate | N/A | No Emulate |
| | PostNet | Tx CheckChar( Enabled/Di sabled) | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |
| | PlanetCode | Tx CheckChar( Enabled/Di | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | Disabled |

| Category | Setting | Option/Range | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | sabled) | | | | | | | | |
| *Scan Options* | Power | Enabled/Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Disabled | Disabled |
| | Scan Angle | Narrow/Wide | Wide | Wide | N/A | N/A | N/A | N/A | N/A | N/A |
| | Filter | Normal/High | Normal | Normal | N/A | N/A | 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) | N/A | 2 second(s) | 2 second(s) | 2 second(s) |
| | Min. Barcode Length | 2 to 36 characters | 4 chars | 4 chars | N/A | N/A | N/A | N/A | 4 chars | N/A |
| | Min. Barcode Length | 2 to 48 characters | N/A | N/A | 4 chars | 4 chars | N/A | 4 chars | N/A | 4 chars |
| | Security Level | 1 to 4 level | 2 level | 2 level | N/A | N/A | N/A | N/A | N/A | N/A |
| | Image Capture | Enabled/Disabled | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | N/A |
| | Auto Trigger | Enabled/Disabled | Disabled | Disabled | Disabled | Disabled | N/A | Disabled | Disabled | Disabled |
| | Reread Delay | Continuous, Short, Medium, Long, Extra Long | Medium | Medium | Medium | Medium | N/A | Medium | Medium | Medium |
| | Finger Trigger | Enabled/Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Partial Display | Start Position | N/A | N/A | N/A | N/A | N/A | N/A | 1 | 1 |
| | | No. of Char(s) | N/A | N/A | N/A | N/A | N/A | N/A | 0 chars | 0 chars |
| | | Action | N/A | N/A | N/A | N/A | N/A | N/A | Select | Select |
| *Data Process* | 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 | N/A | Default | | |
| | | Packet Data | | | | | | | Default | Default |
| | Data Editor/Prefix | | | | | | | | | |
| | Data Editor/Suffix | | | | | | | | | |
| | Data Editor/AIM ID | None/In Prefix/In Suffix | None | None | None | None | N/A | None | None | None |
| | Data Editor/Partial Data | Start Position | 1 | 1 | 1 | 1 | N/A | 1 | 1 | 1 |
| | | No. of Char(s) | 0 chars | 0 chars | 0 chars | 0 chars | N/A | 0 chars | 0 chars | 0 chars |
| | | Action | Select | Select | Select | Select | N/A | Select | Select | Select |
| | Handshake | Enable/Disabled | Disabled | Disabled | Disabled | Disabled | N/A | Disabled | N/A | N/A |
| | 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 | N/A | Disabled | Disabled | Disabled |
| | Enter Key | Enabled/Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Disabled | Disabled |
| | Extend Key | Enabled/Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Disabled | Disabled |
| | Age Verify | Verification Enabled/Disabled | N/A | N/A | Disabled | Disabled | N/A | Disabled | N/A | N/A |
| | | Age Default | N/A | N/A | 21 | 21 | N/A | 21 | N/A | N/A |
| *BT Config* | ConnectDevice (Non Mfi mode) | SPP | Default | Default | Default | Default | Default | Default | N/A | N/A |
| | | HID iOS | | | | | | | N/A | N/A |
| | | SPP2.0 | | | | | | | N/A | N/A |
| | | HID normal | | | | | | | N/A | N/A |
| | ConnectDevice (Mfi mode ) | SPP | | | | | | | | |
| | | MFi | Default | Default | Default | Default | Default | Default | Default | Default |
| | Auto Connect | Enabled/Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | N/A | N/A |
| | 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 | N/A | N/A |
| | Auto Power Off | Enabled/Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | N/A | N/A |
| | Auto Power Off/Beep Warning | Enabled/Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | N/A | N/A |

| | Auto Power Off/Power Off Time | 1 to 30 minutes | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | N/A | N/A |
|---|---|---|---|---|---|---|---|---|---|---|
| | PowerOff Msg | Enabled/Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | N/A | N/A |
| | MAC Address | 12 Characters *Bluetooth* MAC Address | | | | | | | | |
| | BT FW Version | v1.2.xrt Bluetooth Firmware Version | | | | | | | | |
| | Wakeup Nulls | Enabled/Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | N/A | N/A |
| | Connect Alert | Enabled/Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | BT Toggle | Enabled/Disabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | N/A | N/A |
| | DisconnectBtn | Enabled/Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | N/A | N/A |
| | HID AutoLock | disabled,1,2,3,4,5,10,15 minutes | 1 minutes | 1 minutes | 1 minutes | 1 minutes | 1 minutes | 1 minutes | N/A | N/A |
| | HID Keyboard | US,German,French,Italian,Spanish | US | US | US | US | US | US | N/A | N/A |
| | HID Delay/Initial | Disabled, 1,2,3,5,10 secs | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | N/A | N/A |
| | HID Delay/Inter char | Disabled,10, 20, 30, 50, 100msec | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | N/A | N/A |
| | HID Ctrl Char | Disabled, Alt+Numpad, ^+Character, Replace to \| | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | N/A | N/A |
| *BT Service* | Power | Enabled/ Disabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled |
| | Pairing | Pairing neighboring Bluetooth devices | | | | | | | | |
| | Discovering | Discovering neighboring *Bluetooth* devices | | | | | | | N/A | N/A |
| | Connecting to | View Connect to *Bluetooth* device | | | | | | | | |
| | Disconnect | | N/A | N/A | N/A | N/A | N/A | N/A | | |
| | HID Sync | | | | | | | | N/A | N/A |
| | Auto Pairing | Enabled/ Disabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled |
| *USB Config (M model)* | USB Mode | Disabled/ USB Disk/ USB HID | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| *NFC Config (N model)* | NFC Power | Enabled/ Disabled | Enabled | Enabled | Enabled | Enabled | N/A | N/A | Disabled | Disabled |
| | Data Format | Barcode only/Packet Data | Packet Data | Packet Data | Packet Data | Packet Data | N/A | N/A | N/A | N/A |
| | UID Only | Enabled/ Disabled | N/A | N/A | N/A | Disabled | N/A | N/A | N/A | N/A |
| *GPS Config (G model)* | GPS Power | Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Power Mode | Normal/Power Save | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Bypass Data | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Acqurie Test | | N/A | N/A | 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 | N/A | N/A |
| *System Config* | Memory Size(KDC500) | 0.5/2.5, 1/2, 2/1, 3/0 | N/A | N/A | N/A | N/A | N/A | N/A | 0.5/2.5 | 0.5/2.5 |
| | Memory Status | No. of Stored Barcodes | N/A | N/A | N/A | N/A | N/A | N/A | | |
| | | Free Memory Available | N/A | N/A | N/A | N/A | N/A | N/A | | |
| | Reset Memory | Memory (Empties Data) | N/A | N/A | N/A | N/A | N/A | N/A | | |
| | | Application Memory | N/A | N/A | N/A | 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 | N/A | N/A | N/A |
| | Auto Erase | Enabled/ Disabled | Enabled | Enabled | 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 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

| | Battery | % of Battery Charge Available | N/A | N/A | N/A | N/A | N/A | N/A | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Version | Firmware Version & Serial No. | N/A | N/A | N/A | N/A | N/A | N/A | | |
| | Button Lock | Enabled/ Disabled | N/A | N/A | 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 | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled |
| | Beep Alert /Beep On Connect | Enabled/ Disabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled |
| | Beep Alert /Beep On Scan | Enabled/ Disabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled |
| | Beep Alert /BeepOnMSCard | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Enabled | Enabled |
| | Beep Alert /BeepOnICCard | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Enabled | Enabled |
| | Beep Alert /BeepOnNFCCard | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | 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 | N/A | N/A |
| | Auto Exit | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Enabled | Enabled |
| | Port Status | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Enabled | Enabled |
| | Display Format | Time & Battery / Type & Time / Type & Battery / Memory Status / GPS Data(KDC250 only)/Barcode Only | N/A | N/A | N/A | N/A | N/A | N/A | Time & Battery | Time & Battery |
| | Menu Barcode | Enabled/ Disabled | N/A | N/A | Disabled | Disabled | N/A | Disabled | Disabled | Disabled |
| | Scrolling | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Brightness | 1 to 15 level(8 level) | N/A | N/A | N/A | N/A | N/A | N/A | 8 | 8 |
| | Keypad | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Disabled | Disabled |
| | Language | US(English)/ Korean/ Japanese | N/A | N/A | N/A | N/A | N/A | N/A | US(English) | US(English) |
| | Factory Default | Restores Default Settings | | | | | | | | |
| **MSR Config** | Power | Enabled/ Disabled / | N/A | N/A | N/A | N/A | N/A | N/A | Disabled | Disabled |
| | Data Format | MSR Data Only | N/A | Default | N/A | Default | Default | N/A | N/A | N/A |
| | | Packet Data | N/A | | N/A | | | N/A | N/A | N/A |
| | Use Track1 | Enabled/ Disabled | N/A | Enabled | N/A | Enabled | Enabled | N/A | Enabled | Enabled |
| | Use Track2 | Enabled/ Disabled | N/A | Enabled | N/A | Enabled | Enabled | N/A | Enabled | Enabled |
| | Use Track3 | Enabled/ Disabled | N/A | Enabled | N/A | Enabled | Enabled | N/A | Enabled | Enabled |
| | Null Check Track1 | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Disabled | Disabled |
| | Null Check Track2 | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Enabled | Enabled |
| | Null Check Track3 | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | Disabled | Disabled |
| | Beep on error reading | Enabled/ Disabled | N/A | Disabled | N/A | Disabled | Disabled | N/A | Enabled | Enabled |
| | Encrypt MSR Data | Enabled/ Disabled | N/A | Disabled | N/A | Disabled | Disabled | N/A | N/A | N/A |
| | AES Key Length | 128bit/192bit/256bit | N/A | 128bit | N/A | 128bit | N/A | N/A | N/A | N/A |
| | Card Type | ISO/OTHER1/AAMVA | N/A | ISO | N/A | ISO | ISO | N/A | ISO | ISO |
| | Track Separator | None/Space/Comma/Semicolon/CR/LF/CR&LF/Tab | N/A | None | N/A | None | None | N/A | N/A | N/A |
| | Attach Start/End Sentinel | | N/A | Enabled | N/A | Enabled | Enabled | N/A | Enabled | Enabled |
| | Partial Data Start Position | | N/A | 1 | N/A | 1 | 1 | N/A | N/A | N/A |
| | Partial Data Length | | N/A | 0 | N/A | 0 | 0 | N/A | N/A | N/A |
| | Partial Data Action | Erase/ Select | N/A | Select | N/A | Select | Select | N/A | N/A | N/A |
| **ICCR Config** | Power | Enabled/ Disabled / | N/A | N/A | N/A | N/A | N/A | N/A | Disabled | Disabled |
| | IFD Number | | N/A | N/A | N/A | N/A | N/A | N/A | | |
| | Config Number | | N/A | N/A | N/A | N/A | N/A | N/A | | |
| **Key Mgmt** | Stored Keys | | N/A | N/A | N/A | N/A | N/A | N/A | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Inject Keys | | N/A | N/A | N/A | N/A | N/A | N/A | | |
| *Sensitive/ Set Date/Time* | Date | | N/A | N/A | N/A | N/A | N/A | N/A | | |
| | Time | | N/A | N/A | N/A | N/A | N/A | N/A | | |
| *Sensitive/ Set Self-Test* | | | N/A | N/A | N/A | N/A | N/A | N/A | | |
| *Sensitive/ Set Passwords* | 1st Password | | N/A | N/A | N/A | N/A | N/A | N/A | | |
| | 2nd Password | | N/A | N/A | N/A | N/A | N/A | N/A | | |
| *Sensitive/ Key Mgmt* | Stored Keys | | N/A | N/A | N/A | N/A | N/A | N/A | | |
| | Inject Keys | | N/A | N/A | N/A | N/A | N/A | N/A | | |
| | Clear Keys | | N/A | N/A | N/A | N/A | N/A | N/A | | |
| *Sensitive/ Card Encrypt* | | Plaintext / TDES / AES | N/A | N/A | N/A | N/A | N/A | N/A | AES | AES |
| *UHF Configuration (UHF model)* | UHF Power | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | Disabled | N/A | N/A |
| | Power On Time | 500ms/1sec /1.5sec/2sec/2.5sec/3sec/3.5sec/4sec/4.5sec/5sec | N/A | N/A | N/A | N/A | N/A | 1 second | N/A | N/A |
| | Power Off Time | 500ms/1sec /1.5sec/2sec/2.5sec/3sec/3.5sec/4sec/4.5sec/5sec | N/A | N/A | N/A | N/A | N/A | 1.5 second | N/A | N/A |
| | Power Level | 0/1/2/3/4/5/6/7 | N/A | N/A | N/A | N/A | N/A | 0 | N/A | N/A |
| | Data Format | Hexa Decimal / Binary | N/A | N/A | N/A | N/A | N/A | Hexa Decimal | N/A | N/A |

| Top Menu | Sub Menu | Options | KDC270L | KDC270D | KDC270C | KDC280C | KDC470/475L | KDC470/475D | KDC470/475C |
|---|---|---|---|---|---|---|---|---|---|
| **KDC Mode** | Normal | | Default | Default | Default | Default | Default | Default | Default |
| | Application | | Custom Application | Custom Application | Custom Application | Custom Application | N/A | N/A | N/A |
| **View Data** | View/Delete | | View/Delete Data | View/Delete Data | View/Delete Data | View/Delete Data | N/A | N/A | N/A |
| **Set Barcodes (270L/270D/470L/470D)** | EAN13 | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | EAN8 | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | UPCA | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | UPCE | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | CODE39 | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | ITF14 | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | CODE128 | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | I2of5 | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | CODABAR | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | GS1-128 | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | CODE93 | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | CODE35 | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | BooklandEAN | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | EAN13withAddon | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | EAN8withAddon | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | UPCAwithAddon | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | UPCEwithAddon | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| **Set Barcodes (270C/280C/470C)** | 1D Symbology | Codabar | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Code 11 | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Code 32 | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Code 39 | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Code 93 | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Code 128 | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | EAN-8 | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | EAN-13 | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | GS1 Composit | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | I2of5 | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Matrix 2of5 | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | MSI | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Plessey | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | PosiCode | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | GS1 Omni | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | GS1 Limited | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | GS1 Expanded | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | S2of5 Ind | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | S2of5 IATA | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | TLC39 | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Telepen | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Trioptic | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | UPCA | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | UPCE0 | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | UPCE1 | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | 2D Symbology | AztecCode | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | AztecRunes | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Codablock F | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Code16K | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Code49 | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | DataMatrix | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | MaxiCode | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | MicroPDF | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | PDF417 | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |

| Group | Category | Parameter | Range | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | QRCode | | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | HanXin Code | | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | Postal Codes | Postnet | | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | PlanetCode | | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | UK Post | | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Mayada Post | | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Kix Post | | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Australia Post | | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Japan Post | | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | China Post | | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | Korea Post | | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | OCR | OCR Off | | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | | OCR A | | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | | OCR B | | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | | OCR USC | | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | | OCR MICR | | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | | OCR SEMI | | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| Barcode Options (270L/270D/470L/470D) | | CodaBar_NoStartStopChars | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | | UPCE_as_UPCA | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | | EAN8_as_EAN13 | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | | UPCE_as_EAN13 | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | | ReturnCheckDigit | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | | VerifyCheckDigit | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | | UPCA_as_EAN13 | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | | I2of5_VerifyCheckDigit | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | | Code39_VerifyCheckDigit | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | | I2of5_ReturnCheckDigit | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | | Code39_ReturnCheckDigit | Enabled/Disabled | Disabled | Disabled | N/A | N/A | Disabled | Disabled | N/A |
| | | UPCE_ReturnCheckDigit | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | | UPCA_ReturnCheckDigit | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | | EAN8_ReturnCheckDigit | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| | | EAN13_ReturnCheckDigit | Enabled/Disabled | Enabled | Enabled | N/A | N/A | Enabled | Enabled | N/A |
| Barcode Options (270C/280C/470C) | Codabar | Tx StartStop (Enabled/Disabled) | | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | | Check Digit (DoNotVerify/VerfyDONotTX/VerifyDoTx) | | N/A | N/A | DoNotVerify | DoNotVerify | N/A | N/A | DoNotVerify |
| | | Concatenate (Disabled/Enabled/Required) | | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | Code39 | Tx StartStop (Enabled/Disabled) | | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | | Check Digit (DoNotVerify/VerfyDONotTX/VerifyDoTx) | | N/A | N/A | DoNotVerify | DoNotVerify | N/A | N/A | DoNotVerify |
| | | Append (Enabled/Disabled) | | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | | Full ASCII (Enabled/Disabled) | | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | I2of5 | Check Digit (DoNotVerify/VerfyDONotTX/VerifyDoTx) | | N/A | N/A | DoNotVerify | DoNotVerify | N/A | N/A | DoNotVerify |
| | Code11 | Check Digit (2 digits/1 digit) | | N/A | N/A | 2 digits | 2 digits | N/A | N/A | 2 digits |
| | Code128 | Concatenate (Disabled/Enabled) | | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | Telepen | Output (Original/AIM) | | N/A | N/A | AIM | AIM | N/A | N/A | AIM |
| | UPCA | VerifyChkDgt (Enabled/Disabled) | | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |

| Symbology | Parameter | | | | | | |
|---|---|---|---|---|---|---|---|
| | NumberSys (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | 2DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | 5DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | Req. Addenda (Enabled/ Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | Sep. Addenda (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | Coupon Code (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| UPCE | Expand (Enabled/ Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | Req. Addenda (Enabled/ Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | Sep. Addenda (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | Check Digit (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | NumberSys (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | 2DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | 5DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| EAN-13 | VerifyChkDgt(Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | 2DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | 5DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | Req. Addenda (Enabled/ Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | Sep. Addenda (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | ISBN Trans. (Enabled/ Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| EAN-8 | VerifyChkDgt(Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| | 2DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | 5DgtAddenda(Enabled /Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | Req. Addenda (Enabled/ Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | Sep. Addenda (Enabled/ Disabled) | N/A | N/A | Enabled | Enabled | N/A | N/A | Enabled |
| MSI | Tx CheckChar (Enabled/ Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| PosiCode | A and B/A&B LimitedA/A &B LimitedB | N/A | N/A | A&B LimitedB | A&B LimitedB | N/A | N/A | A&B LimitedB |
| GS1 | UPCEAN Ver.(Enable d/Disabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | GS1 Emulation (No Emulate/ GS1 128 Emul/GS1 Emulate) | N/A | N/A | No Emulate | No Emulate | N/A | N/A | No Emulate |
| PostNet | Tx CheckChar( Enabled/Di sabled) | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| PlanetCode | Tx CheckChar( Enabled/Di | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | sabled) | | | | | | | |
| *Scan Options* | Power | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Scan Angle | Narrow/ Wide | Wide | N/A | N/A | N/A | Wide | N/A | N/A |
| | Filter | Normal/ High | Normal | N/A | N/A | N/A | Normal | 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) | 2 second(s) |
| | Min. Barcode Length | 2 to 36 characters | 4 chars | 4 chars | N/A | N/A | 4 chars | 4 chars | N/A |
| | Min. Barcode Length | 2 to 48 characters | N/A | N/A | 4 chars | 4 chars | N/A | N/A | 4 chars |
| | Security Level | 1 to 4 level | 2 level | N/A | N/A | N/A | 2 level | N/A | N/A |
| | Image Capture | Enabled/ Disabled | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | 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 | N/A | N/A | N/A | N/A | N/A |
| | Partial Display | Start Position | 1 | 1 | 1 | 1 | N/A | N/A | N/A |
| | | No. of Char(s) | 0 chars | 0 chars | 0 chars | 0 chars | N/A | N/A | N/A |
| | | Action | Select | Select | Select | Select | N/A | N/A | N/A |
| *Data Process* | 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 | | | | | | | | |
| | Data Editor/Suffix | | | | | | | | |
| | 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 | N/A |
| | Extend Key | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Age Verify | Verification Enabled/ Disabled | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
| | | Age Default | N/A | N/A | 21 | 21 | N/A | N/A | 21 |
| *BT Config\* | ConnectDevice (Non Mfi mode) | SPP | Default | Default | Default | Default | Default | Default | Default |
| | | HID iOS | | | | N/A | | | |
| | | SPP2.0 | | | | N/A | | | |
| | | HID normal | | | | N/A | | | |
| | | HID | N/A | N/A | N/A | | N/A | N/A | N/A |
| | | OPEN | N/A | N/A | N/A | | N/A | N/A | N/A |
| | ConnectDevice (Mfi mode ) | SPP | | | | N/A | | | |
| | | MFi | Default | Default | Default | N/A | Default | Default | Default |
| | Auto Connect | Enabled /Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled |
| | Auto Reconnect | Enabled/ Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled |
| | Auto Power On | Enabled/ 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 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Auto Power Off | Enabled/Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled |
| | Auto Power Off/Beep Warning | Enabled/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 |
| | PowerOff Msg | Enabled/Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled |
| | MAC Address | 12 Characters *Bluetooth* MAC Address | | | | | | | |
| | BT FW Version | v1.2.xrt Bluetooth Firmware Version | | | | | | | |
| | Wakeup Nulls | Enabled/Disabled | Disabled | Disabled | Disabled | N/A | Disabled | Disabled | Disabled |
| | Connect Alert | Enabled/Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | BT Toggle | Enabled/Disabled | Enabled | Enabled | Enabled | Enabled | Disabled | Disabled | Disabled |
| | DisconnectBtn | Enabled/Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled |
| | HID AutoLock | disabled,1,2,3,4,5,10,15 minutes | 1 minutes | 1 minutes | 1 minutes | N/A | 1 minutes | 1 minutes | 1 minutes |
| | HID Keyboard | US, German, French ,Italian, Spanish | US | US | US | US | US | US | US |
| | HID Delay/Initial | Disabled, 1,2,3,5,10 secs | Disabled | Disabled | Disabled | N/A | Disabled | Disabled | Disabled |
| | HID Delay/Inter char | Disabled,10, 20, 30, 50, 100msec | Disabled | Disabled | Disabled | N/A | Disabled | Disabled | Disabled |
| | HID Ctrl Char | Disabled, Alt+Numpad, ^+Character, Replace to | | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled | Disabled |
| *BT Service* | Power | Enabled/Disabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled |
| | Pairing | Pairing neighboring Bluetooth devices | | | | | | | |
| | Discovering | Discovering neighboring *Bluetooth* devices | | | | N/A | | | |
| | Connecting to | View Connect to *Bluetooth* device | | | | N/A | | | |
| | Disconnect | | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | HID Sync | | | | | | | | |
| | Auto Pairing | Enabled/Disabled | Enabled | Enabled | Enabled | N/A | Enabled | Enabled | Enabled |
| *USB Config (M model)* | USB Mode | Disabled/USB Disk/USB HID | Disabled | Disabled | Disabled | Disabled | N/A | N/A | N/A |
| *NFC Config (N model)* | NFC Power | Enabled/Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Data Format | Barcode only/Packet Data | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | UID Only | Enabled/Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| *GPS Config (G model)* | GPS Power | Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Power Mode | Normal/Power Save | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Bypass Data | Enabled/Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Acqurie Test | | N/A | 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 | N/A |
| *System Config* | Memory Size | 0.5/6.5, 1/6, 2/5,3 /4, 4/3, 5/2, 6/1, 7/0 | 0.5/6.5 | 0.5/6.5 | 0.5/6.5 | 0.5/6.5 | 0.5/6.5 | 0.5/6.5 | 0.5/6.5 |
| | Memory Status | No. of Stored Barcodes | | | | | | | |
| | | Free Memory Available | | | | | | | |
| | Reset Memory | Memory (Empties Data) | | | | | | | |
| | | Application Memory | | | | | N/A | N/A | N/A |
| | | BT Registry | | | | | | | |
| | Auto Erase | Enabled/ | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled | Enabled |

|  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|
|  |  | Disabled |  |  |  |  |  |  |
|  | 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) |
|  | Date / Time | YYYY:MM:DD & HH:MM:SS |  |  |  |  |  |  |
|  | Battery | % of Battery Charge Available |  |  |  |  |  |  |
|  | Version | Firmware Version & Serial No. | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
|  | 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 Alert /BeepOnMSCard | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
|  | Beep Alert /BeepOnICCard | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
|  | Beep Alert /BeepOnNFCCard | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
|  | Beep Volume | Low/High | Low | Low | Low | Low | Low | Low | Low |
|  | Mfi ( i-chip installed) | Enabled/Disabled | Enabled | Enabled | Enabled | N/A | Enabled | Enabled | Enabled |
|  | Auto Exit | Enabled/ Disabled | Enabled | Enabled | Enabled | Enabled | N/A | N/A | N/A |
|  | Port Status | Enabled/ Disabled | Enabled | Enabled | Enabled | Enabled | 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 | Time & Battery | Time & Battery | N/A | N/A | N/A |
|  | Menu Barcode | Enabled/ Disabled | N/A | N/A | Disabled | Disabled | N/A | N/A | Disabled |
|  | Scrolling | Enabled/ Disabled | Enabled | Enabled | Enabled | Enabled | N/A | N/A | N/A |
|  | Brightness | 1 to 15 level(8 level) | 8 | 8 | 8 | 8 | N/A | N/A | N/A |
|  | Keypad | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
|  | Language | None/ US(English)/ French/ Italian/ Spanish/ Korean/ Japanese | None | None | None | None | N/A | N/A | N/A |
|  | Factory Default | Restores Default Settings |  |  |  |  |  |  |
| MSR Config | Power | Enabled/ Disabled / | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
|  | 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 | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
|  | Use Track2 | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
|  | Use Track3 | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
|  | Null Check Track1 | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
|  | Null Check Track2 | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
|  | Null Check Track3 | Enabled/ Disabled | 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/OTHER1/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 |
| *ICCR Config* | Power | Enabled/ Disabled / | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | IFD Number | | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Config Number | | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| *Key Mgmt* | Stored Keys | | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Inject Keys | | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| *Sensitive/ Set Date/Time* | Date | | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Time | | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| *Sensitive/ Set Self-Test* | | | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| *Sensitive/ Set Passwords* | 1st Password | | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2nd Password | | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| *Sensitive/ Key Mgmt* | Stored Keys | | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Inject Keys | | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Clear Keys | | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| *Sensitive/ Card Encrypt* | | Plaintext / TDES / AES | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| *UHF Configuration (UHF model)* | UHF Power | Enabled/ Disabled | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Power On Time | 500ms/1sec /1.5sec/2se c/2.5sec/3s ec/3.5sec/4 sec/4.5sec/ 5sec | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Power Off Time | 500ms/1sec /1.5sec/2se c/2.5sec/3s ec/3.5sec/4 sec/4.5sec/ 5sec | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Power Level | 0/1/2/3/4/5/ 6/7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Data Format | Hexa Decimal / Binary | N/A | N/A | N/A | N/A | N/A | N/A | 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 6 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.

Press the **Delete button** to delete the last scanned barcode.
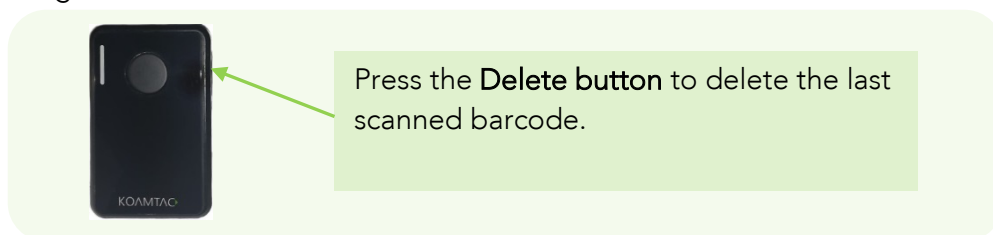
*Figure 17 - Delete Function in KDC20/30*

## 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 10. Appendix A – 10.1 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 10. Appendix A – 10.2 Code Options for a detailed explanation of each option.

## Scan Options Menu

*Power(KDC500 only)*

Users may choose to turn the Scan Engine Power on or off. Select between Enable and Disable.

*Scan Angle* (Opticon laser 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 laser 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 scan timeout. The timeout options are from 500ms 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 (KDC20/100/200/250/270L/270D/350L/410/411/415/470L/470D/500L) or 2 characters to 48 characters (KDC30/270C/280C/300/350C/420/421/425/450/470C/500C). It is strongly recommended that you maximize the minimum barcode length setting to prevent possible errors.

➢ The default minimum barcode length of KDC20/100/200/250/270L/270D/350L/410/411/415/470L/470D/500L is 4 characters.

➢ The default minimum barcode length of KDC30/270C/280C/300/350C/420/421/450/470C/500C is as follows:

| | | | |
|---|---|---|---|
| 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 Passport | - | - |
| | OCR MICR | - | - |
| | OCR SEMI | - | - |

*Table 4 - KDC30/270C/280C/300/350C/420/450/470C/500C Minimum Barcode Length*

*Image Capture*   (KDC30/270C/280C/300/350C/420/421/425/450/470C)

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 5 seconds.

*Security Level*   (Laser Model only)

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.(1D Model only)

| **Note** | • *USB cable insertion requirement is removed from FW2.85/86.O and FW 3.02.*<br>• *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.

*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/270i/350i/400i/470i/500i 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 user to add a prefix to scanned data that may then be wedged to the host. The Prefix must be defined in the 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&D(E&F for KDC500). as shown below in the special barcodes. |
|---|---|

➥ KDC20/100/200/250/270L/270D/350L/410/411/415/470L/470D/500L

Prefix Enter Start



83000

Prefix/Suffix Enter Finish

**83002**

↪ KDC30/270C/280C/300/350C/420/421/425/450/470C/500C

Prefix Enter Start
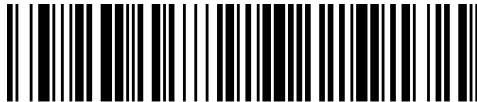
₸MKDC83000.

Prefix/Suffix Enter Finish

₸MKDC83002.

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

↪ KDC20/100/200/250/270L/270D/350L/410/411/415/470L/470D/500L

Delete Prefix

**83004**

Display Prefix

**83004**

↪ KDC30/270C/280C/300/350C/420/421/425/450/470C/500C

Delete Prefix
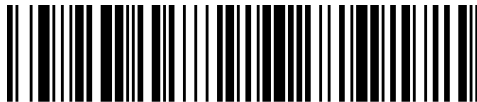
```
|||||||||||||||||||||||||||||||||||||||
ᴛMKDC83004.
```

Display Prefix
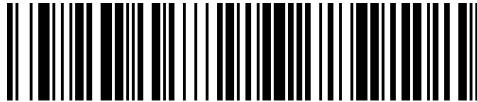
```
|||||||||||||||||||||||||||||||||||||||
ᴛMKDC83006.
```

● **Suffix** - Enables the user to add a suffix to scanned data, which may then be wedged to the host. The suffix must be defined in the KTSync. The maximum length for a suffix is 11 characters.

<table>
<tr><td>**Note**</td><td>• This Suffix option is different from the Suffix option in KTSync, which appends the suffix to data during synchronization.</td></tr>
</table>

<table>
<tr><td>**Note**</td><td>• The user may also define the suffix by scanning characters defined in Appendix C&D(E&F for KDC500). as shown below in the special barcodes.</td></tr>
</table>

➥ 20/100/200/250/270L/270D/350L/410/411/415/470L/470D/500L

Suffix Enter Start

```
|||||||||||||||||||||||||||
83001
```

Prefix/Suffix Enter Finish

```
|||||||||||||||||||||||||||
83002
```

➥ KDC30/270C/280C/300/350C/420/421/425/450/470C/500C

Suffix Enter Start

```
|||||||||||||||||||||||||||||||||||||||
ᴛMKDC83001.
```

Prefix/Suffix Enter Finish

```
|||||||||||||||||||||||||||||||||||||||
ᴛMKDC83002.
```

➥ KDC20/100/200/250/270L/270D/350L/410/411/415/470L/470D/500L

Delete Suffix



83005

Display Suffix



83007

➥ KDC30/270C/280C/300/350C/420/421/425/450/470C/500C

Delete Suffix



ᴛMKDC83005.

Display Suffix



ᴛMKDC83007.

● **AIM ID** - Enables the user to add AIM ID to scanned data, which may then be wedged to the host. AIM ID can be 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. The user also can select if taking or erasing the characters selected with Start position and No of char(s).

➢ Start position

◆ This option specifies the start position of data.

➢ No of char(s)

◆ This option specifies the length of data. The '0' means all data.

➢ Action

◆ This option selects if erasing or taking the specified data.

*Handshake(Deprecated)*

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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 (KDC350/500 only)

This option determines the behavior of the '#' key on the 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 a 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.

### Extend Key (KDC350/500 only)

This option enables users to enter more symbols by using keypad.

### Age Verification (KDC30/270C/280C/300/350C/420/421/425/450/470C)

This option enables to verify age by reading driver license.

## BT Config Menu – KDC20/30/200/250/270/300/350/400/470/500

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.

