

BioSync KBF-1FP Setup

Setting up a KBF-1FP 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-1FP Reader Setup](#) (p/n: 02304-001)

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 BioSync and then enrolling user's cards, fingerprints and PINs (PINs are used with the KBF-3KP reader).



The KBF-1FP is a Wiegand biometric reader for indoor access control applications. It offers storage of up to 9,500 fingerprints and has programmable Wiegand output (8 to 128 bits). Configuration of the readers and the users is performed using the BioManager software and is covered further on in this section. Connection between biometric readers is via an RS-485 network. This RS-485 network is also used for fingerprint transfer and unit configuration.

NOTES:

- When using the PXL controller the controller will process up to 31 Wiegand bits.
- When using an NXT RM3 (Reader Interface Module), the controller will read up to 64 Wiegand bits

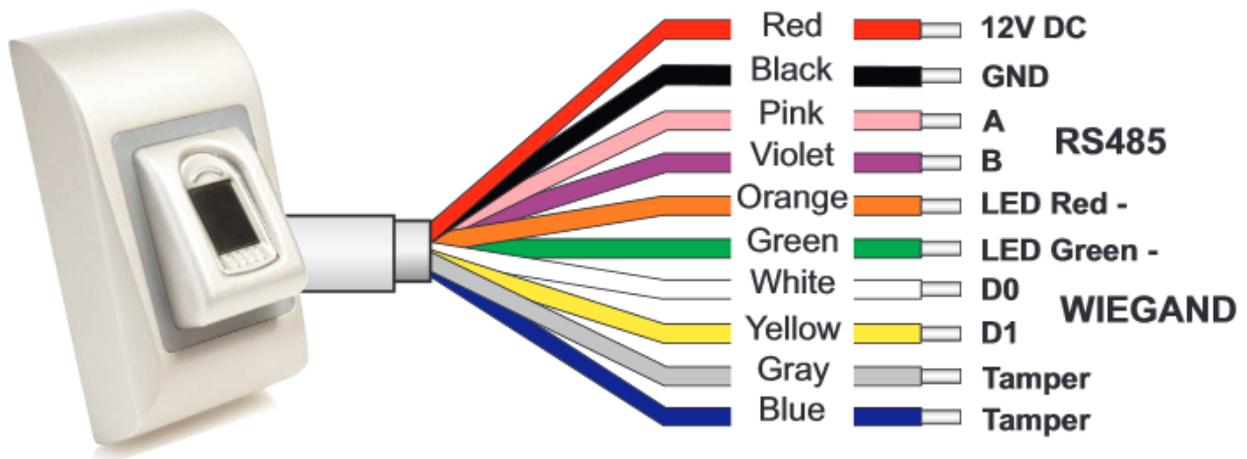
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Connection between the PC and the readers is achieved using an Ethernet-to-RS485 converter (CNV-1000). Only one converter is needed per system, unless you are connecting to more than 32 BioSync readers on the same data line - then an additional CNV-1000 would be required.

NOTE: BioSync readers should be wired together on a continuous daisy-chain connection. You should NOT have multiple spurs from the CNV-1000 converter.

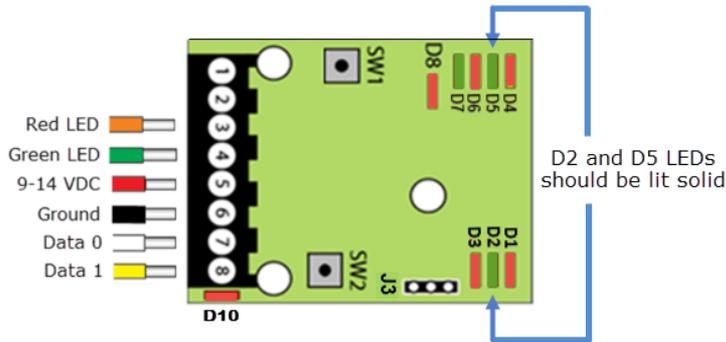
BioSync 1FP Installation

Wiring Diagrams



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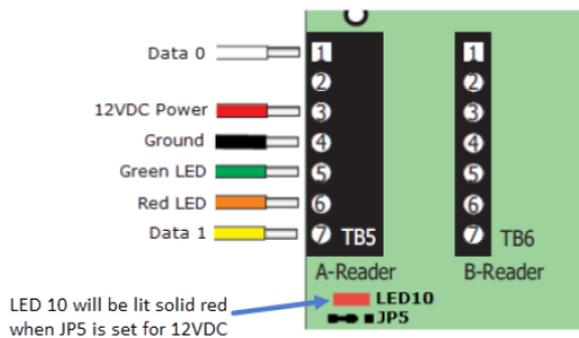
Wiring to an NXT Reader Interface Module



