

## BioSync KBF-3KP Setup

Setting up a KBF-3KP reader as a new installation is a three step process. Each of these steps is covered in its own document:

- [BioManager Software Installation](#) (p/n: 02301-001)
- [CNV Converter Setup](#) (p/n: 02303-001) - (used to connect to the BioSync via ethernet)
- [BioSync KBF-3KP Reader Setup](#) (p/n: 02304-003)

**NOTE:** The current version of the BioManager software is version 10 (at the time of writing). You can download the latest version from the Software Downloads section of the Kerisys website - <http://www.kerisys.com/pages/download/software/>

This guide explains the process of wiring the BioSync to the controller, connecting to the BioSync for the first time, configuring the reader then enrolling user's cards, fingerprints and PINs (when using a 3KP reader).



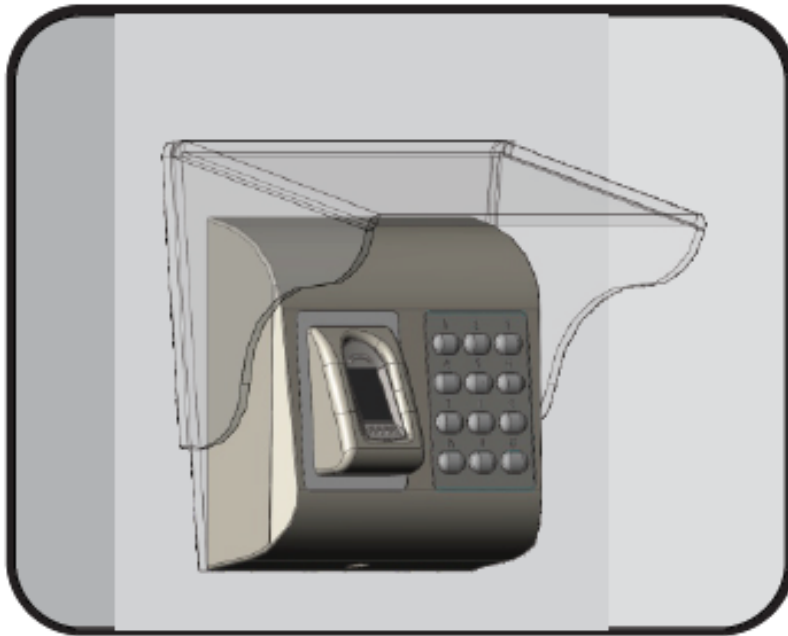
The KBF-3KP biometric keypad reader is a Wiegand biometric fingerprint reader and keypad for access control applications and features a backlight and programmable Wiegand output and can be used inside or outdoors. It offers storage of up to 9,500 fingerprints, programmable Wiegand output (8 to 128 bits) and selectable PIN code length. There is also a tamper switch which is activated if an attempt is made to open or remove the unit from the wall. You can wire the tamper switch into an available input (for example, on a 4x4 module) and then set up an alert/sound alert within Doors.NET.

## BioSync KBF-3KP Setup

### BioSync 3KP Installation

#### Installing Outside

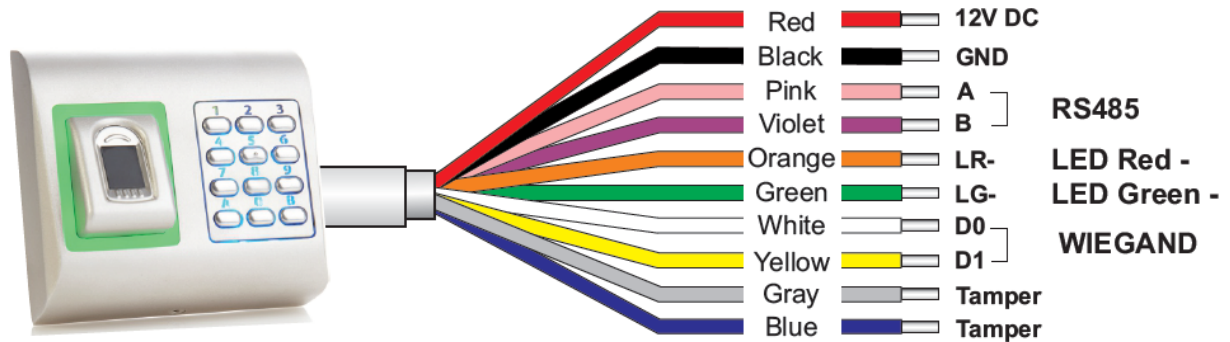
If the 3KP reader is to be installed outside, the reader **MUST** be fitted with the MCD-MINI polycarbonate cover available as a BioSync accessory (in order to protect the sensor from direct rainfall).