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)/270(i)/300(i)/350(i)/400(i)/470(i)

- HID iOS - KDC20(i)/30(i)/200(i)/250(i)/270(i)/300(i)/350(i)/400(i)/470(i)

- SPP2.0 - KDC20(i)/30(i)/200(i)/250(i)/270(i)/300(i)/350(i)/400(i)/470(i)

- SPP - KDC20(i)/30(i)/200(i)/250(i)/270(i)/300(i)/350(i)/400(i)/470(i)/500(i)

- MFi - KDC20i/30i/200i/250i/270i/300i/350i/400i/470i/500i

### *Auto Connect*
Enabled or Disabled(KDC500 doesn't support)

### *Auto Reconnect*
Enabled or Disabled

### *Auto Power On*
Enabled or Disabled(KDC500 doesn't support)

### *PWR On Time*
Disabled, 1 to 10 seconds(KDC500 doesn't support)

### *Auto Power Off*
Enabled or Disabled (KDC250G/350G should use option in system menu)
(KDC500 doesn't support)

### *Beep Warning*
Enabled or Disabled(KDC500 doesn't support)

### *PWR Off Time*
1 to 30 Minutes(KDC500 doesn't support)

### *PowerOff Msg*
Enabled or Disabled(KDC500 doesn't support)

### *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(KDC500 doesn't support)

## *BT Toggle*

Enable or Disable iOS device soft keyboard or Connect/Disconnect Bluetooth. (KDC500 doesn't support)

## *BT Disconnect Button*

Enable or Disable Bluetooth disconnection by pressing down button for 3 seconds. (KDC500 doesn't support)

## *HID AutoLock*

Disabled, 1, 2, 3, 4, 5, 10, 15 minutes(KDC500 doesn't support)

## *HID Keyboard*

Users may select a keyboard language in HID mode. KDC supports five languages: English, German, French, Spanish, and Italian. (KDC500 doesn't support)

## *HID Initial Delay*

In this menu, users may define the initial delay between 1 second to 10 seconds before data transmission in HID mode(KDC500 doesn't support)

## *HID Inter-character Delay*

This option enables users to define the inter-character delay between 10msec to 100msec in HID mode(KDC500 doesn't support)

## *HID Control Character*

This option helps users to map control characters to **ALT+Numlock or ^+Character_or '|'.** (KDC500 doesn't support)

# BT Service Menu – KDC20/30/200/250/270/300/350/400/470/500

## *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. (KDC500 doesn't support)

### *Connecting To*

This option enables the user to inquire to a registered *Bluetooth* device. (KDC500 doesn't support)

### *Disconnect*

This option enables the user to disconnect KDC from the paired *Bluetooth* device. (KDC500 only)

### *HID Sync*

KDC transmits all stored data to the host over HID profile if HID Sync option is enabled. (KDC500 doesn't support)

### *Auto Pairing*

Enables or Disable the automatic Host Bluetooth type detection (SPP or MFi).(i Model only)

## GPS Config Menu – KDC250G/350G

### *Barcode and GPS data format*

The GPS enabled model 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 GPS enabled model 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 GPS enabled model is not being used for an extended period of time.

  - ➢ It is also recommended to use the GPS Auto Power Off option in the SystemConfig 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 GPS enabled model in Power Save mode.

  - ➢ Users should use normal mode if accurate GPS data is required.

  - ➢ The KDC350G will last about 15 hours in normal non-bypass data mode and 18

hours in power save non-bypass data mode.

> ➤ The KDC350G 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 KDC will bypass GPS data to the host if the bypass option is enabled.

  > ➤ The KDC becomes a Bluetooth GPS receiver if this bypass data option is selected.

- **Acquire Test**: Select to acquire GPS signal.

- **Reset GPS**: Reset KDC GPS module.

### *GPS Hot Key*

The KDC250G/350G provides the following hot keys for convenient GPS operations:

- **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 Mode Menu– 100M/200M/250M/270/280/300M/350

### *Disabled*

When this option is selected, KDC enters into USB Serial 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.

KDC100M/200M/250M/300M/350 may be used as USB Disk with 4MB or 8MB space and KDC270/280 may be used as USB Disk with 8MB space.

### *USB HID*

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

### *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.<br>• KTSync may not recognize the KDC if the KDC is in "USB DISK" mode or "USB HID" mode. |

## NFC Config Menu – KDC350N/411N/415N/421N/425N/500

*NFC Power*

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

*Data Format*

- Options: Data only/Packet data.(KDC500 doesn't support)

*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.
- (KDC500 doesn't support)

## UHF Config Menu – KDC450U

*UHF Power*

- Turning UHF Module Power On or Off
- Options: Enable/Disable

*Power On Time*

Specify the power on time duration of UHF module.

- Options: 500ms/1sec/1.5sec/2sec/2.5sec/3sec/3.5sec/4sec/4.5sec/5sec

*Power Off Time*

Specify the power off time duration of UHF module.

- Options: 500ms/1sec/1.5sec/2sec/2.5sec/3sec/3.5sec/4sec/4.5sec/5sec

*Power Level*

Specify the UHF module power level to determine the power strength of antenna. 7 means the most power strength.

- Options: 0/1/2/3/4/5/6/7

*Data Format*

Specify the data format of UHF data when it is transmitted from KDC to Host.

- Options: Binary / Hexa Decimal

*Smart Hopping*

It enables KDC450U to find an optimized UHF channel and can be initiated by reading a special barcode.

## WIFI Config Menu (KDC350F)

KDC350F WiFi model can send and receive data to/from host by using the following protocols.

- UDP
- TCP
- HTTP_GET
- HTTP_POST

In UDP/TCP mode, KDC350F will support full duplex mode, meaning is the KDC350F will be ready to get data from host all the time.

*Power*

- Turns the Wi-Fi Module Power ON and OFF.

*AP*

- Set AP SSID.
- Set AP Passcode.

*Server*

- Configure the following server information
    - IP Address
    - URL Address

- ■ Port Number
- ■ Protocol (UDP/TCP/HTTP-GET/HTTP-POST)
- ■ SSL(Security)
- ■ Server Page

## *Connect*

- ● Connect to AP and server.

## *Auto Connect*

- ● Enable/Disable KDC to reconnect to AP & Server when it detects disconnection from AP and Server.

## *Send Stored*

- ● Enable/Disable KDC to send stored data when sending a new read data.

## MSR Config Menu – KDC415/425/430/500

### *Power(KDC500 only)*

- ● Turning MSR(Magnetic-Stripe Card Reader) on or off
- ● Options: Enabled/Disabled

### *Data Format(KDC415/425/430 only)*

- ● Enables/Disables whether KDC415/425/430 sends with packet data or not.
- ● Options: Enabled/Disabled

### *Use Track*

The user may select which track(1/2/3) data to read from the MS Card.

- ● Track 1 : Enabled/Disabled
- ● Track 2 : Enabled/Disabled
- ● Track 3 : Enabled/Disabled

### *Null Check(KDC500 only)*

The user may select which track(1/2/3) data should not be null. When this option is enabled for a Track and the read data is null, MS Card read fail occurs.

- ● Track 1 : Enabled/Disabled
- ● Track 2 : Enabled/Disabled
- ● Track 3 : Enabled/Disabled

### *Beep On Error*

When this option is enabled, KDC makes a beep sound when it fails to read a MS card.

### Encrypt MSR Data(KDC415/425/430 only)
- If enabled, KDC415/425/430 sends MSR data with AES encrypted.
- Options: Enabled/Disabled

### AES Key length(KDC415/425/430 only)
- Specify the AES key length.
- Options: 128bits/192bits/256bits

### Card Type
The user may select which type of MS card to read.
- ISO
- OTHER 1
- AAMVA
- JIS(KDC500 only)

### Track Separator(KDC415/425/430 only)
- Specify the separator which will be added between track data
- Options: None, Space, Comma, Semicolon, CR, LF, CR&LF, Tab

### Attach SS/ES
When this option is enabled, KDC does not exclude the Start Sentinal(SS) and End Sentinal(ES) control characters in the track data when it sends the card data to the connected Host device.

### Partial Data(KDC415/425/430 only)
Enables the user to transfer partial MSR data. The user defines the start position and number of characters to be transferred.
- Start position
  - ◆ This option specifies the start position of data.
- No of char(s)
  - ◆ This option specifies the length of data. The '0' means all data.
- Action
  - ◆ This option selects if erasing or taking the specified data.

# ICCR Config Menu – KDC500

## *Power*

- Turning ICCR(IC Card Reader) on or off
- Options: Enable/Disable

## *IFD Number*

This option shows the EMV IFD(Interface Device) number.

## *Config Number*

The option shows the stored EMV Contact Configuration number.

# SystemConfig Menu

## *Memory Size* (3.0+ version only, KDC500 doesn't support)

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 checks 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. KDC500 only erase all stored barcodes.

## *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* (KDC250G/350G)

- **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.(except KDC500)

*Battery*

This option shows the current status of battery power level.

*Version*

This option shows the KDC firmware version and serial number.

KDC500 displays only firmware version.

*Serial Number(KDC500 only)*

KDC500 displays the serial number

*Button Lock*

This option enables the user to lock or unlock the KDC scan and scroll buttons.(KDC500 doesn't support)

*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 On MS Card** (KDC500 only) : Enables or disables beep sound when KDC reads a MS Card.
- **Beep On IC Card** (KDC500 only) : Enables or disables beep sound when KDC reads an EMV Contact Card.
- **Beep On NFC Card** (KDC500 only) : Enables or disables beep sound when KDC reads an NFC Tag or EMV Contactless Card.

*Beep Volume*

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

*MFi Mode* (KDC20i/30i/200i/250i/270i/300i/350i/400i/470i)

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(KDC20/30/270/280/350)*

Enables, disables and configure KDC vibrator.

- There are two additional options for KDC vibrator configuration.
  - Scan Success ➔ Specify the number of vibration when scan successfully.
  - Scan Failure ➔ Specify the number of vibration when scan failed.

## _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 selections of display format; Time & Battery, Type & Time, Type & Battery, Memory Status, Barcode only and Graphics.

The Graphics option enables to display 'O' for scan success and 'X' for scan failure.

## _Menu Barcode_

This option enables users to enable or disable Honeywell special barcodes (KDC300/350C/500C only).

## _Scrolling_

This option enables users to enable or disable display scrolling for a barcode with more than 40 characters.(KDC500 doesn't support)

## _Brightness_

This option enables users to adjust brightness of display.

## _Keypad(KDC350/500)_

This option enables users to enter data by using keypad.

## _Language(Version 3.0+, KDC500)_

This option enables users to select KDC display languages.

The supported languages are as following.

- None – Languages is not supported. Default is an English.
- US(English)
- French
- Italian
- Spanish
- Korean
- Japanese

KDC500 only supports US(English), Korean and Japanese.

## _Factory Default_

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

## Key Mgmt Menu– KDC500

- **Stored Keys** : Displays all the encryption keys stored in the KDC500.

- **Inject Keys** : In this menu, the user can inject the necessary encryption keys via Key Loader device.

## Sensitive Menu – KDC500

KDC500 Sensitive menu has sub menus which can impact on the KDC500 security services. KDC500 requires two passwords for the Sensitive menu group access in order to ensure only authorized people can utilize the sensitive services. The default passwords are 0000000 and 11111111.

| **Note** | • For PCI PTS compliance, the default passwords should be changed prior to use. Without the default passwords change, KDC500 declines all the payment related service requests; such as MS Card Read, IC Card Insertion, PIN Entry, etc. |
| --- | --- |

### *Set Date/Time*
In this menu, the user can set the date and time of the KDC500.

### *Set Self-Test*
The user can set the time for the Self-Test in this menu. In PCI PTS, it requires to perform the Self-Test(Firmware and stored key authentication) at least once in 24 hours.

### *Set Passwords*
In this menu, the user can change the current passwords to access the Sensitive Menu.

### *Key Mgmt*

- **Stored Keys** : Displays all the encryption keys stored in the KDC500.

- **Inject Keys** : In this menu, the user can inject the necessary encryption keys via Key Loader device.

- **Clear Keys** : In this menu, the user can clear all the encryption keys stored in the KDC500 except the Firmware Update Authentication key which is loaded during the manufacturing process.

### *Card Encrypt*
This menu allows user to choose the encryption algorithm for the sensitive card data from the list below.

- Plaintext
- T-DES
- AES

# 3.6 LED Status

| | |
|---|---|
| Green | • Successful Reading<br>• USB is connected and battery is fully charged.<br>• MFi mode in pairing mode. |
| Orange | • Low battery<br>• USB is connected and battery is charging<br>• HID mode is in pairing mode. (except KDC500) |
| Red | • No reading<br>• SPP mode is in pairing mode. |

*Table 5 - Explanation of LEDs*

# 3.7 Empty Battery

### KDC100/200/250/270/280/300/350

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.

### KDC20/30/400/470

- 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.

### KDC500

- Under 10% (Low) Displays the message *Low Battery Please Charge*. KDC500 is still functional, but charge the KDC500 IMMEDIATELY to prevent any interruptions while it is collecting data.
- Under 5% (Empty) - Displays the message *Empty Battery Please Charge*. KDC500 is not functional any longer.

# 3.8 Buffer(Memory) Full

The KDC will display the message *Buffer Full* when there is no more space in the flash memory or the number of collected barcodes reaches the maximum number of stored barcode. To prevent the loss of data, you should synchronize the data then reset the memory when this message is displayed.

The 4MB/8MB 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
- 5MB Partition - Collected data size reaches 5MB or collected number is 256,000
- 6MB Partition - Collected data size reaches 6MB or collected number is 307,200
- 7MB Partition - Collected data size reaches 7MB or collected number is 358,400
- 8MB Partition - Collected data size reaches 8MB or collected number is 409,600

## 3.9 Reset Feature (100/200/250/300) or Power-on/off (KDC20/30/270/280/350/400/470/500)

The Reset feature enables the user to restart the KDC100/200/250/300 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. |

If you are using the KDC20/30/270/280/350/470, 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 KDC20/30/270/280/350/470, you will hear a beep sound after pressing the DOWN and SCAN buttons simultaneously.

If you are using the KDC400 (except KDC470/475) you may turn the power on and off by sliding the power switch.

If you are using the KDC500, you can turn the power on and off by pressing the left and right SCAN buttons simultaneously for 5 seconds. When the display shows KOAMTAC logo, you may release the buttons and the power will be on. When you turn off the KDC500, you will see the display shows blank after pressing the left and right SCAN buttons simultaneously.

# 3.10    Replace Battery

Each KDC comes with a rechargeable, Lithium-polymer (KDC20/100/200) or Lithium-ion (KDC30/250/270/280/300/350/400/470/500) 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.

| | | |
|---|---|---|
| 1 |  | Unscrew the screw indicated by the arrow. |
| 2 |  | Remove the battery cover by pulling it down. |
| 3 |  | Remove the battery. Pull out the 2pin connecter gently. |

| | | |
|---|---|---|
| 1 | | Check the hole of KDC270/280 and the hook of the battery cover. |
| 2 | | Position the hook of the battery cover in the direction of the hole of KDC270/280. |
| 3 | | Slide battery cover hook in to the hole of the KDC270/280. |
| 4 | | Press down battery cover. |
| 5 | | Push the battery cover firmly in the direction of the hole of KDC270/280. |

To insert the battery cover for KDC270/280

| | | |
|---|---|---|
| 1 | | Unscrew the screw indicated by the arrow. |
| 2 | | Remove the battery cover by pulling it down. |
| 3 | | Remove the battery by pulling the bottom part of the battery gently. |

| | | |
|---|---|---|
| 1 | | Unscrew the screw indicated by the arrow. |
| 2 | | Remove the battery cover by pulling it up gently. |
| 3 | | Remove the battery. Pull out the 2 pin connecter gently. |

KDC400 Series

| | | |
|---|---|---|
| 1 |  | Unlock the battery cover by sliding the lock switch right. |
| 2 |  | Open the cover as shown in the picture. |
| 3 |  | For easy removal, use a paperclip or similar tool to pull on folded sticker.<br>Hold the sticker and remove battery. |
| 4 |  | <Insert the battery><br>Before inserting battery, fold sticker over battery lengthwise. |
| 5 |  | Slide the lock switch up, open the battery cover and slide in the battery slowly. |
| 6 |  | Close the battery cover and slide the lock switch down |

KDC470

*Figure 18 - Replacing a Battery*

## 3.11    KDC470/475 Extended Battery

KDC470/475 support 2000mAh extended battery option which is used to charge
KDC470/475 1130mAh internal battery and Smartphone battery.

### Operating mode

KDC470/475 extended battery charge smartphone and KDC470 internal batteries when no
power source exists (no USB cable plugged in or not in charging cradle). Extended battery
would be changed to extended battery charging mode if power source is connected

### LED

KDC470/475 extended battery has two LEDs and working as below table. In low battery
mode, KDC470 extended battery enters sleep mode after one minute.

| Battery Label | Charging | Discharging |
|---|---|---|
| Low battery | Red | Red with blinking |
| Charging/Discharging | Orange | Orange with blinking |
| Full charged | Green | Green with blinking |

### Custom iOS and Android case detection issue and operation

KDC470/475 can take up to one minute to detect cradle insertion and removal when custom
iOS case is attached. Android custom case can be detected in real time.

- KDC470/475 extended battery LED stops blinking upon place on the charging cradle
- KDC470/475 extended battery starts to charge smartphone upon removing from
  charging cradle.

# 4. Bluetooth – KDC20/30/200/250/270/280/300/350/400/470/500

The KDC20/30/200/250/270/300/350/400/470 supports HID (Human Interface Device) normal, HID iOS, SPP (Serial Port Profile) and SPP2.0 profiles. The KDC500 supports SPP only. The KDC20i/30i/200i/250i/270i/300i/350i/400i/470i/500i supports MFi (Made for iPhone/iPad/iPod touch) profiles. KDC280C is BLE4.1 device and supports HID, SPP, and OPEN profiles.

**Note**    For PCI PTS compliance, KDC500 can support only SPP and MFi profiles.

The KDC200/250/270/280/300/350/500's *Bluetooth* options may be configured by using the KDC menu, PC KTSync and special barcodes. The KDC20/30/400/470'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/270i/300i/350i/400i/470i/500i models when MFi mode is enabled.(SystemConfig Menu). KDC500i doesn't have MFi mode option and supports MFi by default.

If the **BT Toggle** option(KDC500 doesn't support) 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.

Keyboard does not appear on iPhone/iPad/iPod touch when KDC is connected in **HID iOS mode**, the user can press the DOWN button to **toggle** the **onscreen keyboard**. For the KDC400/470/475 it is the small button located on the left side of the KDC.

The UP button shows the Bluetooth connection status and the DOWN button shows the time when this option is disabled.

| **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. KDC500 doesn't support Auto Connect.

IMPORTANT: Until the host device and the KDC have been fully tested, it is strongly recommended that this feature be set to 'Disabled', 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.

| **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. KDC500 doesn't support this option.

| **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. KDC500 doesn't support this option.

## 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. KDC500 doesn't support this 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.

It is recommended to enable 'Auto Power On' option if this option is enabled. User doesn't need to turn on the Bluetooth power manually with this configuration.

## Beep Warning

The KDC beeps to warn user to power off the Bluetooth if this option is enabled with five short beeps when the following condition meets..

1. Bluetooth power is ON
2. KDC is disconnected
3. Auto Power Off is DISABLED

KDC500 doesn't support this option.

## 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. KDC500 doesn't support this option.

## PowerOFF Msg

The KDC sends a Bluetooth power off message "BTOFF" to the host when KDC is connected from host if this option is enabled. KDC500 doesn't support this option.

## MAC Address

The user may verify the KDC Bluetooth MAC Address.

## FW Version

The user may verify the KDC Bluetooth firmware version in this 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. KDC500 doesn't support this option.

## 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. KDC500 doesn't support this option.

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. This option may not need from iOS 5.x.

## HID Keyboard

The user may select an international keyboard – English, German, French, Spanish, or Italian. It is also required to set the host keyboard with the same keyboard as selected in this menu. KDC500 doesn't support this option.

## 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. KDC500 doesn't support this option.

- 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 or replaced with '|'. KDC500 doesn't support this option.

- 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 "|".

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 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. KDC500 doesn't support this option.

## Disconnect/Reconnect/BT(HID) Toggle

The user may disconnect or reconnect the Bluetooth connection, and toggle the soft keyboard using side buttons. KDC500 doesn't support this option.

| | | | |
|---|---|---|---|
| SPP | Reconnect | 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 | Reconnect | Does nothing | Releases BT connection |
| HID normal | Reconnect | Does nothing | Releases BT connection |

**Note** Some SPP host doesn't support Reconnection from KDC.

## Character dropping in web browser on iOS

When the KDC is connected to an iOS device in the HID iOS Bluetooth profile, scanning into a web browser will sometimes prematurely execute the 'CR + LF' (enter) terminator and result in a few characters dropping.   The KDC will scan perfectly fine in native apps such as Notes.

Workaround #1 - Using KTSync
If the KDC is an "i" model and has the MFi Bluetooth profile, KTSync can be used for keyboard wedging, similar to HID.   In this mode, the data transmission is much faster and more reliable. KTSync must be open with the KDC connected and the KTSync Keyboard needs to be selected before scanning. The HID character delay settings do not have any impact on transmission times when connecting in MFi/SPP.

Workaround #2 - Using HID Transmission Delays
User can adjust initial delay and inter-character delay such as 1 second Initial Delay and 30 millisecond Inter-Character delay.
- Scan the appropriate special bar codes on the back of the user manual.
- Alternatively these settings can be set in KTSync by going to KDC Menu > Bluetooth > and changing the Initial and Inter-Character Delays.

# 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 use Bluetooth connection, 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 KDC20/30/200/250/270/300/350/400/470 with the host, follow these instructions:

1. Select Pairing from the Bluetooth menu. The message "**Pairing started…**" will be displayed.
2. The **"Pairing Done"** message will display when the Bluetooth connection is successfully established. The connection must be established before the pairing timeout of 90 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.

For KDC500 paring with the host, Numeric Comparions pairing method is required for PCI PTS complicance. See the section [2.1 Bluetooth Paring](#) for the details.

## Discovering

KDC200/250/270/300/350 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. KDC20/30/400/470 only supports via KTSync configuration. KDC500 doesn't support this feature.

## 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. KDC20/30/400/470 only supports via KTSync configuration. KDC500 doesn't support this feature.

| **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. KDC500 doesn't support this feature.

## Tips

Pair and connect KDC20i/30i/200i/250i/270i/300i/350i/400i/470i 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.<br>• 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.<br>• KDC with Bluetooth Spec2.1+EDR does not prompt Pin code entry menu.<br>• 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 MFi menu of KDC SystemConfig 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.

## Auto Pairing
For SPP and MFi mode, user used to select host profile before pairing. However, user doesn't need to select host device profile if this option is enabled. KDC automatically detects if host device is a SPP or MFi mode. This option is supported from KDC Bluetooth firmware version 2.2.O.

# 4.3 BLE (Bluetooth Low Engery)

## BLE vs. Classic

KDC280C model supports BLE4.1 and other KDCs models support Classic 2.1+EDR.
Here is key difference between KDC BLE and Classic Bluetooth technology.

|  | Classic | BLE(KDC280C) |
|---|---|---|
| Profiles | SPP, SPP2.0, Mfi, HID iOS, HID normal | SPP, HID, OPEN mode |
| Scan key | Entering pairing mode with pressing 5 seconds | |
| Down key | iOS Soft keyboard toggle | |
|  | Disconnect with pressing 5 seconds | |
| Up key | Reconnect to host | Ready to connect |

Here is the KDC menu difference.
- KDC BLE doesn't support MFI, SPP2.0, but has an additional OPEN mode.
- KDC BLE consolidated HID iOS and HID normal into a HID.
- KDC BEL doesn't support Auto connect/reconnect.
- KDC BLE doesn't support Disconnect button.
- KDC BLE doesn't support Discovering and connecting to.
- KDC BLE doesn't support Auto Pairing.
- KDC BLE doesn't support MFi mode.

| Menu | | | Classic | BLE |
|---|---|---|---|---|
| **BT Config** | **ConnectDevice** | **SPP** | Yes | Yes |
| | | **MFi** | Yes | No |
| | | **HID iOS** | Yes | No |
| | | **HID normal** | Yes | No |
| | | **SPP 2.0** | Yes | No |
| | | **HID** | No | Yes |
| | **Auto Connect** | **Enable/Disable** | Yes | No |
| | **Auto Reconnect** | **Enable/Disable** | Yes | No |
| | **Auto Power On** | **Enable/Disable** | Yes | Yes |
| | **PWR On Time** | **Disabled, 1 -10 seconds** | Yes | Yes |
| | **Auto PowerOff** | **Enable/Disable** | Yes | Yes |
| | **Beep Warning** | **Enable/Disable** | Yes | Yes |
| | **PWR OFF Time** | **1-30 minutes** | Yes | Yes |
| | **PowerOff Msg** | **Enable/Disable** | Yes | Yes |
| | **MAC Address** | | Yes | Yes |
| | **FW Version** | | Yes | Yes |
| | **Wakeup Nulls** | **Enable/Disable** | Yes | Yes |
| | **BT Toggle** | **Enable/Disable** | Yes | Yes |
| | **Disconnect Button** | **Enable/Disable** | Yes | No |
| | **HID AutoLock** | **1,2,3,4,5,10,15** | Yes | Yes |
| | **HID Keyboard** | **US, German, French, Italian, Spanish, Japan** | Yes | Yes |
| | **HID Delay** | **Initial Delay** | Yes | Yes |
| | | **Char. Delay** | Yes | Yes |
| | **HID Ctrl Char** | **Disabled** | Yes | Yes |
| | | **Alt+Numpad** | Yes | Yes |
| | | **^+Character** | Yes | Yes |
| | | **Replace to \|** | Yes | Yes |
| **BT Service** | **Power** | **Enable/Disable** | Yes | Yes |
| | **Pairing** | | Yes | Yes |
| | **Discovering** | | Yes | No |
| | **Connecting to** | | Yes | No |
| | **HID Sync** | | Yes | Yes |
| | **Auto Pairing** | **Enable/Disable** | Yes | No |
| | **Guest mode** | | No | Yes |
| **System Config** | **MFI** | **Enable/Disable** | Yes | No |

## BLE Profiles

KDC BLE models support below three profiles:

①. OPEN – It is a Bluetooth Low Energy standard mode called **Guest mode** which doesn't need to be paired. It supports bi-directional communication.

②. SPP – It is a Koamtac specific customized profile which provides bi-directional communication in the paired mode.

③. HID – It is a Bluetooth Low Energy standard profile which support Human Interface Device as like a keyboard or a mouse. It is required to be paired first.

➤ **Selecting a profile**

There are two ways to set up a BLE profile:

①. By scanning a programming (special) barcode as shown below

      i. OPEN

₸MKDC6A006.

      ii. SPP

₸MKDC6A000.

      iii. HID

₸MKDC6A001.

②. Or, by navigating the MENU from KDC280C-BLE

      i. Press Up & Down button at the same time

      ii. Navigate to BT Config

      iii. Select ConnectDeivce

      iv. Select a profile

➤ **Pairing Mode**

There are three ways to put KDC280C-BLE in to a pairing mode.

①. Scan below **Pairing barcode**



②. Select Pairing from **KDC280C-BLE menu**
   i. Press Up & Down button at the same time
   ii. Navigate to BT Service
   iii. Select Pairing

③. Press the Scan button for five (5) seconds then it goes to a pairing mode

➢ **Pairing completion from the host device**

On the host device, go to Settings → Bluetooth, and select the KDC280[Serial Number] that needs to be paired. The KDC and the host device will now communicate with each other.



*Figure 19 – KDC BLE Pairing*

➢ **Connection of KDC280C-BLE and the host device**

After it has been paired, open application and select a paired device, then it connects to the KDC280C-BLE.

# 4.4 KDC BLE and Samsung Tizen

Free SDK for KDC provides a sample demo application for Tizen, especially Samsung Gear S3. This document explains how to install and use the demo application on Samsung Gear S3.

## Connect the phone to Gear S3 and Install the demo application

➢ Download the Samsung Gear application by referring to the link below. (Please make sure your phone supports Galaxy Gear S3.)
   http://www.samsung.com/ca/support/skp/faq/1119975

➢ Connect the Samsung Gear to your smartphone. On the Gear press the home button and scroll to settings. Scroll down and select Connect to a New Phone. On the phone, open the Samsung Gear application and search for nearby Gear devices. Select your Gear from the list and confirm the passcode on both devices.

➢ From Galaxy Apps, search Koamtac apps, which is "**Koamtac Simple Web Demo**" App and install it on Gear S3.
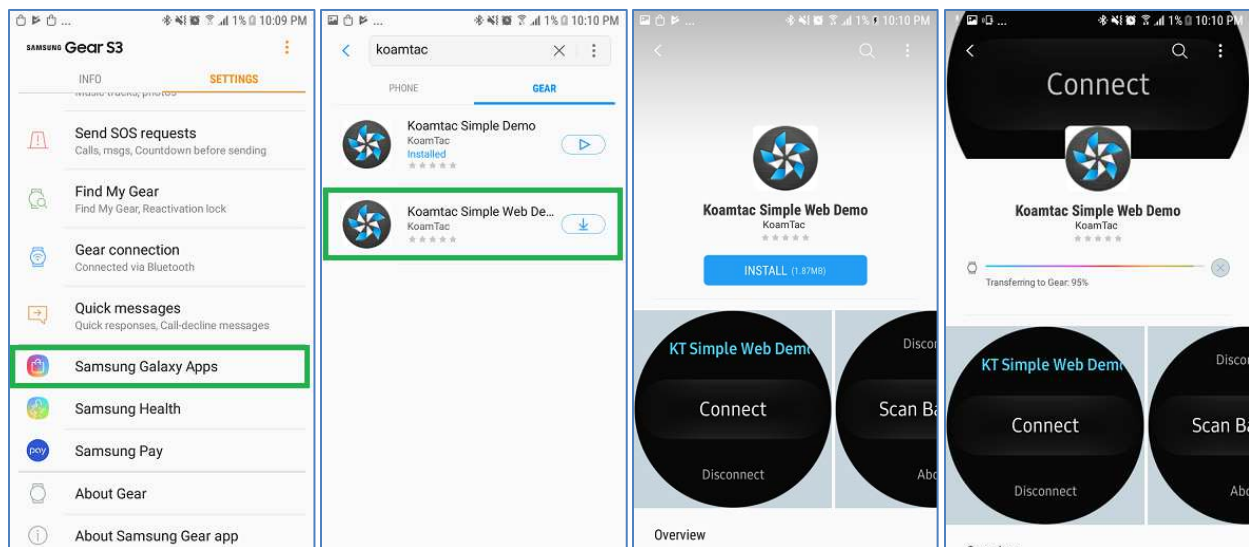


*Figure 20 – KDC BLE and Gear S3*

## Pair/Connect KDC with Gear S3

 ➢ Put KDC280C-BLE into OPEN mode (see Chapter 4 above)

 ➢ Run KTSimpleWebDemo on your Gear S3.

 ➢ Tap "Connect" and the available devices will be listed on your Gear S3. Tap the KDC from the list of available devices to connect.    The number between the brackets refers to the serial number located on the back of the KDC.

 ➢ Now you can trigger the KDC scanner via the demo application or the KDC itself.    Any scanned bar code will be displayed on the Gear S3.      There are also many commands that can be used to view or set the configuration of the KDC.
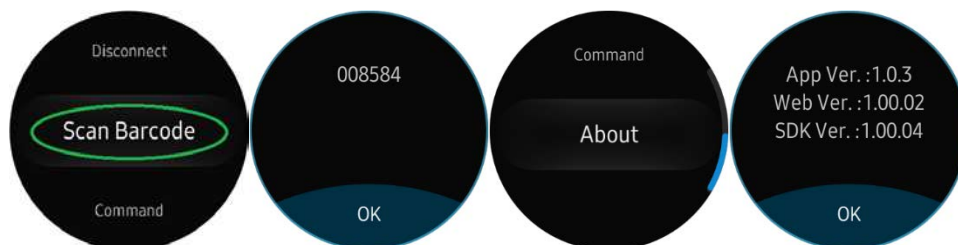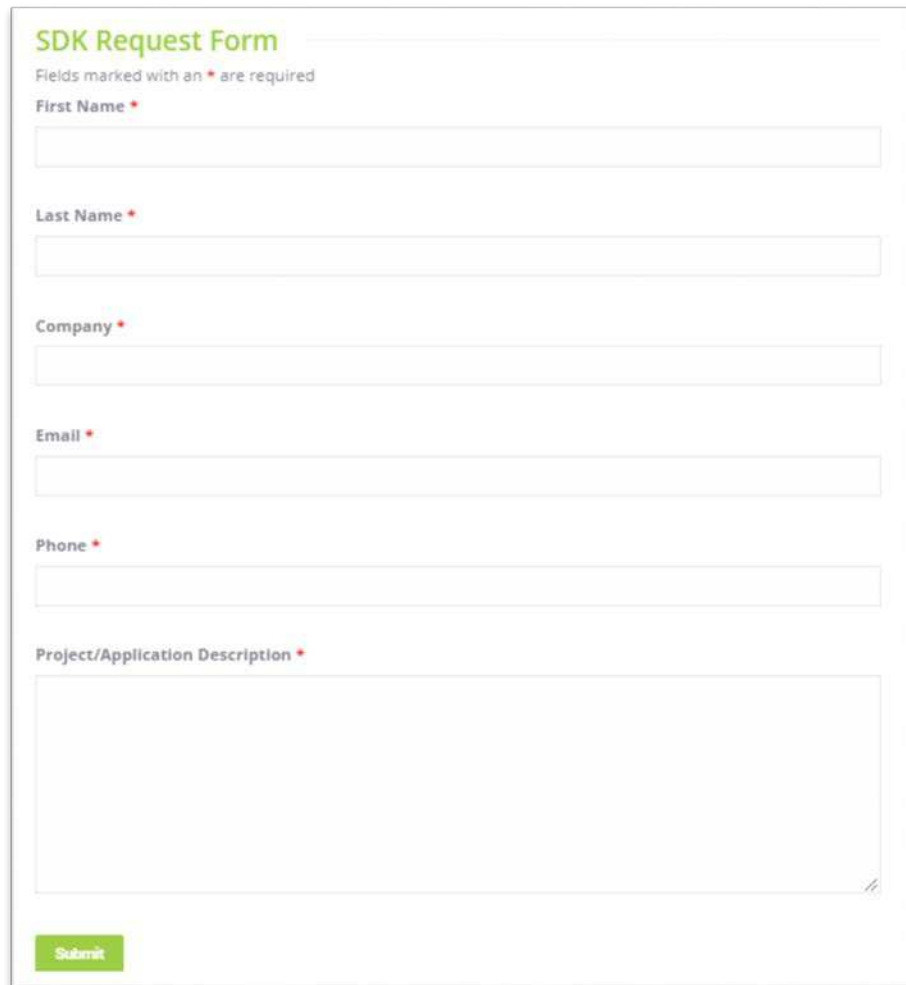
 ➢ If the KDC becomes disconnected or if you disconnect the current KDC, you can reconnect it later by selecting Connect from the Gear S3.
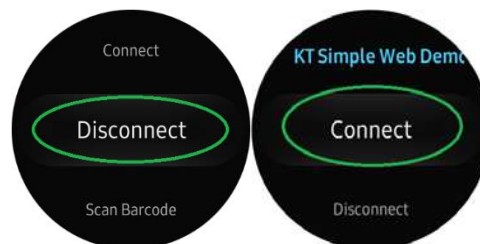
## How to Get Tizen SDK for KDC280C-BLE

➢ You can request free SDK from our website:

    ①. Go to www.koamtac.com

    ②. Navigate to SUPPORT > Downloads > SDK

    ③. And fill the form below and submit it.



