

BioAdmin Manual

Version 4.2.2

BioAdmin™, BioEntry™, BEACon™ and BioStation™ are registered as trademarks of Suprema Inc. All rights reserved. No part of this work covered by the copyright hereon may be reproduced or copied by any means – graphics, electronic or mechanical methods, including photocopying, recording, taping, or information and retrieval systems – without written permission of Suprema Inc. Any software furnished under a license may be used or copied only in accordance with its terms.

Suprema Inc reserves the right to modify or revise all or any part of this document without notice and shall not be responsible for any loss, cost or damage, including consequential damage, caused by reliance on these materials.



Suprema Warranty Policy

Suprema warrants to buyer, subject to the limitations set forth below, that each product shall operate in substantial accordance with the published specifications for such product for a period of one (1) year from the date of shipment of the products ("Warranty Period"). If buyer notifies Suprema in writing within the Warranty Period of any defects covered by this warranty, Suprema shall, at its option, repair or replace the defective product which is returned to Suprema within Warranty Period, freight and insurance prepaid by buyer. Such repair or replacement shall be Suprema's exclusive remedy for breach of warranty with respect to the Product. This limited warranty shall not extend to any product which has been: (i) subject to unusual physical or electrical stress, misuse, neglect, accident or abuse, or damaged by any other external causes; (ii) improperly repaired, altered or modified in any way unless such modification is approved in writing by the Supplier; (iii) improperly installed or used in violation of instructions furnished by Suprema.

Suprema shall be notified in writing of defects in the RMA report supplied by Suprema not later than thirty days after such defects have appeared and at the latest one year after the date of shipment of the Products. The report should give full details of each defected product, model number, invoice number and serial number. No product without RMA (Return Material Authorization) number issued by Suprema may be accepted and all defects must be reproducible for warranty service.

Except as expressly provided herein, the products are provided "as is" without warranty of any kind, either express or implied, including, but not limited to, warranties or merchantability, fitness for a particular purpose.

Disclaimers

The information in this document is provided in connection with Suprema products. No license, express or implied, by estoppels or otherwise, to any intellectual property rights is granted by this document. Except as provided in Suprema's Terms and Conditions of Sale for such products,

Suprema assumes no liability whatsoever, and Suprema disclaims any express or implied warranty, relating to sale and/or use of Suprema products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right.

Suprema products are not intended for use in medical, life saving, life sustaining applications, or other applications in which the failure of the Suprema product could create a situation where personal injury or death may occur. Should Buyer purchase or use Suprema products for any such unintended or unauthorized application, Buyer shall indemnify and hold Suprema and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that Suprema was negligent regarding the design or manufacture of the part.

Suprema reserves the right to make changes to specifications and product descriptions at any time without notice to improve reliability, function, or design. Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined." Suprema reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them.

Please contact Suprema, local Suprema sales representatives or local distributors to obtain the latest specifications and before placing your

product order.

Note: Third-party brands and names are the property of their respective owners.

About BioEntry and BioStation

BioEntry and BioStation are biometric access control and time attendance device with algorithms awarded 2nd consecutive grand prix at finger scan contest (FVC2004 & FVC2006) and standard Wiegand interface. BioEntry and BioStation can replace an existing system or be added to an existing access control and time attendance system with ease.

BioEntry Smart is a fingerprint smart card device that seamlessly integrates fingerprint and smart card device into one device. BioEntry™ Smart is designed to replace existing access devices like proximity or magnetic devices without additional wiring. Fingerprint template is stored in each user's smart card and there is no need to store fingerprint data in a device itself. This eliminates the burden of template management and networking devices.

BioEntry Pass is a fingerprint access device equipped with fast one to many fingerprint identification engines. Enrolled with more than hundreds of users, identification can be done in less than one second.

BioStation is the access control and time attendance finger terminal of distinguished performance. Multifunctional fingerprint terminal for access control and time and attendance, BioStation provides various information real time adopting 2.5 inch color LCD and high-quality sound. Also, using wireless LAN or USB memory, you can configure network and transfer data without complicated wiring.

BioEntry and BioStation supports various fingerprint sensors, i.e. Optical, semiconductor type (capacitive type) or scan type (swipe thermal type),

enabling a user to utilize an optimum fingerprint sensor fit for the application system.

About Suprema Inc

Suprema is a leading biometric company offering core fingerprint technologies in various applications. Suprema's fingerprint products include access control systems, time attendance system, low cost standalone OEM modules, USB fingerprint scanners and fingerprint algorithm SDK. Suprema's fingerprint recognition algorithm was proved to be the world top level by ranking first in the 3rd international Fingerprint Verification Competition (FVC2004 & FVC2006) with the lowest error rate in light category. Suprema's fingerprint products have been sold to more than 80 different countries and are being used in various applications.

For more information on Suprema's technologies and products, please visit Suprema's website (<http://www.supremainc.com>) or contact by e-mail (sales@supremainc.com).

About This Manual

This is an introduction to operation of BioEntry, BioEntry Plus, and BioStation. This manual describes how to manage templates, properly adjust relevant parameters, enroll or delete templates, etc. The purpose of this manual is to provide instructions to using BioEntry and BioStation and troubleshooting tips.

Table of contents

Table of contents	6
1. Getting Started	15
1.1. Outline	15
1.2. Fundamentals	15
1.2.1. Finger scan device	15
1.2.2. Finger scan smart card device	15
1.2.3. Template	16
1.2.4. Enrollment	16
1.2.5. Verification	16
1.2.6. Identification	16
1.2.7. User database	16
1.2.8. Transfer	17
1.2.9. Site key for smartcard	17
1.3. How to place a finger	17
1.3.1. Select a finger to enroll	17
1.3.2. How to place a finger on a sensor	17
1.3.3. Tips for different finger conditions	18
1.3.4. Advices on fingerprint enrollment	18
1.4. Concept of BioAdmin 4.2	18
1.4.1. How to install BioAdmin Server	19
1.4.2. How to install BioAdmin Client	31
1.4.3. Using MySQL or SQL Server database	33
1.4.4. Check the BioAdmin software installation	44
1.5. Log in to BioAdmin	47
1.5.1. Connect Server	47
1.5.2. Registering the initial system administrator account	47
1.5.3. Log in to the BioAdmin 4.2.2	48
1.6. User Level on BioAdmin 4.2	49

1.7.	BioAdmin configuration	49
1.7.1.	Command Menu bar	50
1.7.2.	Main menu	51
1.7.3.	Task and Utilities.....	51
1.7.4.	Main window.....	51
1.8.	User Database	51
2.	Options to determine before starting	52
2.1.	Security Option.....	52
2.2.	Template Format Option.....	52
2.3.	Access Control Option.....	52
2.4.	Using Mifare Card.....	52
3.	Quick start.....	54
3.1.	Quick start with BioStation	54
3.1.1.	Step 1 : HW installation	54
3.1.2.	Step 2 : Search new device.....	54
3.1.3.	Step 3: Connect device.....	58
3.1.4.	Step 4: User management	62
3.1.5.	Step 5: Issue Mifare card	71
3.1.6.	Step 6 : Rules on user T&A event control	73
3.1.7.	Step 7 : Enroll user with 'transfer checked user to device' menu	74
3.1.8.	Step 8: Monitoring	75
3.1.9.	Step 9: Log List.....	76
3.1.10.	Step 10: Report	76
3.2.	Quick start with BioEntry Plus	77
3.2.1.	Step 1 : Hardware Installation	77
3.2.2.	Step 2 : Search a New Device	77
3.2.3.	Step 3 : Connect a New Device	78
3.2.4.	Step 4 : User Management	79
3.2.5.	Step 5: Issue Mifare card.....	87
3.2.6.	Step 6 : User Time Attendance Rule	90

3.2.7. Step 7 : User registration with “Transfer Checked Users to Device” menu	91
3.2.8. Step 8 : Monitoring	92
3.2.9. Step 9 : Log List.....	94
3.2.10. Step 10 : Reports.....	95
3.3. Quick start with BioEntry Smart	95
3.3.1. Step 1: Hardware installation.....	95
3.3.2. Step 2: Enroll user	96
3.3.3. Step 3: Issuing user smart card	103
3.3.4. Step 4: Enroll user ID in the external controller.....	105
3.3.5. Step 5: Authentication Test	105
3.4. Quick start with BioEntry Pass	106
3.4.1. Step 1: Hardware installation.....	106
3.4.2. Step 2: Search new device.....	106
3.4.3. Step 3: Enroll user	109
3.4.4. Step 4: Enroll user with ‘transfer checked user to device’ menu.....	117
3.4.5. Step 5: Enroll user ID in the external controller.....	119
3.4.6. Step 6: Authentication test	119
3.4.7. Step 7: Monitoring	119
3.4.8. Step 8 : Check log	120
4. User Management	121
4.1. Configuration of user management page	121
4.2. User List window.....	122
4.3. User List Display Setting	122
4.4. Select user	125
4.5. Add New User.....	125
4.5.1. User information	126
4.5.2. Custom field	128
4.5.3. Fingerprint.....	129
4.5.4. Issue user smart card	132
4.5.5. Issue with PC USB smart card device	132

4.5.6. Issue with BioEntry Smart	133
4.5.7. User security level and all-time pass card (Bypass) setting	133
4.5.8. Wiegand string setting using ID card.....	134
4.5.9. Read issued smart card.....	135
4.5.10. Card format.....	135
4.5.11. Notes on card issue	135
4.5.12. Rules on user T&A event control	136
4.6. Delete checked user.....	136
4.6.1. Delete checked user from BioAdmin software	136
4.6.2. Synchronization deleted user information with device.....	136
4.7. Transfer checked user to device.....	136
4.8. Delete checked users from device	138
4.9. Manage users in device	138
4.10. Synchronize all users	140
4.11. Export to file.....	140
4.12. Import from file	142
5. Device Management.....	145
5.1. Search New device	146
5.1.1. Serial port.....	146
5.1.2. Ethernet.....	148
5.1.3. USB device.....	149
5.1.4. Virtual Terminal	149
5.1.5. UDP (BioEntry Plus)	151
5.2. Add New BEACon.....	155
5.3. Remove device.....	156
5.4. List Window.....	157
5.4.1. Device List.....	157
5.4.2. Zone List	158
5.5. Manage BioStation device	166
5.5.1. Device information	168

5.5.2. Operation mode	168
5.5.3. Network setting	173
5.5.4. Function key	178
5.5.5. Device Setting	179
5.5.6. Image & Sound	183
5.5.7. Notice	184
5.5.8. Wiegand.....	185
5.5.9. Door Setting.....	190
5.5.10. I/O Setting	192
5.5.11. Entrance Limit Setting.....	194
5.5.12. Black List.....	195
5.6. Manage Virtual Terminal.....	197
5.7. Manage BioEntry Plus device.....	198
5.7.1. Device information	198
5.7.2. Detect Device via UDP.....	198
5.7.3. Operation Mode	201
5.7.4. Network Setting	204
5.7.5. Entrance Limit Setting.....	205
5.7.6. Door Setting.....	207
5.7.7. I/O Setting	208
5.7.8. Command Card	210
5.7.9. Wiegand.....	211
5.7.10. Black List.....	215
5.8. Manage BioEntry device	218
5.8.1. Device information	218
5.8.2. System Setting	219
5.8.3. I/O Setting	221
5.8.4. LED/Beep sound Setting.....	226
5.8.5. Wiegand Setting.....	228
5.8.6. Smart Card setting	233

5.9.	BEACon Configuration	235
5.9.1.	Operation Mode	236
5.9.2.	Signaling speed (Baud rate).....	236
5.9.3.	BEACon Relay Setting	236
5.9.4.	Switch Setting	238
5.9.5.	Refresh / Apply / Transfer (apply to another device)	240
6.	Smartcard / Mifare card	241
6.1.	Configuration of Smartcard page.....	241
6.2.	Smartcard List.....	242
6.3.	Card issue	242
6.4.	Configure Smartcard	243
6.4.1.	Read issued smart card.....	244
6.4.2.	Smart card format	244
6.5.	Edit Card Layout	244
6.5.1.	Select Device Type for Smart card / Mifare card	245
6.5.2.	Configuration of smartcard layout edit page (BioEntry Smart Only).....	245
6.5.3.	Size of Fingerprint data (Template).....	246
6.5.4.	Block.....	247
6.5.5.	Editing process	247
6.5.6.	Factory default (initial setting) layout.....	248
6.5.7.	Configuration of Mifare card layout edit page (BioStation / BioEntry Plus)	249
6.5.8.	Editing process	249
7.	Access Control	251
7.1.	Time Code setting.....	252
7.2.	Holiday setting.....	253
7.3.	Time zone setting.....	254
7.4.	Door Zone setting	255
7.5.	Access Group setting	256
8.	Monitoring.....	260
8.1.	Setup Monitoring.....	260

8.2.	Start Monitoring	261
8.3.	Pause Monitoring	262
8.4.	Event List for Door	262
8.4.1.	Door Open/Close	262
8.4.2.	Alarm Release	263
9.	Log List	264
9.1.	Configuration of Log check page	264
9.2.	Manage Log database	265
9.2.1.	Get recent logs	265
9.2.2.	Auto uploading setting	265
9.2.3.	Release auto uploading	267
9.2.4.	Upload all logs	268
9.2.5.	Export Report	269
9.2.6.	Delete Log information	270
10.	Reports	271
10.1.	Configuration of reports page	271
10.2.	Setup attendance rule	272
10.2.1.	Device setup	273
10.2.2.	Time setup	274
10.2.3.	BioStation function key setting	276
10.3.	Setup Monthly Schedule	277
10.4.	Group Configuration for T&A Control	277
10.4.1.	Use as default	279
10.5.	How to prepare report	279
10.6.	Edit Data	282
11.	Menu bar functions	285
11.1.	System	285
11.1.1.	Manage admin account	285
11.1.2.	Data backup	285
11.1.3.	Data recovery	285

11.1.4. Lock all devices	285
11.1.5. Unlock all devices.....	286
11.1.6. Load BioAdmin 1.X data.....	286
11.1.7. Preferences	286
11.1.8. BioAdmin information.....	294
11.1.9. Reconnect Server	294
11.2. User Management.....	294
11.3. Device Management.....	295
11.3.1. Time setting.....	295
11.3.2. FW upgrade.....	296
11.3.3. Site Key Setting (BioEntry Smart).....	297
11.3.4. Site Key Setting (Mifare).....	299
11.4. Access Control.....	300

Revision History

Version	Date	Description
V1.0	2005.9.27	Created.
V1.1	2005.12.2	Incorporated the changes made by BioAdmin V1.1. Chapter 12. Site Key is added.
V2.0	2006.4.17	Incorporated the changes made by BioAdmin V2.0. Chapter 8. Access Control is added. Chapter 9. Monitoring is added.
V3.0	2006.8.23	Time Attendance added BioStation added.
V4.0	2007. 3. 5	Incorporated the changes made by BioAdmin V4.0.
V4.1	2007. 5. 30	Incorporated the changes made by BioAdmin V4.1.
V4.2	2007.10.19	Incorporated the changes made by BioAdmin V4.2. BioEntry Plus added.
V4.2.2	2008. 4. 27	Incorporated the change made by BioAdmin V4.2.2

1. Getting Started

1.1. Outline

This manual illustrates how to use BioAdmin software. BioAdmin is a PC Windows software for the control and management of Suprema's BioEntry, BioStation and BEACon products. BioAdmin includes various functions needed for a host station for applications of access control and time & attendance using these devices.