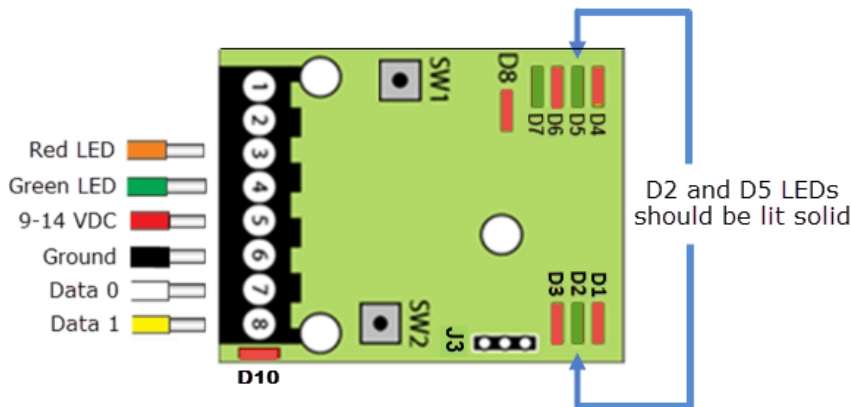
The operating temperature of the product is between  $-15^{\circ}\text{C}$  -  $+60^{\circ}\text{C}$ . If the reader is installed in an environment where the temperature can drop below  $-10^{\circ}\text{C}$  or/and if the sensor could be exposed to direct sunlight, it is strongly recommended to install the reader inside a third party sealed wall mount box (fitted with additional heater if very low temperature) to keep a constant sensor level performance. Keri Systems cannot guarantee the functionality of the product if prior measures and advice are not followed. It is also strongly recommended to use dual technology biometric readers when used outdoors to offer first higher security but also the possibility to use different readers to suit different types of users.

## BioSync KBF-3KP Setup

### KBF-3KP Wiring to the Controller



### Wiring to an NXT RM3 (Reader Interface Module)

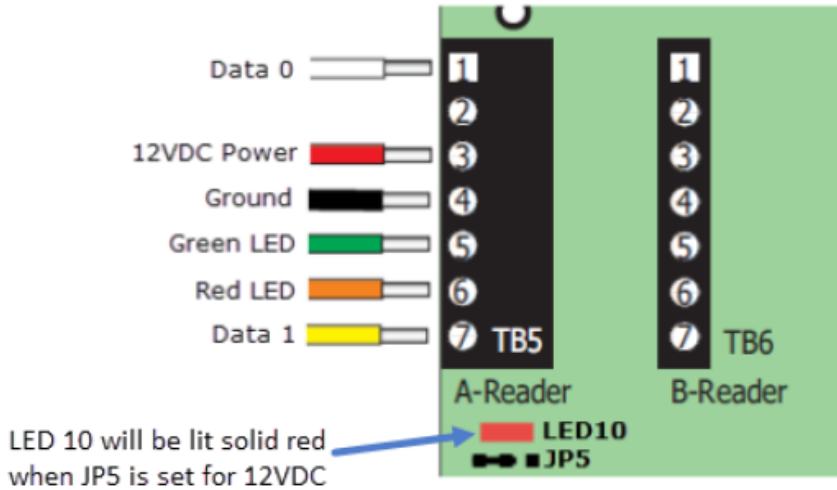


### Reader Interface Module Notes:

- On the Reader Interface Module the J3 jumper should be set to pins 1 and 2. This will provide 12VDC to the BioSync reader and when correctly set the D10 LED should be solid red.
- If you are using a Wiegand-only module, by default the LED mode will be correctly set (providing the RM3 is using firmware version 03.03.10)
- **IMPORTANT:** If you have an NXT 4x4 module connected on the same bus as the BioSync, you **MUST** use a separate power supply to power the BioSync.
- The Reader Interface Module is only supported with the NXT and NXT-MSK controllers.

## BioSync KBF-3KP Setup

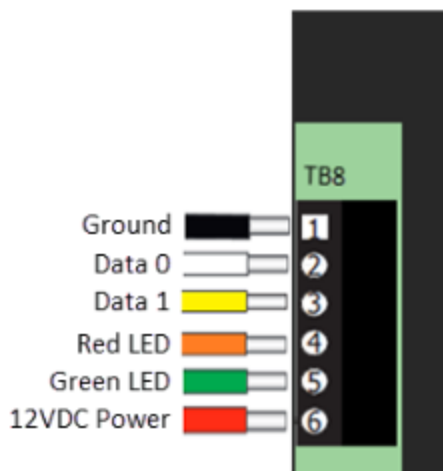
### Wiring to the PXL-500W Controller



### PXL Notes:

- On the PXL-500W controller, the JP5 jumper should be set to pins 1 and 2 - this will provide 12VDC to the BioSync and on the PXL-500W LED10 will be solid red.

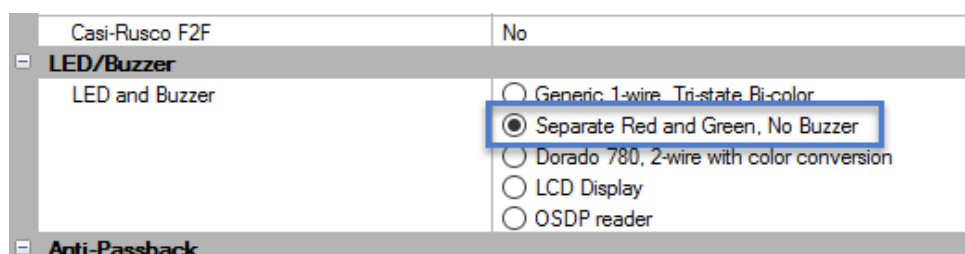
### Wiring to an EP Controller (i.e EP-1502)



## BioSync KBF-3KP Setup

### EP Controller Notes

- BioSync readers have two LED lines but the EP controllers only have one LED pin-out. This is overcome by wiring the Red LED wire into the buzzer pin-out (pin 4) and in Doors.NET you have to set the BioSync reader as being a Dual LED reader type.
  - In Doors.NET go to Setup >> Hardware Setup >> All.
  - Locate and highlight the BioSync reader in the hardware tree.
  - Ensure [Advanced View](#) is enabled for the reader properties.
  - Locate **LED/Buzzer**.
  - Set the reader for **Separate Red and Green, No Buzzer**.