RM3 Notes:

- On the Reader Interface Module (RM3) - 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 already be correctly set (using the default 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 NXT-RIM modules are **ONLY** supported with the NXT and NXT-MSD controller types.

Wiring to the PXL-500W Controller

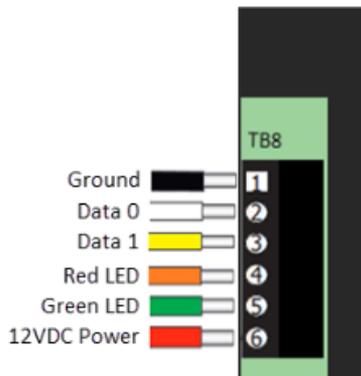


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PXL Notes:

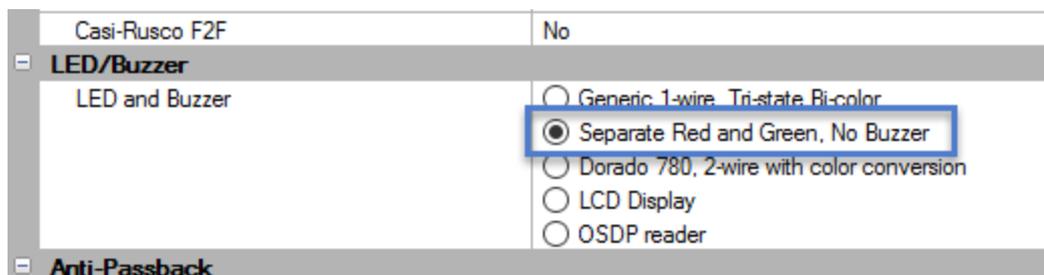
- On the PXL-500W controller, the JP5 jumper should be set to pins 1 and 2 - this will provide 12VDC to the BioSync and the PXL-500W LED10 will be solid red.

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



EP Controller Notes

- BioSync readers have two LED lines but the Mercury EP-Series 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 will need 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**.



This will set the controller to use the buzzer for controlling the second LED line.



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- When using BioSync readers with EP controllers, you have to use custom LED Modes to define the LED behavior for the various reader modes (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 controller 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).
- 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 devices connected to the controller.
- The maximum current draw of the KBF-1FP is approx. 100mA max.
- When using a separate power supply for the BioSync, connect the GND 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 1FP 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 1FP to the BioManager software.

Log Into the BioManager Software

1. Double-click the BioManager Client icon located on the desktop.

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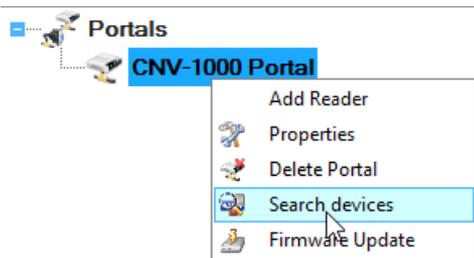


2. If using BioManager for the first time you will be automatically logged into the client, otherwise you may be prompted for a user name and password.
3. On the left of the screen you should see a portal. An existing system will also have readers listed.

Scan for the BioSync

When using the CNV-1000 converter you can use the scan facility which is built into the module. It automatically detects the BioSync, so you do not initially need to find out the device ID/serial number - it is the quickest and easiest method to add the BioSync.

1. From within the BioManager software, right-click on the communication portal.
2. Select **Search devices**.



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

Manual Add

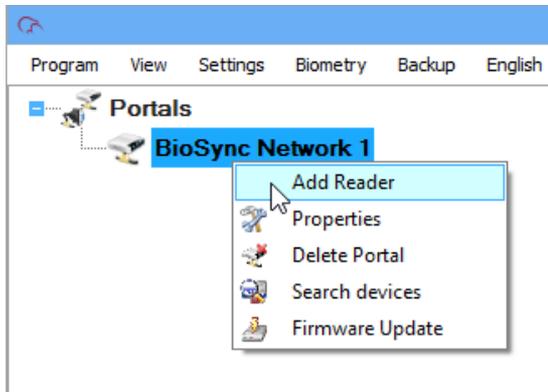
The manual add option is useful if the hardware has not yet been installed but you want to begin setting up the system in advance.