For proper hardware connection, please refer to BioEntry Installation manual and BioStation Installation manual.

There are two approaches in managing BioEntry and BioStation. :

- Using BioAdmin program which is the management software running on Windows based PC platforms. This manual is mainly focused on operating BioEntry and BioStation using BioAdmin software.
- Integrating the management functionality into customer's application software using SDK which contains versatile API's to control BioEntry and BioStation. For further information, please refer to SFM SDK Reference Manual, BioStation SDK manual, and UniFinger Engine SDK Reference Manual.

1.2. Fundamentals

This chapter provides introductory information on BioEntry, BioStation, and BioAdmin including basic concepts, operation flow, and overview of the software.

1.2.1. Finger scan device

Fingerprint access device is a device to authenticate the identity of each person using fingerprints. It can be easily integrated into access control system by connecting with access control panel through industry standard interface such as Wiegand interface. Since fingerprints contain biometric features which are unique for each person, fingerprint access device can be substituted for existing access devices, such as barcode, magnetic card, keypad, or RF card devices, with high security and efficiency.

1.2.2. Finger scan smart card device

Fingerprint smart card device is an advanced model of fingerprint access device

which improves security of the system by integrating smart card technology. Fingerprint data for each person is stored on user's smart card and the device authenticates the user by comparing the stored fingerprint data in the smart card with the input fingerprint data.

1.2.3. Template

A template is the binary data representing the features of each fingerprint. The fingerprint image acquired from a fingerprint sensor is converted to a template, which is stored on the memory of the fingerprint access device or on user's smart card. In authenticating a user, a new template is also generated and compared with the stored templates.

1.2.4. Enrollment

Enrollment is the process to store the fingerprint template with user information. Through enrollment process, new users are entered into the system.

1.2.5. Verification

Verification is the process of authenticating an input fingerprint with the fingerprint of the specified user. On BioEntry Smart, a user places smart card containing personal fingerprint template and user information. Then, the device carries out verification process by scanning an input fingerprint. On BioEntry Pass, verification process can be implemented by connecting external Wiegand device, such as RF card device, which provides the current user ID.

1.2.6. Identification

Identification is the process of searching a matched fingerprint among the stored fingerprints on the device. BioEntry Pass and BioStation basically operate in identification mode, which requires no additional input except the placement of a finger.

1.2.7. User database

User database includes user ID, user name, fingerprint templates, and so on. BioAdmin software is based on the central management of user database. That is, the user database is created, updated, and stored on the host PC. Then, it is selectively distributed to the BioEntry and BioStation connected on the network using transfer menu.

1.2.8. Transfer

Transfer to Device is used to transfer the user database of the host PC to BioEntry and BioStation. The user information such as User ID, templates, access group, and security level is transferred by this process.

Detailed operations are as follows.

- Enroll new users on BioEntry and BioStation
- Replace inconsistent templates on BioEntry and BioStation
- Delete templates of unknown users or de-selected users on BioEntry and BioStation

Transfer from Device is used to upload the user formation from BioEntry and BioStation to the database of host PC. The user information such as User ID, Template Number, Number of Access Group, and Security Level can be uploaded by this process.

1.2.9. Site key for smartcard

Site key is a password for smart card to ensure that an authorized card should be used for a specific installation. 48 bit key is used in BioEntry Smart allowing 0 to 281374976710655 (0xFFFFFFFFFFFF). For proper operation, the same key should be configured on BioEntry Smart and user's smart card.

1.3. How to place a finger

1.3.1. Select a finger to enroll

- (1) It is recommended to use an index finger or a middle finger.
- (2) Thumb, ring or little finger is relatively more difficult to place in a correct position.

1.3.2. How to place a finger on a sensor

- (1) Place a finger as it completely covers the sensor with maximum contact.
- (2) It is better to place the core part of a fingerprint to the center of a sensor.
 - People usually tend to place only the top end of a finger
 - Where is the core (center) of a fingerprint?
 - A peak where spirals of fingerprint ridges are dense
 - Usually opposite to lower part of a nail
 - It is recommended to place a finger as the lower part of a nail is located at the center of a sensor

- (3) If a finger is placed as in the right picture, only a small area of a finger is captured. So it is recommended to place a finger as in the left picture.



1.3.3. Tips for different finger conditions

Suprema's fingerprint products are designed to scan fingerprint smoothly regardless of the conditions of a finger skin. However, if a fingerprint is difficult to scan due to other influences, please refer to the followings tips.

- (1) If a finger is stained with sweat or water, scan after wiping moisture off
- (2) If a finger is covered with dust or impurities, scan after wiping them off
- (3) If a finger is way too dry, scan after blowing warm breath on a fingertip.

1.3.4. Advices on fingerprint enrollment

- (1) In fingerprint recognition, enrollment process is very important. Therefore, when enrolling a fingerprint, please try to place a finger correctly with care.
- (2) In case of low acceptance ratio, the following actions are recommended.
 - Delete enrolled fingerprints and re-enroll the fingers.
 - Enroll the same finger additionally
 - Try with another finger if a finger is not easy to enroll due to scar or worn-out.
- (3) For the case when an enrolled fingerprint can't be used due to scar or holding a baggage, it is recommended to enroll more than two fingers.

1.4. Concept of BioAdmin 4.2

BioAdmin 4.2 is operated as server-client application so that users can operate the BioAdmin Client program from multiple host PCs at the same time. If the users connect BioStation to the BioAdmin Server, logs from the BioStation will be automatically stored on the database of BioAdmin Server real-time. In this server-client application, BioAdmin Client is used as the user interface to manage the data.

If the user does not connect the BioStation to the BioAdmin Server, logs will not be

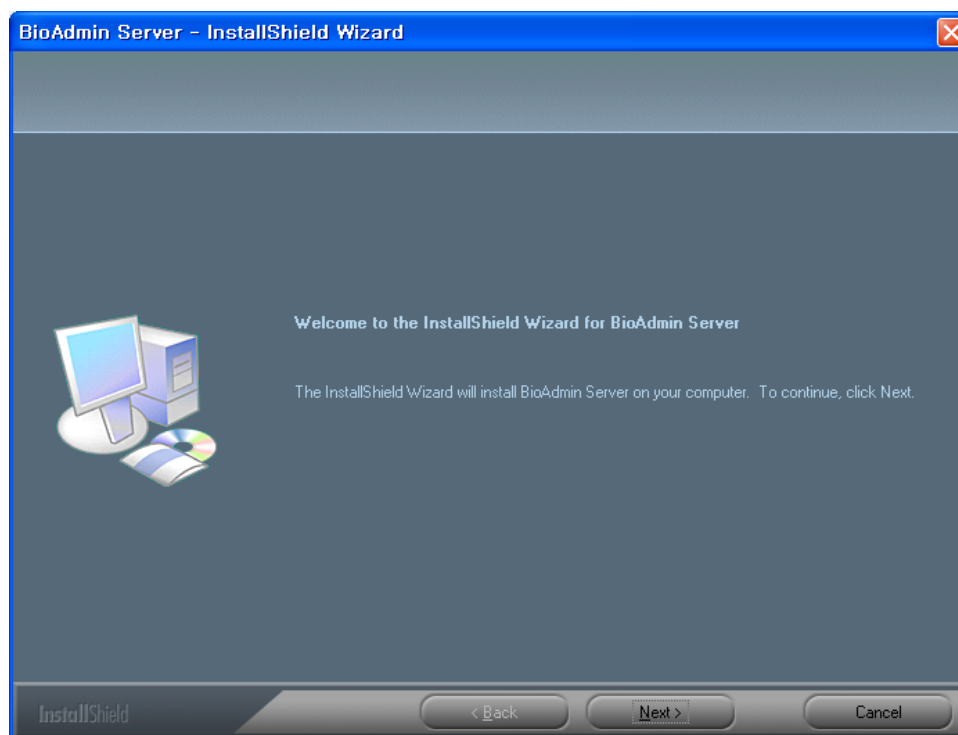
stored on the database automatically.

BioAdmin Server is designed only for BioStation. Therefore, you cannot use the BioEntry or BEACon as the server-client application.

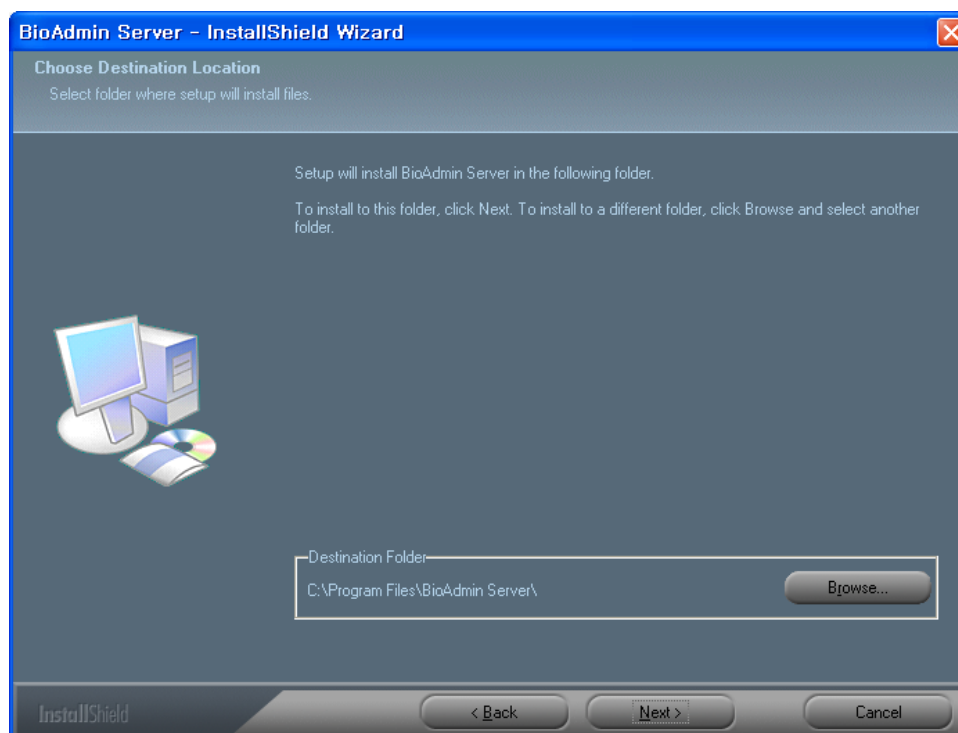
This chapter describes the installation and operation of BioAdmin Server and BioAdmin Client programs.

1.4.1. How to install BioAdmin Server

- Select the PC to be used as the server. Server PC should be always tuned on , because it should receive log data from the connected BioStation and store it on the database real time.
- After selecting a PC to use as the BioAdmin Server, install the BioAdmin Server program. This chapter shows the installation process under the condition that you are using the database on your host PC. If you are using MySQL or SQL Server, you can refer to the chapter 1. 4. 3.
- Start Installation.



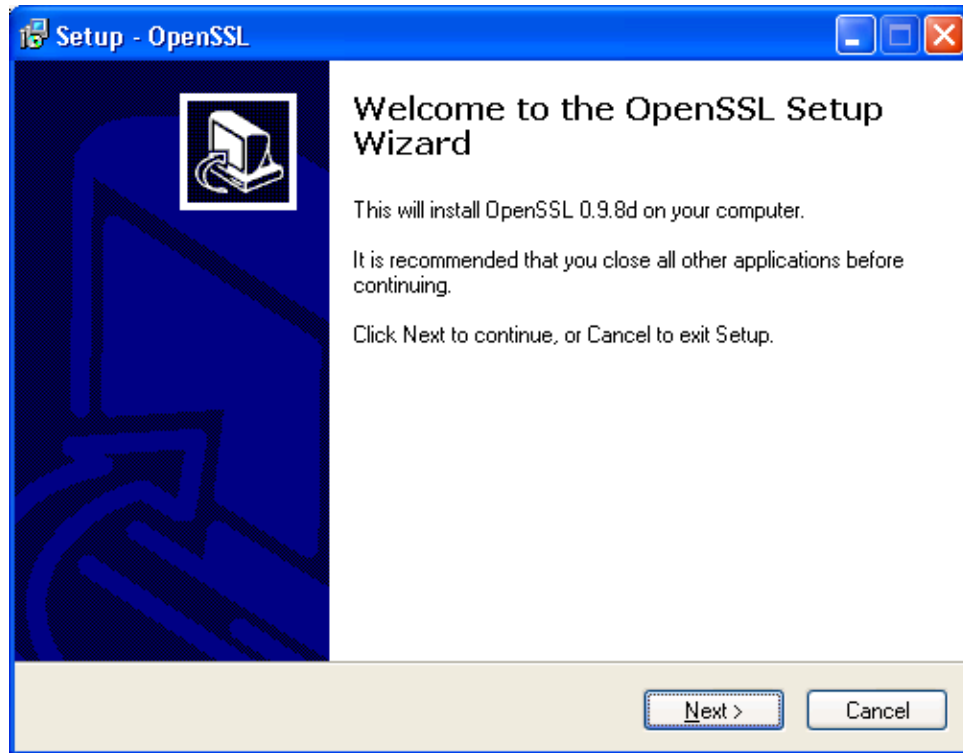
- Choose Destination Location



Choose the hard disk drive on which BioAdmin Server is to be installed. By

default, BioAdmin Server is installed in C:\Program Files\BioAdmin Server\.