**Note:** This will set the controller to use the buzzer for controlling the second LED line and because of this the reader does not generate any sound when the door is forced or held open.

- When using BioSync readers with EP controllers you have to use custom LED Modes to define the LED behavior for the various reader modes (i.e - access granted, access denied, locked, unlocked, lockdown, etc). Setting up and using [Custom LED Modes](#) is covered in a separate section and available as a standalone document (p/n: 02315-001).

### General Notes

- The shield wire connects with the black (Ground) wire at the controller. At the reader side they are kept separate to prevent a ground loop.
- The BioSync readers can be connected to virtually any controllers that conforms to Wiegand format standards (standard 26-bit or a custom Wiegand format).
- The maximum reader cable run distance for the BioSync readers is 500 feet (as per industry standard specifications).

## BioSync KBF-3KP Setup

- Typically the BioSync readers will be powered from the controller so ensure the controller's power supply outputs enough current for the controller and all connected devices.
- The current draw for the BioSync KBF-3KP is approx. 130mA max.
- When using a separate power supply for the BioSync, connect the Ground for both devices to ensure correct transfer of the Wiegand signal.
- When you have connected the reader to the controller and applied power, the BioSync LED bar should flash amber and the reader will beep twice.
- When the BioSync reader is first powered up there will not be a backlight (by default the backlight is disabled) but can be easily enabled once it is online to the BioManager software.

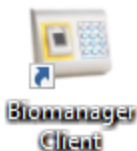
## Add the BioSync 3KP to BioManager

Once you have installed the BioManager Software, setup the CNV converter, set the reader's DIP switch and added the CNV converter as a portal, you are ready to add the BioSync 3KP to the BioManager software.

## Scan for the BioSync

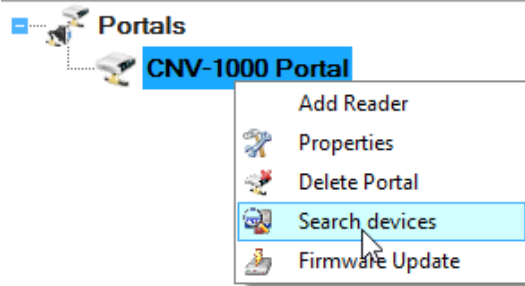
When using the CNV-1000 converter you can use the scan facility to automatically detect the BioSync and you will therefore not initially need to find out the device ID/serial number - hence this is the quickest and easiest method to add the BioSync.

1. Click the BioManager client desktop icon.



2. If using BioManager for the first time you will be automatically logged into the client, otherwise you may be prompted for a user name and password.
3. On the left of the screen you should see a portal. An existing system will also have BioSync readers listed.
4. Right-click on the communication portal.
5. Select **Search devices**.

## BioSync KBF-3KP Setup

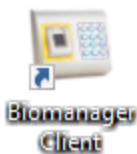


6. A 15-second timer will begin to count down.
7. The detected BioSync reader(s) will show in the search window.
8. Highlight the detected reader then click to **Add Reader**.

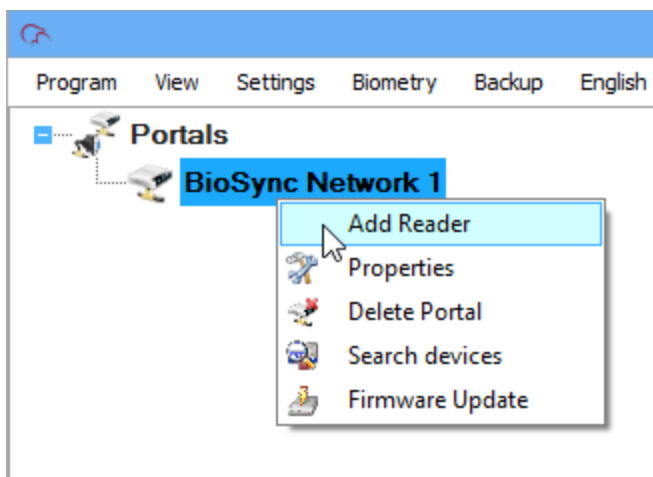
### Manual Add

The manual add option is useful if the hardware has not yet been installed but you want to begin setting up the system in advance.

1. Open the BioManager software via the client icon on the desktop.



2. Right-click on the Portal which should already be listed and select **Add Reader**.

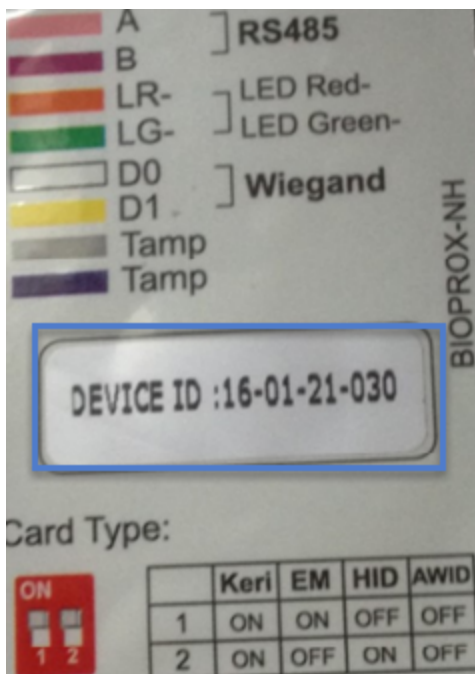


## BioSync KBF-3KP Setup

3. The Add Reader window will appear.
4. Enter a description for the KBF-3KP.
5. Select the **exact** model (KBF-3KP) from the **Type** drop-down list.
6. Select the Wiegand output type. Typically for the KBF-3KP this should be left at the default setting of **Wiegand26**.
7. The Wiegand Output type should be **SingleWiegand**.