*Figure 21 – SDK Request Form*

➢ You'll get a response in 1 ~ 2 business days and receive the SDK package if approved.

➢ The SDK Package consists of 3 subfolders:

①. **Document**

- This explains KDC SDK architecture and all the procedures to use the SDK for KDC.

- There is one more folder (KDCReaderAPI.zip) which explains all the API's using the **hyperlinks** so that you can easily look up any class information that you want to see. (see the screenshot below)

②. **Library/KoamacService**

- It has the actual library file that you should use.

③. **Samples**

- This has a sample demo application and its source codes.
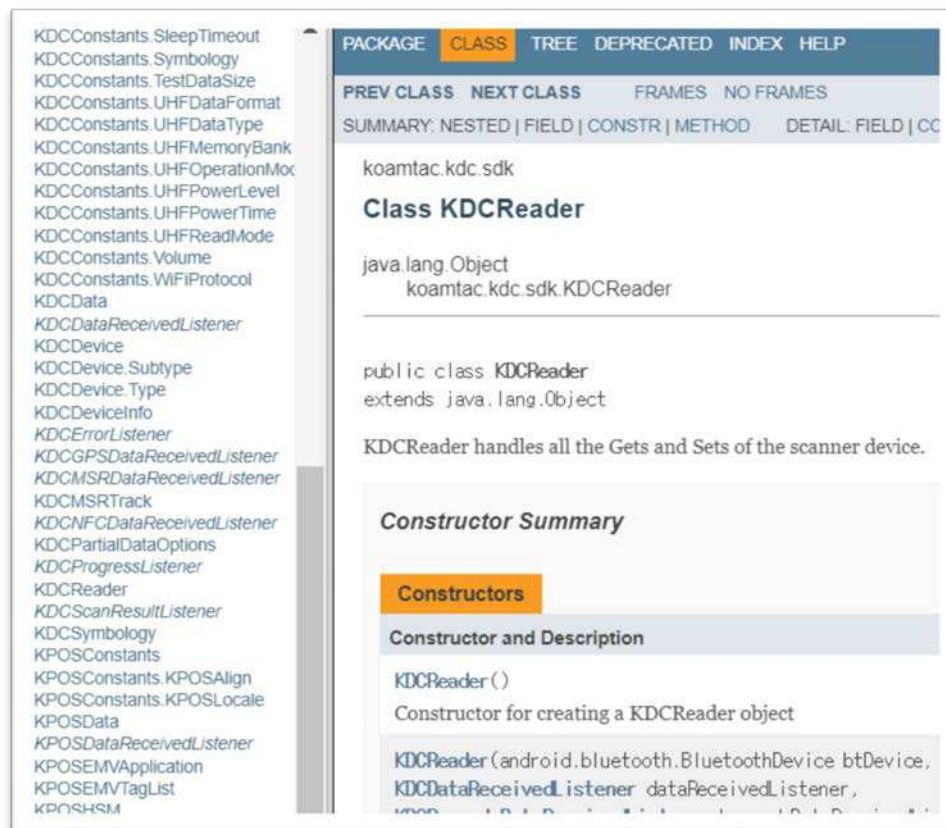


*Figure 22 – SDK Package*

# 5. WiFi (KDC350), NFC (KDC350/470/475), UHF (KDC470/475), Serial/OTG (KDC470/475)

## 5.1 KDC350 WiFi

**WiFi Config Menu**

| | Screen | Comment |
|---|---|---|
| 1 | Power | Turn the Wi-Fi Module Power ON/OFF. |
| 2 | AP | Configure the AP |
| 3 | Server | Configure the server |
| 4 | Connect | Connect to the AP and server |
| 5 | Auto Connect | Enable/Disable auto reconnection |
| 6 | Send Stored | Enable/Disable sending stored data |
| 7 | Version | Shows WiFi module version and MAC address |
| 8 | Exit Menu | Return to previous menu |

- All configuration is stored in the KDC350

## How to use KTSync to configure WiFi

It is possible to configure the following WiFi options by using KTSync.

- WiFi Power
- Auto connect
- SSL
- Download Certification
- Send Stored
- Server IP
- Server URL
- Server Port Number
- Server Page
- Server Protocol
- AP SSID
- AP Passcode
- Response Timeout
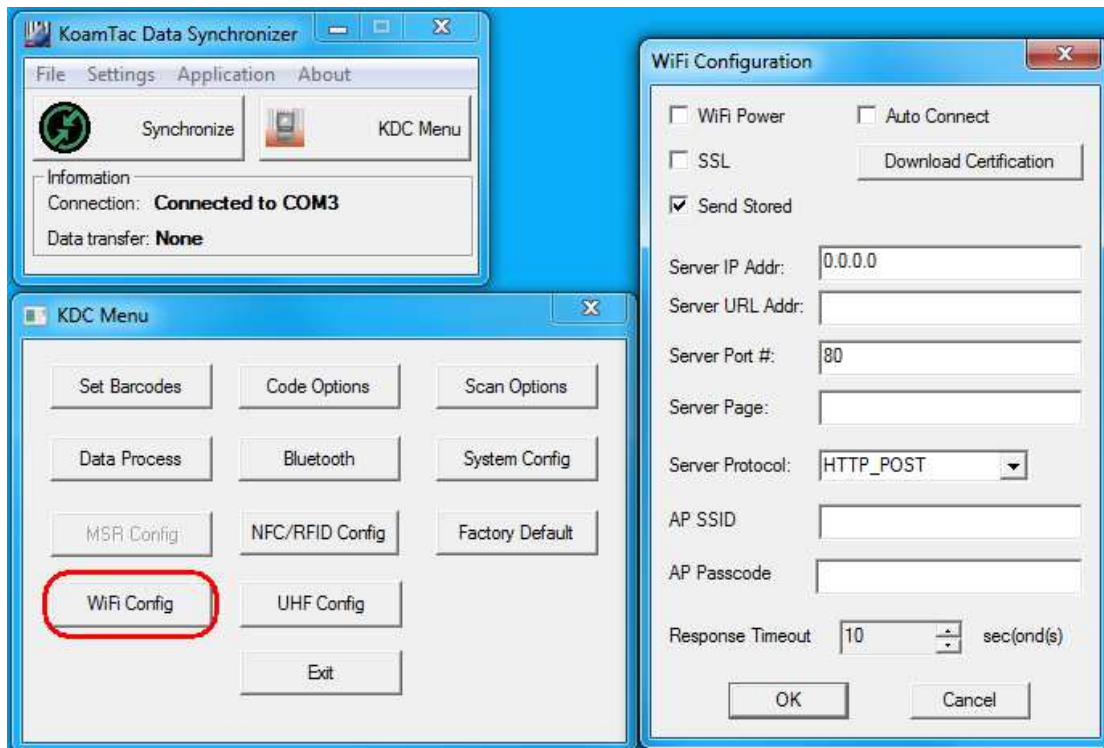
## How to test data transmission

- ➤ TPC


Step 1. Wi-Fi Module Power ON

- Turn on the Wi-Fi module's power with "WIFI Config"→"Power"→"Enable".


Step 2. Configure server information

- "WIFI Config" → "Server" → "IP Address" → "XXX.XXX.X.XX"
- "WIFI Config" → "Server" → "Port Number" → "XXXXX".
- "WIFI Config" → "Server" → "Protocol" → "TCP".
- Obtain the PC's IP address by opening the command prompt in the windows and searching "ipconfig".

```
Wireless LAN adapter Wireless Network Connection:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::4d95:e523:204:5d74%13
   IPv4 Address. . . . . . . . . . . : 192.168.1.59
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 192.168.1.1
```

- The port address is defined in the following test application called "CommOp".
  - o 30 day free trial can be downloaded from
    http://www.serialporttool.com/download/CommOperator/CommOperator.zip
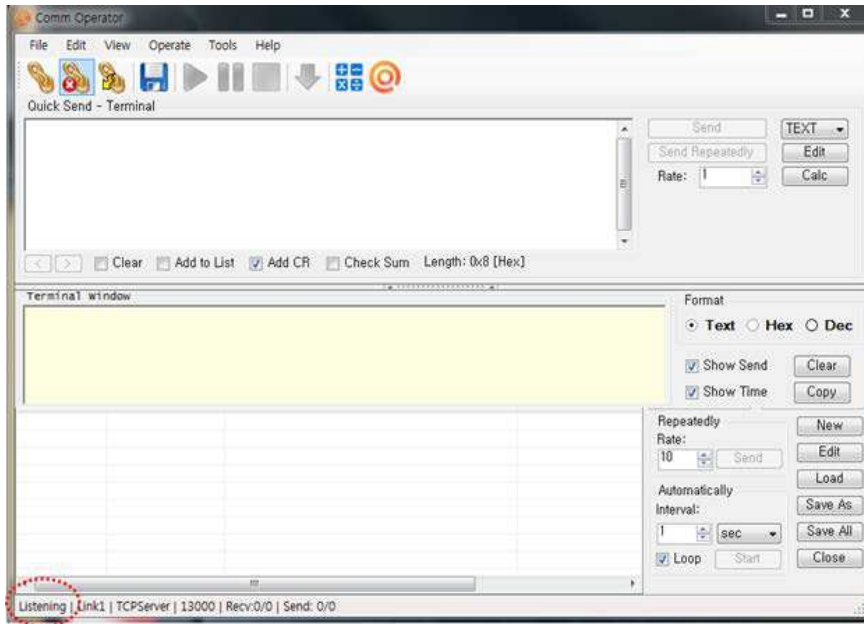
Step 3. Connect to server

- Run the test application "CommOp.exe" with TCP server listening mode. Be
  sure the status is in "Listening" as shown below.

- Connect the KDC to the server in "WIFI Config"→"Connect"
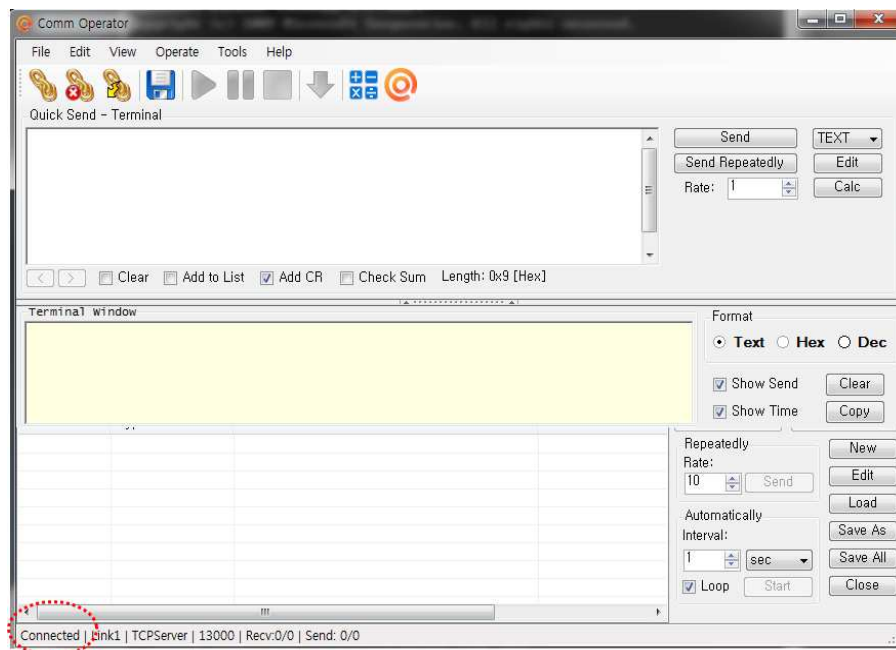
- The status will be changed from "Listening" to "Connected" as shown above once the KDC is connected to the server.

Step 4. Send Barcode Data to server

- Scan a barcode.
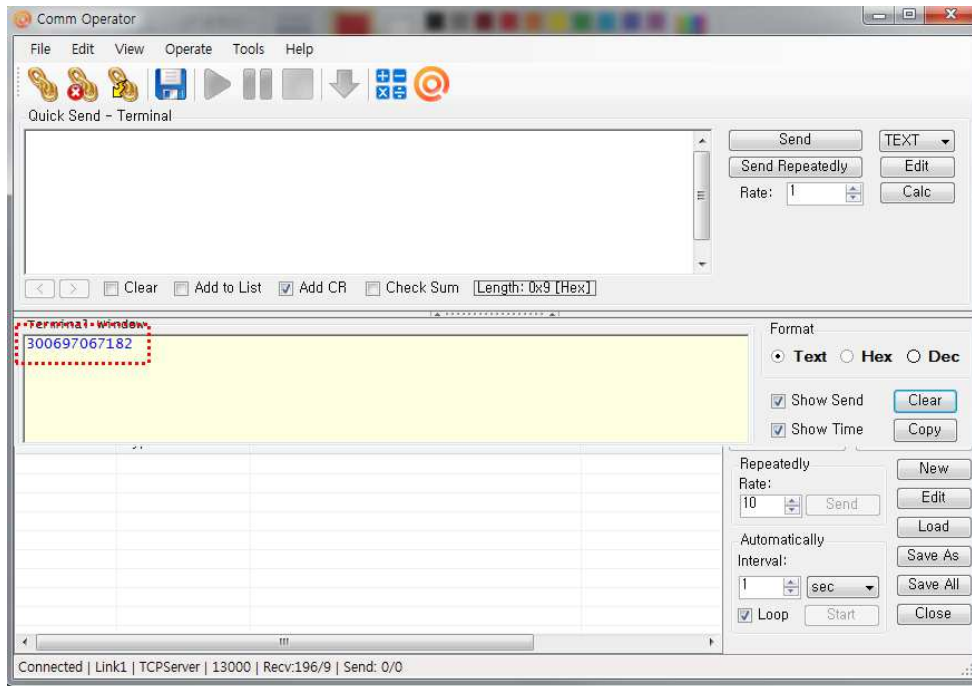


- The barcode sent from the KDC is displayed on the test application as shown above.

➢ UDP

Step 1. Wi-Fi Module Power ON

- Turn on the Wi-Fi power module with "WIFI Config" → "Power" → "Enable".

Step 2. Configure server information

- "WIFI Config" → "Server" → "IP Address" → "XXX.XXX.X.XX".
- "WIFI Config" → "Server" → "Port Number" → "13000".
- "WIFI Config" → "Server" → "Protocol" → "UDP".
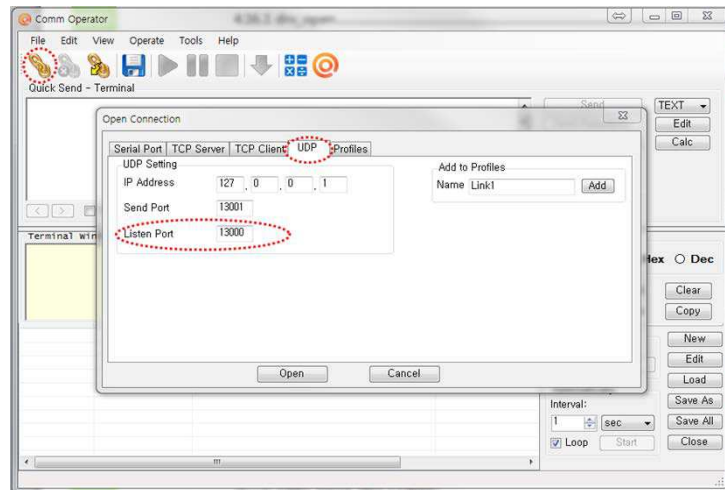


- The port address is defined in the test application as following



133
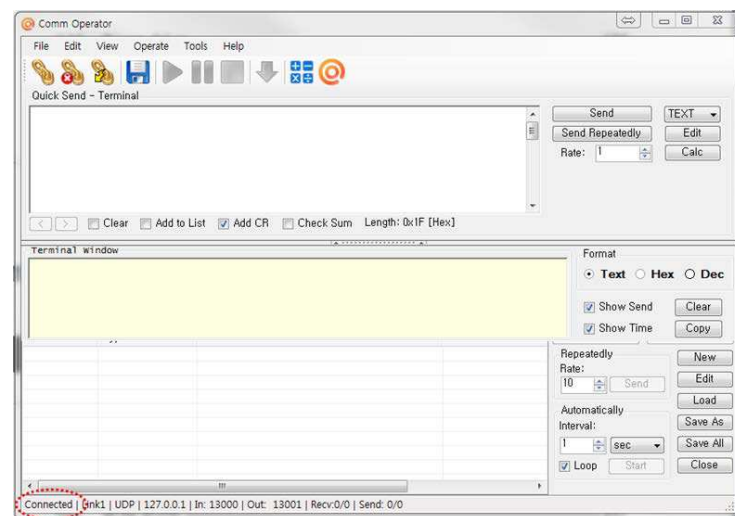
## Step 3. Connect to server

- Run the tester application "CommOp.exe" with UDP mode chosen.
- Connect the KDC to the server in "WIFI Config" → "Connect".

## Step 4. Send barcode data to server

- Scan barcode and the barcode will be displayed as following screen.
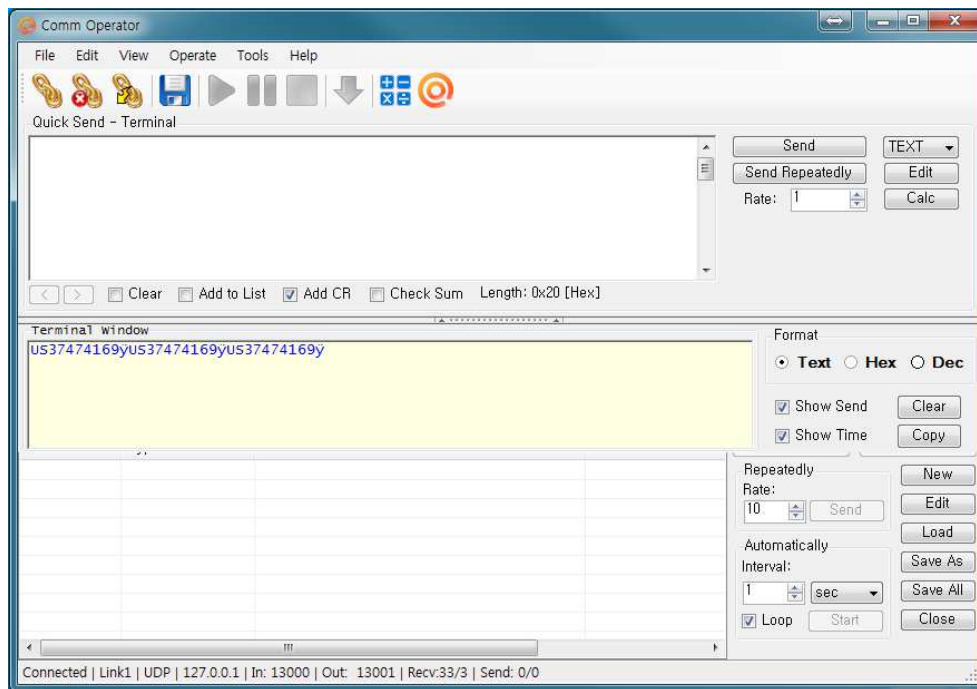
# HTTP GET&POST

Step 1. Install Apache Server (XAMPP)

- Download the installer from http:www.apachefriends.org/en/xampp-windows.html



Step 2. Run XAMPP Control Panel

- Run the XAMPP Control Panel and make sure both Apache and MySQL can be started as shown on the following screen. If it is unable to start, terminate all other online programs, such as skype.

Step 3. Copy web server program into XAMPP

- Unzip the two files below and copy them into c:/xampp/htdocs

  1. Gswebserver.zip
  2. Datacollector.zip

- Be sure the directory list looks like the following
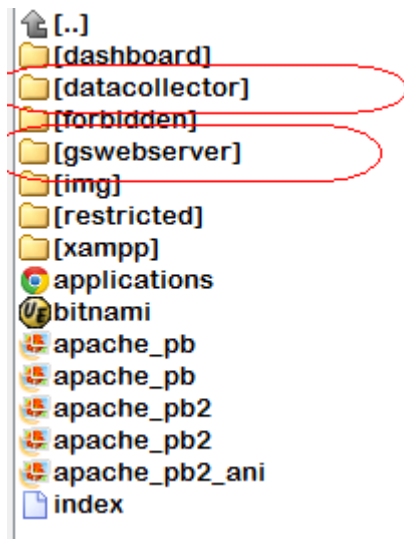


- Make sure that the Apache server has been installed correctly by accessing http://localhost/gswebserver/index.html. You should see the following screen.

## Step 4. Setup SSL

- Unzip the certificates.zip and

    1. Copy 'server.crt' into /xampp/apache/conf/ssl.crt
    2. Copy 'server.key' into /xampp/apache/conf/ssl.key
    3. Make sure the following 3 lines are in /xampp/apache/conf/extra/httpd-ssl.conf.

        *# SSL Engine Switch:*

        *# Enable/Disable SSL for this virtual host.*

        *SSLEngine on*

- Download 'cacert.der' into KDC using KTSync

    1. Open KDC Menu and enter WiFi Config.
    2. Select "Download certification" to download certification data into KDC.
    3. KTSync will display "Download is done".
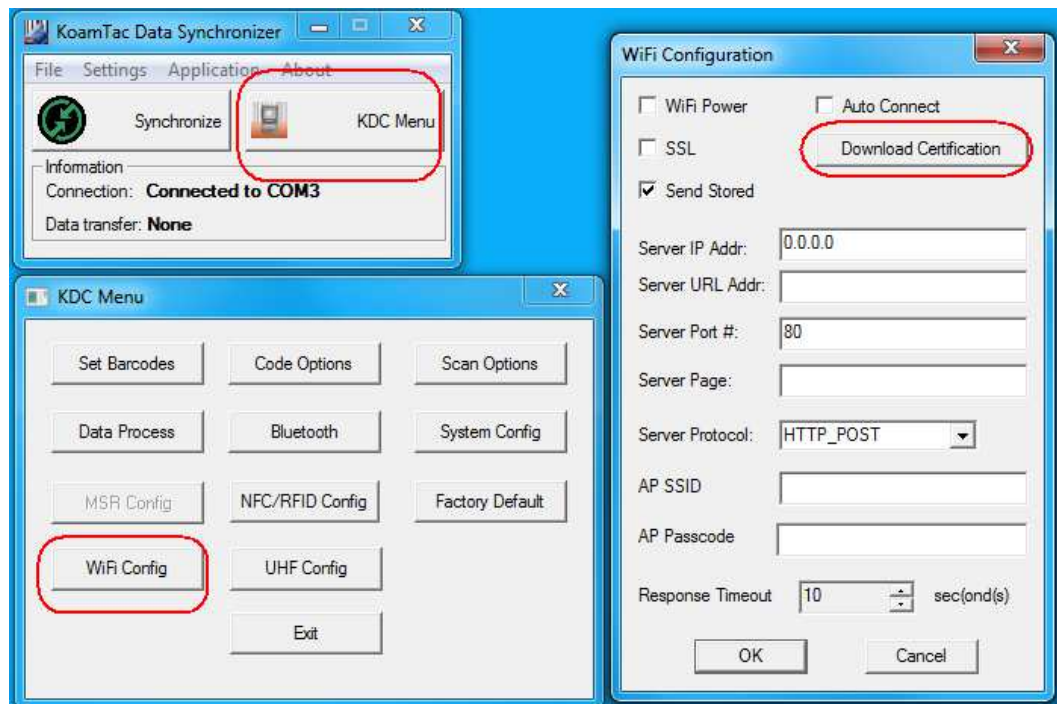


## Step 5. Setup SQL DB

- Enter the MqSQL configuration by pressing "Admin" in XAMPP as shown

- Select "test" and press 'Go" button after entering "datacollector" in Name, and "2" in the Number of columns in the following screen.
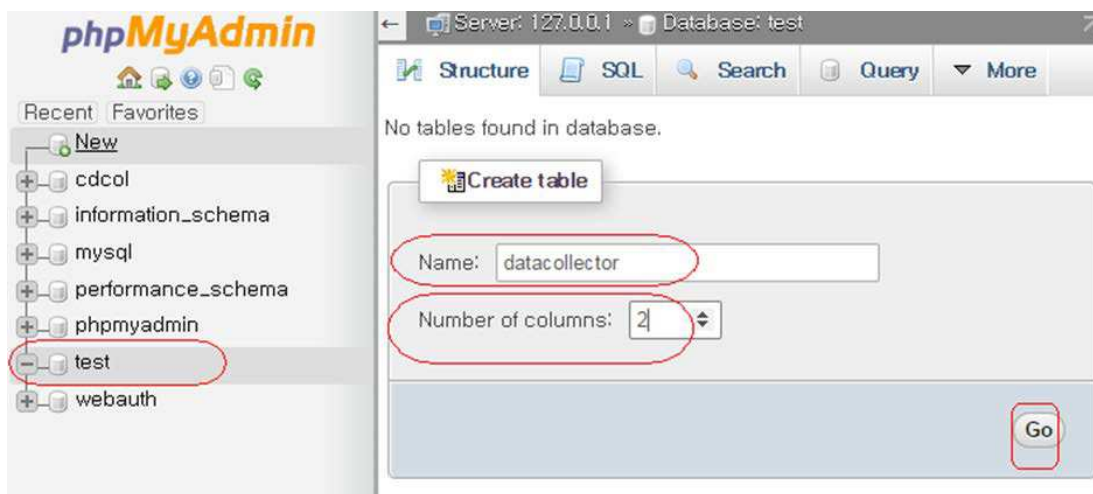


- Enter the following name and type as shown below, then click "Save".
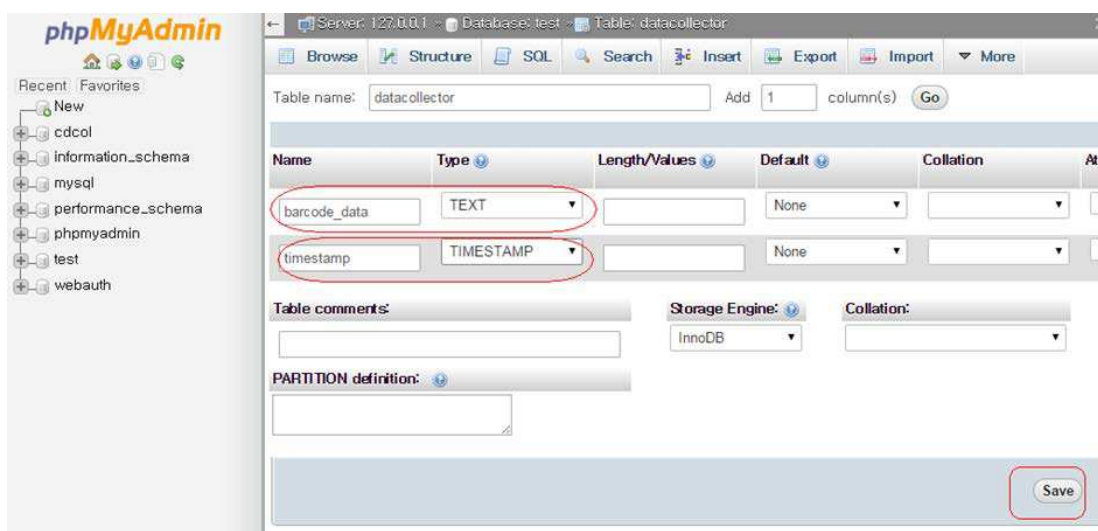
- Once Save is completed, the following screen will display.



Barcode data received from KDC [num: 0]

0 results
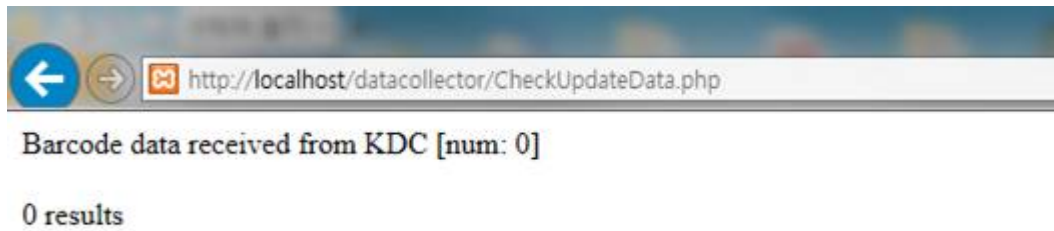
- If everything is installed properly, the following screen will display while opening: http://localhost/datacollector/CheckUpdateData.php.
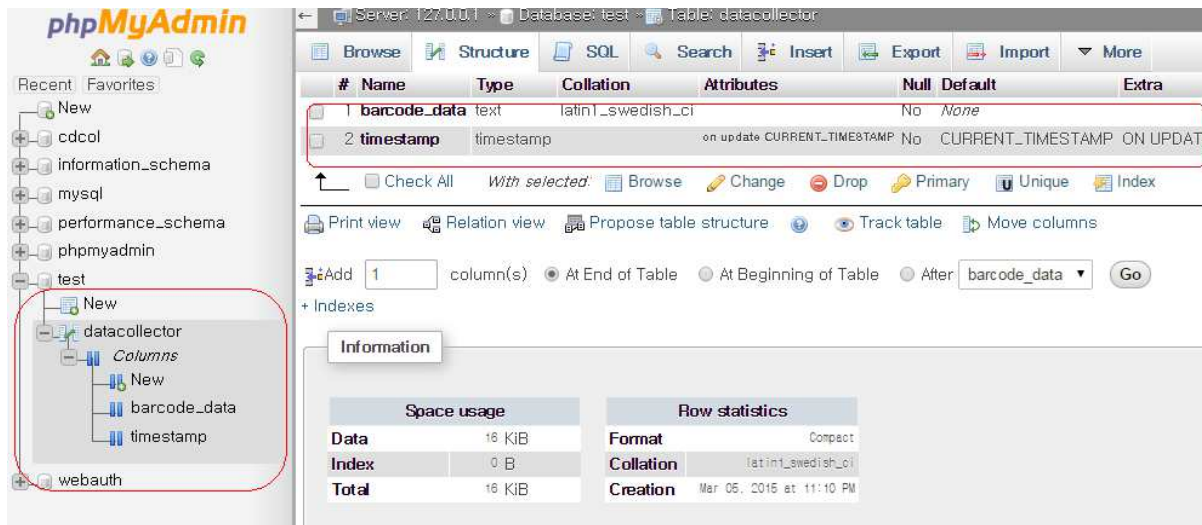


Step 6. Send data from KDC to server

- Configure the KDC350 settings as follows:

    IP Address: Server IP address

    Port: 80(HTTP) if SSL is disabled, 443(HTTPS) if SSL is enabled.

    Server page: /datacollector/InsertData.php?data=

[Note]

- Set the KDC date to current date when using provided certificates.
- Rename InsertData.php.GET when using HTTP GET method.
- Rename InsertData.php.POST when using HTTP POST method.

## WiFi Roaming

KDC does support roaming between APs which has the same SSID. When user presses Scan button, KDC checks current APs signal strength. If the signal strength is lower than pre-defined threshold, KDC disconnects from current connected AP and connect to new AP which has strongest signal strength. Usually it takes about 3-4 seconds. KDC provides a way to set the signal strength(RSSI) threshold and user can set it from -30 to -90.