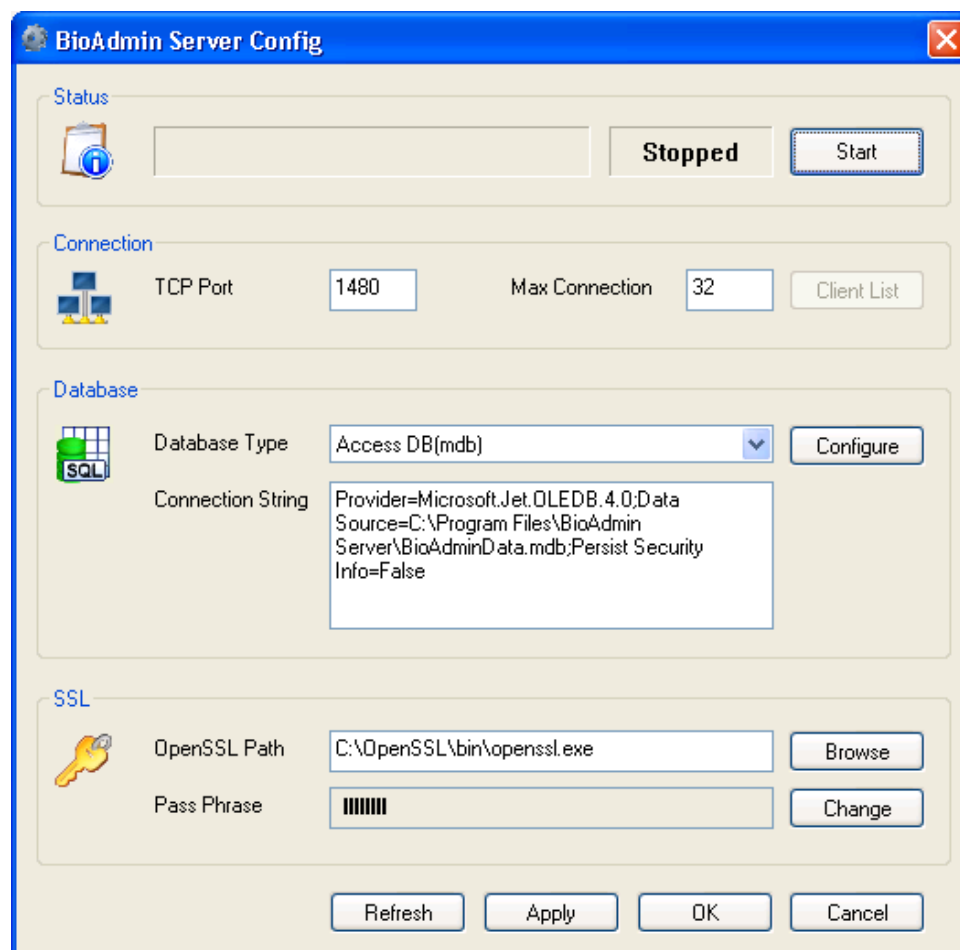
- Setup Open SSL



After copying all files, set up the Open SSL.

- BioAdmin Server Configuration and Database Setting

If you finish the Open SSL set up, following window will appear which is to set up the BioAdmin Server configuration. In most cases, you can maintain its default value for the BioAdmin Server configuration.



- Status

Status shows the current version and status of the BioAdmin Server. By pressing **Start** or **Stop** button, you can start or stop the operation of BioAdmin Server.

If BioAdmin Server is stopped, logs from the networked BioStation will not be stored on the database of the BioAdmin Server and BioAdmin Client will not be able to access to the BioAdmin Server.

If you changed any server configuration or database setting, stop the BioAdmin Server and restart it. Before you restart the BioAdmin Server, changes in the BioAdmin Server configuration or database will not be applied to the BioAdmin Server.

- Connection

On this menu, you can set up the networking details.

- TCP Port

Enter the TCP port. This TCP port is used when you attach a BioStation to the BioAdmin Server or when you access to the BioAdmin Server from BioAdmin Client. Use a unique port, which is not used by any other software.

In most cases, you can use the default port, 1480.

- Max Connection

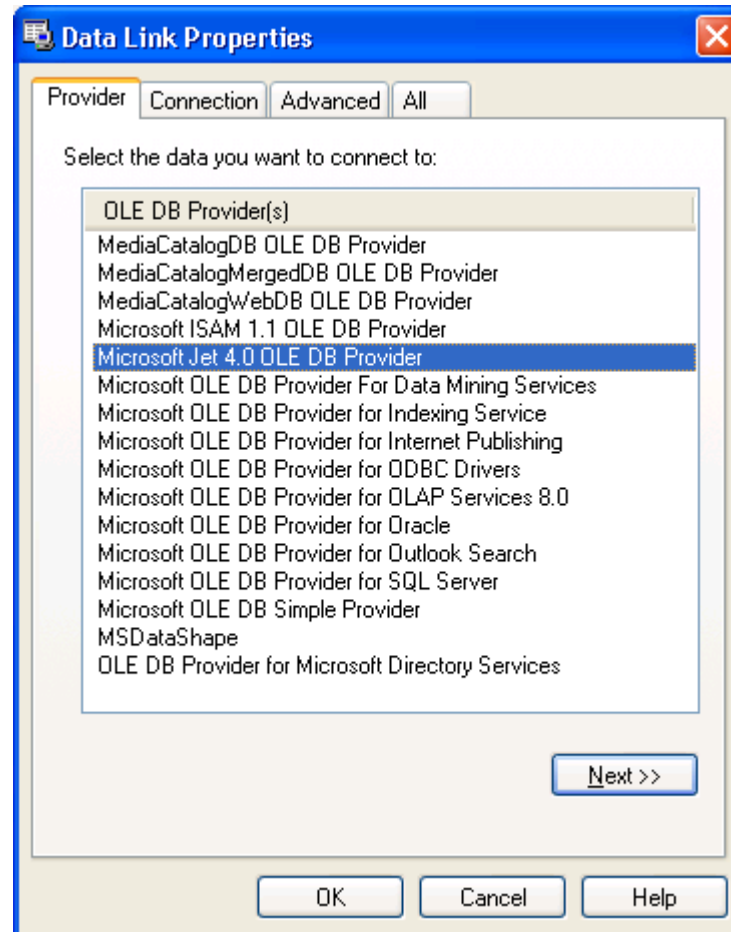
Enter the maximum number of BioStation or BioAdmin Client, which can be connected to the BioAdmin Server at the same time. For example, if you designate it as 50, the total number of BioStation and BioAdmin Client, which can be connected to the BioAdmin Server simultaneously, will be 50.

Maximum number for this connection should be less than 128. If the number is less than 32, which is the default value, you do not need to lower this number from the default.

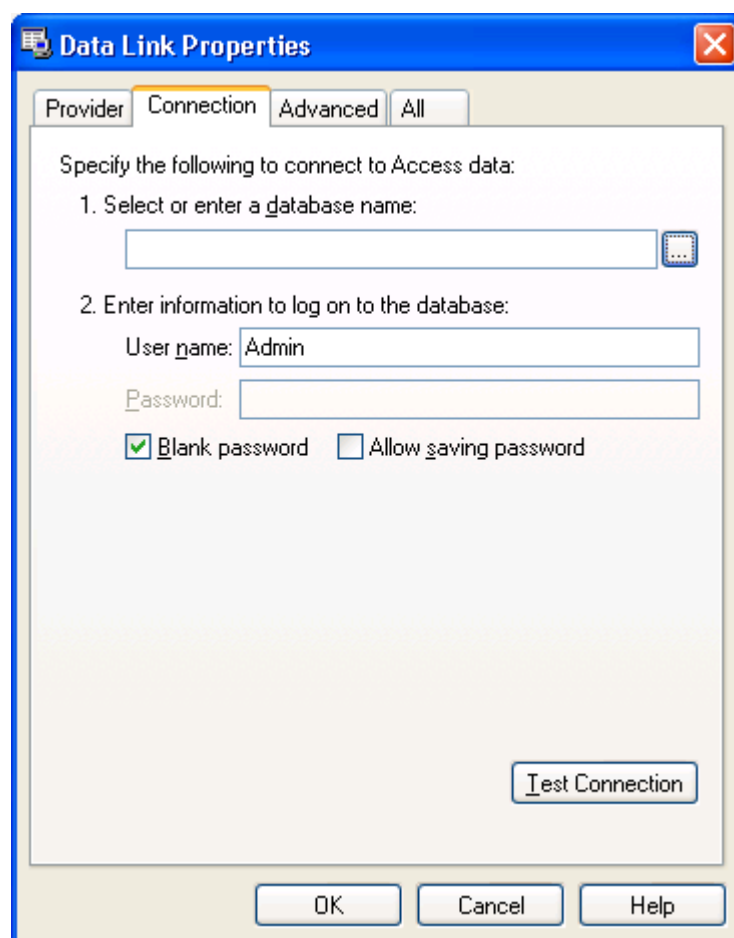
- Client List

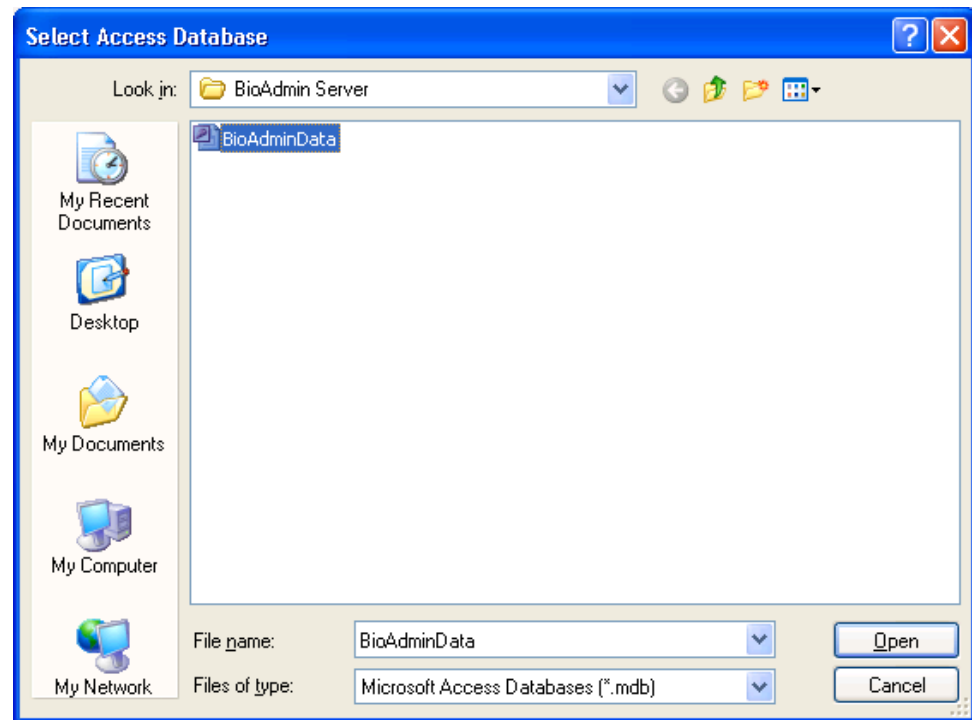
Client List shows the list of BioStations, which are connected to the BioAdmin Server. This list shows the IP Address of those connected BioStations and indicates whether the SSL Certificate was issued. You can issue or remove the SSL Certificate on this list. If the BioAdmin Server is stopped, this menu will be deactivated.

After selecting the database type, press **Configure** button and set up the database. If you are using the default mdb file, select Microsoft Jet 4.0 OLE DB Provider.



Press **Next** button.





- **SSL**

Set up the encryption details between BioAdmin Server and BioAdmin Client or between BioAdmin Server and BioStation.

Press **Refresh** button to show the current setting.

Press **Apply** button to store the new setting. To apply the changes, you should stop and restart the BioAdmin Server.

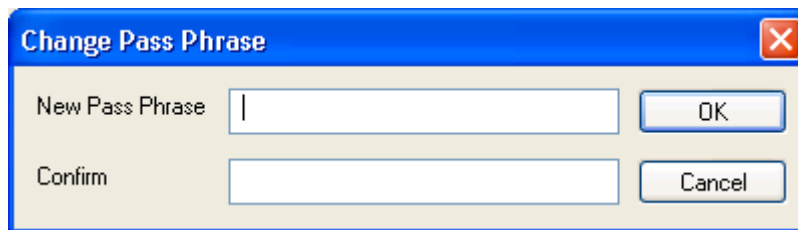
Press **OK** button to store the new setting and close the BioAdmin Server Config window.

Press **Cancel** button to cancel the new setting and close the BioAdmin Server Config window.