Name	BioSync - 3KP
Type	KBF-3KP
Wiegand type	Wiegand26
Wiegand output	SingleWiegand

8. On the reverse of the KBF-3KP (under the mounting bracket), you will see a white label which has a wiring diagram and the device ID/serial number - you should make a note of this number.



9. Enter the device ID/serial number.



## BioSync KBF-3KP Setup

Wiegand output SingleWiegand

Serial 16-01-21-030

Buzzer

Finger Acceptance Flexibility Automatic Secure

Go to the "Biometric" tab  
Put the serial number of Reader

10. For now, all other settings can be left at their default values.
11. Click the SAVE & EXIT button.



12. In the live events grid you should see an online message for the reader.

Biomanager Client - Access - 1.0.8.0

Time	Portal	Controller	Reader	Door	Event
18/07/2016 14:16:12	BioSync Network 1		Main Gate		Device online

13. You are now ready to start adding user PINs and fingerprints.

## Enrolling Users via the 3KP Reader

1. Double-click the Users link to open the User window.



2. Click the New User button.

## BioSync KBF-3KP Setup



3. Enter a User ID (Cardnumber) - This is the number that will be transmitted by the BioSync to the Doors.NET software - It therefore will be unique to each users.

User name	New 3KP User		
User ID's (Card numbers)	12345		
Site code	0	User code	12345
Wiegand 26 ID	12345	Site code	0

**NOTE:** If users will also be using 26-bit Wiegand cards on the Doors.NET system you should enter the cardholder's credential **Imprint** and **Facility Code** to automatically create the unique User ID. The Imprint (User Code) and Facility Code (Site Code) are entered as shown below:

User name	New 3KP User		
User ID's (Card numbers)	7536660		
Site code	115	User code	20
Wiegand 26 ID	7536660	Site code	115

4. Next, enter an Access Code (this in the number that is entered into the keypad).

User	
	Access Code 8765
code	115
User code	20

## BioSync KBF-3KP Setup

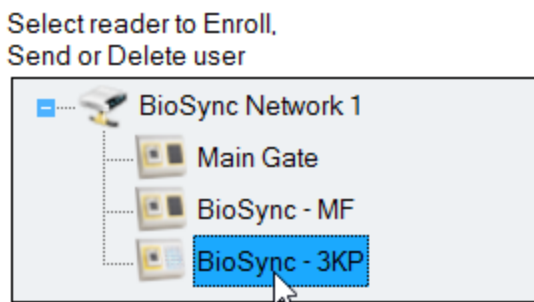
5. Click the SAVE NEW button.



## Enrolling Fingerprints

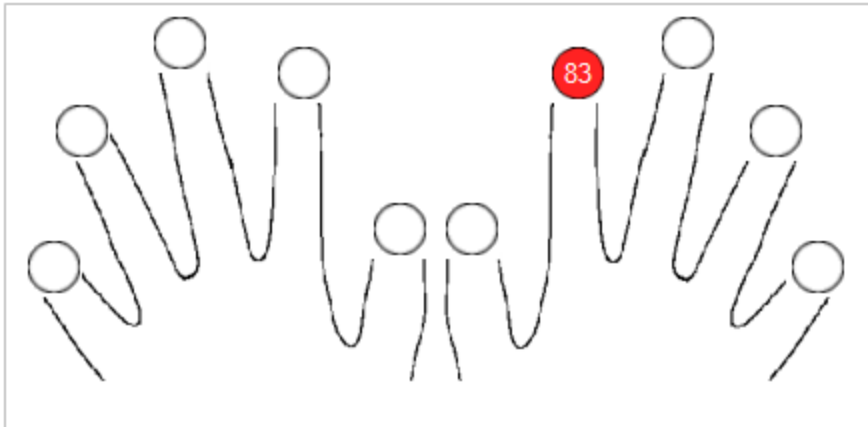
Now that the unique user number has been enrolled, you are ready to enroll user fingerprints. The fingerprint is associated with the enrolled User ID number.

1. In the Biometric section, select the reader (left-click) which will be used for enrollment.



2. On the diagram of two hands, right-click a fingertip for the finger you will be enrolling, select **Enroll**.
3. A 30 second count down will begin and the fingerprint sensor LED will be flickering quickly between amber and green.
4. Present the appropriate finger to the sensor.
5. On the diagram a red circle will appear on the fingertip, there will be a number displayed - ensure this number is greater than 70 to ensure effective accuracy of fingerprint verification.

## BioSync KBF-3KP Setup



6. Click the SAVE NEW button, the fingerprint(s) will then automatically be sent to all BioSync readers that the user has access to.

**Example:** If the user has “Unlimited” Access level then the fingerprints will be sent to all readers, if the user has Access level only for Reader 1 and Reader 3 then the fingerprints will be sent only to those two readers.