The overall work flow is as following.

```
                    ┌─────────────────────┐
                    │  Set RSSI threshold │
                    └─────────────────────┘
                              │
   No ─────────────────────►─◄─────────────────────────┐
                              │                          │
                              ▼                          │
                        ╱──────────╲                     │
                       ╱ Scan Button ╲                   │
         ┌────────────◄   Pressed?   ►                   │
         │             ╲             ╱                    │
         │              ╲───────────╱                     │
         │                   │                            │
         │                  Yes                           │
         │                   ▼                            │
         │          ┌─────────────────┐                  │
         │          │ Get current APs │                  │
         │          │      RSSI       │                  │
         │          └─────────────────┘                  │
         │                   │                            │
         │                   ▼                            │
         │             ╱──────────╲                       │
         │            ╱ Current RSSI < ╲                  │
         │  ┌────────◄   Threshold ?   ►                  │
         │  │         ╲               ╱                   │
         │  │          ╲─────────────╱                    │
         │  │               │                             │
         │  │              Yes                            │
         │  │               ▼                             │
         │  │      ┌─────────────────┐                   │
         │  │      │ Disconnect from │                   │
         │  │      │   current AP    │                   │
         │  │      └─────────────────┘                   │
         │  │               │                             │
         │ No               ▼                             │
         │  │      ┌─────────────────┐                   │
         │  │      │ Connect to new AP│                  │
         │  │      └─────────────────┘                   │
         │  │               │                             │
         │  └──────────────►─▼                            │
         │          ┌─────────────────┐                  │
         │          │ Scan Barcode and│                  │
         │          │  Send to host   │                  │
         │          └─────────────────┘                  │
         │                   │                            │
         │                   └────────────────────────────┘
```
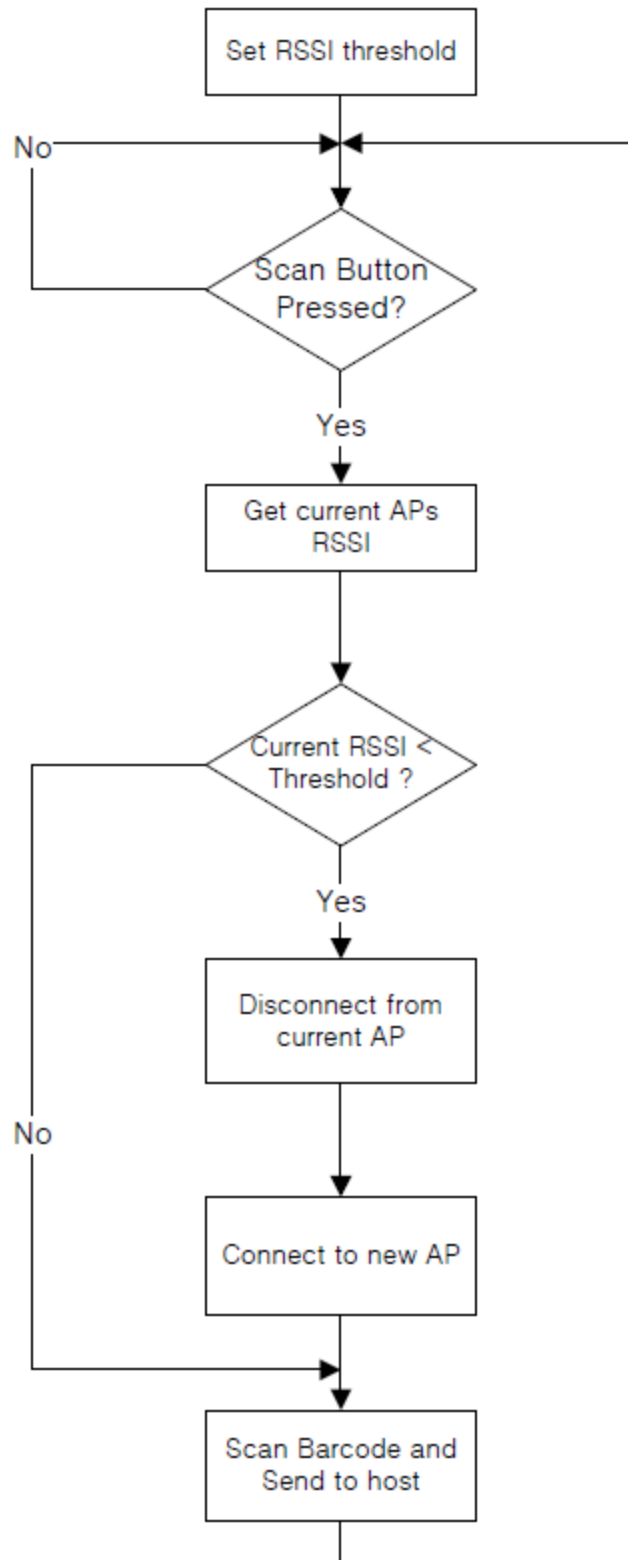
# 5.2 KDC470 HF (NFC)

## Near Field Communication (NFC) and Radio Frequency Identification (RFID) Supported by KDC

This guide explains how to use NFC and RFID functions on KDC models equipped with these options.

| NFC | | RFID |
|---|---|---|
| **1D LASER** models: | **2D IMAGER** models: | **2D IMAGER** models: |
| KDC 350LN | KDC 350CN | KDC 450 |
| KDC 411N | KDC 421N | |
| KDC 415N | KDC 425N | |

The KDC has TWO Special Bar Code sets: one for 1D Laser scanner models and one for 2D imager models. Be sure to follow the instructions for your scanner type.

Table: RFID and NFC Tag Compatibility

| Item | ID | KDC 350N KDC 411N KDC 415N KDC 421N KDC 425N | KDC 450 |
|---|---|---|---|
| Tag RFID | 0x72 | | Yes |
| Tag Calypso | 0x73 | | Yes |
| Tag Mifare 4K | 0x74 | | Yes |
| Tag Type A | 0x75 | | |
| Tag Type B | 0x76 | | |
| Tag Felica | 0x77 | | |
| Tag Jewel | 0x78 | | Yes |
| Tag Mifare 1K | 0x79 | Yes | Yes |
| Tag Mifare Utralight C | 0x7a | Yes | Yes |
| Tag Mifare Ultralight | 0x7b | Yes | Yes |
| Tag Mifare Desfire | 0x7c | | Yes |
| Tag ISO15693 | 0x7d | Yes | Yes |

# Enabling and Disabling The NFC Reader

There are TWO ways to enable/disable the NFC reader across all NFC-equipped KDC models. The KDC350N provides an additional two.

| | | |
|---|---|---|
| **Way ONE** | Scanning Special Bar Codes | (All NFC models) |
| **Way TWO** | Using Commands | (All NFC models) |
| **Way THREE** | Using the On-Board Menu System | (KDC350) |
| **Way FOUR** | Using the Function Key | (KDC350) |

**Way ONE**   Scanning Special Bar Codes  (All NFC models)

**1D LASER** models:
KDC350LN / KDC411N / KDC 415N

NFC Power Enable

N0001

NFC Power Disable

N0010

**2D IMAGER** models:
KDC350CN / KDC 421N / KDC 425N

NFC Power Enable

⊤MKDCN0001.

NFC Power Disable

⊤MKDCN0010.

# Enabling and Disabling The NFC Reader (cont'd)

**Way TWO** — Using Commands (All NFC models)

The KDC NFC function is enabled/disabled with the following commands.

| GRNS | 0 | @ | NFC is disabled. 0 means '0'(0x30) |
|------|---|---|-----------------------------------|
|      | 1 | @ | NFC is enabled. 1 means '1'(0x31) |

The following command is used to retrieve the current status of the KDC NFC function.

| GRNG | value# | @ or ! | Return status of NFC<br>0(0x00): NFC is disabled<br>1(0x01): NFC is enabled |
|------|--------|--------|------------------------------------------------------------------------------|

**Way THREE** — Using the On-Board Menu System (KDC350)



| Enter the KDC menu | Select NFC Config | Select NFC Power | Enabled or Disabled | Select Save & Exit |

press

**Way FOUR** — Using the Function Key (KDC350)

On the KDC350N, NFC power can be toggled by pressing <Fn>+<3> simultaneously on the keypad.

## Getting To Know NFC and RFID Data Formats

Your KDC can output NFC/RFID data to a host in one of four ways by configuring two options (Data Format x UID Only)

| | DATA FORMAT | UID ONLY | KDC OUTPUT | | | | |
|---|---|---|---|---|---|---|---|
| 1 | Packet Data | Disabled | STX(0xAA) | Total Length (3 bytes) | NFC/RFID Packet | | Check Sum (1 byte) |
| 2 | Packet Data | Enabled | STX(0xAA) | Total Length (3 bytes) | UID (16 bytes) | TimeStamp (4 bytes) | Check Sum (1 byte) |
| 3 | Data Only | Disabled | UID Length + UID (1 byte + 15 bytes) | NFC Data Exchange Format (NDEF) Payload | | | |
| 4 | Data Only | Enabled | UID (15 bytes) | | | | |

**NFC/RFID Tag Read**

KDC default mode is **Read** mode when NFC/RFID power is enabled.

In this mode, KDC reads NFC/RFID data when an NFC/RFID tag is positioned near the back of the KDC; users receive the following audible and visible (KDC350) indications of a successful tag read:

l- Single Beep

l- Display UID on KDC screen (KDC350)

Tag data is transmitted to the host via Bluetooth or USB according to the selected NFC data format (as taught in this guide).

When reading NFC tags, the 3rd party host software application must parse the NDEF payload to get the corresponding message.

**NFC/RFID Tag Write**

NFC tag **Write** function works with Mifare Ultralight and Ultralight C tags

KDC will change to **Write** mode only when it receives the write command from the host.

## 5.3  KDC470/475 UHF

### Operation Mode

KDC470/475 UHF reader is in Barcode reading mode upon booting the device. To read UHF tag, it is required to change UHF tag read mode. By keep pressing UP button for 3 seconds, the operation mode is toggled between Barcode read mode and UHF tag read mode. Application also can select Barcode read mode or UHF tag read mode via SDK.

KDC470/475 generates 3 short beeps when changing to UHF tag read mode and 1 long and 1 short beeps when returning to Barcode read mode.

### UHF Tag Read Mode

There are two UHF Tag read modes: Single tag reading and Multiple tag reading. UHF Tag read mode can be changed by scanning barcode or toggle key. In the single tag reading mode, KDC470/475 read s only one tag and stop reading additional tags. In the multiple tags reading mode, KDC470/475 read tags until timeout reaches. Application can change single tag read mode and multiple tag read mode via SDK.

### UHF Special barcodes

| Multiple Read | UHF Single Read |
|:---:|:---:|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ |
| ⊤MKDCN6001. | ⊤MKDCN6010. |

## Toggle key

The UHF tag read mode is toggled between Single read and Multiple read by keep pressing SCAN button for 3 seconds during UHF Tag read mode.

## Trigger

There are two ways of reading UHF tag: Hardware and software trigger. Hardware trigger is a SCAN button and Software trigger is a API called from application via SDK.

## Timeout

KDC470/475 have following UHF tag reading timeout options. KDC470/475 generate 2 short beeps upon timeout reaches.

- 0.5 second
- 1 second
- 2 seconds
- 5 seconds
- 10 seconds
- Continuous

## Data type

KDC470/475 only send EPC data to the host by default but send along with PC data if user configures by reading below barcodes. Data type also can be changed using SDK.

| Data Type – EPC | Data Type - PC+EPC |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖ | ‖‖‖‖‖‖‖‖‖‖ |
| ₸MKDCNU500. | ₸MKDCNU501. |

## 5.4 KDC470/475 Communication Protocols

KDC470/475 supports various communication protocols include

- Serial (Apple iOS devices)
- OTG (Android USB port)
- Bluetooth (Classic or BLE)

KDC470/475 with custom iOS device case operates in Serial mode only. KDC470 with custom Android case opiates in both Bluetooth and OTG mode. Before using OTG mode on the Android custom case, it is strongly recommended to pair KDC470/475 with Android smartphone case in the Bluetooth mode. KDC470 doesn't perform paring when it is in the OTG mode.

### How to start OTG mode

KDC470/475 starts to communicate with Android phone via USB when

1. Android phone case is configured for OTG mode, or
2. By scanning below barcode.


ᴛMKDC5h002.

- Once OTG is configured, it will be stored in the KDC NVRAM and KDC470/475 will run as an OTG mode whenever it restarts.
- By scanning below barcode, user can change KDC470/475 operating mode to Bluetooth anytime.


ᴛMKDC5h001.

## Automatic operation mode changes

Because it is not possible to charge the smartphone while in OTG mode, KDC470/475 automatically switches to Bluetooth mode to charge phone when

1. User plugs USB cable to KDC470/475 USB port
2. User puts KDC470/475 in the charging cradle

All transitions between OTG and Bluetooth modes are performed automatically.


## OTG and Extended battery

The KDC470/475 extended battery is disabled when KDC470/475 is in OTG mode and enabled when

1. KDC470/475 is configured as a Bluetooth mode, or
2. KDC470/475 is connected/charged via USB cable, or
3. KDC470/475 is in the charging cradle


## Serial interface for iOS device

KDC470/475 communicates with iOS device via Serial interface with custom iOS case is attached. There is no operation difference between Bluetooth and Serial communication from iOS device perspective.

# 6. 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/7/8/10/Mobile 5.0+. It has three major functions. (Windows XP/Vista/7/8/10 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.
- KDC Menu configurations.

# 6.1 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:
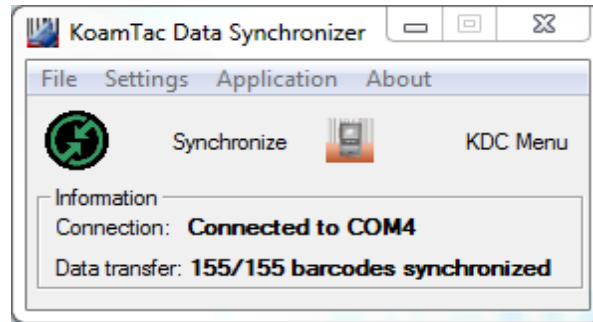


*Figure 23 - KTSync® Synchronizer Initial Screen*

**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/KDC500. Users may register a MAC address to be directly connected by KDC20/30/200/250/270/300/350/400/470.

- 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.
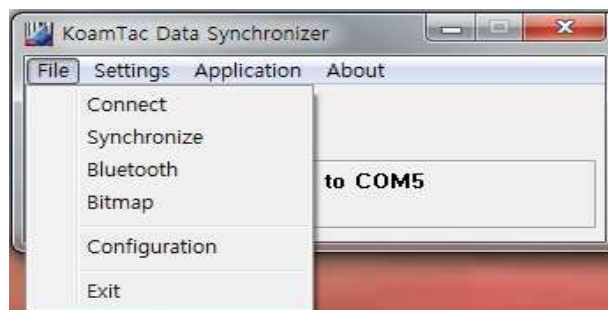


*Figure 24 - File Menu*

**Settings Menu**

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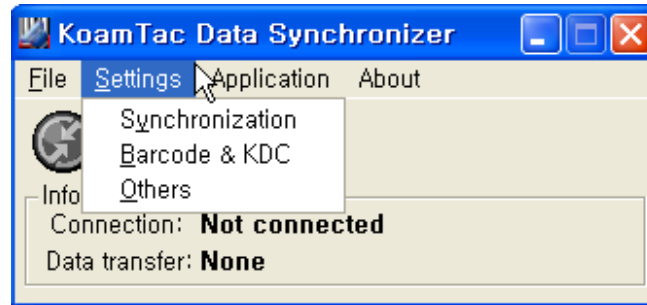


*Figure 25 – Setting Menu*

**Application Menu(KDC500 doesn't support Application)**

- 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.
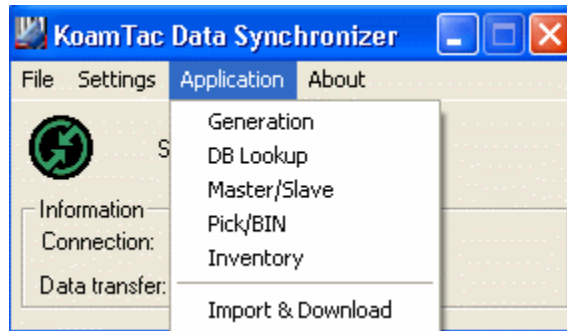
*Figure 26 - Application Menu*

**About Menu -** KTSync - Version Information
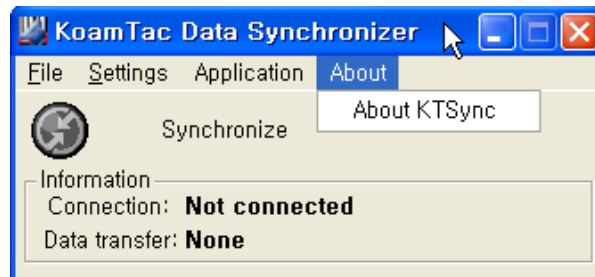


*Figure 27 - About Menu*

## 6.2 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.**
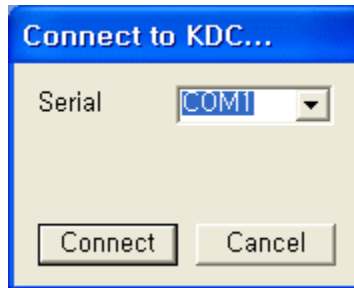


*Figure 28 - COM Port Selection for KDC*

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

### Erase KDC Memory

Erase all stored data in the KDC internal memory.

## 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.(KDC500 doesn't support this feature)
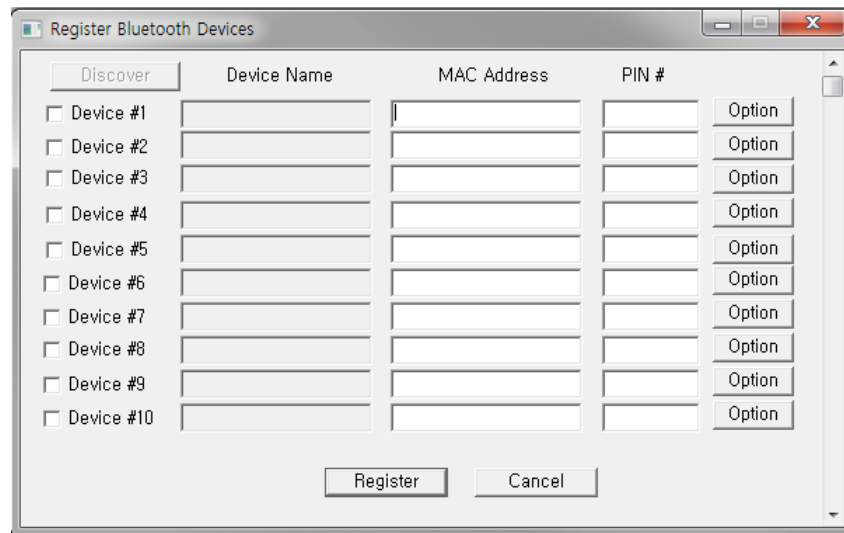


*Figure 29 – Bluetooth Device Registration*
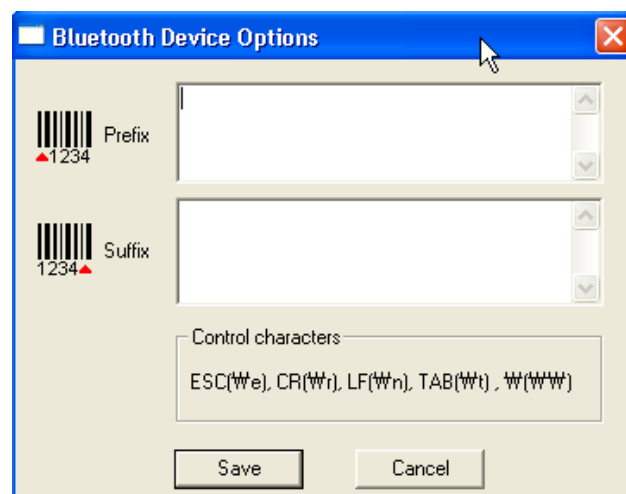


*Figure 30 – Bluetooth Device Prefix/Suffix*

## 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.
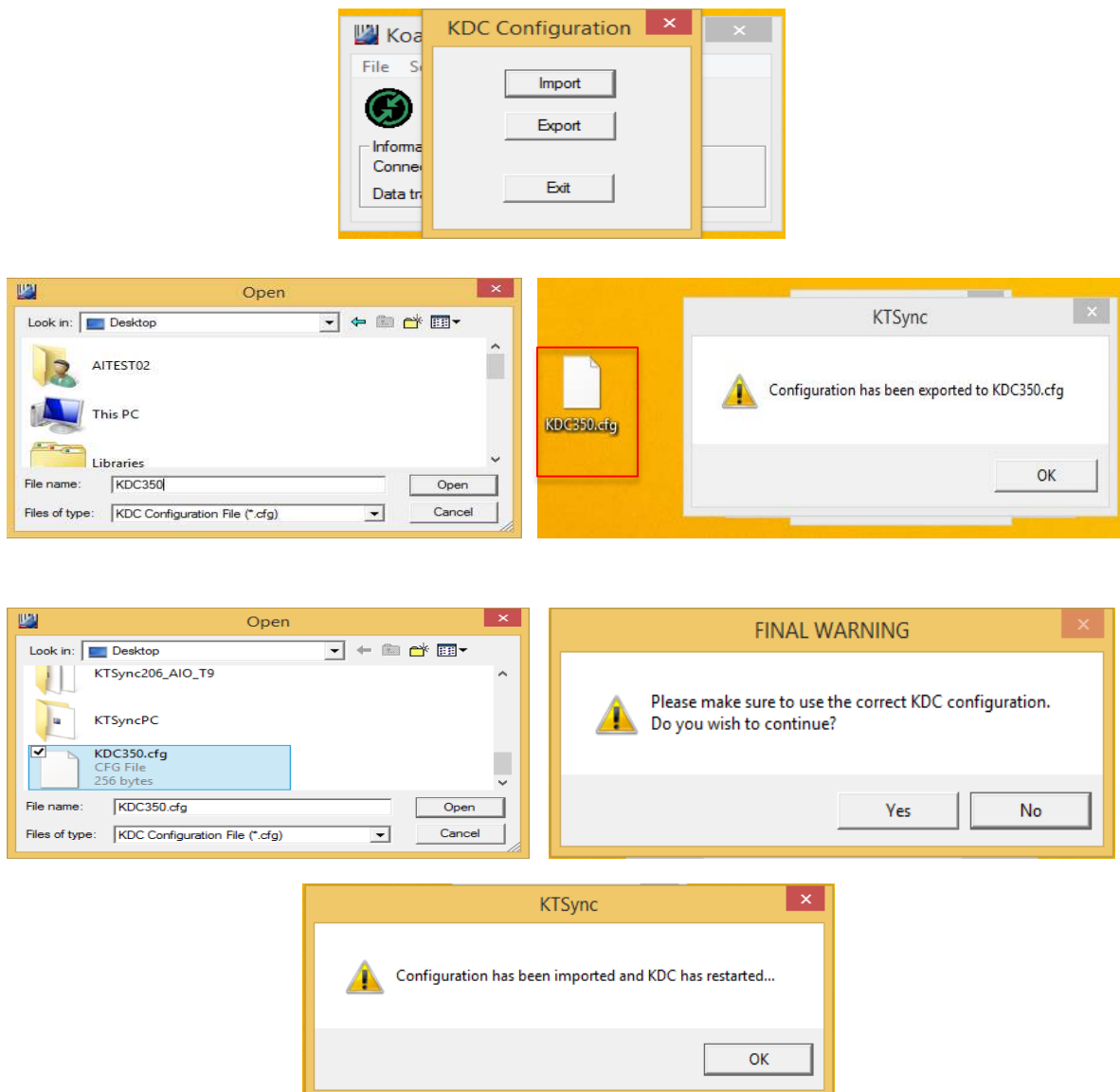


*Figure 32 – KDC Configuration Import/Export*

# Synchronization Settings

KTSync provides several synchronization options for synchronizing data from your KDC to host devices.
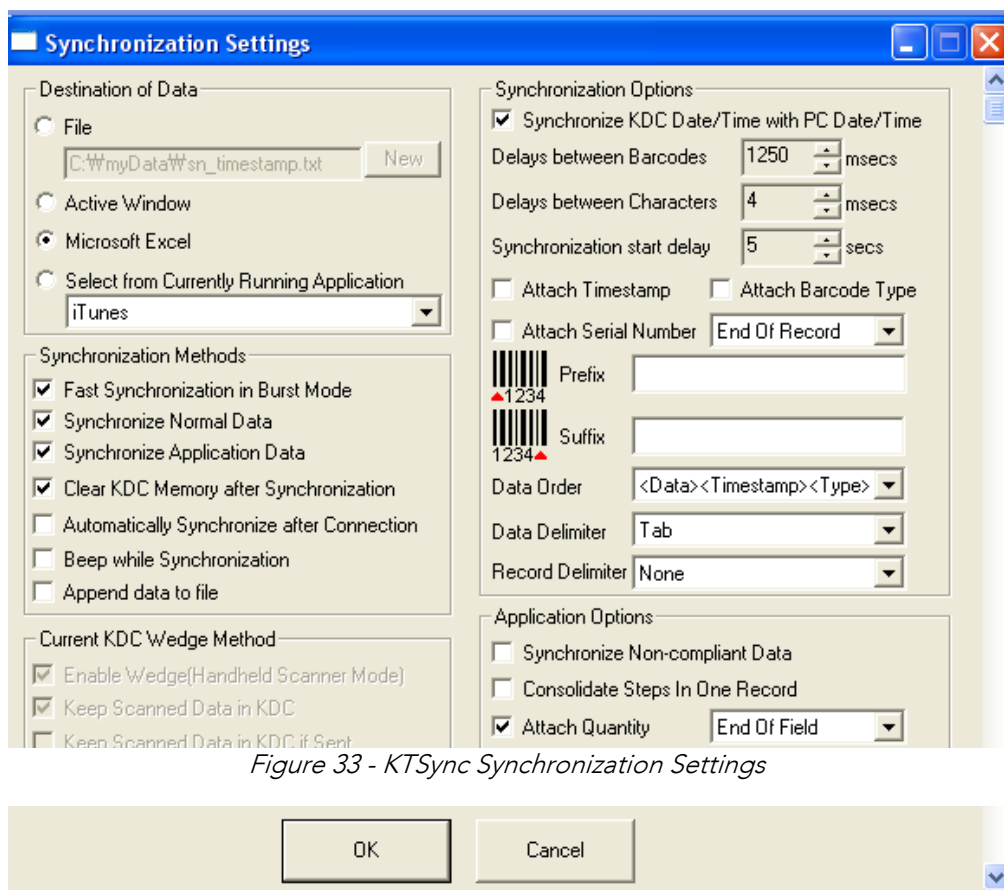


*Figure 33 - KTSync Synchronization Settings*

*Figure 34 – KTSync Synchronization*

## 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:(This option is applied to only Windows XP/Vista/7/8/10)

- 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 Synchronize after Connection" is selected. If not selected, data synchronization is started manually by the user.<br>• 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.

- 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.

# 6.3 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. |
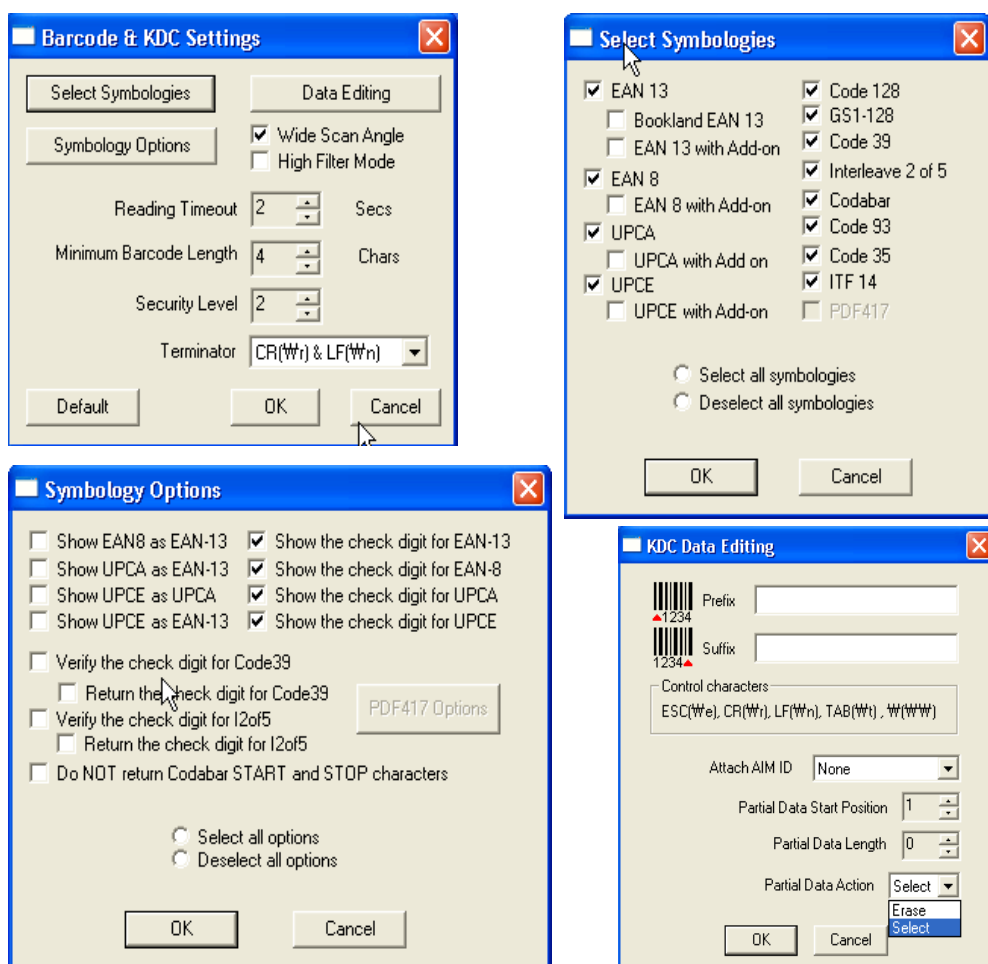


*Figure 35 - Barcode & KDC Settings, Symbologies, Data Editing and Scan Options*

## 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.

# 6.4 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.
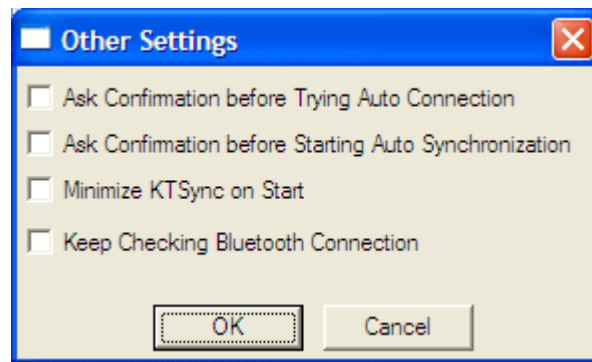


*Figure 36 - KTSync® Confirmation Settings*

## KDC Menu in KTSync

After connecting KDC 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 KDC in KDC Menu window, as shown below.
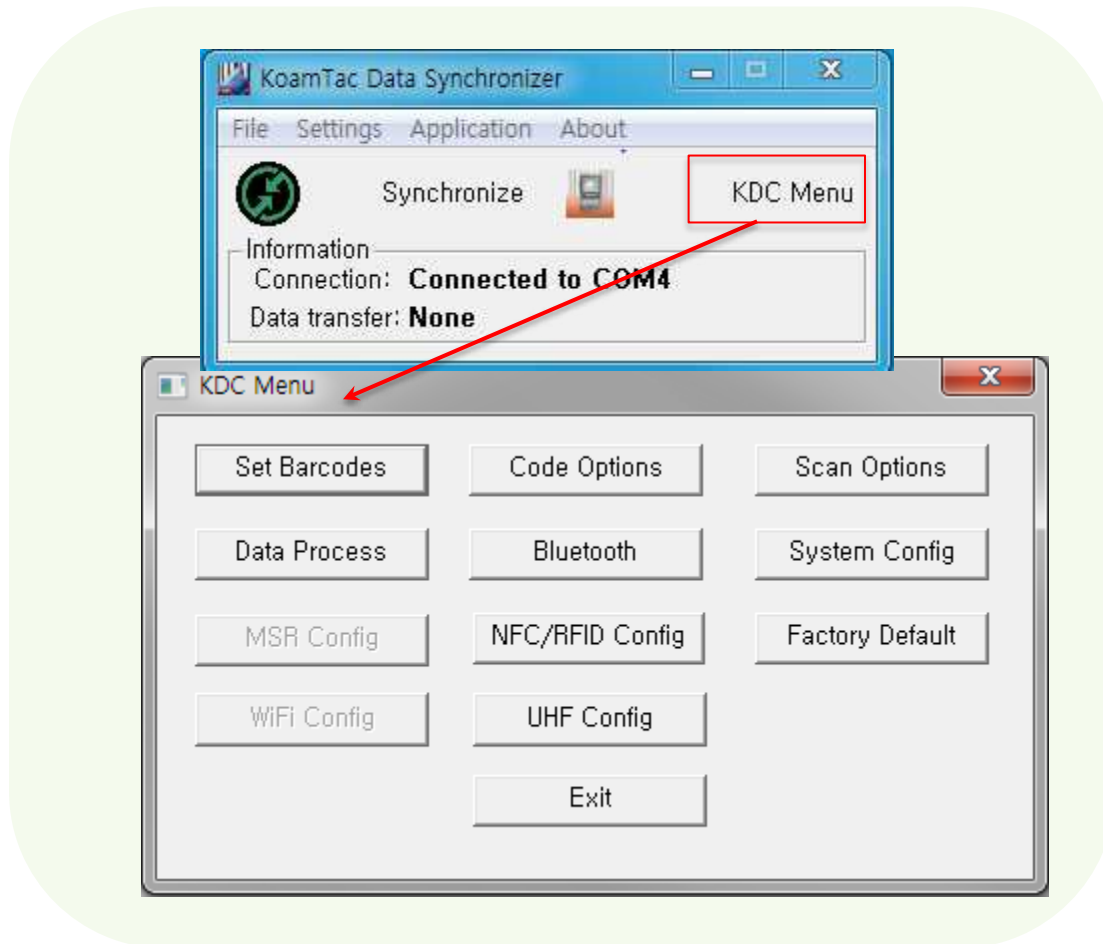


*Figure 37 - KDC Menu in KTSync*

# 6.5 Bitmap Display

Users can download bitmap to be displayed on KDC using KTSync.
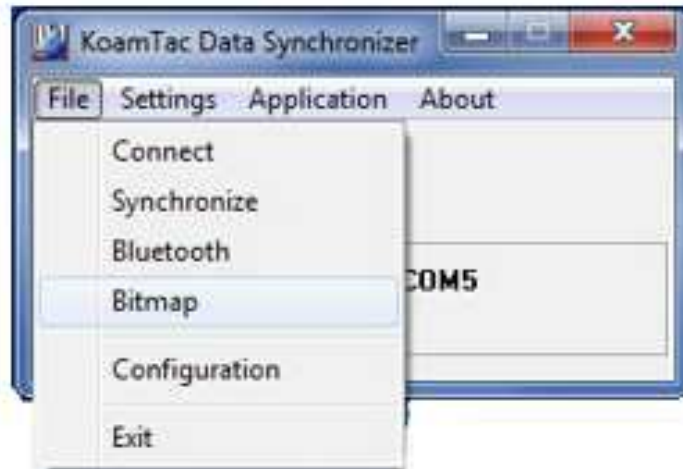


Download Bitmap and upload up to 50 bitmap images. KDC can display 128x48 black and white and is supported with firmware version 3.05 and above. KTSync will only accept bitmap files using the following name:

Example: Bxxx.bmp

\*\*xxx will specify bitmap index in KDC memory and may be set from 000 to 049
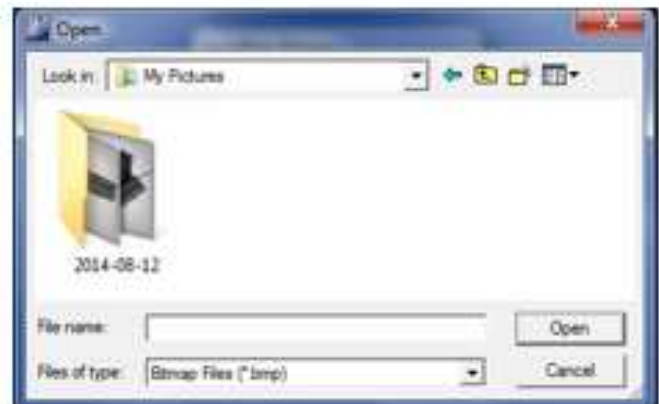


Please refer to KDC programming manual to display downloaded bitmap on KDC.