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

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

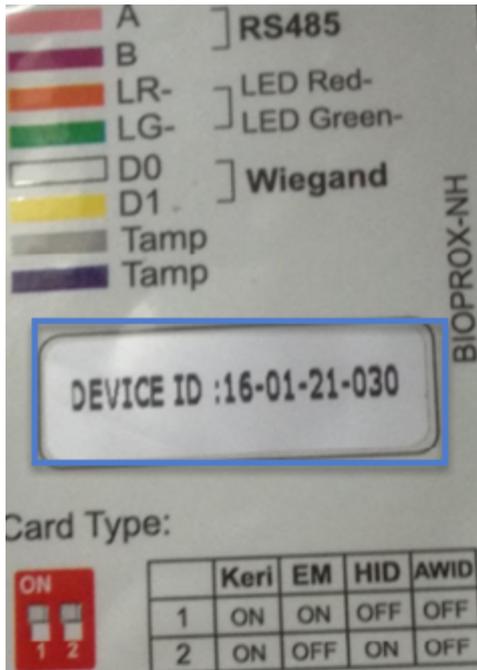


3. The Add Reader window will appear.
4. Enter a description for the BioSync 1FP.
5. Select the **exact** model (KBF-1FP) from the **Type** drop-down list.
6. Select the Wiegand output type. Typically for the KBF-1FP this would be left at the default setting of **Wiegand26**.

Name	<input type="text" value="BioSync 1FP"/>
Type	<input type="text" value="KBF-1FP"/>
Wiegand type	<input type="text" value="Wiegand26"/>

7. On the reverse of the BioSync 1FP (under the mounting bracket), you will see a white label displaying a wiring diagram and the device ID/serial number - you should make a note of this serial number.

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8. Enter the device ID/serial number.



9. For now, all other settings can be left at their default values.

10. Click the SAVE & EXIT button.



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

Biomanager Client - Access - 1.0.8.0

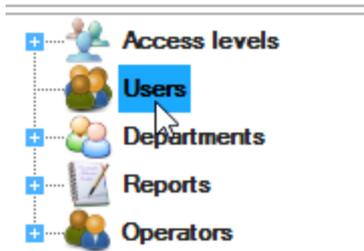
Time	Portal	Controller	Reader	Door	Event
18/07/2016 14:16:12	BioSync Network 1		Main Gate		Device online

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12. You are now ready to start adding users and their fingerprints.

Enrolling Users into BioManager

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



2. Click the New User button.



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

User name	<input type="text" value="1 FP User"/>		
User ID's (Card numbers)	<input type="text" value="12345"/>		
Site code	<input type="text" value="0"/>	User code	<input type="text" value="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 information **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:

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User name	1 FP User		
User ID's (Card numbers)	7536655		
Site code	115	User code	15
Wiegand 26 ID	7536655	Site code	115

By doing this you will then not need to enroll another credential into Doors.NET (as the same number will be processed when the fingerprint is verified).

4. Click the SAVE NEW button.



5. The new user is now created.

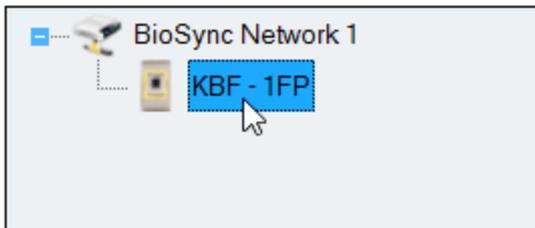
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Enrolling Fingerprints

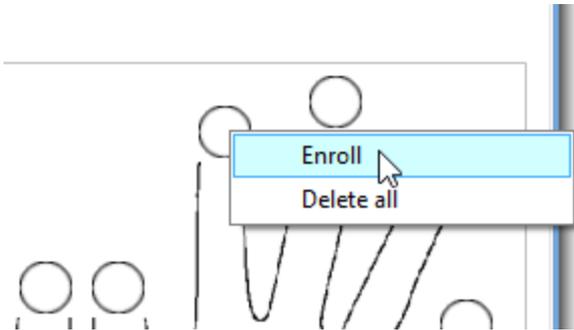
Now that the unique user number has been enrolled, you are ready to enroll user fingerprints. The fingerprint is associated with the enrolled User ID number.