- **OpenSSL Setting**
- BioAdmin Server uses a encrypted communication with BioAdmin Client and BioStation by using SSL authentication. Encrypting the communication between

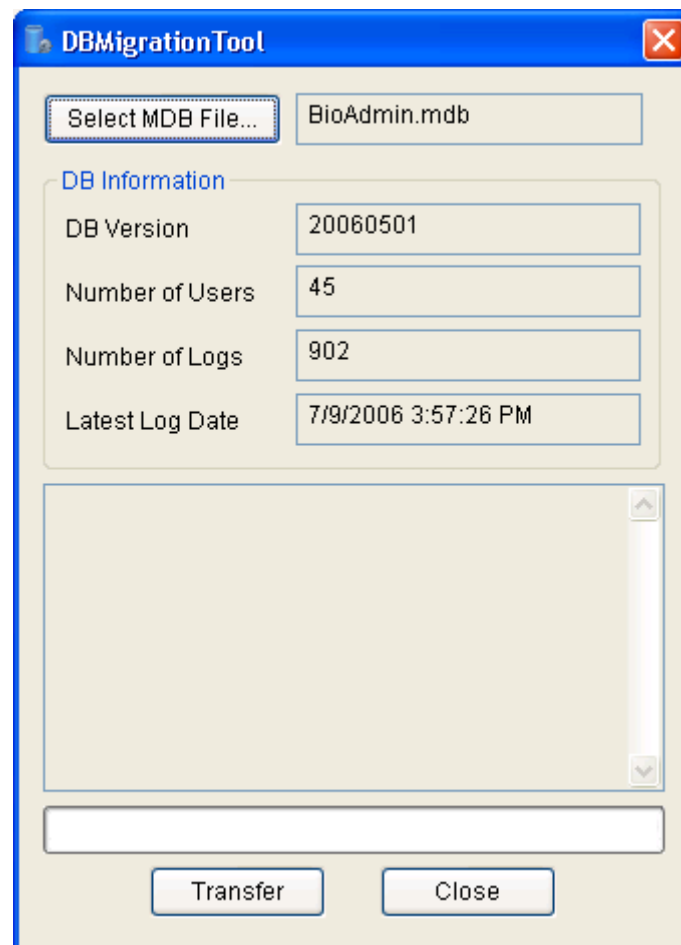
BioAdmin Server and BioAdmin Client (or BioStation) enables much more secure solution to protect the information.

- Designate the OpenSSL path. By default, you can find the file on the following directory. If it is installed in any other directory, click the “Browse” and designate the correct directory.
- Default directory of the openssl.exe : (C:\OpenSSL\bin\openssl.exe)
-
- Pass Phrase is required to issue the certificate. You should enter more than 8 digits, combination of English, number, or special character. To make the system secure, you are strongly recommended to change the Pass Phrase upon the initial installation of BioAdmin Server.

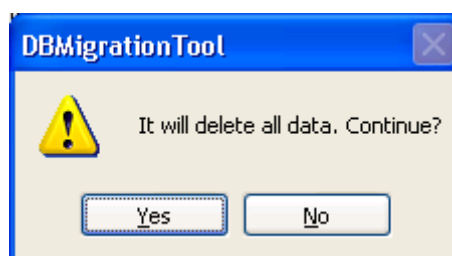


- If you change this Pass Phrase while using the BioAdmin Server after the installation, you should conduct the following procedures.
 - Change the SSL option of the connected BioStations as Not Use.
 - Stop the BioAdmin Server.
 - Change the Pass Phrase.
 - Start the BioAdmin Server.
 - Issue the SSL certificate for BioStation.

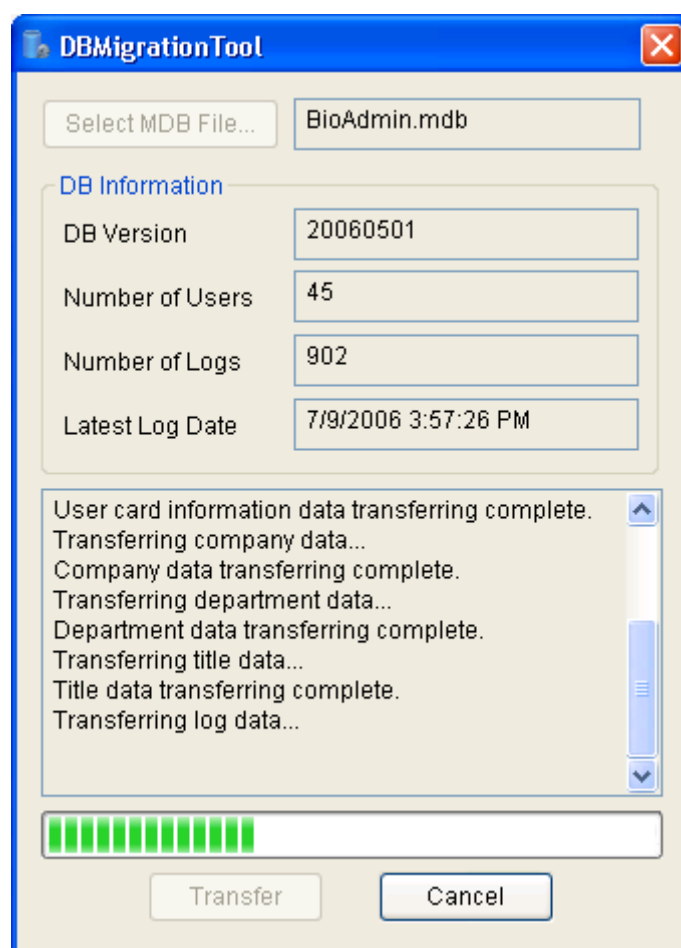
If you are using BioAdmin Client, select the BioStation and press the right button of the mouse. Select **Authenticate Device**.
 - If the certificate is issued properly and stored on the BioStation, BioStation will restart automatically.
- DB Migration Tool
- If you were BioAdmin version 3.X, you need to convert the data from BioAdmin 3.1 to BioAdmin 4.X.
- If you do not need the old data, press Close button.

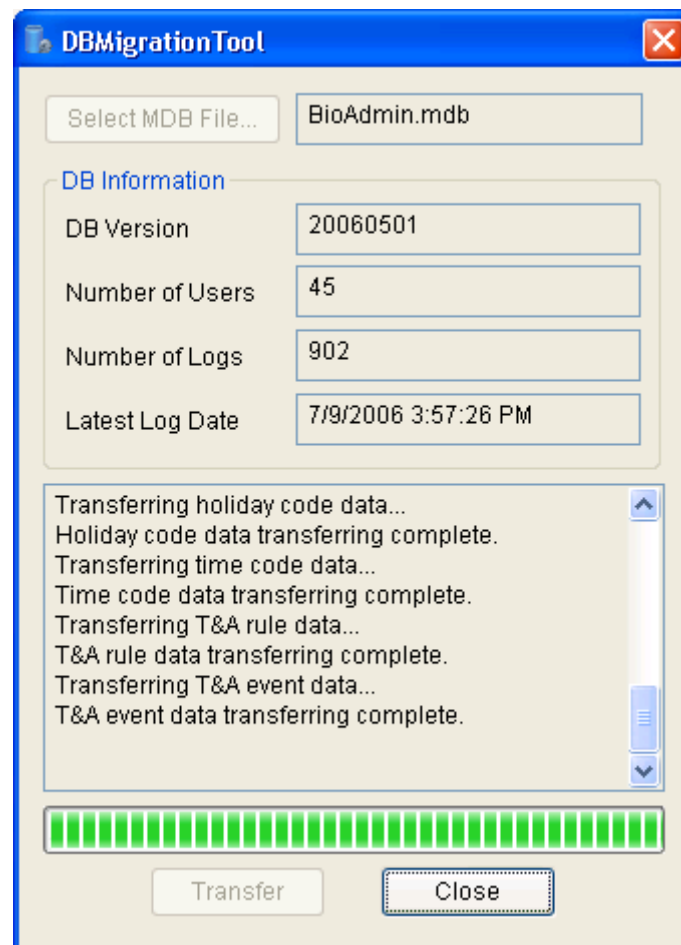


Select the old BioAdmin.mdb file.



- Press Transfer button to transfer the old data to BioAdmin 4.X.
- If you transfer the old data, old data will be deleted. Therefore, if necessary, back up the old data before transferring to BioAdmin 4.X. This data transfer may take time depending on the size of the existing database.

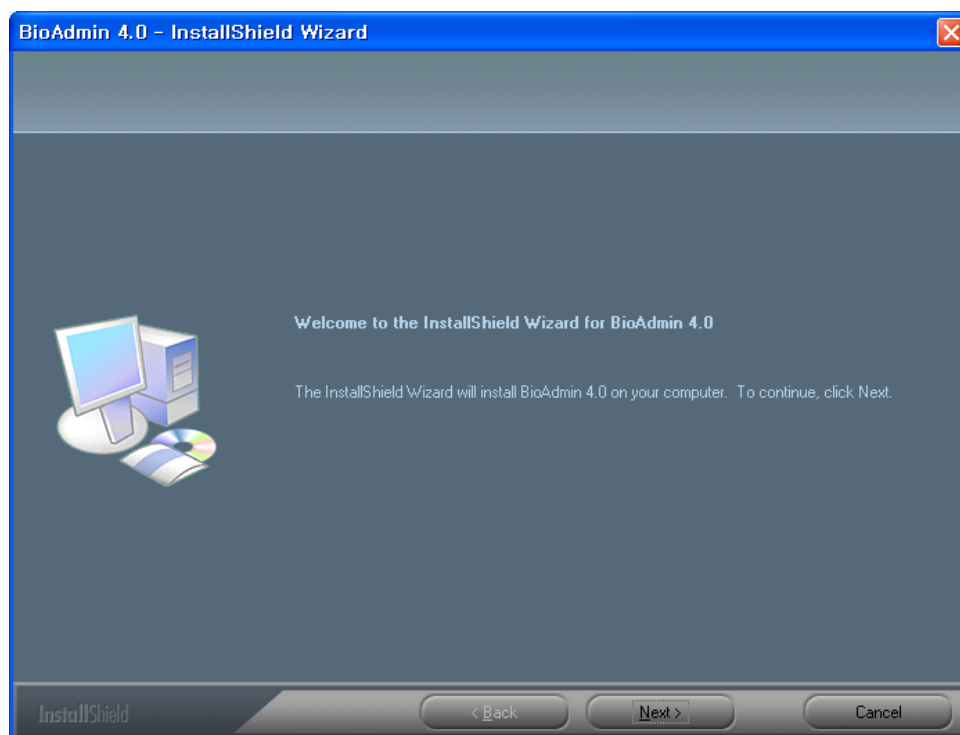




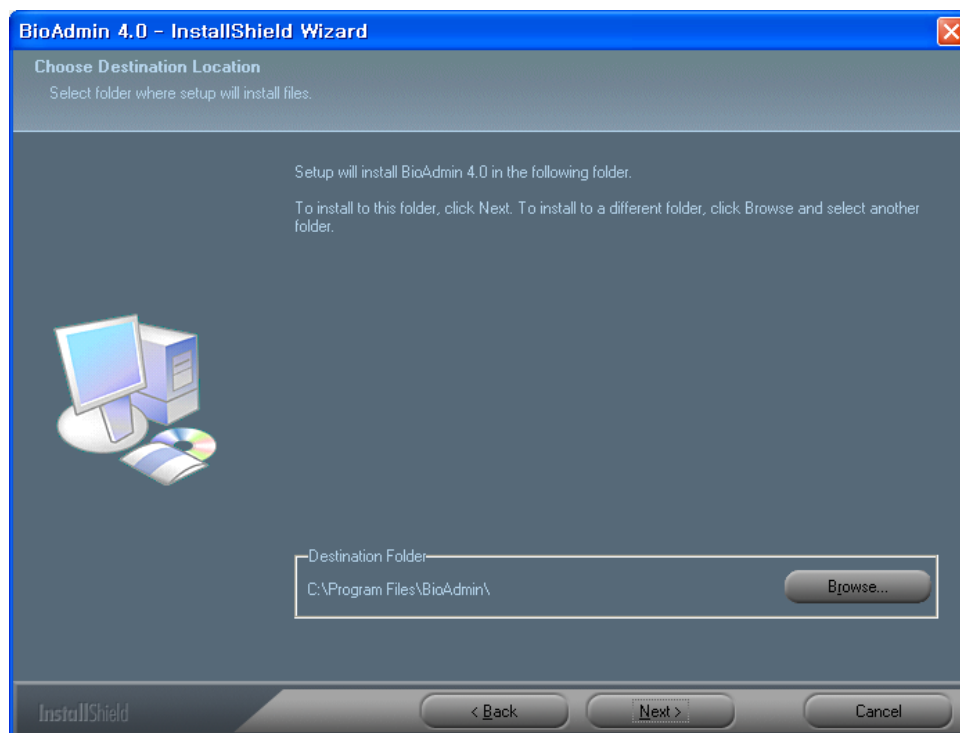
- After the transfer, press Close button.
- Installation Complete
- BioAdmin Server was successfully installed. If you are using the OS Windows 2000 or XP, BioAdmin Server will start as its background service. After this initial installation, BioAdmin Server will run automatically.

1.4.2. How to install BioAdmin Client

- Start Installation.