# 6.6 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.
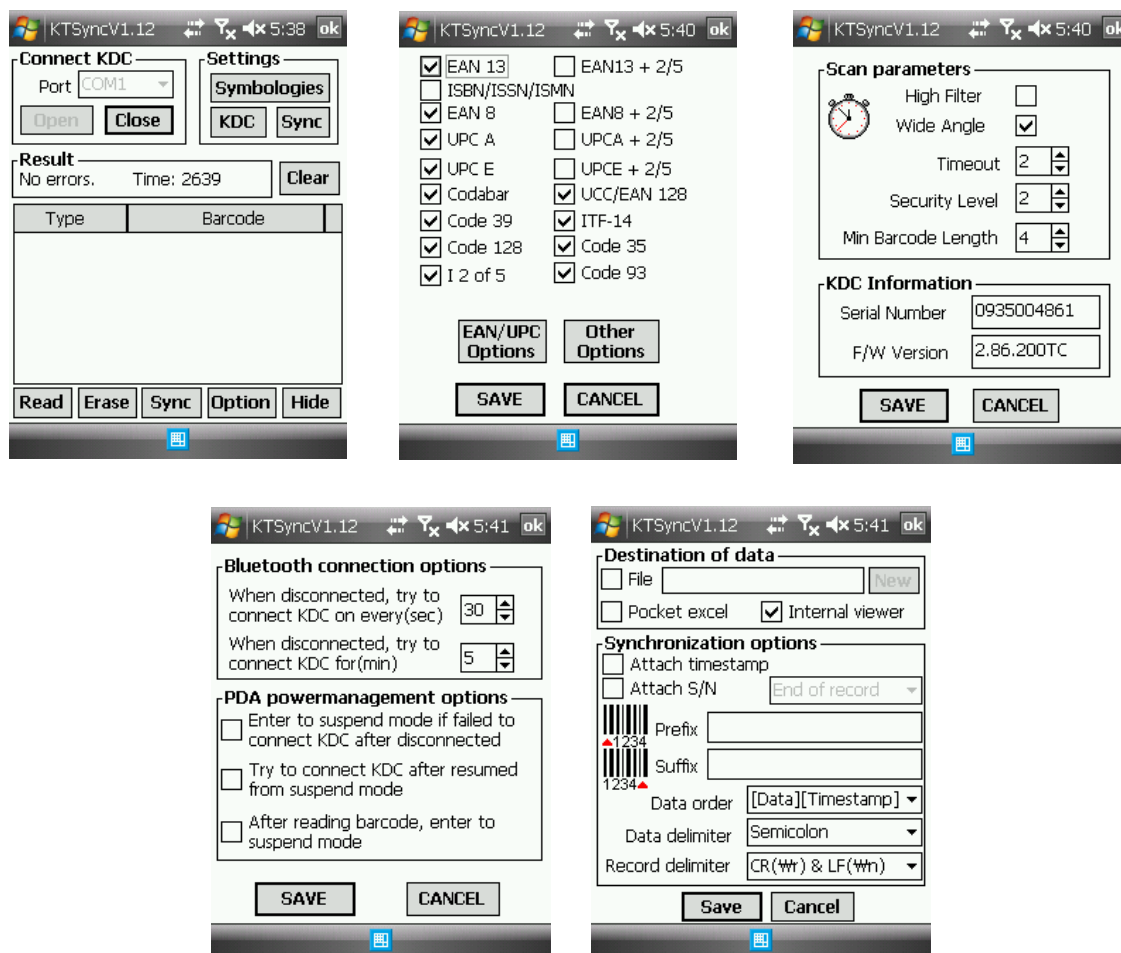


*Figure 38 - Mobile pKTSync*

# 6.7 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.
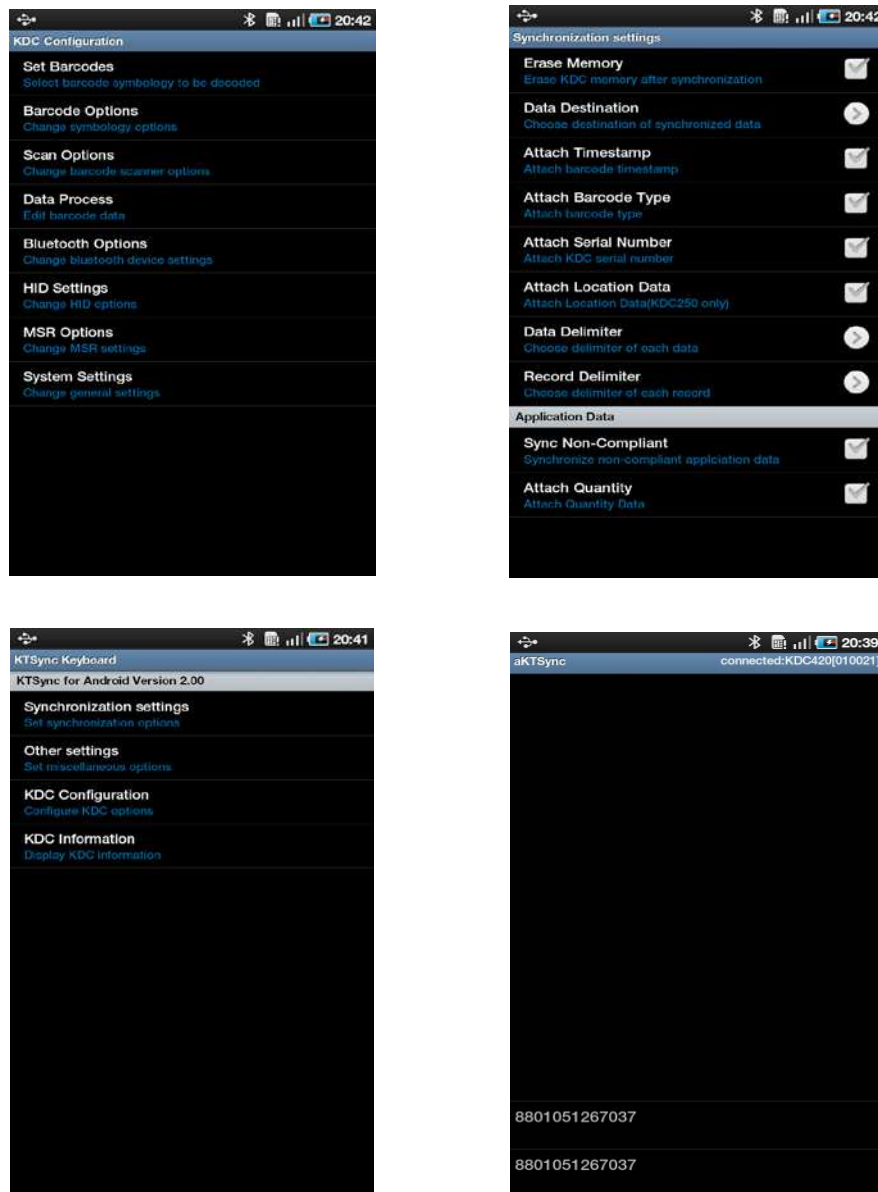
*Figure 39 - Android aKTSync*

## 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.

# 6.8 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**.

| Note | • Users have to disable MFi option in System > MFi menu to use HID Bluetooth profiles.<br>• Users have to RESET the iPhone/iPad/iPod touch to change "HID to MFi mode" or "vice versa" after removing previous KDC connection.<br>KDC with Bluetooth Spec2.1+EDR does not prompt Pin code entry menu. |
| --- | --- |

## KDC20i/30i/200i/250i/270i/270i/350i/400i/470i/500i connection using MFi mode

1. Download and install KTSync from the Apple App Store.

    http://itunes.apple.com/us/app/ktsync/id372916602?mt=8
2. Pair KDC and iOS Device
3. 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.
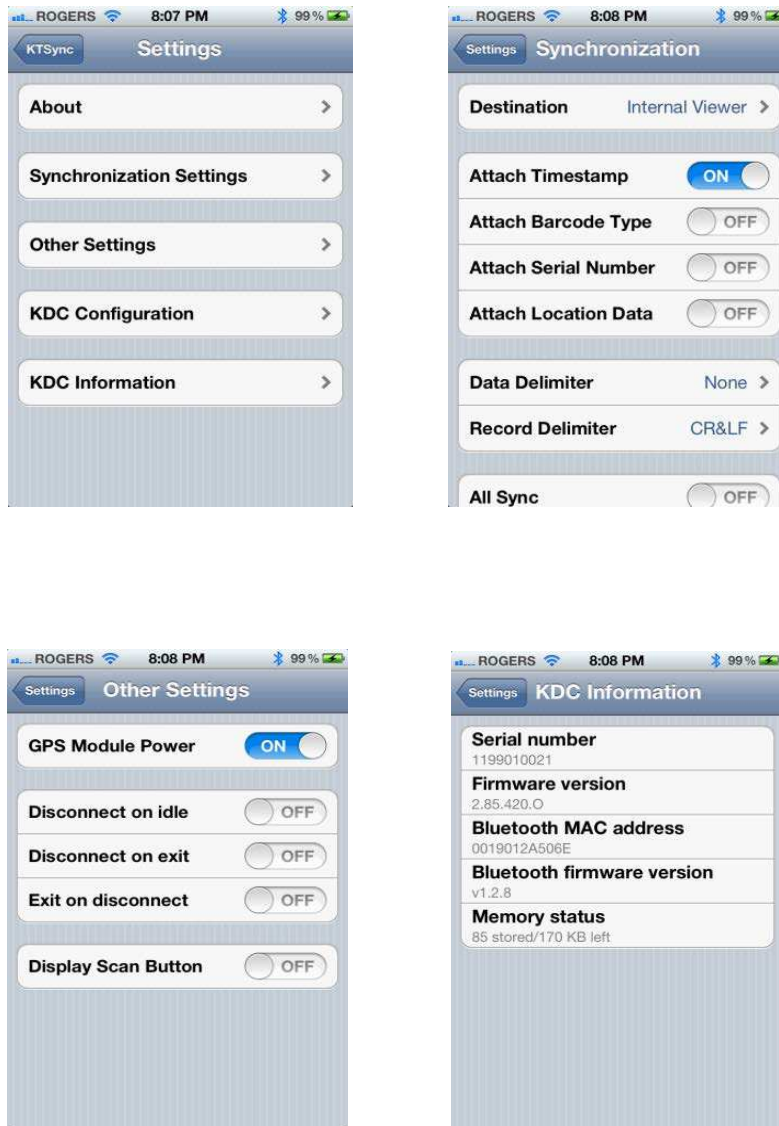
*Figure 40 - iPad/iPhone/iPod touch KTSync*

## 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.

## How to use Keyboard Wedge with iKTSync

1.  Navigate to the iPhone/iPad/iPod Settings > General > Keyboard > Keyboards > Add
    New Keyboard... > Select the KTSync keyboard to be added.
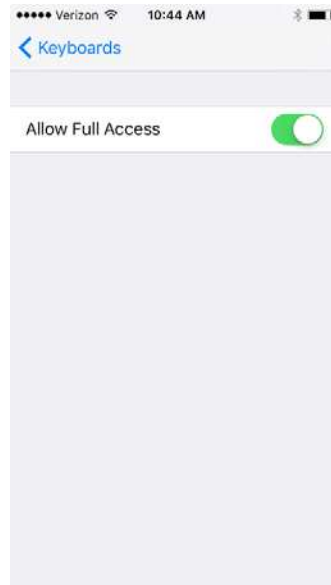
2.  Select the KTSync Keyboard > Allow Full Access.
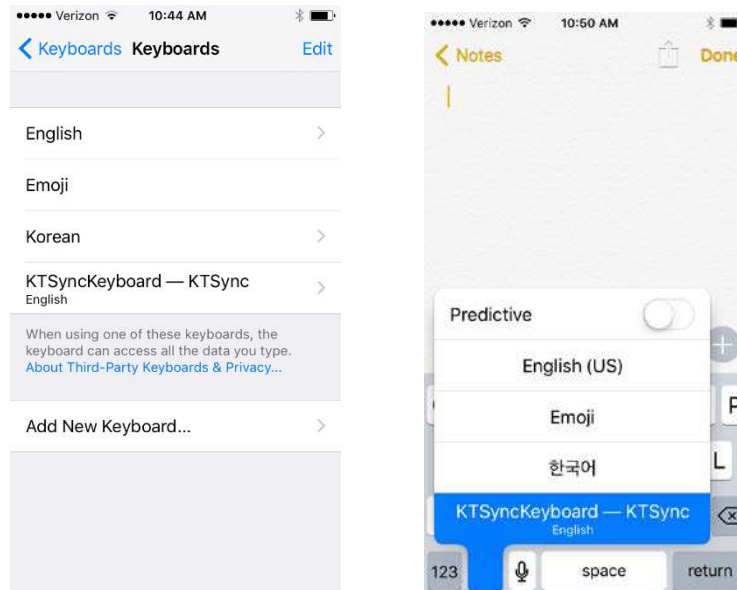
*Figure 41 – iKTSync Keyboard Wedge*

3.  Open up the application you want to scan into, and tap on the screen so the on-screen keyboard appears.    Tap and hold on the globe icon located to the left of the spacebar. Select the KTSync Keyboard & begin scanning!

**Note**    The KDC must be connected to KTSync & the KTSync keyboard must be selected in order for this to work.

# 6.9 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.
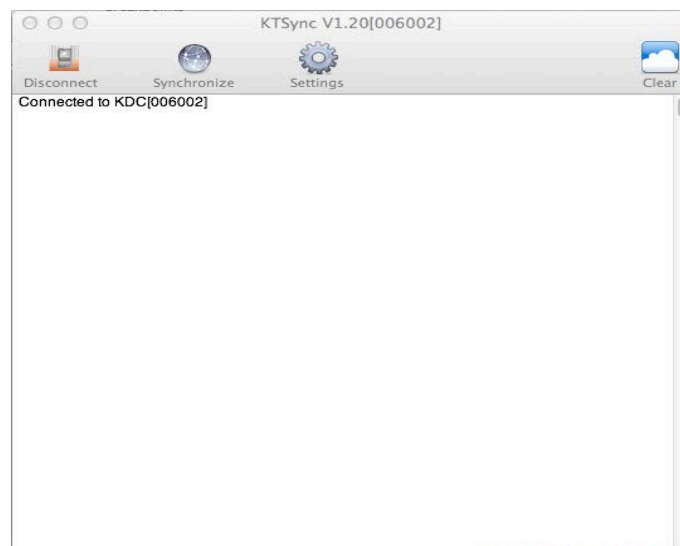
## Connect Button

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.

KDC300002001
KDC200020478
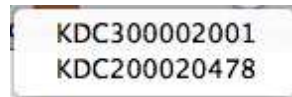
## Disconnect Button

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.
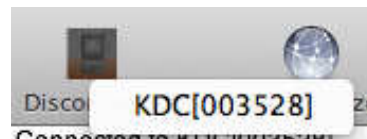
## Synchronize Button

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.
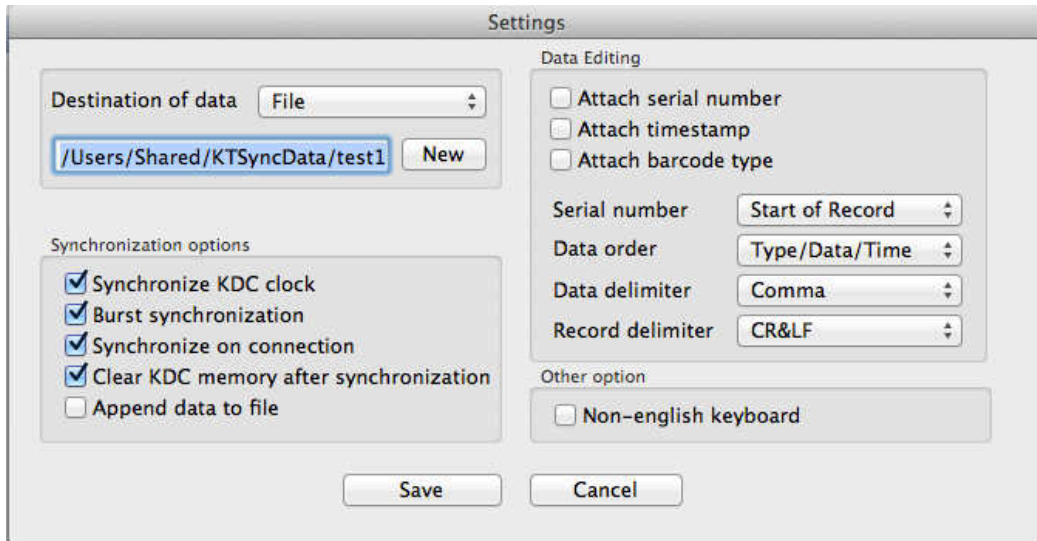
## Destination of Data

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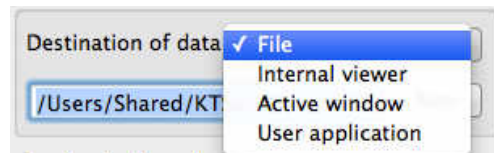


- **File**: The KTSync makes a file name based on 3.11 if file name is specified as an "sn_timestamp.txt". The default directory is  /Users/Shared/KTSyncData directory. The user may define another directory or another filename by clicking the "New" button. The maximum file path length is 128 characters.
- **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.

# 7.Application Generation

KDC FW2.85 does not support the Application Generation feature. Users should upgrade FW2.85 to FW2.86 or FW3.0+ 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.
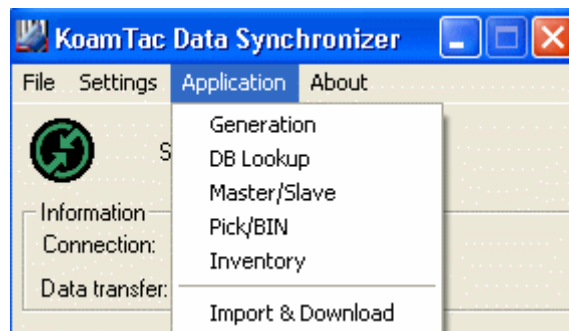


*Figure 42 - Application Menu*

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.
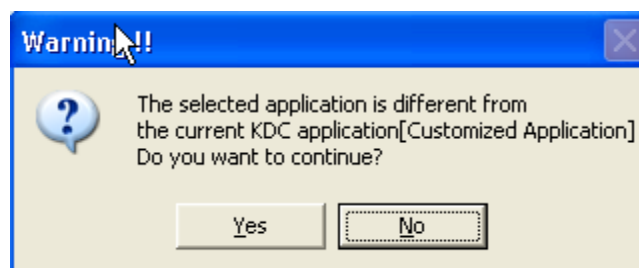


*Figure 43 - Application Warning Window*

**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 or 3.0+.

# 7.1 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 44 - 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 the custom application. Below is a description of each field. These prompts are the same when selecting Generate step 2 and Generate step 3._

**Note**    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 Step1, Step 2, and Step 3.



*Figure 45 - 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 (1D models), 2 and 48 (2D models) 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.

# 7.2 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.
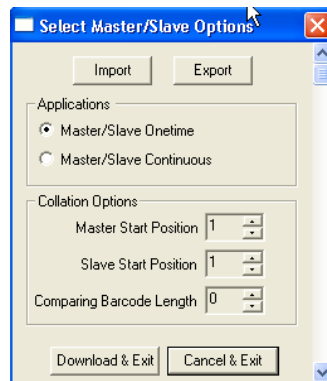


*Figure 46 - Master/Slave Application Settings*

## 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.
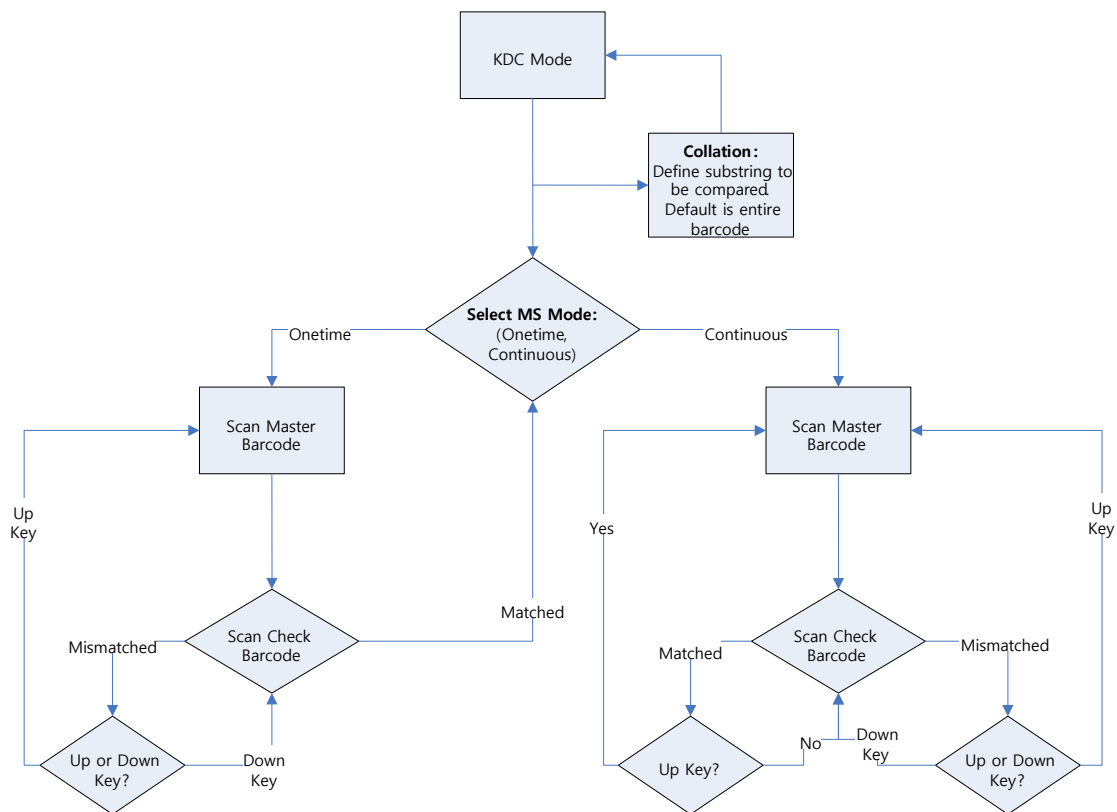


*Figure 47 - Master/Slave Application Flow Chart*

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- **Pick Start Position and Symbology**

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

- **Bin Start Position and Symbology**

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

- **Comparing Barcode Length**

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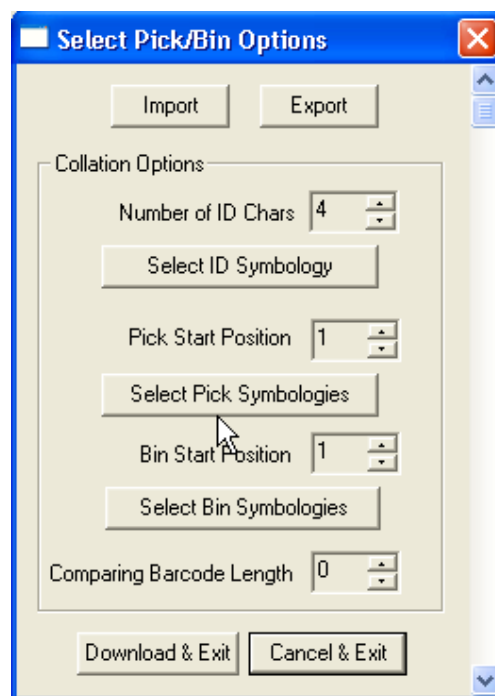


*Figure 48 - Pick/BIN Application Menu*
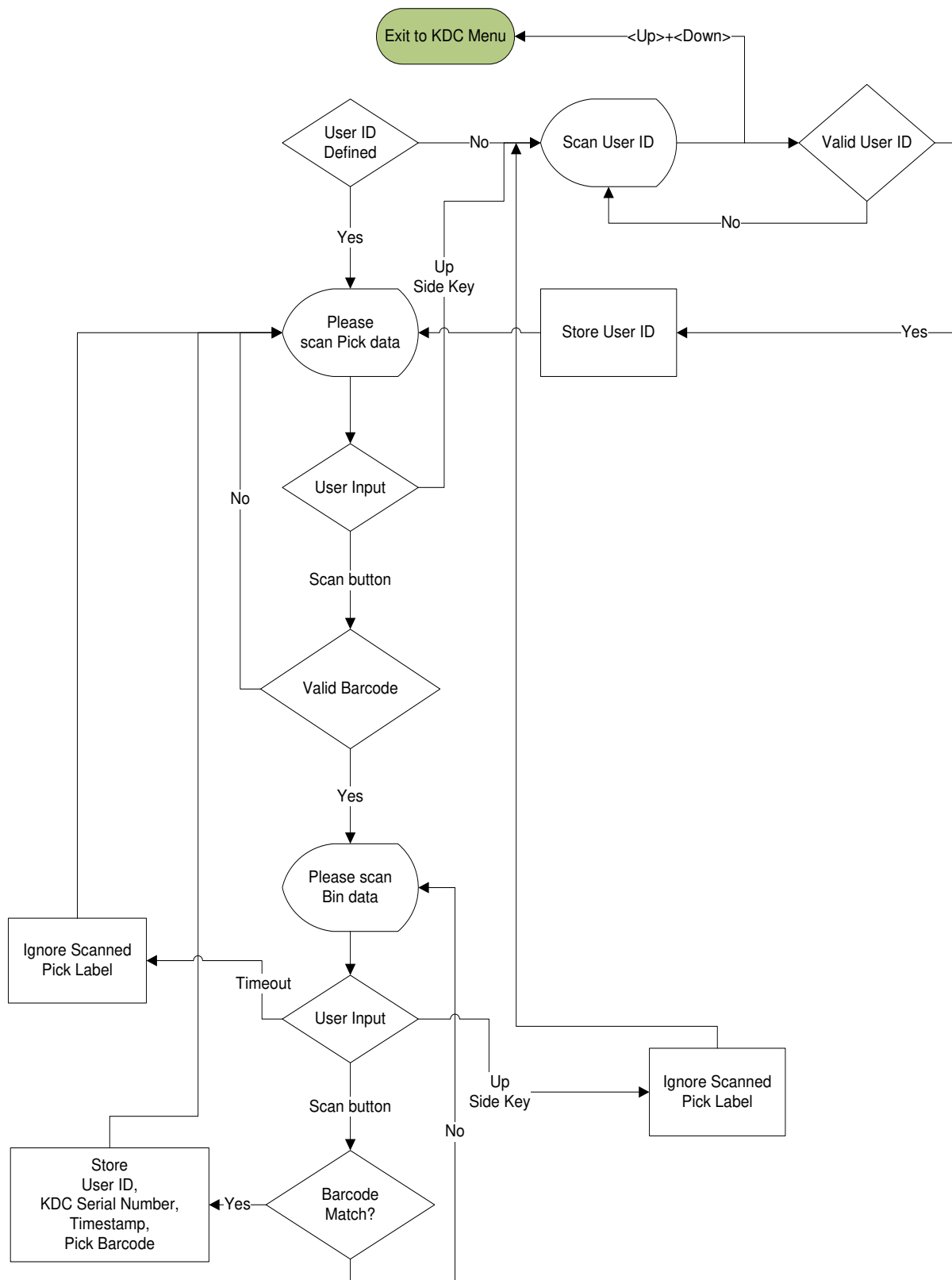
*Figure 49 - Pick/BIN Application Flow Chart*

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## 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 (based on the firmware version v2.86 and v3.0+)*

- The database size may not exceed 800 records (v2.86) / 61,440 records (v3.0+).
- 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.
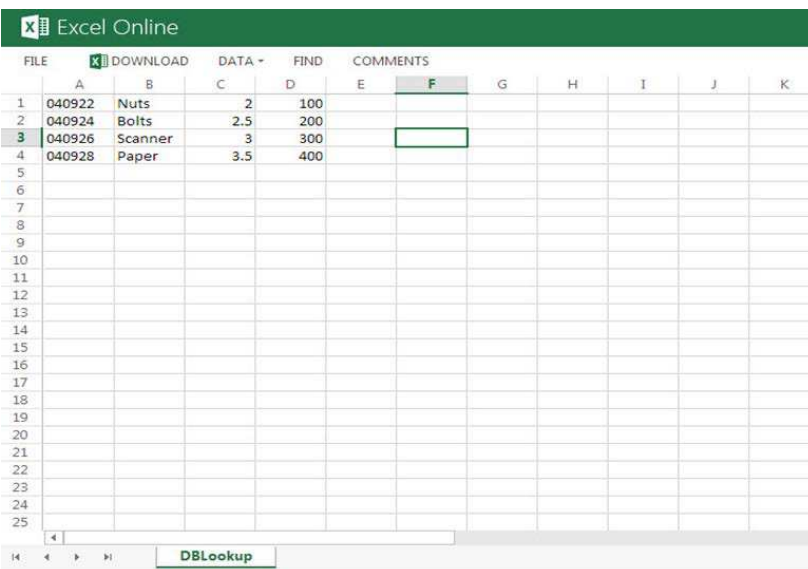
*DB Lookup Fields and Settings (based on the firmware version v2.86 and v3.0+)*

- **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.

## *Formatting Database*

You must first create a database in order to use the DB Lookup Application. If you need to create one, follow the steps below. We recommend using Microsoft Excel when creating a database for formatting purposes. Copy & paste from Excel into a text document, such as, Microsoft Word. Save the Word document as a .txt file.
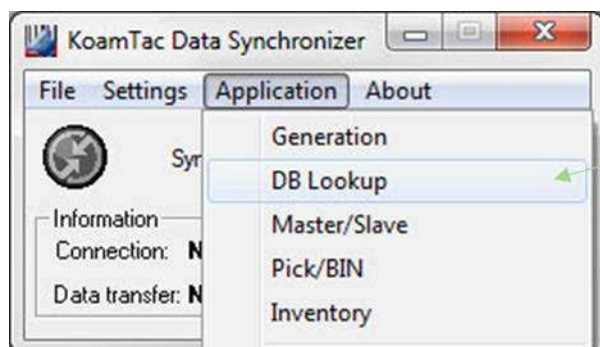


There should be a total of four columns, matching the four lines on your KDC screen. Column A must contain barcode data.

## *Creating an application*

Connect your KDC to your PC. Open KTSync>Application>DB Lookup



First select the DB Lookup application.

## Import the application to your KDC



Step 1,
Select the database
(.txt) file to send to
the scanner.

Step 3,
If you wish to save these
settings in a file, click EXPORT.
After exporting the settings file,
it can be imported to a different
device in the future.

Step 2,
Adjust settings as
needed.