**NOTE:** If more fingerprints are added for one user, all fingerprints will send the same Wiegand Code (the User ID) to the controller.

7. Repeat steps 2-5 for any additional fingerprints to be enrolled.

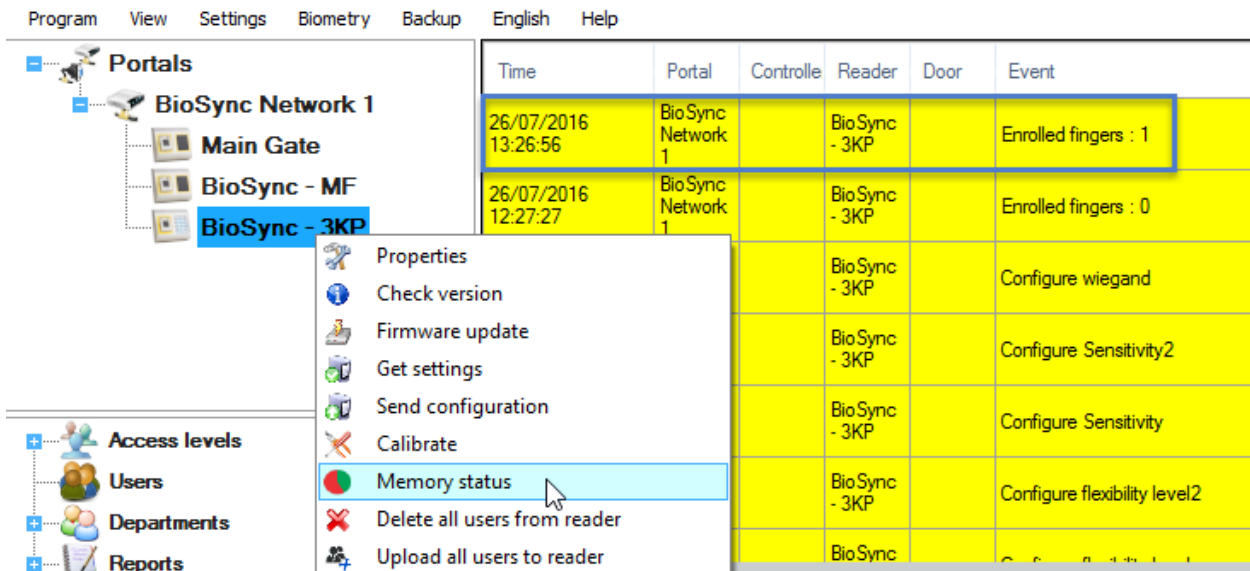
## Check Communication and Memory Status

If ever you wish to check the communication status of a BioSync reader, or to check how many fingerprints are enrolled, perform the following steps:

1. Right-click the reader and select 'Memory Status'
2. In the events grid a yellow-highlighted line will appear and the enrolled fingerprint count will be displayed.

## BioSync KBF-3KP Setup

Program View Settings Biometry Backup English Help



Time	Portal	Controle	Reader	Door	Event
26/07/2016 13:26:56	Bio Sync Network 1		Bio Sync - 3KP		Enrolled fingers : 1
26/07/2016 12:27:27	Bio Sync Network 1		Bio Sync - 3KP		Enrolled fingers : 0
			Bio Sync - 3KP		Configure wiegand
			Bio Sync - 3KP		Configure Sensitivity2
			Bio Sync - 3KP		Configure Sensitivity
			Bio Sync - 3KP		Configure flexibility level2
			Bio Sync		Configure flexibility level2

Left sidebar menu items: Portals, BioSync Network 1, Main Gate, BioSync - MF, BioSync - 3KP, Access levels, Users, Departments, Reports.

Context menu items: Properties, Check version, Firmware update, Get settings, Send configuration, Calibrate, Memory status, Delete all users from reader, Upload all users to reader.

## Deleting Fingerprints

In general, the fingerprints are stored in the biometric reader and in the software. Deleting can be done only in the readers or from both places.

### Deleting one user from the biometric reader

- Select the user
- Click on “Delete User”. The User together with its fingerprints will be deleted from both the software and the reader.

### Deleting all users from the biometric reader

- Right click on the reader and select “Delete all users from reader”.

### Delete one or more fingerprints

- Select the user and open the “Biometric” tab.
- Go to the fingertip that needs to be deleted, right click and select “Delete” for one finger or “Delete All” for all fingers (of the user).
- Click “Save Changes”.

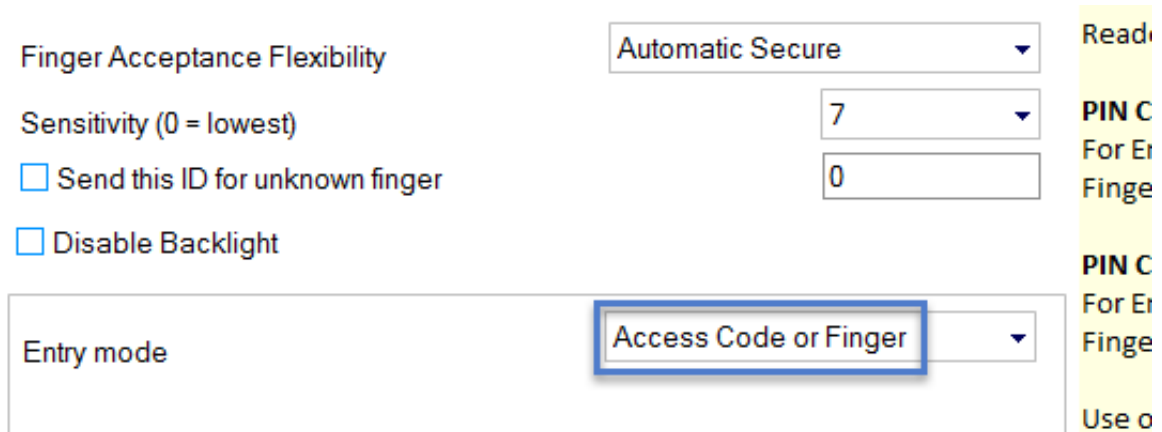
*With this procedure the user's fingerprints are deleted from the software and from the reader.*