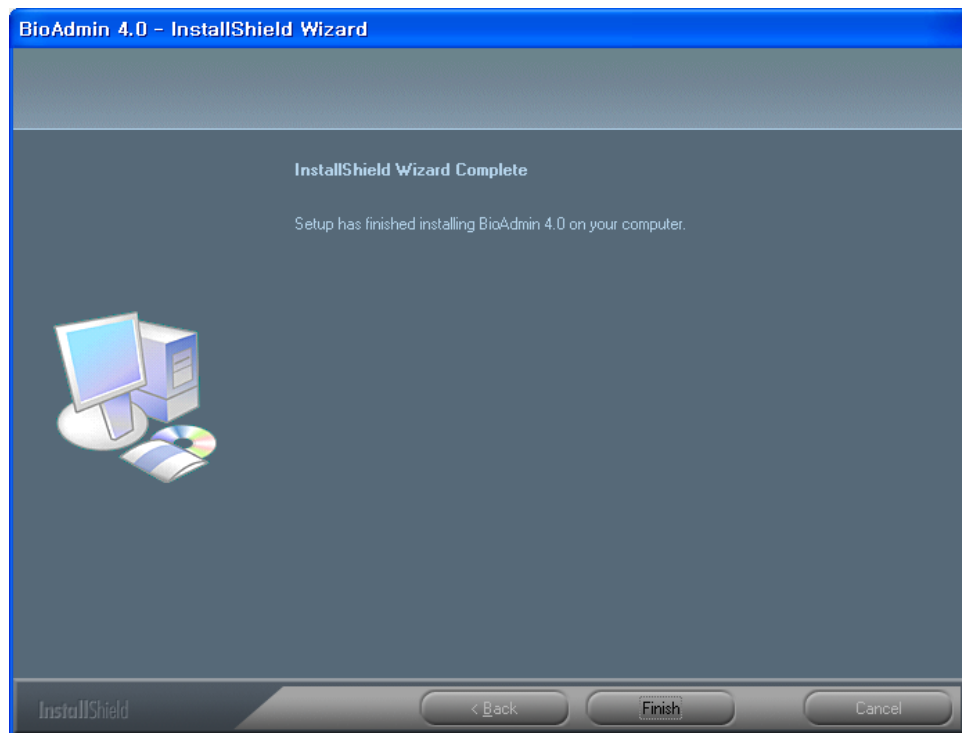


- Choose Destination Location



Choose the hard disk drive on which BioAdmin Client is to be installed. By default, BioAdmin Client is installed in C:\Program Files\BioAdmin.

- Installation Complete

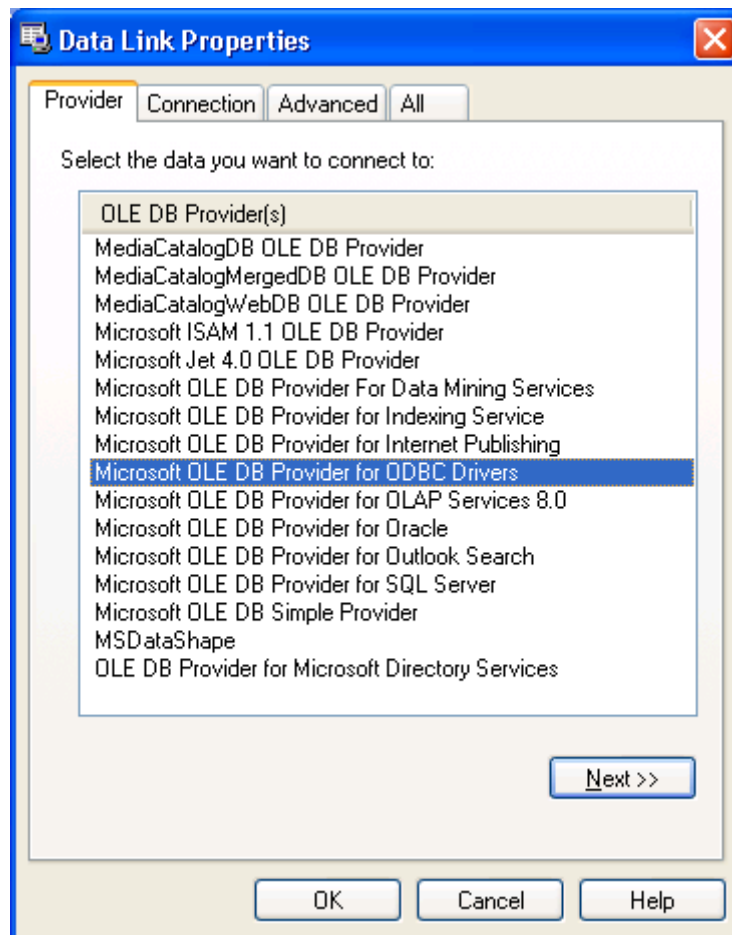


BioAdmin Client was successfully installed. Close the installation program and execute the BioAdmin Client.

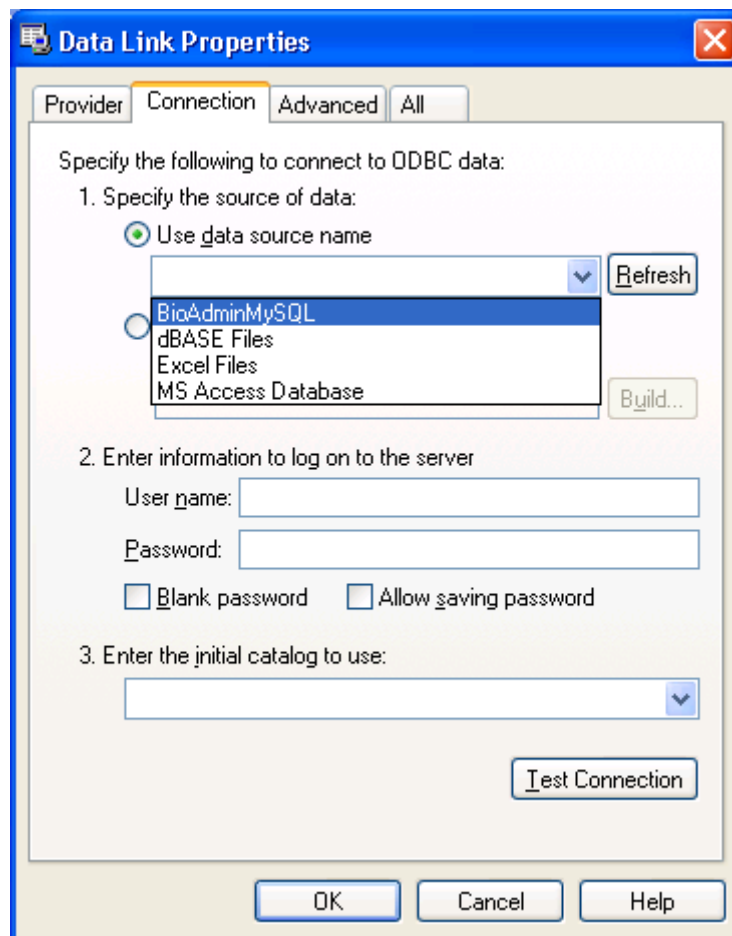
1.4.3. Using MySQL or SQL Server database

- - You can use MySql or SQL Server database by the following procedures.
 - Using MySQL database
 - If you are already using MySQL Server, you can use the MySQL database instead of mdb.
- Execute **BioAdmin Server Config** menu.

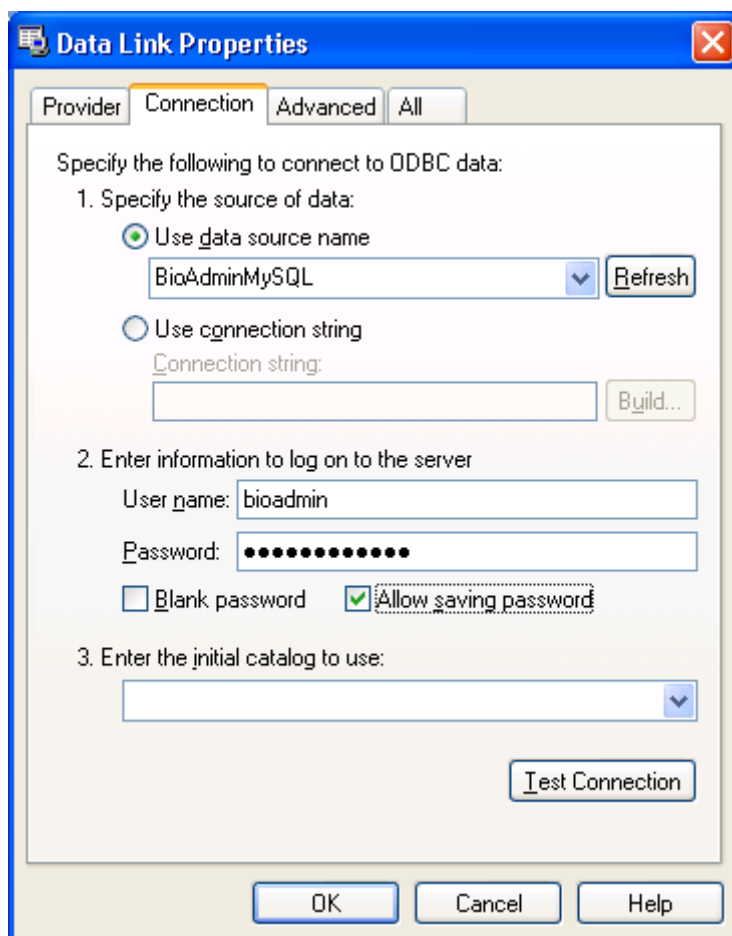
- Click the **Configure** button on the Database field.
- On the **Data Link Properties** window, select **Microsoft OLE DB Provider for ODBC Drivers** and press **Next** button.



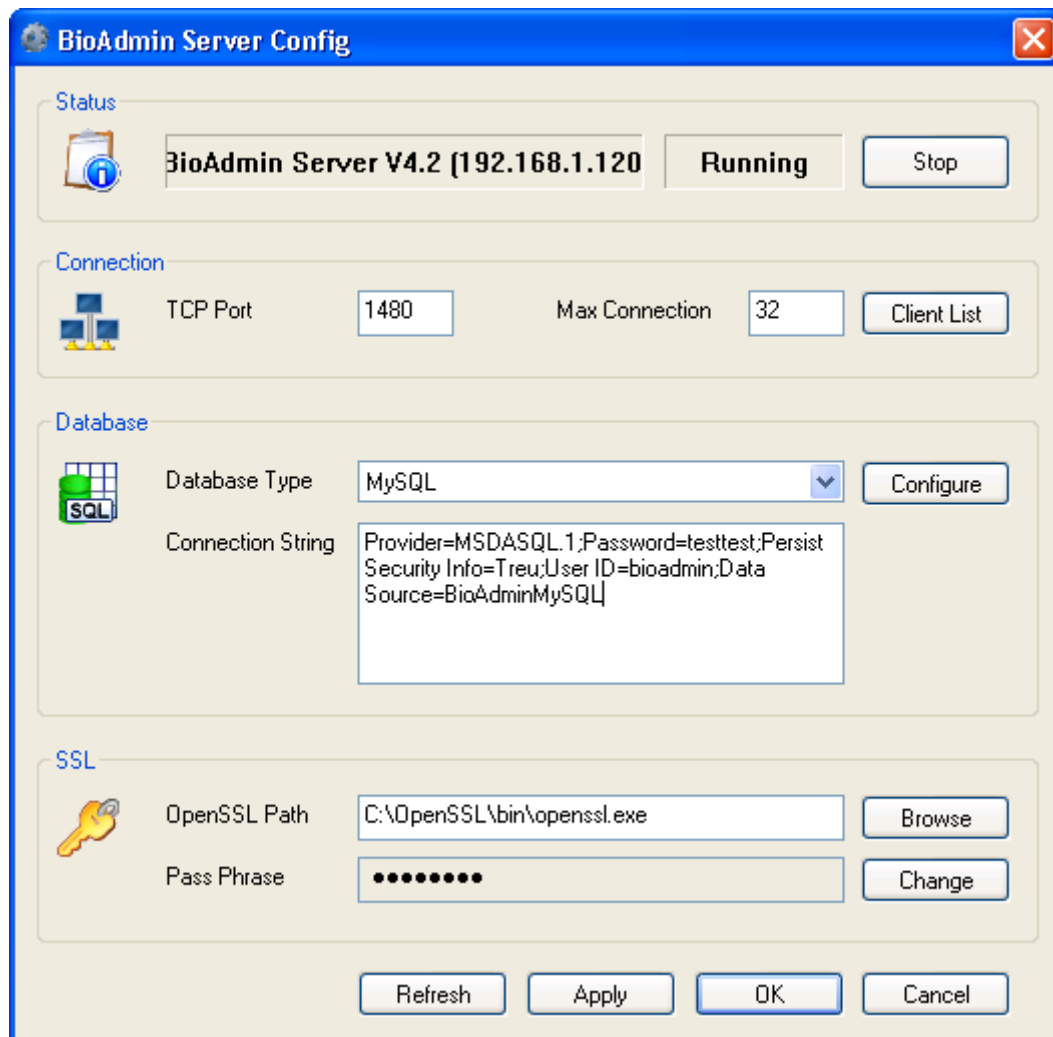
- Select data source name.