Step 4,
Select Download & Exit to upload
settings and database to the
scanner.
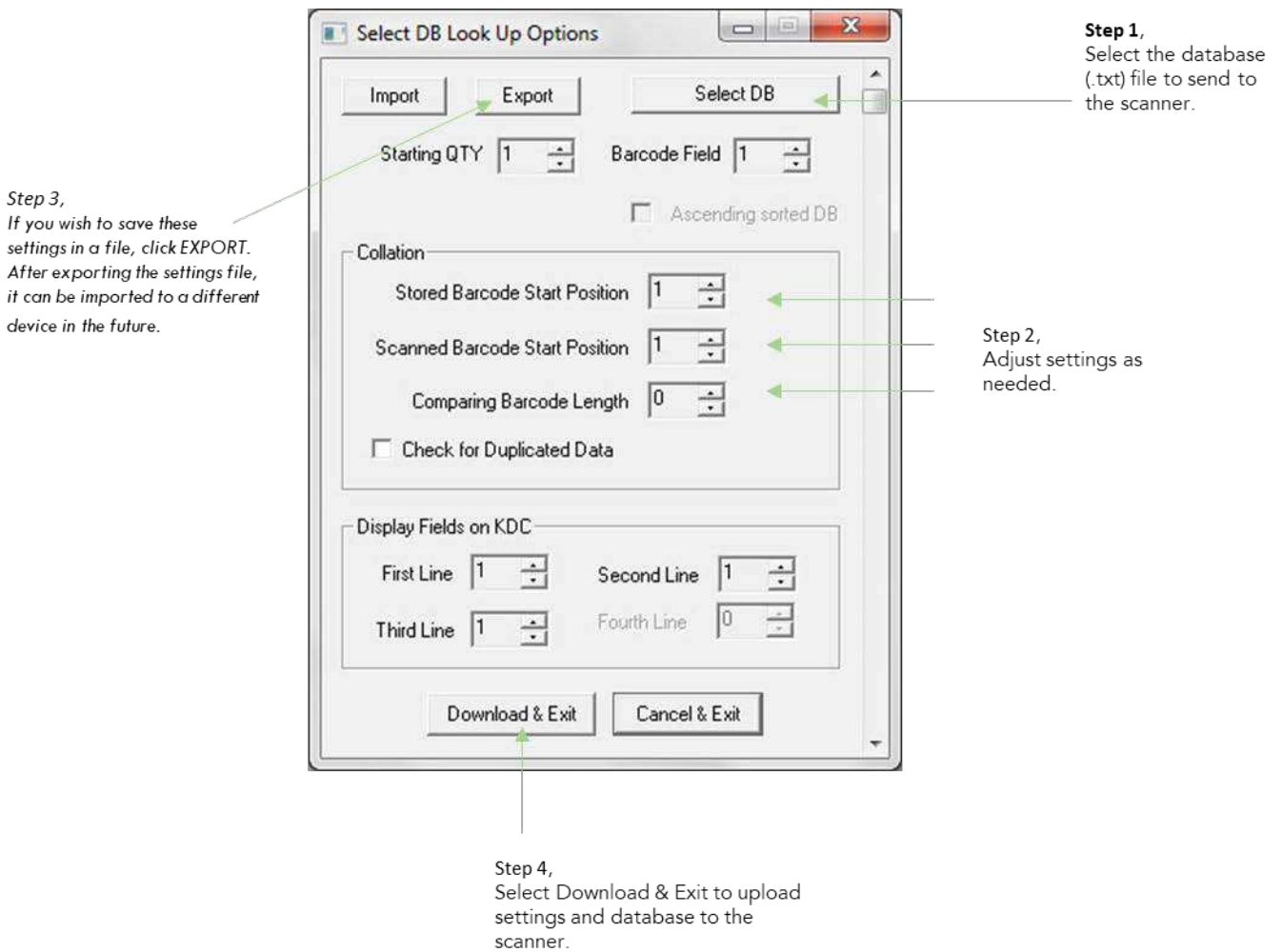
*Figure 50 - DB Lookup Application*

## 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 (based on the firmware version v2.86 and v3.0+)*

- The inventory may not exceed 800 items (v2.86) / 61,440 items (v3.0+).
- 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 (1D models) or 4 to 256 (2D models).
- 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 51 – Inventory Application*

# 8. Troubleshooting

| | | |
|---|---|---|
| **KDC not working** | Dead Battery: No scan light, beep sound, LED light, and display. | Charge battery by connecting KDC to power source using included cable.   KDC may take up to 20 minutes to power on from dead battery. |
| | Hardware failure<br>• Laser scan engine appears as a dot or not emitted at all.<br>• OLED – display screen is distorted or no display.<br>• USB – KDC does not charge at all.   KDC display toggles between messages 'USB Port Connected' and 'USB Port Disconnected' when KDC is plugged into power source. | Contact distributor for technical support |
| **KDC not charging** | Bad battery | Recommends replacing KDC battery annually. |
| | Bad USB port | Power source does not supply proper current to KDC.   Try first using another USB port or power source.   If problem persists the issue may be hardware damage to the USB port or charging cable. |
| **Failed reading** | Failed Reading – KDC is out of scan range or incorrect angle | Try scanning at a closer distance or changing the angle of the scan. |
| | Failed Reading – Scan window is dirty or damaged | Clean the scan window and make sure there are is no dirt or cracks impacting the scan light.   Contact distributor for support if damaged. |
| | Barcode settings - Symbology not enabled or supported | Check barcode settings to make sure Symbology is enabled or contact |
| | Barcode settings – does not meet minimum length | Check scan options. Min. length for laser models is 4 characters and can be lowered to 2. Imager models min. length is 2 and can be lowered to 1. |
| | Failed Reading – poor bar code quality or damage barcode | Try scanning a different bar code. |
| | Failed Reading – KDC is out of scan | Try scanning at a closer distance or |

| | range or incorrect angle | changing the angle of the scan. |
|---|---|---|
| KDC reads wrong barcode | Dirty scan window | Clean scan window |
| | Damaged scan window | Replace scan window |
| | Poor quality barcode | Select only necessary barcodes, increase minimum barcode length, increase security level. |
| KDC unable to connect with host device. | Smartphone – Make sure correct Bluetooth profile is selected.   Use HID iOS or MFi for iOS devices and HID Normal/SPP for Android devices. | Unpair KDC and scan appropriate pairing bar code on quick manual.   Once scanned the LED lights on the KDC will blink Orange indicating HID mode, Red indicating SPP mode, or Green indicating MFi mode. |
| | PC (wired) – Make sure USB cable is connected properly and USB port or cable is not damaged. PC (Bluetooth) – Make sure SPP profile is used and KDC is unplugged from USB cable | Try reinstalling KDC driver, restarting PC and using different USB ports and USB cables. Unplug KDC from USB and repair using Bluetooth. |
| Buffer Full Message | Barcode storage is full. | First, synchronize data using KTSync to save data to PC then clear memory using Memory Reset bar code on the quick manual. |
| Abnormal KTSync Operation on DELL PC | Quickset Utility | Disable Quickset Utility before using KTSync. Dell Quickset utility interrupts normal KTSync operation |
| KDC500 touch keypad not working | WSED Utility | Disable WSED Wireless enable/disable utility.   Delete the folder C:/Program Files/WSED, which contains a file WSED.exe, with the same icon as in the taskbar Delete the registry entry KEY_LOCAL_MACHINE /SOFTWARE/Microsoft/Windows/CurrentVersion/Run/WSED |
| | Foreign object detected | Clear any foreign object (including your finger) placed on the touch keypad and reset KDC. |
| KDC500 Compromise message displayed | Hardware failure | Contact distributor for technical support. |
| | Security Attack detected | Contact distributor for technical support. |

*Table 6 - Troubleshooting Techniques*

# 9.Contact Information

**KOAMTAC**

CORPORATE HEADQUARTERS

116 Village Blvd., Suite 305

Princeton, NJ 08540, USA

Phone: 609-256-4700, FAX: 609-228-4373

Email: support@koamtac.com

**For more information, visit our website - 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.

|  | KDC20/100/200/250/270L/270D/350L/410/411/415/470L/470D/500L | KDC30/270C/280C/300/350C/420/421/425/450/470C/500C |
|---|---|---|
| 1D Barcodes | EAN13, EAN8, UPCA, UPCE, Bookland EAN, EAN13 with Addon, EAN8 with Add-on, UPCA with Add-on, UPCE with Add-on, Interleave 2 of 5, ITF14, Code128, Codabar, GS1-128, Code39, Code93, & Code35 | Codabar, Code11, Code32, Code39, Code128, EAN8, EAN13, GS1-128, I2of5, MSI, Plessey, PosiCode, GS1 DATABAR OMNI, GS1 Limited, GS1 Expanded, S2of5IA, S2of5ID, TLC39, Telepen, Trioptic, UPCA, & UPCE |
| 2D Barcodes | N/A | AztecCode, AztecRunes, CodablockF,Code 16K, Code49, DataMatrix, MaxiCode, MicroPDF, PDF417, & QRCode and HanXin Code |
| Postal Barcodes | N/A | AusPost, MayadaPost, ChinaPost, JapanPost, KoreaPost, KixPost, Planet Code, Postnet (US), & UKPost |
| OCR Fonts | N/A | OCR-A, OCR-B, OCRUSCurrency, OCRMICRE13B, & OCRSEMIFONT |

Table 7 - Symbologies Supported by KDC

## 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 | |
|---|---|---|---|
| Auto-discrimination | If add-on symbol is present, then it is also decoded; otherwise, only the EAN-13 symbol is decoded. | true | true |
| With add-on | Only EAN-13 barcodes with 2 or 5 add-on symbols are decoded. | false | true |
| Without add-on | 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_ReturnCh eckDigit |
| --- | --- | --- | --- |
| 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 (KDC20/100/200/250/270L/270D/410/411/415/470L/470D)

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.

## Transmission of "Check Digit"

| 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"*

By default, the che...        ...itted. Its transmission may be enabled for all symbologies by enabling **ReturnCheckDigit** option.

| Option Selected | Is the check digit returned? | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| 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:**_   _In case of EAN-13, it takes up 20 bytes. The maximum number of EAN-13 barcodes that may be saved is STORAGE_SIZE/20. For example, in case of 4MB, it may store maximum 204,800 barcodes and in case of 8MB, it may store maximum 409,600 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 KDC20/100/200/250/270L/270D/350L/410/411/415/470L/470D/500L support 1D barcode only. KDC30/270C/280C/300/350C/420/421/425/450/470C/475C/500C support most major 1D, 2D barcode symbologies and OCR.

### KDC30/270C/280C/300/350C/420 /421/425/450/470C/500C

#### 2D Barcodes
AztecCode, AztecRunes, CodablockF, Code16K, Code49, DataMatrix, MaxiCode, MicroPDF, PDF417, QRCode, and HanXin Code

#### 1D Barcodes
Codabar, Code11, Code32, Code39, Code128, EAN8, EAN13, GS1-128, I2of5, MSI, Plessey, PosiCode, GS1 DATABAR OMNI, GS1 Limited, GS1 Expanded, S2of5IA, S2of5ID, TLC39, Telepen, Trioptic, UPCA, and UPCE

#### Postal Barcodes
AusPost, CanadaPost, ChinaPost, JapanPost, KoreaPost, KixPost, Planet Code, Postnet (US), and UKPost

#### OCR Fonts
OCR-A, OCR-B, OCRPassport, OCRMICRE13B, and OCRSEMIFONT

### KDC20/100/200/250/270L/270D/350L /410/411/415/470L/470D/500L

#### 1D Barcodes

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

11.2

*Table 14 – Symbologies supported by KDC*

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(except KDC470/475) have one Ultra-mini USB port that supports USB to Serial protocol and Bluetooth that supports HID/SPP/MFi *Bluetooth* profiles. KDC270 and KDC470/475 have one Micro USB port 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 *Bluethooth* profiles. KDC500 has one micro USB port that supports USB to Serial protocol and Bluetooth that supports SPP/MFi *Bluetooth* profile. KDC280 has one Micro USB port and Bluetooth Low Energy that supports HID, SPP and OPEN(Guest) 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 KDC30/250/300/270/280, and 5 hours to charge the KDC350/400/470/500.

Q: How many barcodes may a fully charged KDC scan?
A: If the user scans a barcode every 1 seconds, KDC100/30 scans more than 12,000 barcodes, KDC20 scans more than 11,000 barcodes, KDC200 scans more than 8,500 barcodes, KDC250/270L/270D scans more than 33,000 scans, KDC270C/280C/300 scans more than 22,000 scans and 2D models of KDC350/400/470/500 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. **KDC250/270L/270D** lasts 7 days while connected in Bluetooth and 120 days if not connected in Bluetooth. **KDC30/270C/280C/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. **KDC410/415/420/425/430/470** last more than 8 days while connected in Bluetooth and 20 days while if not connected in Bluetooth. **KDC450/470** 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. **KDC500** lasts more 7 days while connected in Bluetooth and 10 days if not connected in Bluetooth.

**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 store.koamtac.com or from local KDC reseller.

## 11.4    Memory

Q: How many barcodes may be stored in the KDC?
A: 4MB version of KDC100M/200M/250M/300M/350 may store maximum of 204,800 barcodes and 8MB version and KDC270/280/470 may store maximum of 409,600 barcodes . KDC20/30 have 150KB data memory which may store maximum 7,680 barcodes. KDC41x/42x has 80KB data memory and may store maximum 4,096 barcodes. KDC500 has 3MB data memory which may store maximum 153,600 barcodes.

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 KDC200/250/270/280/300/350, which supports host devices running on Android®, iPhone/iPad/iPod touch, Blackberry®, Windows® XP/Vista/7/8/10/Mobile 5.0+. KTSync® provides keyboard wedging program only for KDC20/30/400/470. KDC100 and KDC500 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/7/8/10/Mobile 5.0+ and Android is available on KOAMTAC support page. Android®, iPhone/iPad/iPod touch, Blackberry®, and Mac® SDK are available through KOAMTAC authorized distributors.
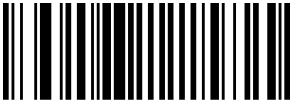
# 12. Appendix C – 1D Special Barcodes (KDC20/100/200/250/270L/270D/350L/410/415/470L/470D)

## 12.1　Set Symbologies

| Enable EAN13 | Disable EAN13 |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖ 2000001 | ‖‖‖‖‖‖‖‖‖‖ 2100001 |
| Enable EAN8 | Disable EAN8 |
| ‖‖‖‖‖‖‖‖‖‖ 2000002 | ‖‖‖‖‖‖‖‖‖‖ 2100002 |
| Enable UPCA | Disable UPCA |
| ‖‖‖‖‖‖‖‖‖‖ 2000004 | ‖‖‖‖‖‖‖‖‖‖ 2100004 |
| Enable UPCE | Disable UPCE |
| ‖‖‖‖‖‖‖‖‖‖ 2000008 | ‖‖‖‖‖‖‖‖‖‖ 2100008 |
| Enable Code39 | Disable Code39 |
| ‖‖‖‖‖‖‖‖‖‖ 2000010 | ‖‖‖‖‖‖‖‖‖‖ 2100010 |

| Enable ITF14 | Disable ITF14 |
|---|---|
| 2000020 | 2100020 |
| Enable Code128 | Disable Code128 |
| 2000040 | 2100040 |
| Enable I2 of 5 | Disable I2 of 5 |
| 2000080 | 2100080 |
| Enable Codabar | Disable Codabar |
| 2000100 | 2100100 |
| Enable GS1-128 | Disable GS1-128 |
| 2000200 | 2100200 |
| Enable Code93 | Disable Code93 |
| 2000400 | 2100400 |
| Enable Code35 | Disable Code35 |
| 2000800 | 2100800 |

| Enable Bookland EAN | Disable Bookland EAN |
|:---:|:---:|
| 2001000 | 2101000 |
| Enable EAN13 with Addon | Disable EAN13 with Addon |
| 2002000 | 2102000 |
| Enable EAN8 with Addon | Disable EAN8 with Addon |
| 2004000 | 2104000 |
| Enable UPCA with Addon | Disable UPCA with Addon |
| 2008000 | 2108000 |
| Enable UPCE with Addon | Disable UPCE with Addon |
| 2010000 | 2110000 |
| Enable GS1 Omni | Disable GS1 Omni |
| 2020000 | 2120000 |
| Enable GS1 Limited | Disable GS1 Limited |
| 2040000 | 2140000 |

| Enable GS1 Expanded | Disable GS1 Expanded |
|---|---|
| ‖‖ ‖ ‖‖‖ ‖‖‖‖‖‖‖ ‖ ‖‖ ‖‖‖ ‖ | ‖‖ ‖ ‖‖‖ ‖‖‖‖‖‖‖ ‖ ‖‖ ‖‖‖ ‖ |
| 2080000 | 2180000 |

## 12.2    Barcode Options

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

| Verify check digit for I2of5 | Do NOT verify check digit for I2of5 |
|---|---|
| 3000400000 | 3100400000 |
| Verify check digit for Code39 | Do NOT verify check digit for Code39 |
| 3000800000 | 3100800000 |
| Return check digit for I2of5 | Do NOT return check digit for I2of5 |
| 3004000000 | 3104000000 |
| Return check digit for Code39 | Do NOT return check digit for Code39 |
| 3008000000 | 3108000000 |
| Return check digit for UPCE | Do NOT return check digit for UPCE |
| 3010000000 | 3110000000 |
| Return check digit for UPCA | Do NOT return check digit for UPCA |
| 3020000000 | 3120000000 |
| Return check digit for EAN8 | Do NOT return check digit for EAN8 |
| 3040000000 | 3140000000 |

| Return check digit for EAN13 | Do NOT return check digit for EAN13 |
|---|---|
| ‖‖ ‖ ‖‖‖ ‖‖‖‖ ‖‖ ‖‖‖ ‖‖‖<br>3080000000 | ‖‖ ‖ ‖‖‖ ‖‖‖‖ ‖‖ ‖‖‖ ‖‖‖<br>3180000000 |

## 12.3     Delete Last Scanned Barcode

Delete Last Scanned Barcode
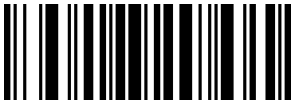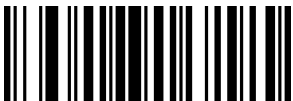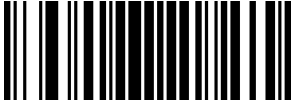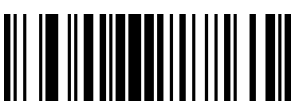
80001

# 12.4    Scan Options
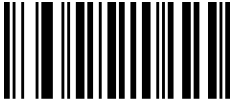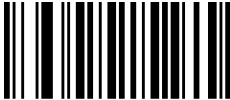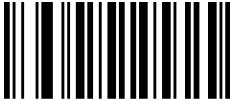
| Wide Scan Angle* | Narrow Scan Angle* |
|---|---|
| 3000004000 | 3100004000 |
| Normal Filter Mode* | High Filter Mode* |
| 3100008000 | 3000008000 |
| Enable Auto Trigger | Disable Auto Trigger |
| 5A001 | 5A010 |
| Reread Delay = Continuous | Reread Delay = Short |
| 5B000 | 5B001 |
| Reread Delay = Medium | Reread Delay = Long |
| 5B002 | 5B003 |
| Reread Delay = Extra Long | |
| 5B004 | |
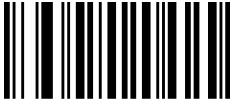
*Opticon laser only

# 12.5    Scan Timeout

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

# 12.6　Minimum Barcode Length

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

| Minimum Length = 16 | Minimum Length = 17 |
|---|---|
| 010 | 011 |
| Minimum Length = 18 | Minimum Length = 19 |
| 012 | 013 |
| Minimum Length = 20 | Minimum Length = 21 |
| 014 | 015 |
| Minimum Length = 22 | Minimum Length = 23 |
| 016 | 017 |
| Minimum Length = 24 | Minimum Length = 25 |
| 018 | 019 |
| Minimum Length = 26 | Minimum Length = 27 |
| 01A | 01B |
| Minimum Length = 28 | Minimum Length = 29 |
| 01C | 01D |

| | |
|---|---|
| Minimum Length = 30 | Minimum Length = 31 |
| 01E | 01F |
| Minimum Length = 32 | Minimum Length = 33 |
| 020 | 021 |
| Minimum Length = 34 | Minimum Length = 35 |
| 022 | 023 |
| Minimum Length = 36 | |
| 024 | |

## 12.7     ScanIfConnect

| ScanIfConnect = Enable | ScanIfConnect = Disable |
|---|---|
| ‖‖ ‖ ‖‖‖ ‖ ‖‖ ‖‖‖ ‖‖ ‖ ‖‖‖ ‖ <br> 5I001 | ‖‖ ‖ ‖‖‖ ‖ ‖‖ ‖‖‖ ‖‖ ‖ ‖‖‖ <br> 5I010 |

# 12.8    Security Level(Laser model only)

| Security level = 1 | Security level = 2 |
|---|---|
| 41 | 42 |
| Security level = 3 | Security level = 4 |
| 43 | 44 |

# 12.9 Data Process - Wedge/Store, Enter Key, Extend Key

| Wedge Only | Wedge & Store Always |
|---|---|
| 82000 | 82001 |
| Store Only | Save if Sent |
| 82002 | 82003 |
| Save if Not Sent | |
| 82004 | |
| Enable Enter Key (KDC350L/D Only) | Disable Enter Key (KDC350L/D Only) |
| 8E001 | 8E000 |
| Enable Extend Key (KDC350L/D Only) | Disable Extend Key (KDC350L/D Only) |
| 8X001 | 8X000 |

# 12.10    Data Process - Data Edit

| Start Prefix Enter | Start Suffix Enter |
|---|---|
| 83000 | 83001 |
| Finish Prefix/Suffix Enter | Cancel Prefix/Suffix Enter |
| 83002 | 83003 |
| Delete Prefix | Delete Suffix |
| 83004 | 83005 |
| Display Prefix | Display Suffix |
| 83006 | 83007 |
| AIM ID None | AIM ID In Prefix |
| 8B000 | 8B001 |
| AIM ID In Suffix | |
| 8B002 | |
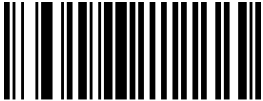
## 12.11    Data Process - Data Format and Handshake

| Data format = Barcode only | Data format = Packet data |
|---|---|
| 84001 | 84010 |
| Enable Handshake | Disable Handshake |
| 86001 | 86010 |
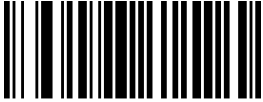
# 12.12  Data Process - Termination Character & Duplicate Check

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

# 12.13 Data Process - Termination Character & Duplicate Check

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

| | |
|---|---|
| Bluetooth Profile = MFi | Bluetooth Profile = SPP2.0 |
| 6A002 | 6A003 |
| Bluetooth Profile = HID Normal | |
| 6A004 | |
| Enable Auto Connect | Disable Auto Connect |
| 62001 | 62010 |
| Enable Auto Reconnect | Disable Auto Reconnect |
| 6R001 | 6R010 |
| Enable Auto Power On | Disable Auto Power On |
| 66001 | 66010 |
| Enable Auto Power Off | Disable Auto Power Off |
| 64001 | 64010 |
| Enable Beep Warning | Disable Beep Warning |
| 68001 | 68010 |

| | |
|---|---|
| Enable Power Off Msg | Disable Power Off Msg |
| 63001 | 63010 |
| Display BT MAC Address | Display BT FW Version |
| 63100 | 63200 |
| Enable Wakeup Nulls | Disable Wakeup Nulls |
| 63401 | 63410 |
| Enable BT Toggle | Disable BT Toggle |
| 6B001 | 6B010 |
| Enable BT Disconnect Button | Disable BT Disconnect Button |
| 6B101 | 6B110 |
| Enable Auto Pairing | Disable Auto Pairing |
| 6N001 | 6N010 |

## 12.14   Bluetooth Auto Power On Time

| | |
|---|---|
| Auto Power On Time = Disabled | Auto Power On Time = 1sec |
| 67000 | 67001 |

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

## 12.15　Bluetooth Power Off Time

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

| BT Power Off Time = 15min | BT Power Off Time = 16min |
|:---:|:---:|
| 6900F | 69010 |
| BT Power Off Time = 17min | BT Power Off Time = 18min |
| 69011 | 69012 |
| BT Power Off Time = 19min | BT Power Off Time = 20min |
| 69013 | 69014 |
| BT Power Off Time = 21min | BT Power Off Time = 22min |
| 69015 | 69016 |
| BT Power Off Time = 23min | BT Power Off Time = 24min |
| 69017 | 69018 |
| BT Power Off Time = 25min | BT Power Off Time = 26min |
| 69019 | 6901A |
| BT Power Off Time = 27min | BT Power Off Time = 28min |
| 6901B | 6901C |

| BT Power Off Time = 29min | BT Power Off Time = 30min |
|---|---|
| 6901D | 6901E |

## 12.16    HID Auto Lock Time

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

# 12.17    HID Keyboard

| HID Keyboard = US | HID Keyboard = German |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>6F000 | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>6F001 |
| **HID Keyboard = French** | **HID Keyboard = Italian** |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>6F002 | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>6F003 |
| **HID Keyboard = Spanish** | |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>6F004 | |

# 12.18    HID Initial Delay

| HID Initial Delay = Disabled | HID Initial Delay = 1second |
|---|---|
| H0000 | H0001 |
| HID Initial Delay = 2seconds | HID Initial Delay = 3seconds |
| H0002 | H0003 |
| HID Initial Delay = 5seconds | HID Initial Delay = 10seconds |
| H0005 | H000A |

# 12.19 HID Character Delay

| HID Character Delay = Disabled | HID Character Delay = 10msec |
|---|---|
| H1000 | H100A |
| HID Character Delay = 20msec | HID Character Delay = 30msec |
| H1014 | H101E |
| HID Character Delay = 50msec | HID Character Delay = 100msec |
| H1032 | H1064 |
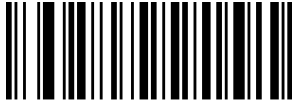
## 12.20    HID Control Character

| HID Control Character = Disabled | HID Control Character = Alt+Numpad |
|---|---|
| H2000 | H2001 |
| HID Control Character = ^+Character | HID Control Character = Replace with '\|' |
| H2002 | H2003 |

# 12.21   System

※  Note 1. 4M Model Only

※  Note 2. 8M Model Only

| Memory Size = 0.5M / 3.5M [Note1,2] | Memory Size = 1M / 3M [Note1,2] |
|---|---|
| 5E000 | 5E001 |
| Memory Size = 2M / 2M [Note1,2] | Memory Size = 3M / 1M [Note1,2] |
| 5E002 | 5E003 |
| Memory Size = 4M / 0M [Note1,2] | Confirm Memory Size Change [Note1,2] |
| 5E004 | 5E100 |
| Memory Size = 5M / 3M [Note2] | Memory Size = 6M / 2M [Note2] |
| 5E005 | 5E006 |
| Memory Size = 7M / 1M [Note2] | Memory Size = 8M / 0M [Note2] |
| 5E007 | 5E008 |
| Memory Status | Reset Memory |
| 50001 | 50002 |

| Erase Memory | Reset App data |
|:---:|:---:|
| 50003 | 50004 |
| Reset BT Registry | |
| 50005 | |
| Enable Auto Erase | Disable Auto Erase |
| 5F001 | 5F010 |
| Date/Time | Battery |
| 52001 | 53001 |
| Display Version | |
| 54001 | |
| Lock Button | Unlock Button |
| 55001 | 55010 |
| Enable Beep Sound | Disable Beep Sound |
| 56001 | 56010 |

| High Beep Volume | Low Beep Volume |
|:---:|:---:|
| **5D001** | **5D010** |
| Enable Auto Menu Exit | Disable Auto Menu Exit |
| **58001** | **58010** |
| Enable MFi Mode | Disable MFi Mode |
| **6M001** | **6M010** |
| Enable Vibrator | Disable Vibrator |
| **5G001** | **5G010** |
| Scan Success = No vibration | Scan Success = 1 vibration |
| **5S000** | **5S001** |
| Scan Success = 2 vibrations | Scan Success = 3 vibrations |
| **5S002** | **5S003** |
| Scan Success = 4 vibrations | Scan Success = 5 vibrations |
| **5S004** | **5S005** |

| | |
|---|---|
| Scan Failure = No vibration | Scan Failure = 1 vibration |
| 5S200 | 5S201 |
| Scan Failure = 2 vibrations | Scan Failure = 3 vibrations |
| 5S202 | 5S203 |
| Scan Failure = 4 vibrations | Scan Failure = 5 vibrations |
| 5S204 | 5S205 |
| Enable Port Status | Disable Port Status |
| 58101 | 58100 |
| Display Format = Time & Battery | Display Format = Type & Time |
| 58200 | 58201 |
| Display Format = Type & Battery | Display Format = Memory Status |
| 58202 | 58203 |
| Display Format = GPS Data (GPS Model) | Display Format = Barcode Only |
| 58204 | 58205 |

| | |
|---|---|
| Display Format = Graphic<br><br>||||\|\|||\||\|\|\||\|||||\||\|\||\||||<br>58206 | |
| Enable Scrolling<br><br>||||\|\|||\||\|\|\||\|||||\||\|\||\||||<br>59001 | Disable Scrolling<br><br>\|||\|\|||\||\|\|\||\|||||\||\|\||\||||<br>59010 |
| Factory Default<br><br>||\|\|||\||\|\|\||\|||||\||\|\||\||||<br>57001 | KDC Reset<br><br>\|||\|\|||\||\|\|\||\|||||\||\|\||\||||<br>A0000 |
| Enable Backup Battery (KDC20/20D Only)<br><br>\|||\|\|||\||\|\|\||\|||||\||\|\||\||||<br>5R001 | Disable Backup Battery (KDC20/20D Only)<br><br>\|||\|\|||\||\|\|\||\|||||\||\|\||\||||<br>5R010 |
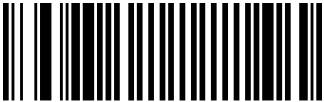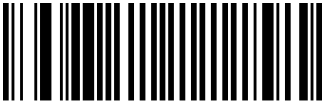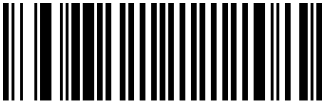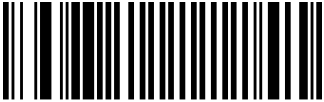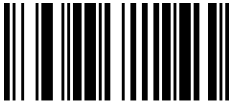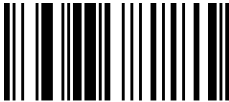
# 12.22　Sleep Timeout

| | |
|---|---|
| Sleep Timeout = Disable<br><br>51000 | Sleep Timeout = 1sec<br><br>51001 |
| Sleep Timeout = 2sec<br><br>51002 | Sleep Timeout = 3sec<br><br>51003 |
| Sleep Timeout = 4sec<br><br>51004 | Sleep Timeout = 5sec<br><br>51005 |
| Sleep Timeout = 10sec<br><br>5100A | Sleep Timeout = 20sec<br><br>51014 |
| Sleep Timeout = 30sec<br><br>5101E | Sleep Timeout = 1min<br><br>5103C |
| Sleep Timeout = 2min<br><br>51078 | Sleep Timeout = 5min<br><br>5112C |
| Sleep Timeout = 10min<br><br>51258 | |
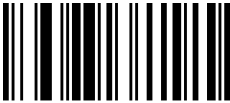
# 12.23　ETC

| Enable Reverse Direction | Disable Reverse Direction |
|---|---|
| 3000000002 | 3100000002 |
| Enable Verify check digit | Disable Verify check digit |
| 3002000000 | 3102000000 |
| Enable Return check digit | Disable Return check digit |
| 3001000000 | 3101000000 |

## 12.24    Function

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

# 12.25    Number
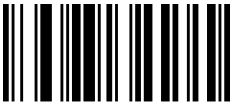
| 0 | 1 |
|---|---|
| <br>7130 | <br>7131 |
| **2** | **3** |
| <br>7132 | <br>7133 |
| **4** | **5** |
| <br>7134 | <br>7135 |
| **6** | **7** |
| <br>7136 | <br>7137 |
| **8** | **9** |
| <br>7138 | <br>7139 |

# 12.26    Lower Case Alphabet

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

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

# 12.27    Upper Case Alphabet
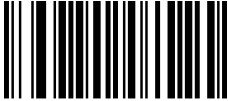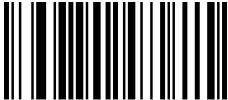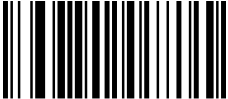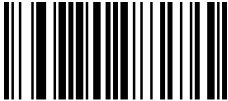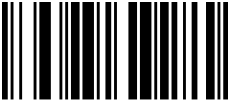
| A | B |
|---|---|
| 7141 | 7142 |
| C | D |
| 7143 | 7144 |
| E | F |
| 7145 | 7146 |
| G | H |
| 7147 | 7148 |
| I | J |
| 7149 | 714A |
| K | L |
| 714B | 714C |
| M | N |
| 714D | 714E |

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

# 12.28   Control Character

| BS | TAB |
|---|---|
| 7108 | 7109 |
| LF | VT |
| 710A | 710B |
| CR | ESC |
| 710D | 711B |
| Space | DEL |
| 7120 | 717F |
| Shift + Tab | |
| 7111 | |

# 12.29    Symbol Character

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

| / | : |
|---|---|
| 712F | 713A |
| ; | < |
| 713B | 713C |
| = | > |
| 713D | 713E |
| ? | @ |
| 713F | 7140 |
| [ | \ |
| 715B | 715C |
| ] | ^ |
| 715D | 715E |
| _ | ` |
| 715F | 7160 |

| { | \| |
|---|---|
| 717B | 717C |
| } | ~ |
| 717D | 717E |
| Start String | Stop String |
| 7201 | 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.
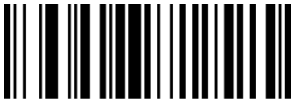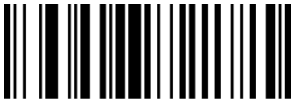
# 12.30 GPS (GPS Model Only)

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

## 12.31　GPS/BT Auto Power Off Timeout

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

## 12.32    NFC (NFC Model Only)

| Enable NFC Power | Disable NFC Power |
|:---:|:---:|
| N0001 | N0010 |
| NFC Data Format = Data only | NFC Data Format = Packet data |
| N1001 | N1000 |
| UID Only = Enable | UID Only = Disable |
| N3001 | N3000 |
| New Data Format = Enable | New Data Format = Disable |
| N4001 | N4010 |

# 12.33　USB Disk (M Model Only)

| USB Serial Mode | USB Disk Mode |
|---|---|
| U0000 | U0001 |
| **USB HID Mode** | **Format USB Disk** |
| U0002 | U1000 |
| **Data Format = Data** | **Data Format = Data, Time** |
| U2000 | U2001 |
| **Data Format = Data, Type** | **Data Format = Data, Time, Type** |
| U2002 | U2003 |

## 12.34　USB DM Button(KDC20/20D Only)

| USB DM Button = Enable | USB DM Button = Disable |
|---|---|
| 5U001 | 5U010 |

## 12.35 WiFi (WiFi Model Only)

| Enable WiFi Power | Disable WiFi Power |
|---|---|
| S0001 | S0010 |
| Provisioning | Protocol = UDP |
| S1000 | S2000 |
| Protocol = TCP | Protocol = HTTP_GET |
| S2001 | S2002 |
| Protocol = HTTP_POST | Server URL |
| S2003 | S4 |
| Port Number | Server Page |
| S5 | S6 |
| Enable SSL | Disable SSL |
| S7001 | S7010 |

| Enable AutoConnect | Disable AutoConnect |
|:---:|:---:|
| S8001 | S8010 |
| AP SSID | AP Passcode |
| S9 | SA |
| Connect | Server IP |
| SB | S3 |
| Enable Send Stored | Disable Send Stored |
| SC001 | SC010 |

# 12.36    Multilanguage

| Disable(English Only) | English |
|---|---|
| 5L000 | 5L001 |
| | French |
| | 5L003 |
| Italian | Spanish |
| 5L004 | 5L005 |
| Korean | Japanese |
| 5L006 | 5L007 |

# 13. Appendix D – 2D Special Barcodes (KDC30/270C/280C/300/350C/420/425/450/470C)

## 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

Delete Last Scanned Barcode

$_T$MKDC80001.