## BioSync KBF-3KP Setup

### Changing the BioSync Reader Mode

The following steps explain how to change the user authentication operating mode in BioManager.

1. In the BioManager software (in the upper-left pane), right-click on the BioSync reader and select **Properties**.
2. From the BioSync reader properties window, locate **Entry Mode**.



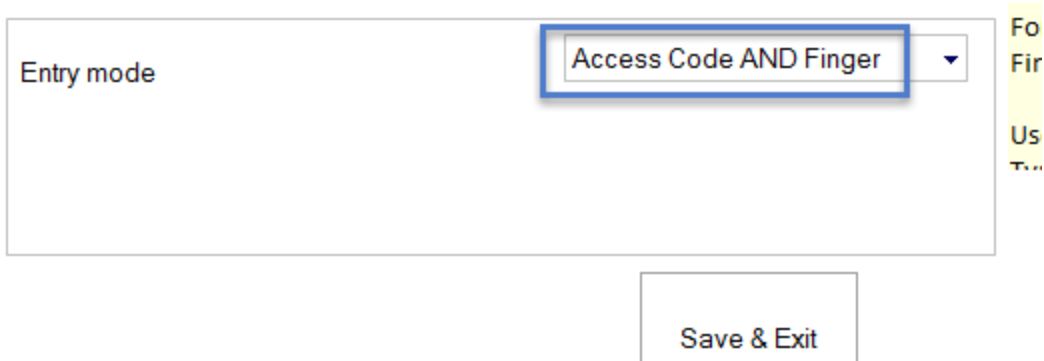
The screenshot shows the BioSync reader properties window. The 'Entry mode' dropdown menu is highlighted with a blue box and set to 'Access Code or Finger'. Other settings include 'Finger Acceptance Flexibility' set to 'Automatic Secure', 'Sensitivity (0 = lowest)' set to '7', and 'Send this ID for unknown finger' and 'Disable Backlight' checkboxes are unchecked. On the right side, there are labels for 'Read', 'PIN C', 'For Er', 'Finge', 'PIN C', 'For Er', 'Finge', and 'Use o'.

The available entry modes are:

- **Finger** - You will only need your enrolled fingerprint to gain access (the keypad will be inactive).
- **Access Code or Finger** - You can use either your access code or your enrolled finger to gain access
- **Access Code AND Finger** - Enables the use of the double security mode: Enter the PIN code (Access code) (i.e 9876). For the next 8 seconds the fingerprint sensor LED will flicker amber. You should present your enrolled finger within the 8 seconds.

3. Select the mode you wish to set the reader to.

## BioSync KBF-3KP Setup



Entry mode: Access Code AND Finger

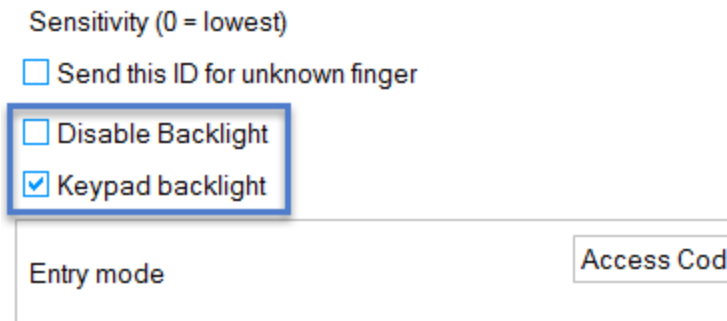
Save & Exit

4. After making your selection click the **Save and Exit** button.

## Enable or Disable the Keypad or Sensor Backlight

To enable or disable either the keypad backlight or the sensor backlight you must first ensure you are at least using Biosync firmware version 1.25.

1. Right-click the KBF-3KP from the reader list on the left, select Properties.
2. There are two backlight options (Disable Backlight and Keypad Backlight)
3. To have both LEDs enabled, ensure Disable Backlight is not select and Keypad Backlight is selected.



Sensitivity (0 = lowest)

Send this ID for unknown finger

Disable Backlight

Keypad backlight

Entry mode: Access Cod

4. To disable both backlights you should make the opposite selections.



## BioSync KBF-3KP Setup

Sensitivity (0 = lowest)

Send this ID for unknown finger

Disable Backlight

Keypad backlight

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Entry mode Access Coc

5. Click the SAVE & EXIT button and the settings will be sent to the reader.

## Enrolling the Users into Doors.NET

The same users now need to be added to Doors.NET because so far we have only added the users to the BioManager software and the BioSync reader (not to the controller). In this example the BioSync reader is wired into an NXT-MSD controller but the same setup procedure applies to all controller types. It details the manual enrollment of a 26-bit Wiegand card but any other enrollment method can also be used.