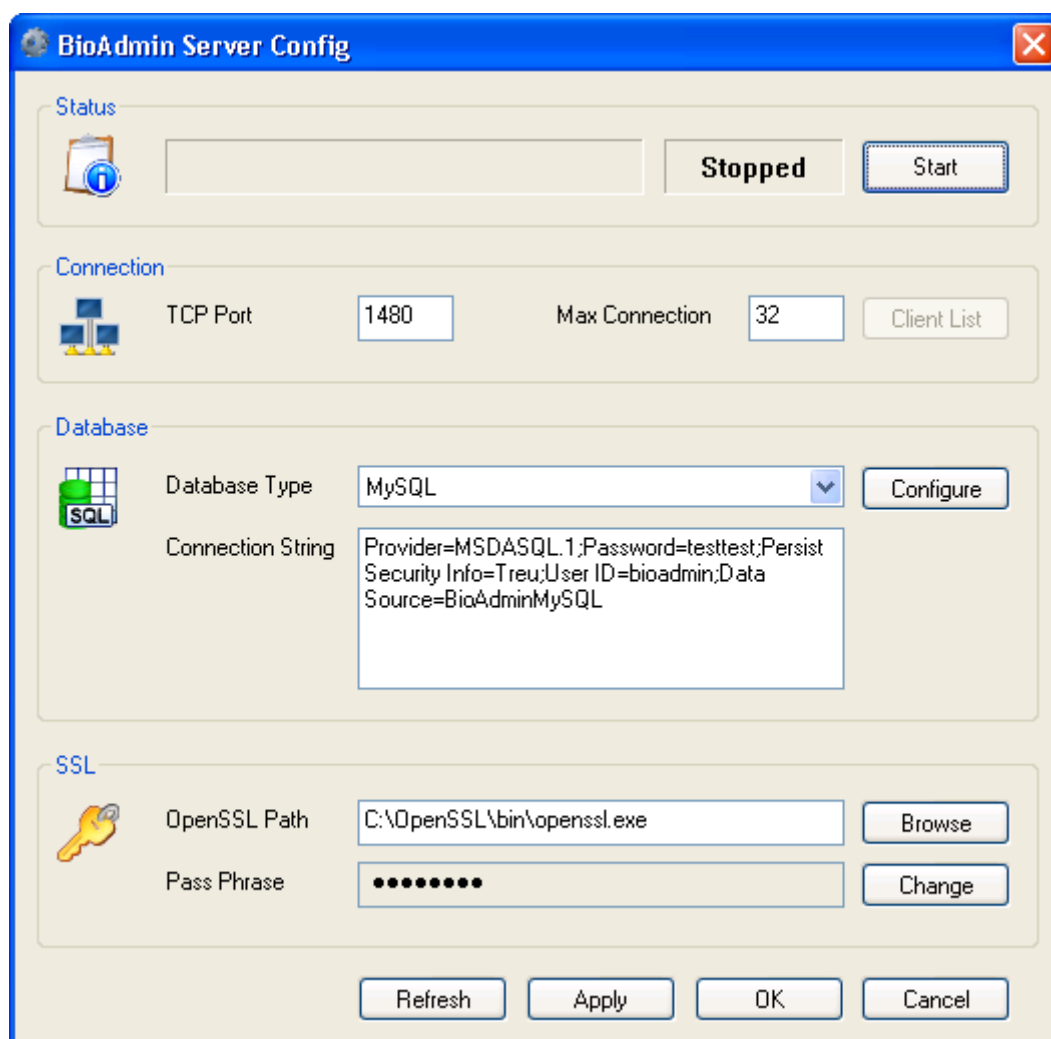
- Enter the ID and password of the DB server. If there is no password designated, check on the **Blank password**. If there is any password, check on the **Allow saving password**.



- Press **Test Connection** button to check the connection status.
- Press **OK** button.




- Select the database type as **MySQL**.
- If you were already using the MySQL, press Apply button on **BioAdmin Server Config**. Press **Stop** and **Start** the BioAdmin server.




The image shows a Windows-style configuration window titled "BioAdmin Server Config". It has a blue title bar with a close button (X) in the top right corner. The window is divided into four main sections: Status, Connection, Database, and SSL. The Status section shows a "Stopped" status with a "Start" button. The Connection section shows "TCP Port" set to 1480 and "Max Connection" set to 32, with a "Client List" button. The Database section shows "Database Type" set to "MySQL" with a "Configure" button, and a "Connection String" field containing "Provider=MSDASQL.1;Password=testtest;Persist Security Info=Treu;User ID=biadmin;Data Source=BioAdminMySQL". The SSL section shows "OpenSSL Path" set to "C:\OpenSSL\bin\openssl.exe" with a "Browse" button, and a "Pass Phrase" field with masked characters and a "Change" button. At the bottom, there are four buttons: "Refresh", "Apply", "OK", and "Cancel".

BioAdmin Server Config


Status

 **Stopped**

Connection


 TCP Port Max Connection

Database

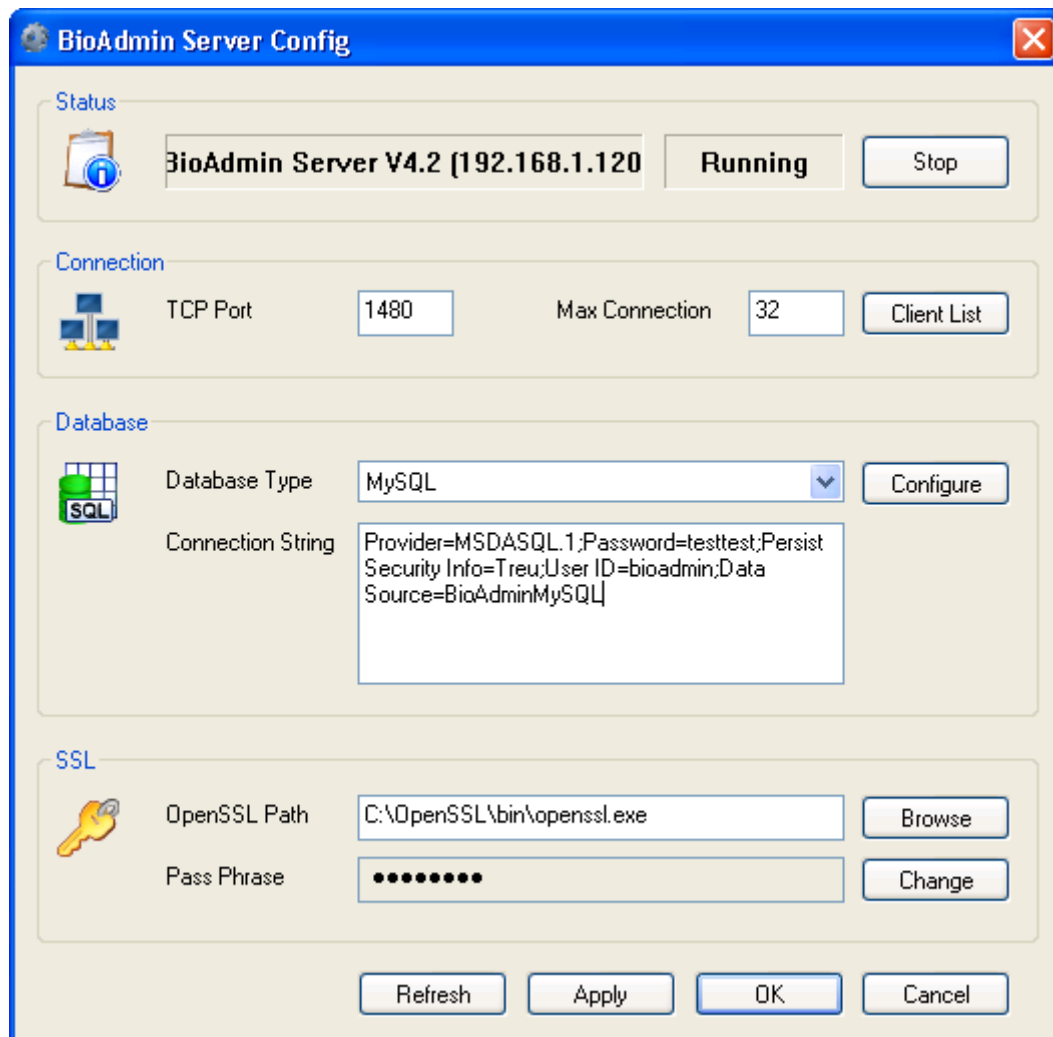
 Database Type

Connection String

SSL

 OpenSSL Path

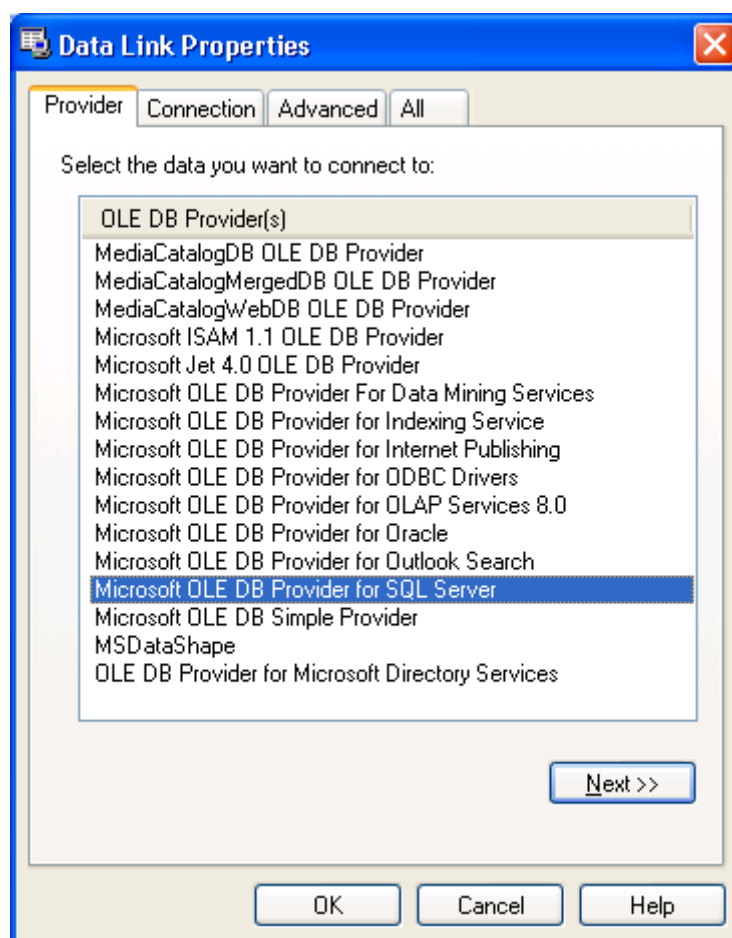
Pass Phrase



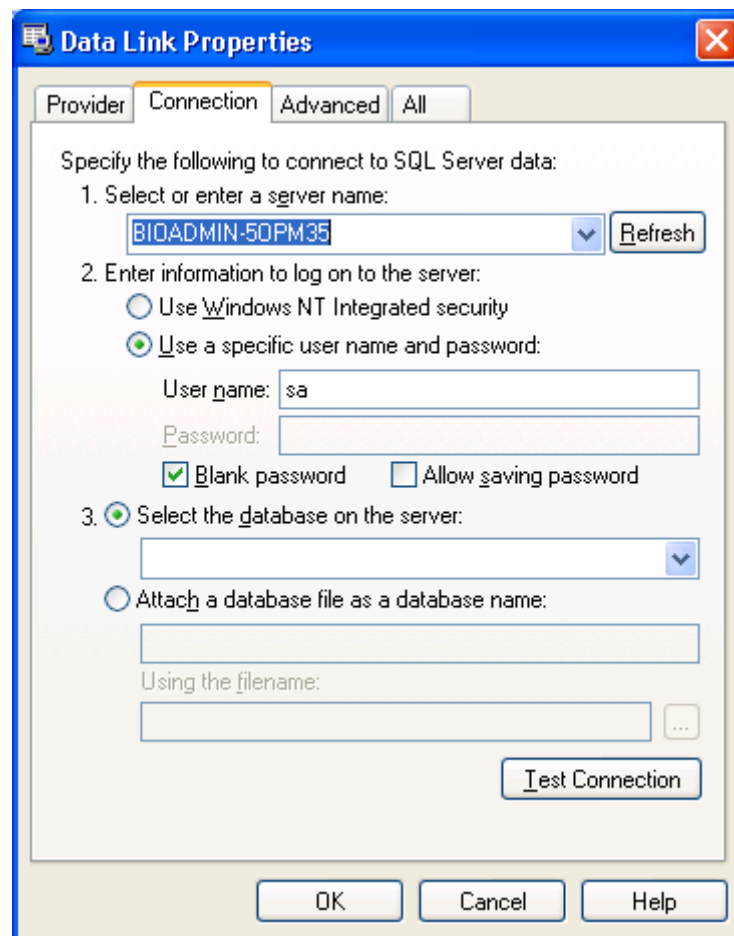
- If the status is changed as **Start**, press **OK** button.
- Using SQL Server database

If you are already using MySQL Server, you can use SQL Server database instead of mdb.

 - Execute BioAdmin Server Config menu.
 - Click the **Configure** button on the Database field.
 - On the **Data Link Properties** window, select **Microsoft OLE DB Provider for SQL Server** and press **Next** button.