1. In the Biometric section, select the reader (left-click) you wish to use for enrollment.

Select reader to Enroll,
Send or Delete user

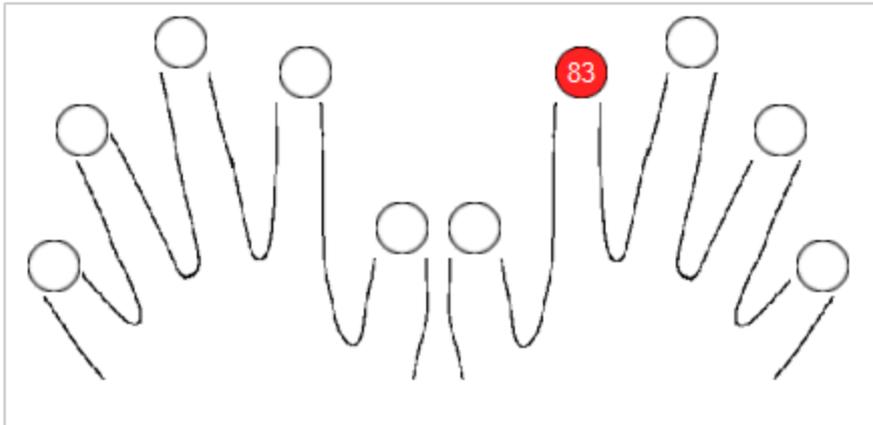


2. On the diagram of two hands, right-click a fingertip for the fingerprint you will be enrolling, select **Enroll**.



3. A 30 second count-down will begin and the fingerprint sensor LED will be flickering 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.

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6. Click the SAVE NEW button and the fingerprint(s) will automatically be sent to all online 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 Reader1 and Reader 3 then the fingerprints will be sent only to those two readers.

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

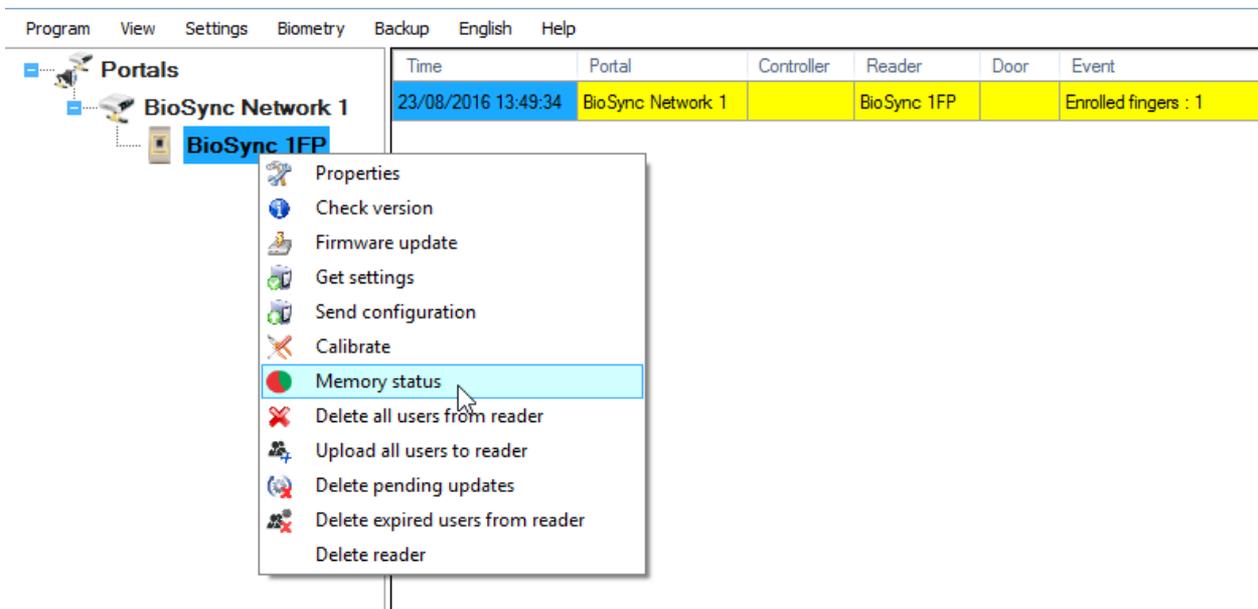
7. Repeat steps 2-5 for any additional fingerprints to be enrolled.