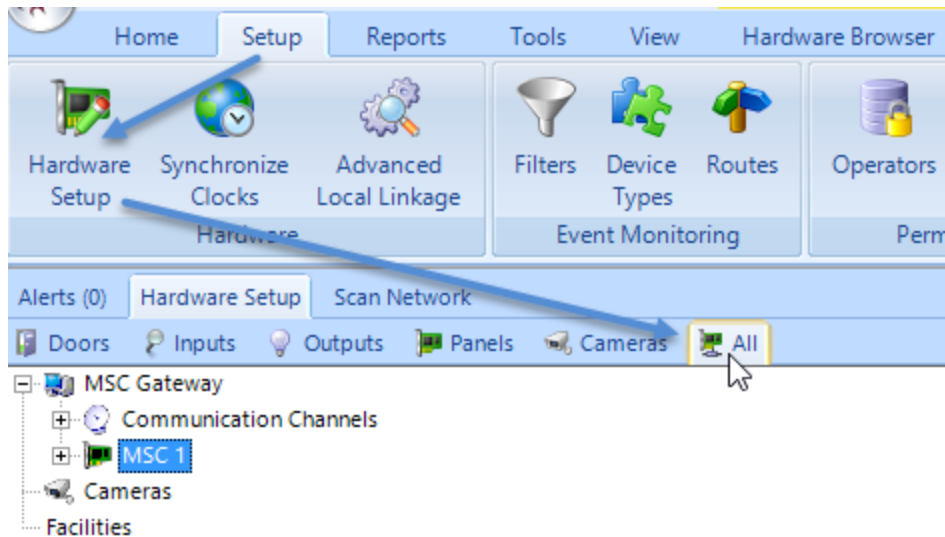
**NOTE:** If you have existing 26-bit Wiegand credentials which are already enrolled in Doors.NET you will not need to perform the next steps. As long as the enrolled credential Imprint and Facility code have been correctly entered into Doors.NET you should be getting access granted once your fingerprint and/or access code has been verified. The following steps assume this is a Doors.NET installation without any existing cardholders.

### Set the Reader Manufacturer Model

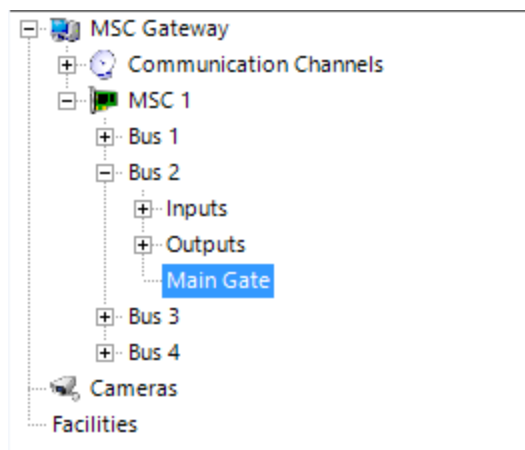
1. From within Doors.NET go to Setup >> Hardware Setup >> All.



## BioSync KBF-3KP Setup

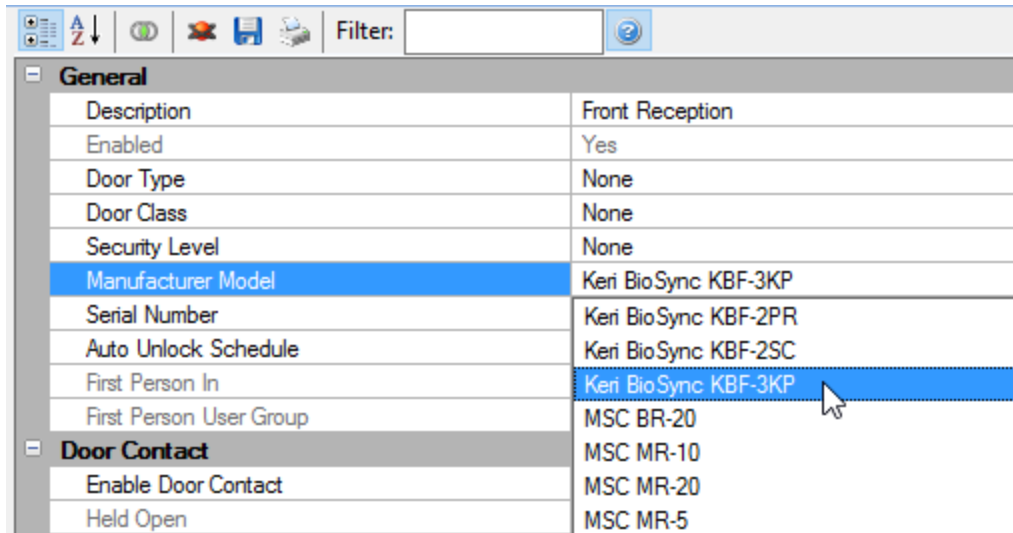


2. Locate the bus which the BioSync reader is on and select the BioSync reader.




3. The reader properties will appear on the right.
4. Locate **Manufacturer Model** and select **Keri BioSync KBF-3KP** from the drop-down list.