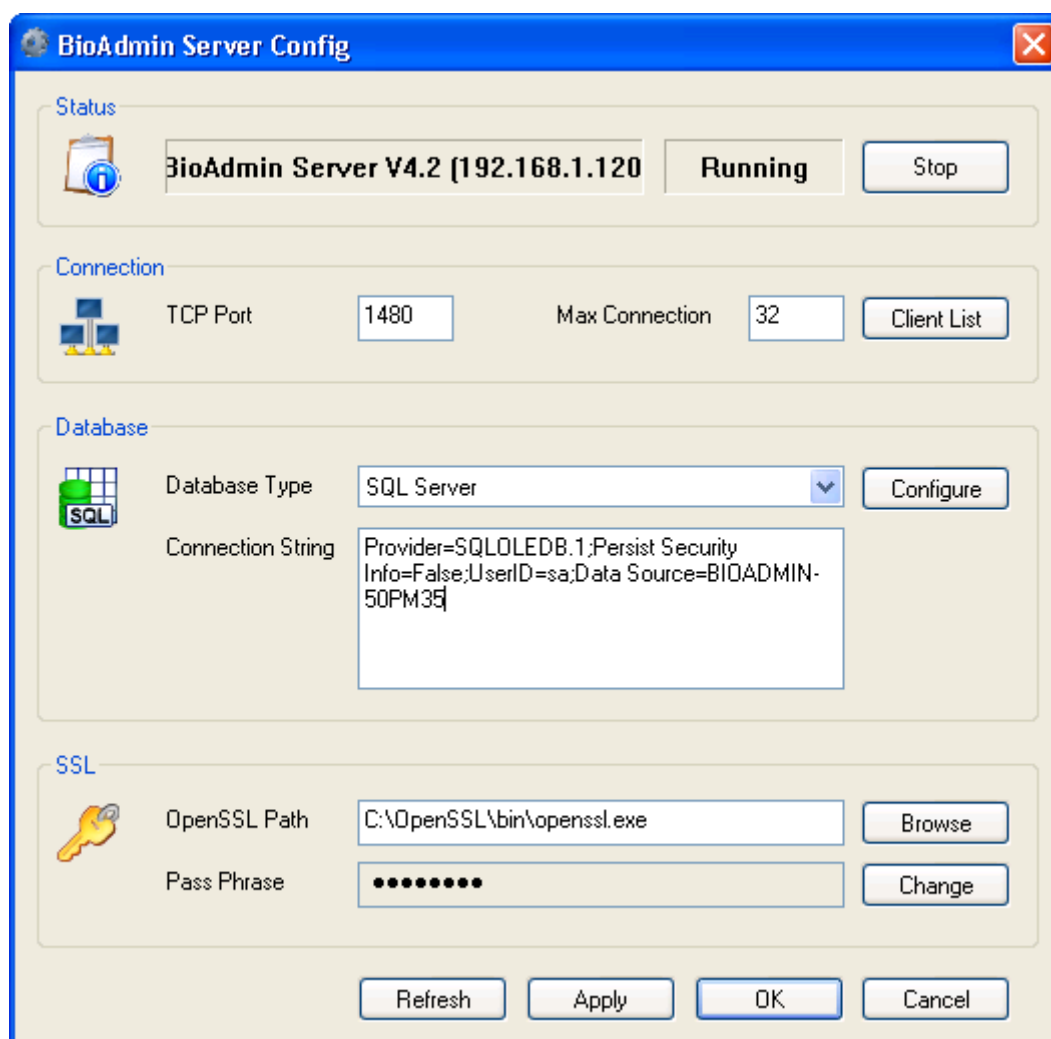


- Enter the SQL Server name.



The image shows a Windows-style dialog box titled "Data Link Properties". It has four tabs: "Provider", "Connection" (which is selected), "Advanced", and "All". The "Connection" tab contains instructions to "Specify the following to connect to SQL Server data:" followed by three numbered steps. Step 1 is "Select or enter a server name:" with a dropdown menu showing "BIOADMIN-50PM35" and a "Refresh" button. Step 2 is "Enter information to log on to the server:" with two radio button options: "Use Windows NT Integrated security" (unselected) and "Use a specific user name and password:" (selected). Below these are text boxes for "User name:" (containing "sa") and "Password:". There are also checkboxes for "Blank password" (checked) and "Allow saving password" (unchecked). Step 3 is "Select the database on the server:" with a radio button selected and a dropdown menu. Below it is an option "Attach a database file as a database name:" with a text box and a "Using the filename:" text box with a browse button "...". A "Test Connection" button is located at the bottom right of the main area. At the very bottom of the dialog are "OK", "Cancel", and "Help" buttons.

- Enter the User name and Password for the database server. If there is no password, check on the **Blank password**. If there is any password, check on the **Allow saving password**.
- Choose the **Select the database on the server**. To select this option, you should create the database in advance on the SQL Server.
- Press **Test Connection** button to check the connection status.
- Press **OK** button.



The image shows the 'BioAdmin Server Config' window. It has a blue title bar with the text 'BioAdmin Server Config' and a close button. The window is divided into four sections: Status, Connection, Database, and SSL. The Status section shows 'BioAdmin Server V4.2 (192.168.1.120)' and a 'Running' status with a 'Stop' button. The Connection section shows 'TCP Port' as 1480 and 'Max Connection' as 32, with a 'Client List' button. The Database section shows 'Database Type' as 'SQL Server' with a 'Configure' button, and a 'Connection String' field containing 'Provider=SQLOLEDB.1;Persist Security Info=False;UserID=sa;Data Source=BIOADMIN-50PM35'. The SSL section shows 'OpenSSL Path' as 'C:\OpenSSL\bin\openssl.exe' with a 'Browse' button, and a 'Pass Phrase' field with masked characters and a 'Change' button. At the bottom, there are 'Refresh', 'Apply', 'OK', and 'Cancel' buttons.

BioAdmin Server Config

Status

BioAdmin Server V4.2 (192.168.1.120) **Running** Stop

Connection

TCP Port 1480 Max Connection 32 Client List

Database

Database Type SQL Server Configure

Connection String Provider=SQLOLEDB.1;Persist Security Info=False;UserID=sa;Data Source=BIOADMIN-50PM35

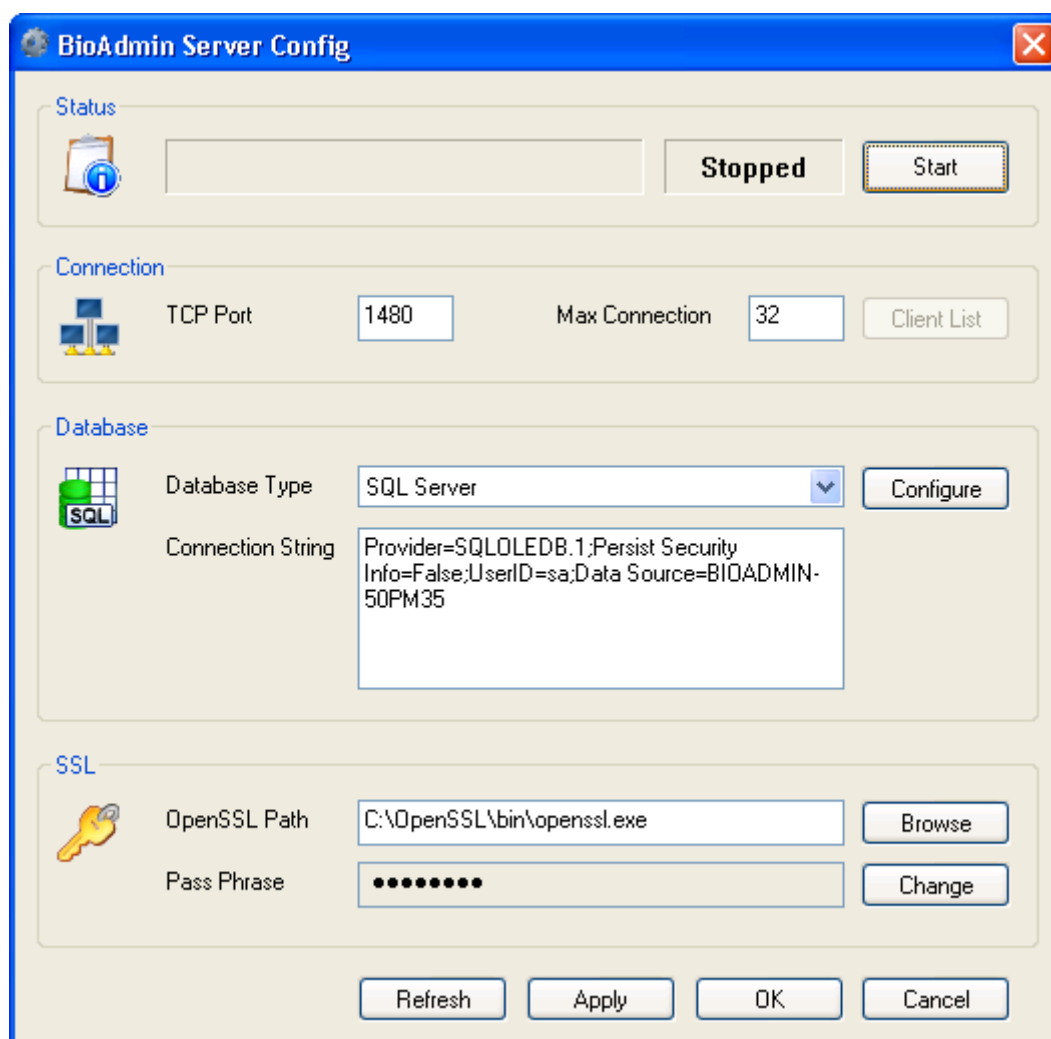
SSL

OpenSSL Path C:\OpenSSL\bin\openssl.exe Browse

Pass Phrase Change

Refresh Apply OK Cancel

- Select the database type as **SQL Server**.
- Press **Apply** button.
- Stop and restart the BioAdmin Server.



The image shows a Windows-style configuration window titled "BioAdmin Server Config". It has a blue title bar with a close button (X) in the top right corner. The window is divided into four main sections: Status, Connection, Database, and SSL.

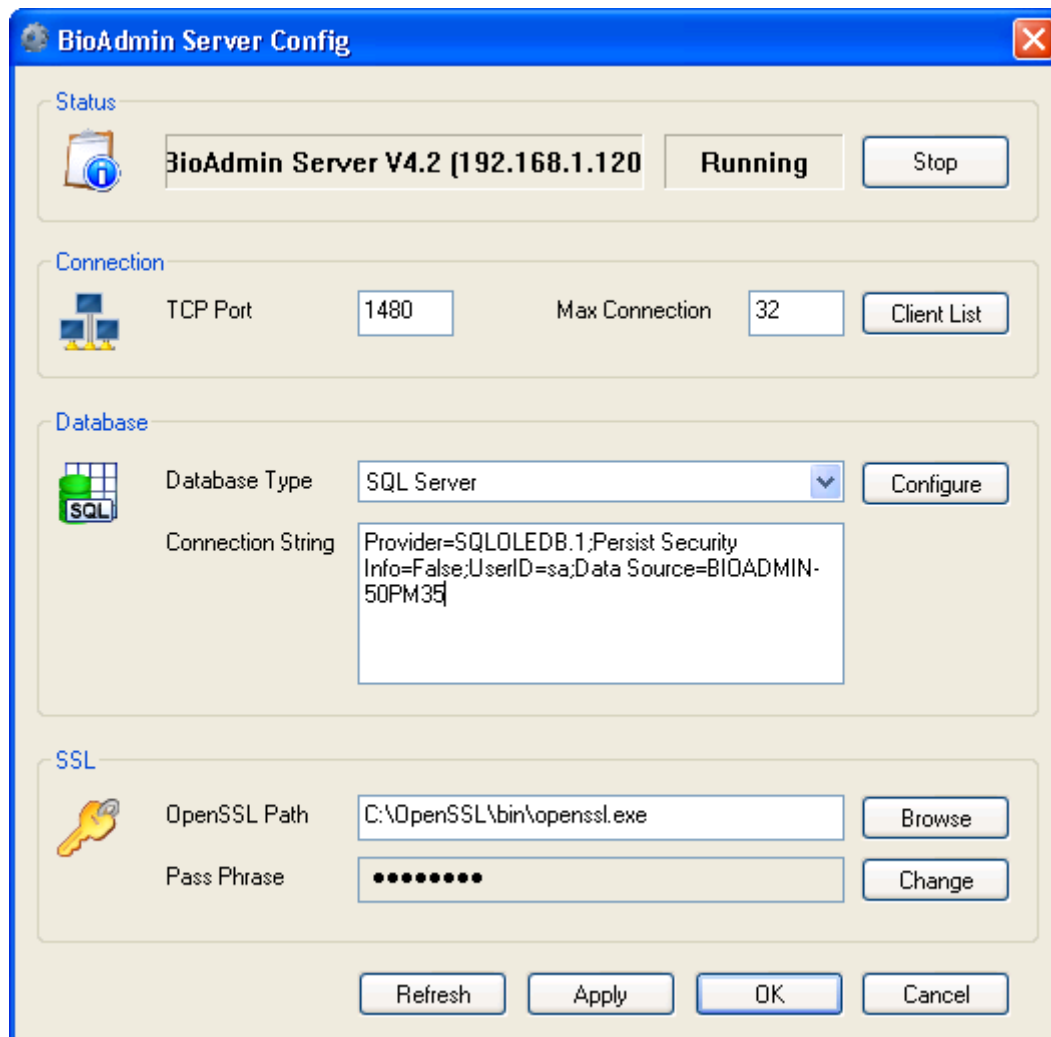
Status: This section contains a status icon (a blue circle with a white 'i'), a text box, and a "Stopped" label. To the right of the "Stopped" label is a "Start" button.

Connection: This section contains a network icon, a "TCP Port" label with a text box containing "1480", a "Max Connection" label with a text box containing "32", and a "Client List" button.

Database: This section contains a database icon, a "Database Type" label with a dropdown menu showing "SQL Server", and a "Configure" button. Below these is a "Connection String" label with a text box containing "Provider=SQLOLEDB.1;Persist Security Info=False;UserID=sa;Data Source=BIOADMIN-50PM35".

SSL: This section contains a key icon, an "OpenSSL Path" label with a text box containing "C:\OpenSSL\bin\openssl.exe" and a "Browse" button, and a "Pass Phrase" label with a text box containing "....." and a "Change" button.

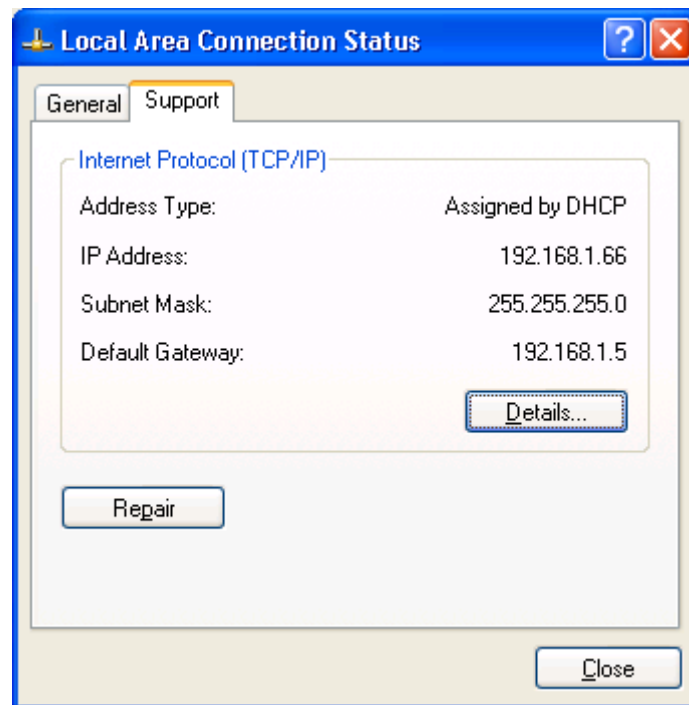
At the bottom of the window are four buttons: "Refresh", "Apply", "OK", and "Cancel".