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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.





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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 (for the user).
- Click "Save Changes".

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

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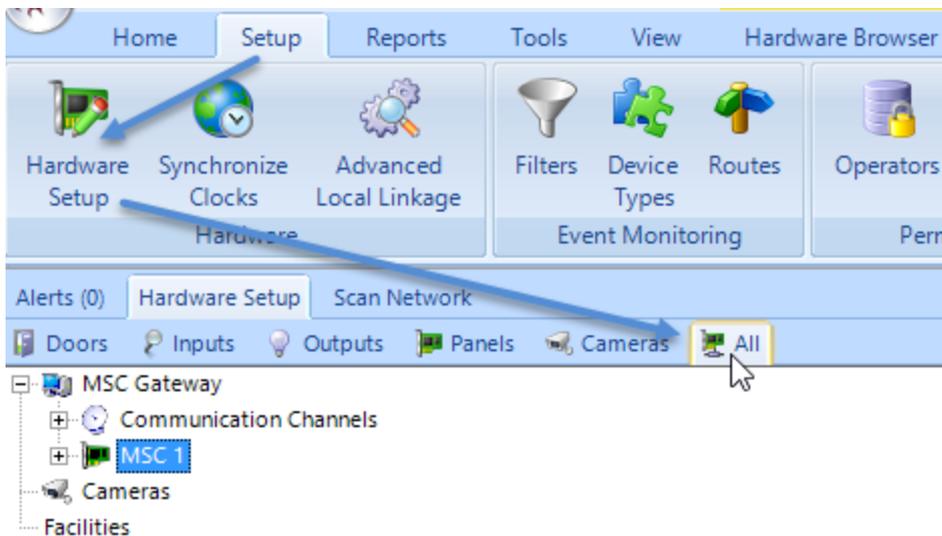
Enrolling the Users into Doors.NET

The same user now must be enrolled into Doors.NET (unless the user already exists with an enrolled credential). Assuming this is a brand new installation... so far we have only added the user to the BioManager software and the BioSync reader (not to the controller). In this example the BioSync reader is wired into an NXT-MSK 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 has 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.