## BioSync KBF-3KP Setup

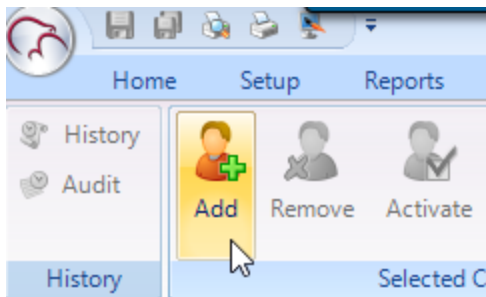


General	
Description	Front Reception
Enabled	Yes
Door Type	None
Door Class	None
Security Level	None
Manufacturer Model	Keri BioSync KBF-3KP
Serial Number	Keri BioSync KBF-2PR
Auto Unlock Schedule	Keri BioSync KBF-2SC
First Person In	Keri BioSync KBF-3KP
First Person User Group	MSC BR-20
Door Contact	
Enable Door Contact	MSC MR-10
Held Open	MSC MR-20
	MSC MR-5

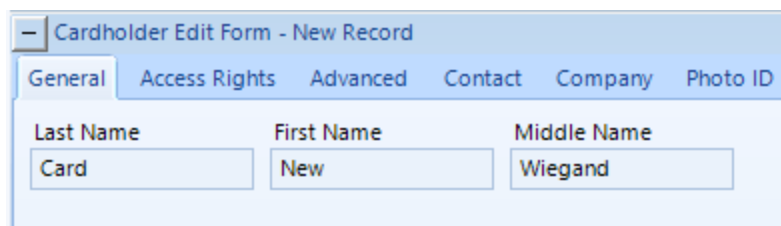
5. Save the reader settings .
6. Close the hardware page.

### Manually Enroll the Cardholder

1. Go to Home >> Cardholders.
2. Click the **Add** icon.



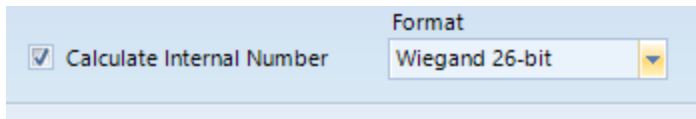
3. Enter a first name and last name for the new cardholder (middle name is optional).



Cardholder Edit Form - New Record					
General	Access Rights	Advanced	Contact	Company	Photo ID
Last Name	First Name	Middle Name			
Card	New	Wiegand			

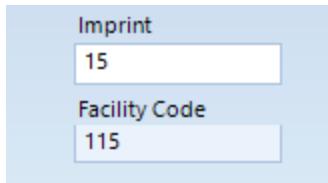
## BioSync KBF-3KP Setup

4. Ensure **Calculate Internal Number** is selected and the format is correct.



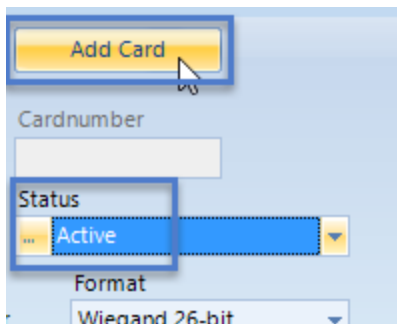
Format  
 Calculate Internal Number    Wiegand 26-bit

5. Enter the Facility Code and the Imprint (*Site Code and User Code in BioManager*).



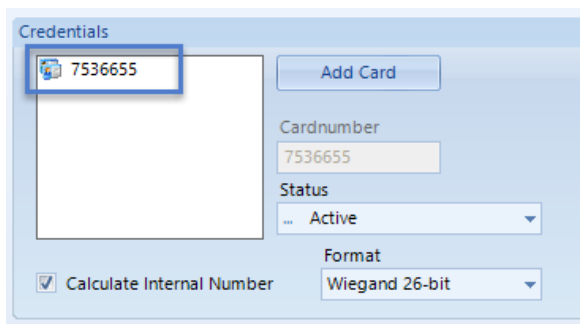
Imprint  
15  
Facility Code  
115

6. Set the status to **Active**.
7. Click the **Add Card** button.



Add Card  
Cardnumber  
Status  
Active  
Format  
Wiegand 26-bit

8. A unique card number will appear in the Credentials list. This number should exactly match the unique number (User ID) in BioManager.



Credentials  
7536655  
Add Card  
Cardnumber  
7536655  
Status  
Active  
Format  
Wiegand 26-bit  
 Calculate Internal Number

## BioSync KBF-3KP Setup

Users count: 6 / 6

User name

User ID's (Card numbers)  Access Code

Site code  User code

Wiegand 26 ID 7536655 Site code 115 User code 15


Access level

- Go to the Access Rights tab and assign an access group to the new cardholder (i.e Total Access).

Cardholder Edit Form - New Record

General Access Rights Advanced Contact Company

Assigned	Description
<input type="checkbox"/>	
<input checked="" type="checkbox"/>	Total Access

- Save the new record .
- If you now gain access at the BioSync reader the reader's LED should go green and you should see an access granted event in the Live Events grid.

Live Events

Drag a column header here to group by that column.

Icon	Location	Message
<input checked="" type="checkbox"/>	Main Gate	Access Granted
<input type="checkbox"/>	MSC 1	Controller Configuration Saved to Flas..

- As previously mentioned, the fingerprint is associated with the User ID/Credential number so even if the BioSync is set to Finger/Finger or Card modes, and you only present the enrolled finger, the same name and card number will appear in Live Events.