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# 13.4    Scan Options

| Enable Auto Trigger | Disable Auto Trigger |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC5A001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC5A010. |
| Reread Delay = Continuous | Reread Delay = Short |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC5B000. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC5B001. |
| Reread Delay = Medium | Reread Delay = Long |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC5B002. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC5B003. |
| Reread Delay = Extra Long | |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC5B004. | |

# 13.5    Scan Timeout

| Scan Timeout = 500msec | Scan Timeout = 1sec |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>T MKDC101F4. | ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>T MKDC103E8. |
| Scan Timeout = 2sec | Scan Timeout = 3sec |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>T MKDC107D0. | ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>T MKDC10BB8. |
| Scan Timeout = 4sec | Scan Timeout = 5sec |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>T MKDC10FA0. | ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>T MKDC11388. |
| Scan Timeout = 6sec | Scan Timeout = 7sec |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>T MKDC11770. | ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>T MKDC11B58. |
| Scan Timeout = 8sec | Scan Timeout = 9sec |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>T MKDC11F40. | ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>T MKDC12328. |
| Scan Timeout = 10sec | |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>T MKDC12710. | |

# 13.6    Minimum Barcode Length (except KDC30)

| Minimum Length = 2 | Minimum Length = 3 |
|---|---|
| ᴛMKDC002. | ᴛMKDC003. |
| Minimum Length = 4 | Minimum Length = 5 |
| ᴛMKDC004. | ᴛMKDC005. |
| Minimum Length = 6 | Minimum Length = 7 |
| ᴛMKDC006. | ᴛMKDC007. |
| Minimum Length = 8 | Minimum Length = 9 |
| ᴛMKDC008. | ᴛMKDC009. |
| Minimum Length = 10 | Minimum Length = 11 |
| ᴛMKDC00A. | ᴛMKDC00B. |
| Minimum Length = 12 | Minimum Length = 13 |
| ᴛMKDC00C. | ᴛMKDC00D. |
| Minimum Length = 14 | Minimum Length = 15 |
| ᴛMKDC00E. | ᴛMKDC00F. |

| Minimum Length = 16 | Minimum Length = 17 |
|---|---|
| ₸MKDC010. | ₸MKDC011. |
| Minimum Length = 18 | Minimum Length = 19 |
| ₸MKDC012. | ₸MKDC013. |
| Minimum Length = 20 | Minimum Length = 21 |
| ₸MKDC014. | ₸MKDC015. |
| Minimum Length = 22 | Minimum Length = 23 |
| ₸MKDC016. | ₸MKDC017. |
| Minimum Length = 24 | Minimum Length = 25 |
| ₸MKDC018. | ₸MKDC019. |
| Minimum Length = 26 | Minimum Length = 27 |
| ₸MKDC01A. | ₸MKDC01B. |
| Minimum Length = 28 | Minimum Length = 29 |
| ₸MKDC01C. | ₸MKDC01D. |

| Minimum Length = 30 | Minimum Length = 31 |
|---|---|
| ⊤MKDC01E. | ⊤MKDC01F. |
| Minimum Length = 32 | Minimum Length = 33 |
| ⊤MKDC020. | ⊤MKDC021. |
| Minimum Length = 34 | Minimum Length = 35 |
| ⊤MKDC022. | ⊤MKDC023. |
| Minimum Length = 36 | |
| ⊤MKDC024. | |

# 13.7    Image Capture (except KDC30)

| Capture Now | Enable Image Capture |
|---|---|
| ᴛMKDC90000. | ᴛMKDC91001. |
| Image Format = JPEG | Image Format = BMP |
| ᴛMKDC92006. | ᴛMKDC92008. |
| Pixel Depth = 1 bit per pixel | Pixel Depth = 8 bit per pixel |
| ᴛMKDC93001. | ᴛMKDC93008. |

# 13.8　ScanIfConnect

| ScanIfConnect = Enable | ScanIfConnect = Disable |
|---|---|
| ▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌<br>ᴛMKDC5I001. | ▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌▌<br>ᴛMKDC5I010. |

# 13.9　Data Process - Wedge/Store, Enter Key & Extend Key

| Wedge Only | Wedge & Store Always |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC82000. | ‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC82001. |
| **Store Only** | **Save if Sent** |
| ‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC82002. | ‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC82003. |
| **Save if Not Sent** | |
| ‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC82004. | |
| **Enable Enter Key (KDC350C Only)** | **Disable Enter Key (KDC350C Only)** |
| ‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC8E001. | ‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC8E000. |
| **Enable Extend Key (KDC350C Only)** | **Disable Extend Key (KDC350C Only)** |
| ‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC8X001. | ‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC8X000. |
| **Enable Age Verification** | **Disable Age Verification** |
| ‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC8V001. | ‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC8V000. |

# 13.10 Data Process - Data Edit

| Start Prefix Enter | Start Suffix Enter |
|---|---|
| ⊤MKDC83000. | ⊤MKDC83001. |
| Finish Prefix / Suffix Enter | Cancel Prefix / Suffix Enter |
| ⊤MKDC83002. | ⊤MKDC83003. |
| Delete Prefix | Delete Suffix |
| ⊤MKDC83004. | ⊤MKDC83005. |
| Display Prefix | Display Suffix |
| ⊤MKDC83006. | ⊤MKDC83007. |
| AIM ID None | AIM ID In Prefix |
| ⊤MKDC8B000. | ⊤MKDC8B001. |
| AIM ID In Suffix | |
| ⊤MKDC8B002. | |

## 13.11    Data Process – Data Format & Handshake

| Data format = Barcode only | Data format = Packet data |
|:---:|:---:|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br><sub>T</sub>MKDC84001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br><sub>T</sub>MKDC84010. |
| Enable Handshake | Disable Handshake |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br><sub>T</sub>MKDC86001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br><sub>T</sub>MKDC86010. |

## 13.12   Data Process - Termination Character & Duplicate Check

| Termination Character = None | Termination Character = CR |
|---|---|
| ᴛMKDC88000. | ᴛMKDC88001. |
| Termination Character = LF | Termination Character = CR+LF |
| ᴛMKDC88002. | ᴛMKDC88003. |
| Termination Character = Tab | |
| ᴛMKDC88004. | |
| Enable Duplicate Check | Disable Duplicate Check |
| ᴛMKDC89001. | ᴛMKDC89010. |

# 13.13　Bluetooth

| Enable Bluetooth Power | Disable Bluetooth Power |
|---|---|
| ₜMKDC60001. | ₜMKDC60010. |
| Enter Pairing Mode | |
| ₜMKDC61001. | |
| Enable Discovering | Disable Discovering |
| ₜMKDC61101. | ₜMKDC61110. |
| Connect To Last | Connect To |
| ₜMKDC61201. | ₜMKDC61301. |
| Disconnect | |
| ₜMKDC6D000. | |
| HID Sync | SPP Sync |
| ₜMKDC6E000. | ₜMKDC6E001. |
| Bluetooth Profile = SPP | Bluetooth Profile = HID iOS |
| ₜMKDC6A000. | ₜMKDC6A001. |

| | |
|---|---|
| Bluetooth Profile = MFi | Bluetooth Profile = SPP2.0 |
| ᴛMKDC6A002. | ᴛMKDC6A003. |
| Bluetooth Profile = HID Normal | |
| ᴛMKDC6A004. | |
| Enable Auto Connect | Disable Auto Connect |
| ᴛMKDC62001. | ᴛMKDC62010. |
| Enable Auto Reconnect | Disable Auto Reconnect |
| ᴛMKDC6R001. | ᴛMKDC6R010. |
| Enable Auto Power Off | Disable Auto Power Off |
| ᴛMKDC64001. | ᴛMKDC64010. |
| Enable Auto Power On | Disable Auto Power On |
| ᴛMKDC66001. | ᴛMKDC66010. |
| Enable Beep Warning | Disable Beep Warning |
| ᴛMKDC68001. | ᴛMKDC68010. |

| Enable Power Off Msg | Disable Power Off Msg |
|---|---|
| ₜMKDC63001. | ₜMKDC63010. |
| Display BT Mac Address | Display BT FW Version |
| ₜMKDC63100. | ₜMKDC63200. |
| Enable Wakeup Nulls | Disable Wakeup Nulls |
| ₜMKDC63401. | ₜMKDC63410. |
| Enable BT Toggle | Disable BT Toggle |
| ₜMKDC6B001. | ₜMKDC6B010. |
| Enable BT Disconnect Button | Disable BT Disconnect Button |
| ₜMKDC6B101. | ₜMKDC6B110. |
| Enable Auto Pairing | Disable Auto Pairing |
| ₜMKDC6N001. | ₜMKDC6N010. |
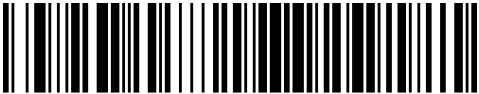
## 13.14　Bluetooth Auto Power On Time

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

## 13.15　Bluetooth Power Off Time

| BT Power Off Time = 1min | BT Power Off Time = 2min |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC69001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC69002. |
| BT Power Off Time = 3min | BT Power Off Time = 4min |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC69003. | ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC69004. |
| BT Power Off Time = 5min | BT Power Off Time = 6min |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC69005. | ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC69006. |
| BT Power Off Time = 7min | BT Power Off Time = 8min |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC69007. | ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC69008. |
| BT Power Off Time = 9min | BT Power Off Time = 10min |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC69009. | ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC6900A. |
| BT Power Off Time = 11min | BT Power Off Time = 12min |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC6900B. | ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC6900C. |
| BT Power Off Time = 13min | BT Power Off Time = 14min |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC6900D. | ‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC6900E. |

| BT Power Off Time = 15min | BT Power Off Time = 16min |
|---|---|
| ₜMKDC6900F. | ₜMKDC69010. |
| BT Power Off Time = 17min | BT Power Off Time = 18min |
| ₜMKDC69011. | ₜMKDC69012. |
| BT Power Off Time = 19min | BT Power Off Time = 20min |
| ₜMKDC69013. | ₜMKDC69014. |
| BT Power Off Time = 21min | BT Power Off Time = 22min |
| ₜMKDC69015. | ₜMKDC69016. |
| BT Power Off Time = 23min | BT Power Off Time = 24min |
| ₜMKDC69017. | ₜMKDC69018. |
| BT Power Off Time = 25min | BT Power Off Time = 26min |
| ₜMKDC69019. | ₜMKDC6901A. |
| BT Power Off Time = 27min | BT Power Off Time = 28min |
| ₜMKDC6901B. | ₜMKDC6901C. |

| BT Power Off Time = 29min | BT Power Off Time = 30min |
|---|---|
| ‍MKDC6901D. | ‍MKDC6901E. |
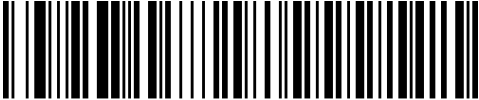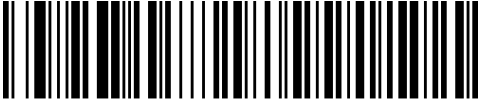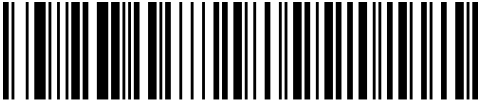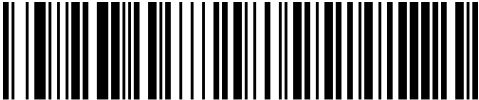
## 13.16　HID Auto Lock Time

| HID Auto Lock Time = 0min (Never) | HID Auto Lock Time = 1min |
|---|---|
| ₜMKDC6C000. | ₜMKDC6C001. |
| HID Auto Lock Time = 2min | HID Auto Lock Time = 3min |
| ₜMKDC6C002. | ₜMKDC6C003. |
| HID Auto Lock Time = 4min | HID Auto Lock Time = 5min |
| ₜMKDC6C004. | ₜMKDC6C005. |
| HID Auto Lock Time = 10min | HID Auto Lock Time = 15min |
| ₜMKDC6C00A. | ₜMKDC6C00F. |

# 13.17　HID Keyboard

| HID Keyboard = US | HID Keyboard = German |
|---|---|
|  ᴛMKDC6F000. |  ᴛMKDC6F001. |
| HID Keyboard = French | HID Keyboard = Italian |
|  ᴛMKDC6F002. |  ᴛMKDC6F003. |
| HID Keyboard = Spanish | |
|  ᴛMKDC6F004. | |

# 13.18　HID Initial Delay

| HID Initial Delay = Disabled | HID Initial Delay = 1second |
|---|---|
| ┬MKDCH0000. | ┬MKDCH0001. |
| HID Initial Delay = 2seconds | HID Initial Delay = 3seconds |
| ┬MKDCH0002. | ┬MKDCH0003. |
| HID Initial Delay = 5seconds | HID Initial Delay = 10seconds |
| ┬MKDCH0005. | ┬MKDCH000A. |

## 13.19    HID Character Delay

| HID Character Delay = Disabled | HID Character Delay = 10msec |
|---|---|
| ┬MKDCH1000. | ┬MKDCH100A. |
| HID Character Delay = 20msec | HID Character Delay = 30msec |
| ┬MKDCH1014. | ┬MKDCH101E. |
| HID Character Delay = 50msec | HID Character Delay = 100msec |
| ┬MKDCH1032. | ┬MKDCH1064. |

## 13.20    HID Control Character

| HID Control Character = Disabled | HID Control Character = Alt+Numpad |
|---|---|
| ⊤MKDCH2000. | ⊤MKDCH2001. |
| HID Control Character = ^+Character | HID Control Character = Replace with '|' |
| ⊤MKDCH2002. | ⊤MKDCH2003. |

# 13.21  System

| | |
|---|---|
| Memory Size = 0.5M / 3.5M [Note1,2]<br><br>⊤MKDC5E000. | Memory Size = 1M / 3M [Note1,2]<br><br>⊤MKDC5E001. |
| Memory Size = 2M / 2M [Note1,2]<br><br>⊤MKDC5E002. | Memory Size = 3M / 1M [Note1,2]<br><br>⊤MKDC5E003. |
| Memory Size = 4M / 0M [Note1,2]<br><br>⊤MKDC5E004. | Confirm memory size [Note1,2]<br><br>⊤MKDC5E100. |
| Memory Size = 5M / 3M [Note2]<br><br>⊤MKDC5E005. | Memory Size = 6M / 2M [Note2]<br><br>⊤MKDC5E006. |
| Memory Size = 7M / 1M [Note2]<br><br>⊤MKDC5E007. | Memory Size = 8M / 0M [Note2]<br><br>⊤MKDC5E008. |
| Memory Status<br><br>⊤MKDC50001. | Reset Memory<br><br>⊤MKDC50002. |
| Erase Memory<br><br>⊤MKDC50003. | Reset App data<br><br>⊤MKDC50004. |

※  Note 1. 4M Model Only

※  Note 2. 8M Model Only

| Reset BT Registry | |
|---|---|
| ᴛMKDC50005. | |

| Enable Auto Erase | Disable Auto Erase |
|---|---|
| ᴛMKDC5F001. | ᴛMKDC5F010. |

| Date/Time | Battery |
|---|---|
| ᴛMKDC52001. | ᴛMKDC53001. |

| Display Version | |
|---|---|
| ᴛMKDC54001. | |

| Lock Button | Unlock Button |
|---|---|
| ᴛMKDC55001. | ᴛMKDC55010. |

| Enable Beep Sound | Disable Beep Sound |
|---|---|
| ᴛMKDC56001. | ᴛMKDC56010. |

| High Beep Volume | Low Beep Volume |
|---|---|
| ᴛMKDC5D001. | ᴛMKDC5D010. |

| Enable MFi Mode | Disable MFi Mode |
|---|---|
| ⊤MKDC6M001. | ⊤MKDC6M010. |
| Enable Vibrator | Disable Vibrator |
| ⊤MKDC5G001. | ⊤MKDC5G010. |
| Scan Success = No vibration | Scan Success = 1 vibration |
| ⊤MKDC5S000. | ⊤MKDC5S001. |
| Scan Success = 2 vibrations | Scan Success = 3 vibrations |
| ⊤MKDC5S002. | ⊤MKDC5S003. |
| Scan Success = 4 vibrations | Scan Success = 5 vibrations |
| ⊤MKDC5S004. | ⊤MKDC5S005. |
| Scan Failure = No vibration | Scan Failure = 1 vibration |
| ⊤MKDC5S200. | ⊤MKDC5S201. |
| Scan Failure = 2 vibrations | Scan Failure = 3 vibrations |
| ⊤MKDC5S202. | ⊤MKDC5S203. |

| | |
|---|---|
| Scan Failure = 4 vibrations | Scan Failure = 5 vibrations |
| ᴛMKDC5S204. | ᴛMKDC5S205. |
| Enable Auto Menu Exit | Disable Auto Menu Exit |
| ᴛMKDC58001. | ᴛMKDC58010. |
| Enable Port Status | Disable Port Status |
| ᴛMKDC58101. | ᴛMKDC58100. |
| Display Format = Time & Battery | Display Format = Type & Time |
| ᴛMKDC58200. | ᴛMKDC58201. |
| Display Format = Type & Battery | Display Format = Memory Status |
| ᴛMKDC58202. | ᴛMKDC58203. |
| Display Format = GPS Data(GPS Model) | Display Format = Barcode Only |
| ᴛMKDC58204. | ᴛMKDC58205. |
| Display Format = Graphic | |
| ᴛMKDC58206. | |

| Enable Menu Barcode | Disable Menu Barcode |
|---|---|
| ⊤MKDC52401. | ⊤MKDC52410. |
| Enable Scrolling | Disable Scrolling |
| ⊤MKDC59001. | ⊤MKDC59010. |
| Factory Default | KDC Reset |
| ⊤MKDC57001. | ⊤MKDCA0000. |

# 13.22　Sleep Timeout

| Sleep Timeout = Disable | Sleep Timeout = 1sec |
|---|---|
| ᴛMKDC51000. | ᴛMKDC51001. |
| Sleep Timeout = 2sec | Sleep Timeout = 3sec |
| ᴛMKDC51002. | ᴛMKDC51003. |
| Sleep Timeout = 4sec | Sleep Timeout = 5sec |
| ᴛMKDC51004. | ᴛMKDC51005. |
| Sleep Timeout = 10sec | Sleep Timeout = 20sec |
| ᴛMKDC5100A. | ᴛMKDC51014. |
| Sleep Timeout = 30sec | Sleep Timeout = 1min |
| ᴛMKDC5101E. | ᴛMKDC5103C. |
| Sleep Timeout = 2min | Sleep Timeout = 5min |
| ᴛMKDC51078. | ᴛMKDC5112C. |
| Sleep Timeout = 10min | |
| ᴛMKDC51258. | |

## 13.23    Function

| F1 | F2 |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7002. |
| **F3** | **F4** |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7003. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7004. |
| **F5** | **F6** |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7005. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7006. |
| **F7** | **F8** |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7007. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7008. |
| **F9** | **F10** |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7009. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC700A. |
| **F11** | **F12** |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC700B. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC700C. |

## 13.24　Number
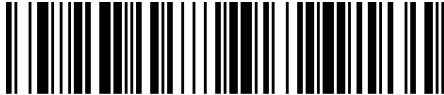
| 0 | 1 |
|---|---|
| TMKDC7130. | TMKDC7131. |
| **2** | **3** |
| TMKDC7132. | TMKDC7133. |
| **4** | **5** |
| TMKDC7134. | TMKDC7135. |
| **6** | **7** |
| TMKDC7136. | TMKDC7137. |
| **8** | **9** |
| TMKDC7138. | TMKDC7139. |

# 13.25   Lower Case Alphabet
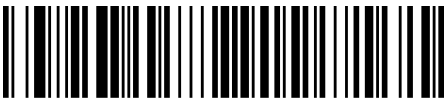
| a | b |
|---|---|
| <sub>T</sub>MKDC7161. | <sub>T</sub>MKDC7162. |
| c | d |
| <sub>T</sub>MKDC7163. | <sub>T</sub>MKDC7164. |
| e | f |
| <sub>T</sub>MKDC7165. | <sub>T</sub>MKDC7166. |
| g | h |
| <sub>T</sub>MKDC7167. | <sub>T</sub>MKDC7168. |
| j | i |
| <sub>T</sub>MKDC7169. | <sub>T</sub>MKDC716A. |
| k | l |
| <sub>T</sub>MKDC716B. | <sub>T</sub>MKDC716C. |
| m | n |
| <sub>T</sub>MKDC716D. | <sub>T</sub>MKDC716E. |

| o | p |
|---|---|
| ᴛMKDC716F. | ᴛMKDC7170. |
| q | r |
| ᴛMKDC7171. | ᴛMKDC7172. |
| s | t |
| ᴛMKDC7173. | ᴛMKDC7174. |
| u | v |
| ᴛMKDC7175. | ᴛMKDC7176. |
| w | x |
| ᴛMKDC7177. | ᴛMKDC7178. |
| y | z |
| ᴛMKDC7179. | ᴛMKDC717A. |

# 13.26　Upper Case Alphabet

| A | B |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC7141. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC7142. |
| C | D |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC7143. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC7144. |
| E | F |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC7145. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC7146. |
| G | H |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC7147. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC7148. |
| I | J |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC7149. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC714A. |
| K | L |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC714B. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC714C. |
| M | N |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC714D. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC714E. |

| O | P |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ |
| ᴛMKDC714F. | ᴛMKDC7150. |
| Q | R |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ |
| ᴛMKDC7151. | ᴛMKDC7152. |
| S | T |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ |
| ᴛMKDC7153. | ᴛMKDC7154. |
| U | V |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ |
| ᴛMKDC7155. | ᴛMKDC7156. |
| W | X |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ |
| ᴛMKDC7157. | ᴛMKDC7158. |
| Y | Z |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ |
| ᴛMKDC7159. | ᴛMKDC715A. |

# 13.27　Control Character

| BS | TAB |
|---|---|
| ₜMKDC7108. | ₜMKDC7109. |
| LF | VT |
| ₜMKDC710A. | ₜMKDC710B. |
| CR | ESC |
| ₜMKDC710D. | ₜMKDC711B. |
| Space | DEL |
| ₜMKDC7120. | ₜMKDC717F. |
| Shift + Tab | |
| ₜMKDC7111. | |

# 13.28　Symbol Character

| ! | " |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7121. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7122. |
| # | $ |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7123. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7124. |
| % | & |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7125. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7126. |
| ' | ( |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7127. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7128. |
| ) | * |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC7129. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC712A. |
| + | , |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC712B. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC712C. |
| - | . |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC712D. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC712E. |

| / | : |
|---|---|
| ᴛMKDC712F. | ᴛMKDC713A. |
| ; | < |
| ᴛMKDC713B. | ᴛMKDC713C. |
| = | > |
| ᴛMKDC713D. | ᴛMKDC713E. |
| ? | @ |
| ᴛMKDC713F. | ᴛMKDC7140. |
| [ | \ |
| ᴛMKDC715B. | ᴛMKDC715C. |
| ] | ^ |
| ᴛMKDC715D. | ᴛMKDC715E. |
| _ | ` |
| ᴛMKDC715F. | ᴛMKDC7160. |

| { | &#124; |
|---|---|
| `ₜMKDC717B.` | `ₜMKDC717C.` |
| } | ~ |
| `ₜMKDC717D.` | `ₜMKDC717E.` |
| Start String | Stop String |
| `ₜMKDC7201.` | `ₜMKDC7210.` |

**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.

# 13.29    GPS (GPS Model Only)

| Enable GPS Power | Disable GPS Power |
|---|---|
| ⊤MKDCG0001. | ⊤MKDCG0010. |
| Enable GPS Bypass Data | Disable GPS Bypass Data |
| ⊤MKDCG1001. | ⊤MKDCG1010. |
| Reset GPS Module | GPS Acquire Test |
| ⊤MKDCG2000. | ⊤MKDCG2001. |
| GPS Power Save Mode = Normal | GPS Power Save Mode = Power Saving |
| ⊤MKDCG2002. | ⊤MKDCG2003. |
| Enable GPS Auto Power Off | Disable GPS Auto Power Off |
| ⊤MKDCG3001. | ⊤MKDCG3010. |
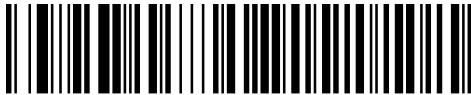
## 13.30    GPS/BT Auto Power Off Timeout

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

## 13.31    NFC (NFC Model Only)

| Enable NFC Power | Disable NFC Power |
|---|---|
| ┬MKDCN0001. | ┬MKDCN0010. |
| NFC Data Format = Data only | NFC Data Format = Packet data |
| ┬MKDCN1001. | ┬MKDCN1000. |
| UID Only = Enable | UID Only = Disable |
| ┬MKDCN3001. | ┬MKDCN3000. |
| New Data Format = Enable | New Data Format = Disable |
| ┬MKDCN4001. | ┬MKDCN4010. |

# 13.32　UHF (UHF Model Only)

| Enable UHF Power | Disable UHF Power |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCNU001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCNU000. |
| Power On Time = 500ms | Power On Time = 1 sec |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCNU101. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCNU102. |
| Power On Time = 1.5 sec | Power On Time = 2 sec |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCNU103. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCNU104. |
| Power On Time = 2.5 sec | Power On Time = 3 sec |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCNU105. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCNU106. |
| Power On Time = 3.5 sec | Power On Time = 4 sec |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCNU107. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCNU108. |
| Power On Time = 4.5 sec | Power On Time = 5 sec |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCNU109. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCNU10A. |
| Power Off Time = 500ms | Power Off Time = 1 sec |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCNU201. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCNU202. |

| Power Off Time = 1.5 sec | Power Off Time = 2 sec |
|---|---|
| ₸MKDCNU203. | ₸MKDCNU204. |
| Power Off Time = 2.5 sec | Power Off Time = 3 sec |
| ₸MKDCNU205. | ₸MKDCNU206. |
| Power Off Time = 3.5 sec | Power Off Time = 4 sec |
| ₸MKDCNU207. | ₸MKDCNU208. |
| Power Off Time = 4.5 sec | Power Off Time = 5 sec |
| ₸MKDCNU209. | ₸MKDCNU20A. |
| Power Level = 0 | Power Level = 1 |
| ₸MKDCNU400. | ₸MKDCNU401. |
| Power Level = 2 | Power Level = 3 |
| ₸MKDCNU402. | ₸MKDCNU403. |
| Power Level = 4 | Power Level = 5 |
| ₸MKDCNU404. | ₸MKDCNU405. |

| Power Level = 6 | Power Level = 7 |
|---|---|
| ⊤MKDCNU406. | ⊤MKDCNU407. |
| **Data Format = Binary** | **Data Format = Hexa Decimal** |
| ⊤MKDCNU300. | ⊤MKDCNU301. |
| **Smart Hopping** | |
| ⊤MKDCNUH. | |

# 13.33 USB Disk (M Model Only)

| USB Serial Mode | USB Disk Mode |
|---|---|
| <br>‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDCU0000. | <br>‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDCU0001. |
| **USB HID Mode** | **Format USB Disk** |
| <br>‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDCU0002. | <br>‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDCU1000. |
| **Data Format = Data** | **Data Format = Data,Time** |
| <br>‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDCU2000. | <br>‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDCU2001. |
| **Data Format = Data,Type** | **Data Format = Data,Time,Type** |
| <br>‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDCU2002. | <br>‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDCU2003. |

## 13.34　USB DM Button(KDC30 only)

| USB DM Button = Enable | USB DM Button = Disable |
|---|---|
| TMKDC5U001. | TMKDC5U010. |

# 13.35　WiFi (WiFi Model Only)

| Enable WiFi Power | Disable WiFi Power |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCS0001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCS0010. |
| **Provisioning** | **Protocol = UDP** |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCS1000. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCS2000. |
| **Protocol = TCP** | **Protocol = HTTP_GET** |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCS2001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCS2002. |
| **Protocol = HTTP_POST** | **Server URL** |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCS2003. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCS4. |
| **Port Number** | **Server Page** |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCS5. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCS6. |
| **Enable SSL** | **Disable SSL** |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCS7001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCS7010. |
| **Enable AutoConnect** | **Disable AutoConnect** |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCS8001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDCS8010. |

| AP SSID | AP Passcode |
|---|---|
| ᴛMKDCS9. | ᴛMKDCSA. |
| Connect | Server IP |
| ᴛMKDCSB. | ᴛMKDCS3. |
| Enable Send Stored | Disable Send Stored |
| ᴛMKDCSC001. | ᴛMKDCSC010. |

# 13.36　Multilanguage

| Disable(English Only) | English |
|---|---|
| ᴛMKDC5L000. | ᴛMKDC5L001. |
|  | French |
|  | ᴛMKDC5L003. |
| Italian | Spanish |
| ᴛMKDC5L004. | ᴛMKDC5L005. |
| Korean | Japanese |
| ᴛMKDC5L006. | ᴛMKDC5L007. |

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

## 14.1 KDC415MSR

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

| Enable Track3 | |
|---|---|
| **M3004** | |

| Disable Track | |
|---|---|

| Disable Track1 | Disable Track2 |
|---|---|
| **M4001** | **M4002** |

| Disable Track3 | |
|---|---|
| **M4004** | |

| Track Separator | |
|---|---|

| Track Separator = None | Track Separator = Space |
|---|---|
| **M5000** | **M5001** |
| Track Separator = Comma | Track Separator = Semi Colon |
| **M5002** | **M5003** |
| Track Separator = CR | Track Separator = LF |
| **M5004** | **M5005** |

| Track Separator = CR+LF | Track Separator = Tab |
|---|---|
| M5006 | M5007 |

## AES Key Length

| AES Key Length = 128 bits | AES Key Length = 192 bits |
|---|---|
| M8000 | M8001 |

| AES Key Length = 256 bits | |
|---|---|
| M8002 | |

## MSR Card Type

| MSR Card Type = ISO | MSR Card Type = Other 1 |
|---|---|
| MA000 | MA001 |

| MSR Card Type = AAMVA | |
|---|---|
| MA002 | |

## 14.2    KDC425MSR

| Beep On Error ||
|---|---|
| No Beep On Error | Beep On Error |
| ┬MKDCM6000. | ┬MKDCM6001. |
| **Data Format** ||
| MSR Data Only | Packet data |
| ┬MKDCM1000. | ┬MKDCM1001. |
| **Encrypt Mode** ||
| Disabled | AES |
| ┬MKDCM2000. | ┬MKDCM2001. |
| **Enable Track** ||
| Enable Track1 | Enable Track2 |
| ┬MKDCM3001. | ┬MKDCM3002. |
| Enable Track3 | |
| ┬MKDCM3004. | |

| Disable Track | |
|---|---|
| Disable Track1 <br><br> ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br><br> ꜱMKDCM4001. | Disable Track2 <br><br> ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br><br> ꜱMKDCM4002. |
| Disable Track3 <br><br> ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br><br> ꜱMKDCM4004. | |
| Track Separator | |
| Track Separator = None <br><br> ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br><br> ꜱMKDCM5000. | Track Separator = Space <br><br> ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br><br> ꜱMKDCM5001. |
| Track Separator = Comma <br><br> ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br><br> ꜱMKDCM5002. | Track Separator = Semi Colon <br><br> ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br><br> ꜱMKDCM5003. |
| Track Separator = CR <br><br> ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br><br> ꜱMKDCM5004. | Track Separator = LF <br><br> ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br><br> ꜱMKDCM5005. |
| Track Separator = CR+LF <br><br> ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br><br> ꜱMKDCM5006. | Track Separator = Tab <br><br> ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br><br> ꜱMKDCM5007. |

| AES Key Length | |
|---|---|
| AES Key Length = 128 bits | AES Key Length = 192 bits |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM8000. | ‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM8001. |
| AES Key Length = 256 bits | |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM8002. | |
| MSR Card Type | |
| MSR Card Type = ISO | MSR Card Type = Other 1 |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCMA000. | ‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCMA001. |
| MSR Card Type = AAMVA | |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCMA002. | |
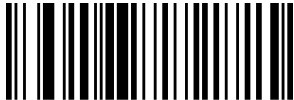
# 15. Appendix F – 1D Special Barcodes (500L)

## 15.1    Set Symbologies

| Enable EAN13 | Disable EAN13 |
|---|---|
| ‖‖‖‖‖‖‖‖‖<br>2000001 | ‖‖‖‖‖‖‖‖‖<br>2100001 |
| Enable EAN8 | Disable EAN8 |
| ‖‖‖‖‖‖‖‖‖<br>2000002 | ‖‖‖‖‖‖‖‖‖<br>2100002 |
| Enable UPCA | Disable UPCA |
| ‖‖‖‖‖‖‖‖‖<br>2000004 | ‖‖‖‖‖‖‖‖‖<br>2100004 |
| Enable UPCE | Disable UPCE |
| ‖‖‖‖‖‖‖‖‖<br>2000008 | ‖‖‖‖‖‖‖‖‖<br>2100008 |
| Enable Code39 | Disable Code39 |
| ‖‖‖‖‖‖‖‖‖<br>2000010 | ‖‖‖‖‖‖‖‖‖<br>2100010 |

| Enable ITF14 | Disable ITF14 |
|:---:|:---:|
| 2000020 | 2100020 |
| Enable Code128 | Disable Code128 |
| 2000040 | 2100040 |
| Enable I2 of 5 | Disable I2 of 5 |
| 2000080 | 2100080 |
| Enable Codabar | Disable Codabar |
| 2000100 | 2100100 |
| Enable GS1-128 | Disable GS1-128 |
| 2000200 | 2100200 |
| Enable Code93 | Disable Code93 |
| 2000400 | 2100400 |
| Enable Code35 | Disable Code35 |
| 2000800 | 2100800 |

| Enable Bookland EAN | Disable Bookland EAN |
|:---:|:---:|
| 2001000 | 2101000 |
| Enable EAN13 with Addon | Disable EAN13 with Addon |
| 2002000 | 2102000 |
| Enable EAN8 with Addon | Disable EAN8 with Addon |
| 2004000 | 2104000 |
| Enable UPCA with Addon | Disable UPCA with Addon |
| 2008000 | 2108000 |
| Enable UPCE with Addon | Disable UPCE with Addon |
| 2010000 | 2110000 |
| Enable GS1 Omni | Disable GS1 Omni |
| 2020000 | 2120000 |
| Enable GS1 Limited | Disable GS1 Limited |
| 2040000 | 2140000 |

| Enable GS1 Expanded | Disable GS1 Expanded |
|:---:|:---:|
| 2080000 | 2180000 |

# 15.2　Barcode Options

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

| Verify check digit for I2of5 | Do NOT verify check digit for I2of5 |
|---|---|
| 3000400000 | 3100400000 |
| Verify check digit for Code39 | Do NOT verify check digit for Code39 |
| 3000800000 | 3100800000 |
| Return check digit for I2of5 | Do NOT return check digit for I2of5 |
| 3004000000 | 3104000000 |
| Return check digit for Code39 | Do NOT return check digit for Code39 |
| 3008000000 | 3108000000 |
| Return check digit for UPCE | Do NOT return check digit for UPCE |
| 3010000000 | 3110000000 |
| Return check digit for UPCA | Do NOT return check digit for UPCA |
| 3020000000 | 3120000000 |
| Return check digit for EAN8 | Do NOT return check digit for EAN8 |
| 3040000000 | 3140000000 |

| Return check digit for EAN13 | Do NOT return check digit for EAN13 |
|:---:|:---:|
| ‖‖‖ ‖‖‖‖‖‖‖‖‖ | ‖‖‖ ‖‖‖‖‖‖‖‖‖ |
| 3080000000 | 3180000000 |