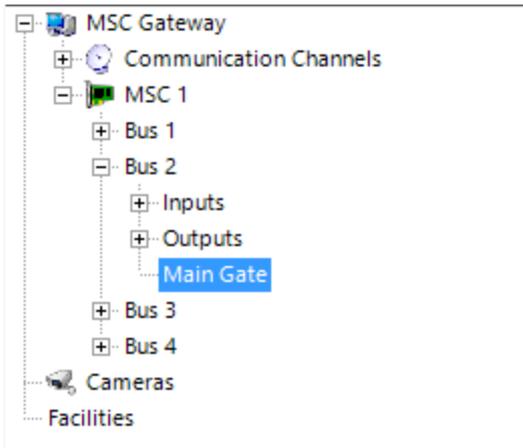
Set the Reader Manufacturer Model

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

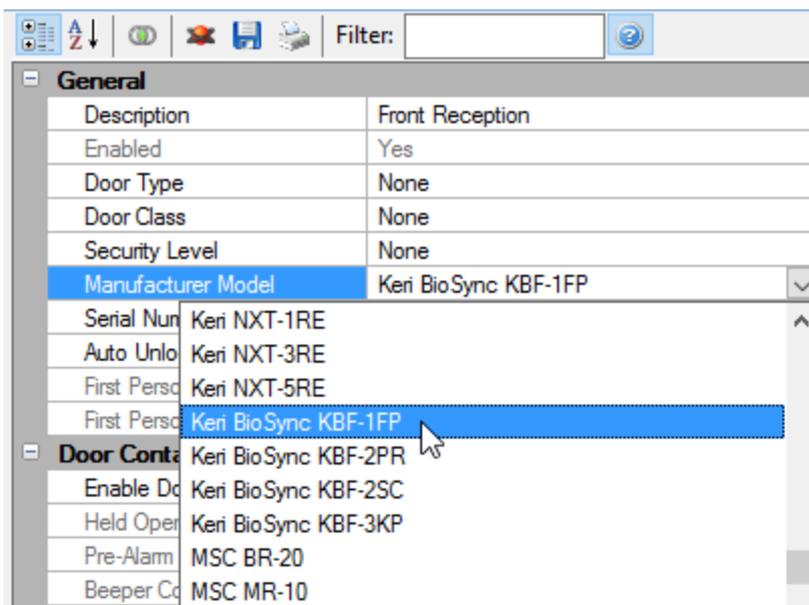


2. Locate the bus which the BioSync reader is connected to, and select the BioSync reader.

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3. The reader properties will appear on the right.
4. Locate **Manufacturer Model** and select **Keri BioSync KBF-1FP** from the drop-down list.



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

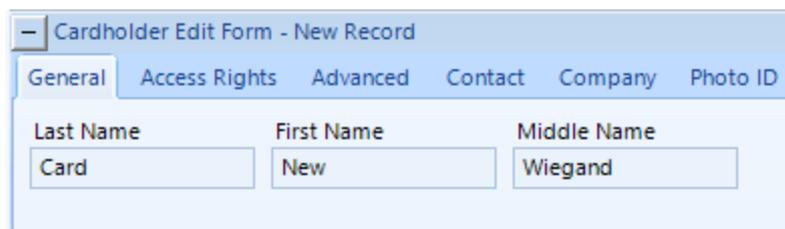
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Manually Enroll the Cardholder

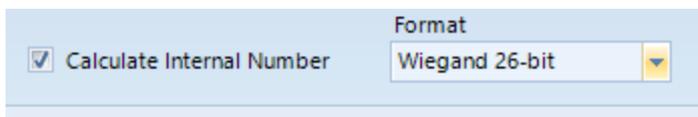
1. Go to Home >> Cardholders.
2. Click the **Add** icon.



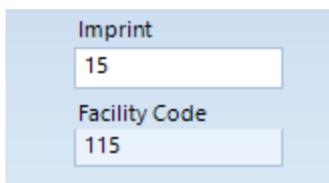
3. Enter a first name and last name for the new cardholder (middle name is optional).

A screenshot of the 'Cardholder Edit Form - New Record' window. The 'General' tab is selected, showing fields for 'Last Name' (Card), 'First Name' (New), and 'Middle Name' (Wiegand). Other tabs include 'Access Rights', 'Advanced', 'Contact', 'Company', and 'Photo ID'.

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

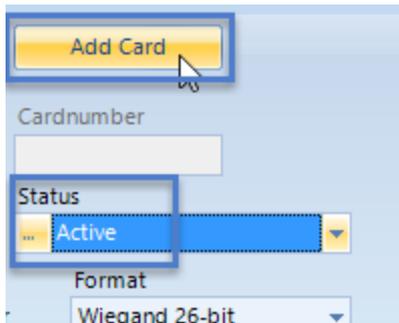
A screenshot of the 'Calculate Internal Number' checkbox, which is checked, and a 'Format' dropdown menu set to 'Wiegand 26-bit'.