## 15.3　Delete Last Scanned Barcode
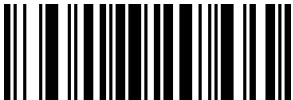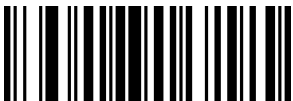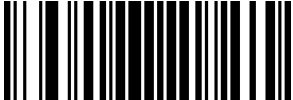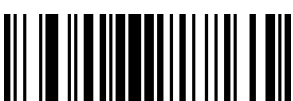
Delete Last Scanned Barcode

80001
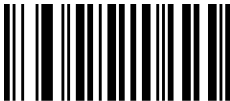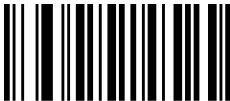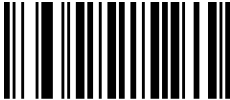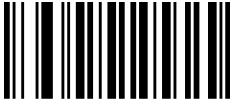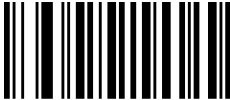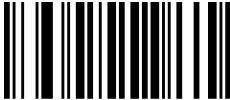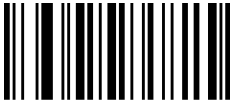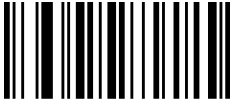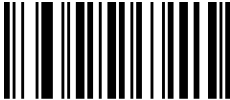
# 15.4  Scan Options

| Enable Auto Trigger | Disable Auto Trigger |
|---|---|
| 5A001 | 5A010 |
| Reread Delay = Continuous | Reread Delay = Short |
| 5B000 | 5B001 |
| Reread Delay = Medium | Reread Delay = Long |
| 5B002 | 5B003 |
| Reread Delay = Extra Long | |
| 5B004 | |

# 15.5    Scan Timeout

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

# 15.6    Minimum Barcode Length

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

| Minimum Length = 16 | Minimum Length = 17 |
|---|---|
| 010 | 011 |
| Minimum Length = 18 | Minimum Length = 19 |
| 012 | 013 |
| Minimum Length = 20 | Minimum Length = 21 |
| 014 | 015 |
| Minimum Length = 22 | Minimum Length = 23 |
| 016 | 017 |
| Minimum Length = 24 | Minimum Length = 25 |
| 018 | 019 |
| Minimum Length = 26 | Minimum Length = 27 |
| 01A | 01B |
| Minimum Length = 28 | Minimum Length = 29 |
| 01C | 01D |

| Minimum Length = 30 | Minimum Length = 31 |
|---|---|
| 01E | 01F |
| Minimum Length = 32 | Minimum Length = 33 |
| 020 | 021 |
| Minimum Length = 34 | Minimum Length = 35 |
| 022 | 023 |
| Minimum Length = 36 | |
| 024 | |

## 15.7    ScanIfConnect

| ScanIfConnect = Enable | ScanIfConnect = Disable |
|---|---|
| 5I001 | 5I010 |

# 15.8 Data Process - Wedge/Store, Enter Key & Extend Key

| Wedge Only | Wedge & Store Always |
|---|---|
| 82000 | 82001 |
| Store Only | Save if Sent |
| 82002 | 82003 |
| Save if Not Sent | |
| 82004 | |
| Enable Enter Key | Disable Enter Key |
| 8E001 | 8E000 |
| Enable Extend Key | Disable Extend Key |
| 8X001 | 8X000 |

## 15.9    Data Process - Data Edit

| Start Prefix Enter | Start Suffix Enter |
|:---:|:---:|
| 83000 | 83001 |
| Finish Prefix/Suffix Enter | Cancel Prefix/Suffix Enter |
| 83002 | 83003 |
| Delete Prefix | Delete Suffix |
| 83004 | 83005 |
| Display Prefix | Display Suffix |
| 83006 | 83007 |
| AIM ID None | AIM ID In Prefix |
| 8B000 | 8B001 |
| AIM ID In Suffix | |
| 8B002 | |
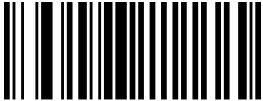
## 15.10    Data Process - Data Format

| Data format = Barcode only | Data format = Packet data |
|---|---|
| ‖‖ ‖‖ ‖‖‖‖ ‖ ‖‖‖ ‖‖ ‖‖ ‖‖<br>84001 | ‖‖ ‖ ‖‖‖‖‖ ‖ ‖‖‖‖ ‖ ‖‖ ‖‖<br>84010 |
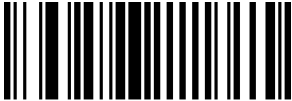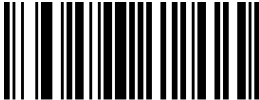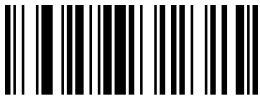
## 15.11 Data Process - Termination Character & Duplicate Check
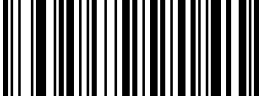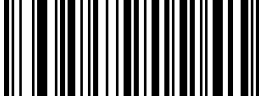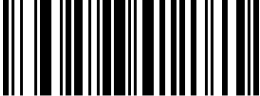
| Termination Character = None | Termination Character = CR |
|---|---|
| 88000 | 88001 |
| Termination Character = LF | Termination Character = CR+LF |
| 88002 | 88003 |
| Termination Character = Tab | |
| 88004 | |
| Enable Duplicate Check | Disable Duplicate Check |
| 89001 | 89010 |

# 15.12 Bluetooth

| Enable Bluetooth Power | Disable Bluetooth Power |
|---|---|
| 60001 | 60010 |
| Enter Pairing Mode | |
| 61001 | |
| Disconnect | |
| 6D000 | |
| Enable Auto Pairing | Disable Auto Pairing |
| 6N001 | 6N010 |
| Bluetooth Profile = SPP | Bluetooth Profile = MFi |
| 6A000 | 6A002 |
| Enable Auto Reconnect | Disable Auto Reconnect |
| 6R001 | 6R010 |
| Display BT MAC Address | Display BT FW Version |
| 63100 | 63200 |

# 15.13   System

| Memory Status | Reset Memory |
|---|---|
| 50001 | 50002 |
| Enable Auto Erase | Disable Auto Erase |
| 5F001 | 5F010 |
| Battery | |
| 53001 | |
| Display Version | Serial Number |
| 54001 | 54002 |
| Enable Beep Sound | Disable Beep Sound |
| 56001 | 56010 |
| Enable Power On Beep | Disable Power On Beep |
| 56101 | 56110 |
| Enable BeepOnConnect | Disable BeepOnConnect |
| 56201 | 56210 |

| Enable Beep On Scan | Disable Beep On Scan |
|---|---|
| 56301 | 56310 |
| Enable BeepOnMSCard | Disable BeepOnMSCard |
| 56401 | 56410 |
| Enable BeepOnICCard | Disable BeepOnICCard |
| 56501 | 56510 |
| Enable BeepOnNFCCard | Disable BeepOnNFCCard |
| 56601 | 56610 |
| High Beep Volume | Low Beep Volume |
| 5D001 | 5D010 |
| Enable Auto Menu Exit | Disable Auto Menu Exit |
| 58001 | 58010 |
| Enable Port Status | Disable Port Status |
| 58101 | 58100 |

| | |
|---|---|
| Display Format = Time & Battery | Display Format = Type & Time |
| 58200 | 58201 |
| Display Format = Type & Battery | Display Format = Memory Status |
| 58202 | 58203 |
| Display Format = Barcode Only | |
| 58205 | |
| Factory Default | KDC Reset |
| 57001 | A0000 |

# 15.14 Sleep Timeout

| Sleep Timeout = Disable | Sleep Timeout = 5sec |
|---|---|
| 51000 | 51005 |
| Sleep Timeout = 10sec | Sleep Timeout = 20sec |
| 5100A | 51014 |
| Sleep Timeout = 30sec | Sleep Timeout = 1min |
| 5101E | 5103C |
| Sleep Timeout = 2min | Sleep Timeout = 5min |
| 51078 | 5112C |
| Sleep Timeout = 10min | |
| 51258 | |

## 15.15    NFC

| Enable NFC Power | Disable NFC Power |
|:---:|:---:|
| N0001 | N0010 |

## 15.16 MSR

| Enable MSR Power | Disable MSR Power |
|---|---|
| MB001 | MB010 |
| No Beep On Error | Beep On Error |
| M6000 | M6001 |
| Enable Use Track1 | Disable Use Track1 |
| M3001 | M4001 |
| Enable Use Track2 | Disable Use Track2 |
| M3002 | M4002 |
| Enable Use Track3 | Disable Use Track3 |
| M3004 | M4004 |
| Enable Null Check Track1 | Disable Null Check Track1 |
| M3101 | M4101 |
| Enable Null Check Track2 | Disable Null Check Track2 |
| M3102 | M4102 |

| Enable Null Check Track3 | Disable Null Check Track3 |
|---|---|
| M3104 | M4104 |
| Enable Attach SS/ES | Disable Attach SS/ES |
| M9001 | M9000 |
| MSR Card Type = ISO | MSR Card Type = Other 1 |
| MA000 | MA001 |
| MSR Card Type = AAMVA | MSR Card Type = JIS 2 |
| MA002 | MA003 |

# 15.17 ICCR(IC CARD READER)

| Enable ICCR Power | Disable ICCR Power |
|---|---|
| I0001 | I0010 |
| IFD Number | Config Number |
| I1000 | I1001 |

# 15.18    Key Management

| Stored Keys | Inject Keys |
|:---:|:---:|
| EK2000 | EK1000 |

# 15.19 Multilanguage

| English | Korean |
|---|---|
| 5L001 | 5L006 |
| Japanese | |
| 5L007 | |

# 16. Appendix G – 2D Special Barcodes (KDC500C)

## 16.1 Set Symbologies

For KDC500C, please refer to Honeywell Adaptus® Technology enabled scanner user manual, such as 5600.

## 16.2 Barcode Options

For KDC500C, please refer to Honeywell Adaptus® Technology enabled scanner user manual, such as 5600.

## 16.3 Delete Last Scanned Barcode

| Delete Last Scanned Barcode |
|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC80001. |

## 16.4 Scan Options

| Enable Auto Trigger | Disable Auto Trigger |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC5A001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC5A010. |

| Reread Delay = Continuous | Reread Delay = Short |
|---|---|
| TMKDC5B000. | TMKDC5B001. |
| Reread Delay = Medium | Reread Delay = Long |
| TMKDC5B002. | TMKDC5B003. |
| Reread Delay = Extra Long | |
| TMKDC5B004. | |

# 16.5    Scan Timeout

| Scan Timeout = 500msec | Scan Timeout = 1sec |
|---|---|
| ₜMKDC101F4. | ₜMKDC103E8. |
| Scan Timeout = 2sec | Scan Timeout = 3sec |
| ₜMKDC107D0. | ₜMKDC10BB8. |
| Scan Timeout = 4sec | Scan Timeout = 5sec |
| ₜMKDC10FA0. | ₜMKDC11388. |
| Scan Timeout = 6sec | Scan Timeout = 7sec |
| ₜMKDC11770. | ₜMKDC11B58. |
| Scan Timeout = 8sec | Scan Timeout = 9sec |
| ₜMKDC11F40. | ₜMKDC12328. |
| Scan Timeout = 10sec | |
| ₜMKDC12710. | |

# 16.6　　Minimum Barcode Length

| | |
|---|---|
| Minimum Length = 2<br><br>ᴛMKDC002. | Minimum Length = 3<br><br>ᴛMKDC003. |
| Minimum Length = 4<br><br>ᴛMKDC004. | Minimum Length = 5<br><br>ᴛMKDC005. |
| Minimum Length = 6<br><br>ᴛMKDC006. | Minimum Length = 7<br><br>ᴛMKDC007. |
| Minimum Length = 8<br><br>ᴛMKDC008. | Minimum Length = 9<br><br>ᴛMKDC009. |
| Minimum Length = 10<br><br>ᴛMKDC00A. | Minimum Length = 11<br><br>ᴛMKDC00B. |
| Minimum Length = 12<br><br>ᴛMKDC00C. | Minimum Length = 13<br><br>ᴛMKDC00D. |
| Minimum Length = 14<br><br>ᴛMKDC00E. | Minimum Length = 15<br><br>ᴛMKDC00F. |

| | |
|---|---|
| Minimum Length = 16 | Minimum Length = 17 |
| ᴛMKDC010. | ᴛMKDC011. |
| Minimum Length = 18 | Minimum Length = 19 |
| ᴛMKDC012. | ᴛMKDC013. |
| Minimum Length = 20 | Minimum Length = 21 |
| ᴛMKDC014. | ᴛMKDC015. |
| Minimum Length = 22 | Minimum Length = 23 |
| ᴛMKDC016. | ᴛMKDC017. |
| Minimum Length = 24 | Minimum Length = 25 |
| ᴛMKDC018. | ᴛMKDC019. |
| Minimum Length = 26 | Minimum Length = 27 |
| ᴛMKDC01A. | ᴛMKDC01B. |
| Minimum Length = 28 | Minimum Length = 29 |
| ᴛMKDC01C. | ᴛMKDC01D. |

| Minimum Length = 30 | Minimum Length = 31 |
|---|---|
| ~MKDC01E. | ~MKDC01F. |
| Minimum Length = 32 | Minimum Length = 33 |
| ~MKDC020. | ~MKDC021. |
| Minimum Length = 34 | Minimum Length = 35 |
| ~MKDC022. | ~MKDC023. |
| Minimum Length = 36 | |
| ~MKDC024. | |

## 16.7 ScanIfConnect

| ScanIfConnect = Enable | ScanIfConnect = Disable |
|---|---|
| TMKDC5I001. | TMKDC5I010. |

# 16.8    Data Process - Wedge/Store, Enter Key & Extend Key

| Wedge Only | Wedge & Store Always |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC82000. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC82001. |
| Store Only | Save if Sent |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC82002. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC82003. |
| Save if Not Sent | |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC82004. | |
| Enable Enter Key | Disable Enter Key |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC8E001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC8E000. |
| Enable Extend Key | Disable Extend Key |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC8X001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC8X000. |

# 16.9    Data Process - Data Edit

| Start Prefix Enter | Start Suffix Enter |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC83000. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC83001. |
| Finish Prefix / Suffix Enter | Cancel Prefix / Suffix Enter |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC83002. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC83003. |
| Delete Prefix | Delete Suffix |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC83004. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC83005. |
| Display Prefix | Display Suffix |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC83006. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC83007. |
| AIM ID None | AIM ID In Prefix |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC8B000. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC8B001. |
| AIM ID In Suffix | |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDC8B002. | |

# 16.10    Data Process – Data Format

| Data format = Barcode only | Data format = Packet data |
|---|---|
| ᴛMKDC84001. | ᴛMKDC84010. |

# 16.11　Data Process - Termination Character & Duplicate Check

| Termination Character = None | Termination Character = CR |
|---|---|
| ⊤MKDC88000. | ⊤MKDC88001. |
| Termination Character = LF | Termination Character = CR+LF |
| ⊤MKDC88002. | ⊤MKDC88003. |
| Termination Character = Tab | |
| ⊤MKDC88004. | |
| Enable Duplicate Check | Disable Duplicate Check |
| ⊤MKDC89001. | ⊤MKDC89010. |

## 16.12 Bluetooth

| Enable Bluetooth Power | Disable Bluetooth Power |
|---|---|
| ᴛMKDC60001. | ᴛMKDC60010. |
| **Enter Pairing Mode** | **Connect To** |
| ᴛMKDC61001. | ᴛMKDC61301. |
| **Disconnect** | |
| ᴛMKDC6D000. | |
| **Enable Auto Pairing** | **Disable Auto Pairing** |
| ᴛMKDC6N001. | ᴛMKDC6N010. |
| **Bluetooth Profile = SPP** | **Bluetooth Profile = MFi** |
| ᴛMKDC6A000. | ᴛMKDC6A002. |
| **Enable Auto Reconnect** | **Disable Auto Reconnect** |
| ᴛMKDC6R001. | ᴛMKDC6R010. |
| **Display BT Mac Address** | **Display BT FW Version** |
| ᴛMKDC63100. | ᴛMKDC63200. |

# 16.13　System

| Memory Status | Reset Memory |
|---|---|
| ᴛMKDC50001. | ᴛMKDC50002. |
| Enable Auto Erase | Disable Auto Erase |
| ᴛMKDC5F001. | ᴛMKDC5F010. |
| Battery | |
| ᴛMKDC53001. | |
| Display Version | Serial Number |
| ᴛMKDC54001. | ᴛMKDC54002. |
| Enable Beep Sound | Disable Beep Sound |
| ᴛMKDC56001. | ᴛMKDC56010. |
| Enable Power On Beep | Disable Power On Beep |
| ᴛMKDC56101. | ᴛMKDC56110. |
| Enable Beep On Connect | Disable Beep On Connect |
| ᴛMKDC56201. | ᴛMKDC56210. |

| | |
|---|---|
| Enable Beep On Scan | Disable Beep On Scan |
| ㄒMKDC56301. | ㄒMKDC56310. |
| Enable BeepOnMSCard | Disable BeepOnMSCard |
| ㄒMKDC56401. | ㄒMKDC56410. |
| Enable BeepOnICCard | Disable BeepOnICCard |
| ㄒMKDC56501. | ㄒMKDC56510. |
| Enable BeepOnNFCCard | Disable BeepOnNFCCard |
| ㄒMKDC56601. | ㄒMKDC56610. |
| High Beep Volume | Low Beep Volume |
| ㄒMKDC5D001. | ㄒMKDC5D010. |
| Enable Auto Menu Exit | Disable Auto Menu Exit |
| ㄒMKDC58001. | ㄒMKDC58010. |
| Enable Port Status | Disable Port Status |
| ㄒMKDC58101. | ㄒMKDC58100. |

| Display Format = Time & Battery | Display Format = Type & Time |
|---|---|
| ⊤MKDC58200. | ⊤MKDC58201. |
| Display Format = Type & Battery | Display Format = Memory Status |
| ⊤MKDC58202. | ⊤MKDC58203. |
| Display Format = Barcode Only | |
| ⊤MKDC58205. | |
| Enable Menu Barcode | Disable Menu Barcode |
| ⊤MKDC52401. | ⊤MKDC52410. |
| Factory Default | KDC Reset |
| ⊤MKDC57001. | ⊤MKDCA0000. |

# 16.14 Sleep Timeout

| Sleep Timeout = Disable | Sleep Timeout = 5sec |
|---|---|
| ₜMKDC51000. | ₜMKDC51005. |
| Sleep Timeout = 10sec | Sleep Timeout = 20sec |
| ₜMKDC5100A. | ₜMKDC51014. |
| Sleep Timeout = 30sec | Sleep Timeout = 1min |
| ₜMKDC5101E. | ₜMKDC5103C. |
| Sleep Timeout = 2min | Sleep Timeout = 5min |
| ₜMKDC51078. | ₜMKDC5112C. |
| Sleep Timeout = 10min | |
| ₜMKDC51258. | |

# 16.15　NFC

| Enable NFC Power | Disable NFC Power |
|---|---|
| ᴛMKDCN0001. | ᴛMKDCN0010. |

## 16.16　MSR

| Enable MSR Power | Disable MSR Power |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCMB001. | ‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCMB010. |
| No Beep On Error | Beep On Error |
| ‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM6000. | ‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM6001. |
| Enable Use Track1 | Disable Use Track1 |
| ‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM3001. | ‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM4001. |
| Enable Use Track2 | Disable Use Track2 |
| ‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM3002. | ‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM4002. |
| Enable Use Track3 | Disable Use Track3 |
| ‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM3004. | ‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM4004. |
| Enable Null Check Track1 | Disable Null Check Track1 |
| ‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM3101. | ‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM4101. |
| Enable Null Check Track2 | Disable Null Check Track2 |
| ‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM3102. | ‖‖‖‖‖‖‖‖‖‖ <br> ᴛMKDCM4102. |

| | |
|---|---|
| Enable Null Check Track3 | Disable Null Check Track3 |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ₜMKDCM3104. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ₜMKDCM4104. |
| Enable Attach SS/ES | Disable Attach SS/ES |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ₜMKDCM9001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ₜMKDCM9000. |
| MSR Card Type = ISO | MSR Card Type = Other 1 |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ₜMKDCMA000. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ₜMKDCMA001. |
| MSR Card Type = AAMVA | MSR Card Type = JIS 2 |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ₜMKDCMA002. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖ <br> ₜMKDCMA003. |

# 16.17    ICCR(IC CARD READER)

| Enable ICCR Power | Disable ICCR Power |
|---|---|
| <br>ᴛMKDCI0001. | <br>ᴛMKDCI0010. |
| IFD Number | Config Number |
| <br>ᴛMKDCI1000. | <br>ᴛMKDCI1001. |

# 16.18    Key Management

| Stored Keys | Inject Keys |
|---|---|
| ⊤MKDCEK2000. | ⊤MKDCEK1000. |

# 16.19　Multilanguage

| English | Korean |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC5L001. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC5L006. |
| **Japanese** | |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>ᴛMKDC5L007. | |

# 17. Appendix G – 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.*

## 17.1    KDC20/100/250/270L/270D/350L/410/411/415/470L/ 470D/500L

- 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

## 17.2 KDC30/270C/280C/300/350C/420/421/425/450/ 470C/500C

- 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 String1> 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



M KDC82000;88000;64010.

- QR code

# 18. Appendix H – Power management

When the KDC is not in use, it enters sleep mode. In this state, the KDC consumes very little power to prolong battery life.

The KDC270/KDC280/470 supports an additional power management feature called Hibernation mode. In this state, the KDC consumes even less power than when in sleep mode. This is because Hibernation mode is essentially in the same state as the power off state. The KDC will boot up faster from Hibernation mode in comparison to the power off state.   This is because in Hibernation mode, the KDC skips initialization.

Press and hold the SCAN button for more than 3 seconds to boot from Hibernation mode or power off mode.

By default, the Hibernation mode is disabled. It can be enabled by scanning the barcodes below with selected timeouts.

## 18.1    1D – KDC270L/270D/470L/470D

| Disabled | 10 minutes |
|---|---|
| 5P000 | 5P00A |
| 15 minutes | 30 minutes |
| 5P00F | 5P001E |
| 45 minutes | 60 minutes |
| 5P02D | 5P03C |

## 18.2   2D – KDC30OP/KDC270C/280C/470C

| Disabled | 10 minutes |
|---|---|
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC5P000. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC5P00A. |
| 15 minutes | 30 minutes |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC5P00F. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC5P001E. |
| 45 minutes | 60 minutes |
| ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC5P02D. | ‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖<br>TMKDC5P03C. |

The following table shows the different power management modes of the KDC.

| Mode | Description | Current consumption | Support Models |
|---|---|---|---|
| Power Off | • KDC is not ready to use and all components are off<br>• It takes about 30 – 60 seconds to boot up before it can be used<br>• To power OFF the KDC, press and hold the SCAN + DOWN buttons for more than 3 seconds or Slide power switch off (KDC400 only). Or press and hold the both SCAN buttons for more than 3 seconds. (KDC500 only) | < 10 uA | KDC20/30<br><br>KDC350<br><br>KDC400<br><br>KDC270<br><br>KDC280<br><br>KDC470/475<br><br>KDC500 |
| Hibernation | • KDC is not ready to use and all components are off.<br>• It takes 4 – 5 seconds to boot up before it can be used<br>• KDC transits into a hibernation mode from Power On or Sleep mode when the timeout has occurred (10, 15, 30, 45 & 60 | < 10 uA | KDC30OP<br><br>KDC270<br><br>KDC280 |

| | | | KDC470/475 |
|---|---|---|---|
| | • Power on the KDC by pressing the SCAN button for 3 seconds | | |
| Decoder Off | • KDC is ready to use<br>• KDC wakes up with a command from the host or a button event<br>• Decoder is off when the timeout has occurred (5 minutes)<br>• It takes about 500ms to start decoding | < (80uA ~ 3mA) | KDC30<br><br>KDC30OP<br><br>KDC270C<br><br>KDC280C<br><br>KDC470/475C |
| Sleep | • KDC is ready to use<br>• It takes 150ms to wake up from sleep mode<br>• KDC wakes up with a command from the host or a button event<br>• KDC transits into a sleep mode when the sleep timeout has occurred | < (80uA ~ 10mA) | All |
| Power On | • KDC is fully ready to use<br>• To power ON the KDC, press and hold the SCAN + DOWN buttons for more than 3 seconds (KDC20, 30, 350, 270, 280, 470) or Slide power switch on (KDC400 only) or press and hold the both SCAN buttons for more than 3 seconds. (KDC500 only)<br>• KDC30OP, KDC270, KDC280 and KDC470/475 power are also powered on with press and hold the SCAN button only for more than 3 seconds. | < (40mA ~ 100mA) | All |

Note: KDC100/200/250/300 doesn't have power off state.

# 19. Appendix I – KDC470/475 specific features

## 19.1 Connection method with a PC

The KDC470/475 automatically sets up a communication path between itself and the PC when the KDC470/475 is plugged in via USB cable. By pressing the DOWN button for 3 seconds, the KDC470/475 toggles the communication path between the PC and smart device.

## 19.2 Smart device charging method

It is possible to charge a smart device and the KDC470/475 at the same time by via USB cable or using a charging cradle.

## 19.3    Configuring SCAN buttons

The KDC470/475 has two scan buttons (Main scan buttons) and provides an additional two scan buttons (Case scan buttons) on certain smart device cases. By default, both main and case scan buttons are enabled.

However, user can configure scans buttons as following

1.  Enable/Disable main scan buttons. In this case, the Case scan buttons are only work.

2.  Disable Case scan buttons and separate main LEFT and RIGHT scan buttons.

   ①.  Enable only LEFT scan button

   ②.  Enable only RIGHT scan button

   ③.  Enable both LEFT and RIGHT scan button

## 1D – KDC470/475L/D

| Disable main scan buttons | Enable main scan buttons |
|---|---|
| 5X000 | 5X001 |
| Disable Case scan buttons | Enable Case scan buttons |
| 5X101 | 5X100 |
| Disable both main scan buttons | Enable LEFT main scan button only |
| 5X200 | 5X201 |
| Enable RIGHT main scan button only | Enable both main scan buttons |
| 5X202 | 5X203 |

## 2D – KDC470/475C

| Disable main scan buttons | Enable main scan buttons |
|---|---|
| ⊤MKDC5X000. | ⊤MKDC5X001. |
| Disable Case scan buttons | Enable Case scan buttons |
| ⊤MKDC5X101. | ⊤MKDC5X100. |
| Disable both main scan buttons | Enable LEFT main scan button only |
| ⊤MKDC5X200. | ⊤MKDC5X201. |
| Enable RIGHT main scan button only | Enable both main scan buttons |
| ⊤MKDC5X202. | ⊤MKDC5X203. |

## 19.4    USB OTG (On-The-Go) Mode

KDC470/475 support OTG mode when using Android phone with a smartphone case. KDC470/475 smartphone case allows user to charge Phone and KDC470/475 at the same time. However, it is not possible to charge Phone if using OTG mode. It should be switched Bluetooth mode while charging a Phone.

There are two modes in KDC470/475: OTG mode and Bluetooth mode.
- KDC470/475 stores mode in NVRAM
- These modes are only determined via a special barcode and a command

In the OTG mode, KDC470/475 is switched to Bluetooth mode temporarily when
- KDC470/475 is running w/o a smartphone case
- KDC470/475 is running w/o a smartphone
- KDC470/475 is running w/ a smartphone which doesn't support OTG mode
- KDC470/475 and Phone are under charging via USB or Cradle
    o KDC470/475 is switched back to OTG mode when USB cable is unplugged or removed from charging cradle.

All transitions between OTG and Bluetooth modes are done automatically in KDC470/475 and application can keep connections when transition is happened with following an application guide.

[Note] To switch and connect between OTG and Bluetooth, the KDC470/475 should be paired with Phone before using it.

The below picture describes overall flow of using OTG and Bluetooth mode in KDC470/475.

Power On

Read NVRAM

Store NVRAM

OTG Mode? —No→ Bluetooth Mode —→ Change to OTG Mode? —Yes→ Store NVRAM

Special barcode or Command

Change to OTG Mode? —No→

Yes

Phone case? —No→

Yes

Does phone support OTG? —No→

Yes

OTG Mode ←—No——

Yes Special barcode or Command

Phone charging started? —No→ Change to Bluetooth Mode?

No

Phone is unplugged? —Yes→

Yes

Yes Back to OTG mode

Charging via USB or Cradle only

Temporary bluetooth connection

Phone charging finished? —No→

No

Phone is plugged? —Yes→

Yes

## When does KDC470/475 switch modes?

- U1: Removes Phone from KDC470/475 case and KDC470/475 switches to Bluetooth mode from OTG mode
- U2: Inserts Phone to KDC470/475 case and KDC470/475 switches back to OTG mode from Bluetooth mode
- U3: Plugs USB cable and KDC470/475 switches to Bluetooth mode from OTG mode
- U4: Unplugs USB cable and KDC470/475 switches back to OTG mode from Bluetooth mode
- U5: Puts KDC470/475+Case into a cradle and KDC470/475 switches to Bluetooth mode
- U6: Removes KDC470/475+Case from a cradle and KDC470/475 switches back to OTG mode
- U7: Scans a Bluetooth mode special barcode to change to Bluetooth mode
- U8: Scans an OTG mode special barcode to change to OTG mode

The following table shows the connection modes of KDC470/475 which can be changed automatically.

| Phone Installed? | USB Connected? | On the Charging Cradle? | Mode to be set to |
|---|---|---|---|
| Yes | No | No | OTG |
| | No | Yes | Bluetooth |
| | Yes | N/A | Bluetooth |
| No | N/A | N/A | Bluetooth |

# Special Barcodes

- <u>**Bluetooth Mode**</u>: KDC and Smart Device communicate each other through Bluetooth.

5h001

┬MKDC5h001.

- <u>**OTG Mode**</u>: KDC and Smart Device communicate each other through USB.

5h002

┬MKDC5h002.

# 20. Appendix J – How to connect KDC280 to host via BLE

KDC280 has BLE(Bluetooth Low Energy) V4.1 instead of Bluetooth V2.1 and supports below three profiles.

- OPEN
    - It is a Bluetooth Low Energy standard mode called **Guest** mode which doesn't need to be paired. It does supports bi-directional communication.
- SPP
    - It is a KoamTac specific customized profile which provides bi-directional communication in the paired mode.
- HID
    - It is a Bluetooth Low Energy standard profile which does support Human Interface Device as like keyboard. It is required to be paired first.

## Selecting profile

Select a BLE profile. There are two ways to set up a BLE profile. The user may establish a BLE profile manually (on the KDC280) or by scanning a programming barcode as shown below.

OPEN

$_T$MKDC6A006.

SPP

$_T$MKDC6A000.

HID

$_T$MKDC6A001.
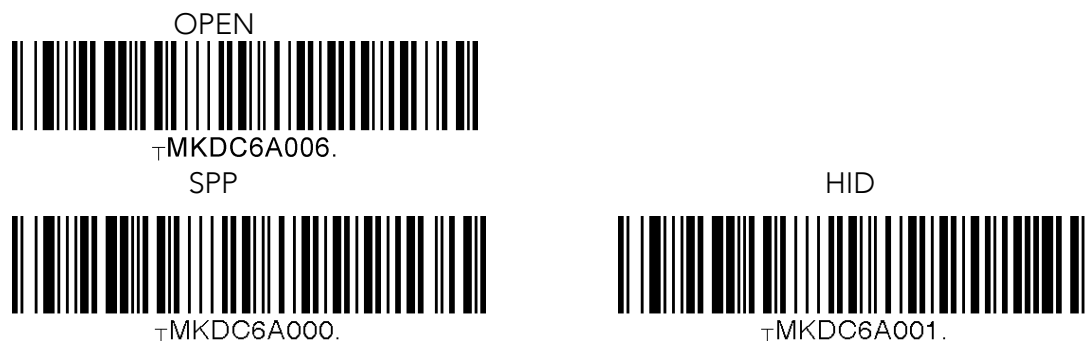
The user also may select a BLE profile from the **ConnectDevice** menu of KDC280.

## KDC280 Main menu → BT Config → ConnectDevice

## Pairing

1. There are three ways to put KDC280 into **Pairing** mode.
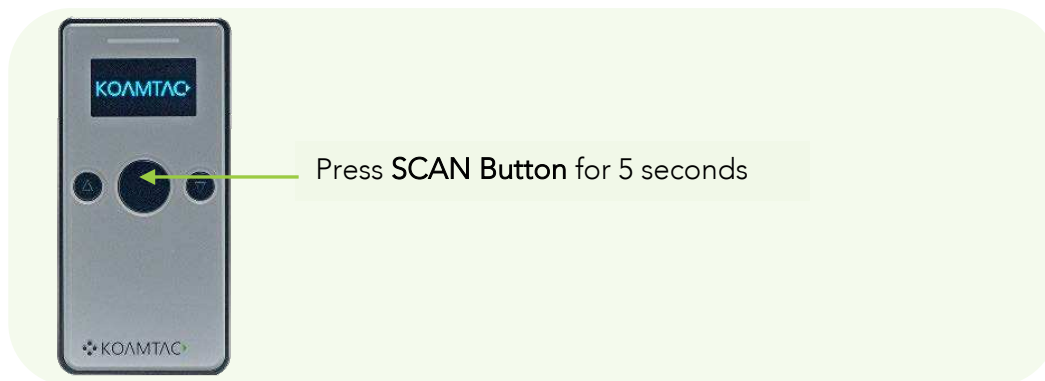
   - Scan below **Pairing** barcode.

   

   - Select **Pairing** from the KDC280 menu.

   ## KDC280 Main Menu → BT Service → Pairing

   - Press the Scan button for five seconds in order to enter into Pairing mode.

   

   Press **SCAN Button** for 5 seconds

2. On the host device, go to **Settings -> Bluetooth**, and select the KDC280 that needs to be paired. The KDC and host device will now communicate with each other.

   

   Settings

   Tap **Bluetooth**          Tap the **KDC**

3. After it has been paired, open application and select a paired device and connect to the KDC280.