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

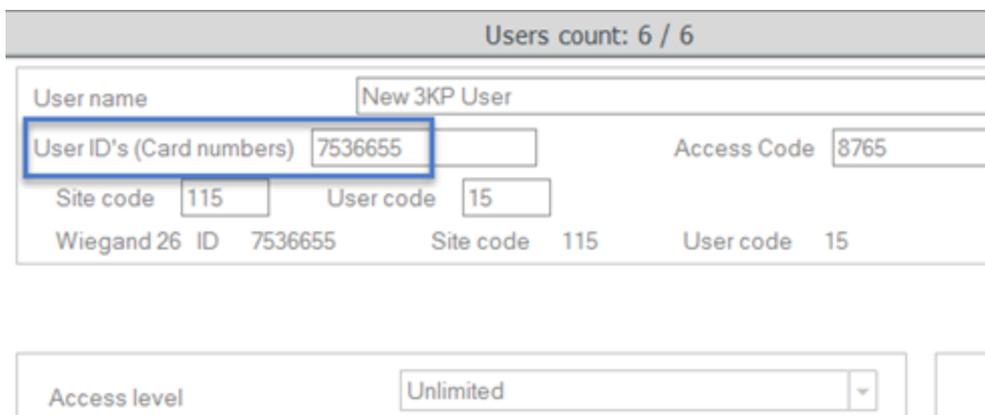
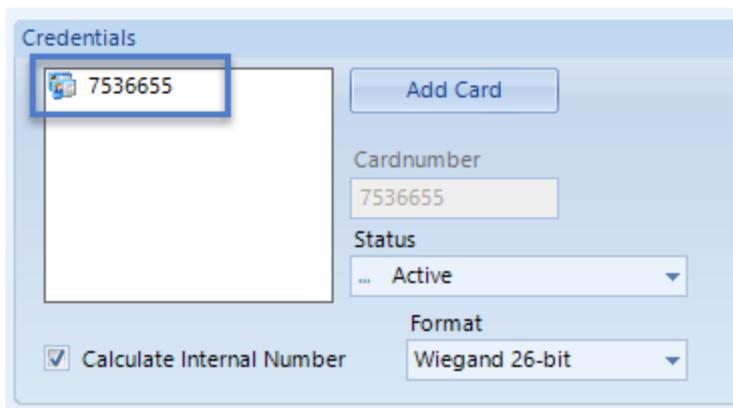
A screenshot of the 'Imprint' and 'Facility Code' input fields. The 'Imprint' field contains the value '15' and the 'Facility Code' field contains the value '115'.

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

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

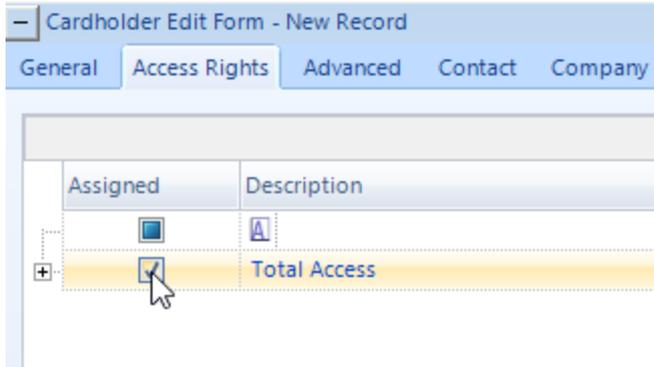


Users count: 6 / 6			
User name	New 3KP User		
User ID's (Card numbers)	7536655	Access Code	8765
Site code	115	User code	15
Wiegand 26 ID	7536655	Site code	115
		User code	15

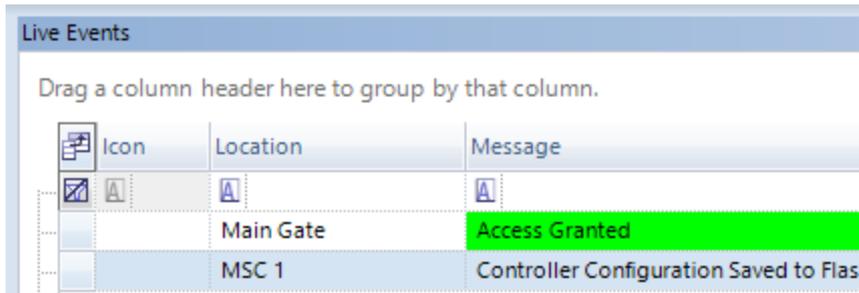
Access level: Unlimited

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

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10. Save the new record .
11. 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.



12. As previously mentioned, the fingerprint is associated with the User ID/Credential number - this is the number that will appear in Live Events.

TimeStamp (Controller)	Location	Message	Detail	Cardnumber
23/08/2016 14:07:42	MSC 3	Controller Configuration Saved to Flash Mem...	AutoSave Configuration Compl...	=
23/08/2016 14:07:30	Main Gate	Access Granted		7536655
23/08/2016 14:07:14	Main Gate	Reader Online	RIM-Wiegand	
23/08/2016 14:07:13	Reader 1.0	Reader Online	RIM-Wiegand	