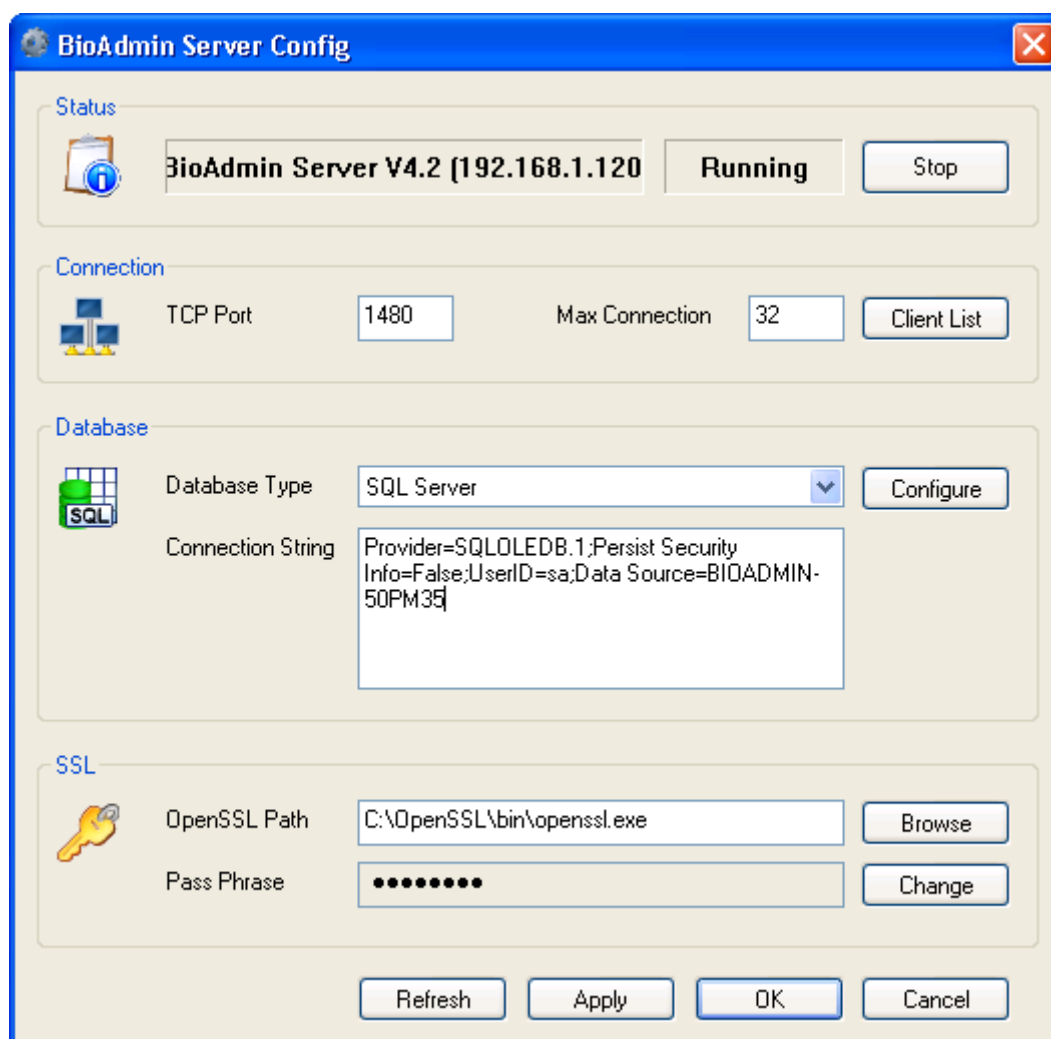
- If the status is changed as **Start**, press **OK** button.

1.4.4. Check the BioAdmin software installation

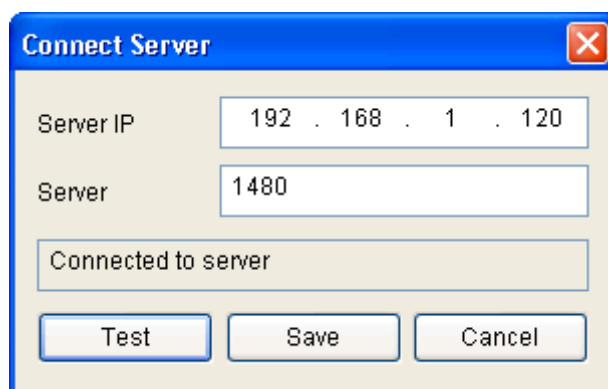
- Network Configuration
- Configure the Network menu of the BioStation as to use the server. Ask the IP address of the server PC to your network manager. You can also check this IP address on Network connection page of your operation system. For more details on BioStation setting, refer to the BioStation Installation Guide.



- If you change the BioStation setting to use the server, BioStation will try the connection with BioAdmin Server soon.
 - You can check the connected BioStation on BioAdmin Server Config window.
 - At this stage, BioStation was just connected to BioAdmin Server, but not managed by the BioAdmin Server. If you issue the certificate, BioStation will get managed by the BioAdmin Server.
 - If the BioStation is connected to the BioAdmin Server, BioAdmin Server will get the necessary information from BioStation. This may take a few minutes depending on the data size on BioStation. While receiving data from BioStation, you may not control the BioStation from BioAdmin Client.
-
- Check Server Status
 - If you finished the installation of BioAdmin Server and BioAdmin Client, you can check the server status on BioAdmin Server Config window.



- Check the version and status of the BioAdmin Server.
- Enter the server IP and server port on BioAdmin Client.
- You can check the connection status by pressing **Test** button.



- If you can access to the BioAdmin Server, now you are ready to use the BioAdmin Server and BioAdmin Client.

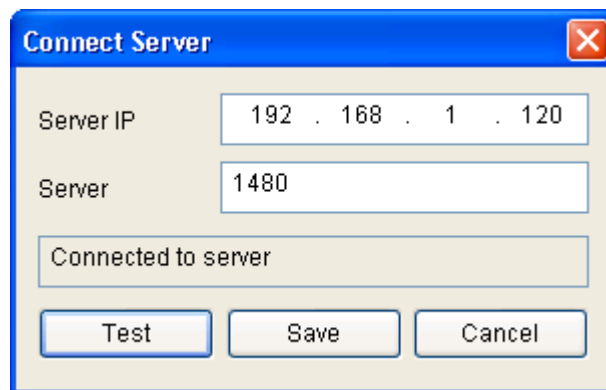
Note: In case of installed BioAdmin Server successfully, it may occur not to connect to server correctly. Please restart BioAdmin Server program.

You may go to Windows 'Start' -> 'Program' -> 'BioAdmin Server' to "Uninstall BioAdmin Server Service".

Run "Install BioAdmin Server Service" for restarting.

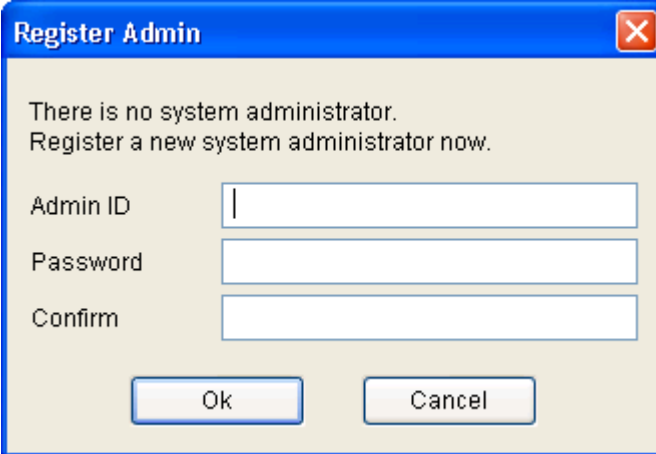
1.5. Log in to BioAdmin

1.5.1. Connect Server



- Enter the server IP and server port.
- Press **Test** button and check whether the BioAdmin Client can access to the BioAdmin Server.
- Press **Save** button to store the server setting and access to that server.
-

1.5.2. Registering the initial system administrator account

A Windows-style dialog box titled "Register Admin" with a blue header bar and a red close button. The main area has a light beige background. It contains the text "There is no system administrator. Register a new system administrator now." followed by three input fields labeled "Admin ID", "Password", and "Confirm". At the bottom are "Ok" and "Cancel" buttons.

Register Admin

There is no system administrator.
Register a new system administrator now.

Admin ID

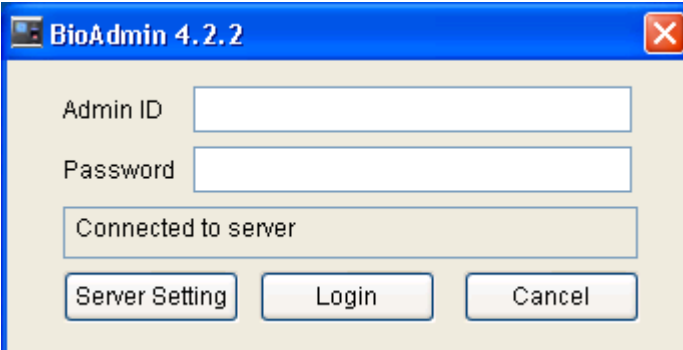
Password

Confirm

Ok Cancel

- After entering Admin ID and password, press OK button. At this initial registering, you can put any Admin ID and password.
- This initial registration is required to open the BioAdmin Client program after installing the BioAdmin Server. Therefore, once you register this initial Admin ID and password, you can log in to the BioAdmin Client without registering additional admin account from the next time.
-

1.5.3. Log in to the BioAdmin 4.2.2

A Windows-style dialog box titled "BioAdmin 4.2.2" with a blue header bar and a red close button. It contains input fields for "Admin ID" and "Password", a status box labeled "Connected to server", and three buttons: "Server Setting", "Login", and "Cancel".

BioAdmin 4.2.2

Admin ID

Password

Connected to server

Server Setting Login Cancel

- After entering the Admin ID and password, press log in button.
- Enter the Admin ID and password you used upon registering the initial administrator account.
- You can see the server information by pressing the Server Setting button.

1.6. User Level on BioAdmin 4.2

You can differentiate the user level into three groups as below.

- Administrator : Administrator can change and see all the settings on BioAdmin software.
- Viewer : Viewer can see the settings, but cannot change any settings on BioAdmin software.
- User : User can see his log information.

1.7. BioAdmin configuration

BioAdmin Software is composed of 4 elements, command menu bar, main menu, task and utilities, and main window.



1.7.1. Command Menu bar

Command menu bar contains command items supported by BioAdmin software, which are grouped into 4 categories:

- **System** : admin. Account, back up database, restore backup, lock all devices, unlock all devices, upload 1. x version data, preference, BioAdmin information, and close
- **User management** : add new user, company management, department management, title management, and setup custom fields.
- **Device management** : add new device, add new BEACon, set time, upgrade firmware, upload password initialization code/ password initialization, site key setting
- **Access control** : time code definition, holiday definition, time zone definition, door zone definition, and access group definition.

1.7.2. Main menu

Major command menus can be accessed by buttons on the left pane, such as user management, device management, smart card, access control, monitoring, log list, or report.

1.7.3. Task and Utilities

Task window shows sub-menus for the selected main menu

Utility window shows the User selection tool, Device tree, and Log filtering tool.

1.7.4. Main window

On each command menu, relevant information is updated on the main window.

Main window contains the following information and controls:

- Retrieved information from currently selected device
- Information stored on host PC, such as user database or log data
- Controls to manage or to configure the information

1.8. User Database

User database refers to the entire user information including user ID, user name and fingerprint information. BioAdmin software is based on user database management in priority.

That is, user database is created, updated and saved to host PC. Then, it is selectively distributed to BioEntry and BioStation devices connected to network via transfer.

Note : Difference between select and check – select is used when choosing each user ID in select tool box (press Shift button and choose a user with an arrow key ↓ or click the last user ID with a mouse, to select multiple users.), whereas, check is to check each selected user ID. Using check tool, you can check all, uncheck all, reverse check, check user and uncheck a selected user with ease.

2. Options to determine before starting

2.1. Security Option

Security option is used to encrypting fingerprint template data which is used between host PC and BioStation. By encrypting the template data, you can enhance the security level of the system.

Security option should be used only when there is no fingerprint data on the BioStation. Otherwise, BioAdmin will remove all fingerprint templates on the BioStation.

Please refer to the "11.1.7 Preferences" Security Option for more in detail.

2.2. Template Format Option

It has been added ISO 19479-2 Standard template data support for BioEntry Pass™/BioEntry Smart™, BioStation™, BioEntry Plus™ devices.

To use this option, the device should not have user information on it, then it can be changed. In case of BioAdmin, it will be applied after deleting all template data.

Please refer to the "11.1.7 Preferences" Template Format Option for more in detail.

2.3. Access Control Option

From the BioAdmin V4.1, new type of Access Control information will be used for BioStation & BioEntry Plus. In case of previous version of Access Control, it should be decided which Access Control type use and which version use since it does not support BioEntry Plus. After using new version of Access Control setting, previous version won't be used. Lastly, in case of BioEntry Pass / BioEntry Smart, new Access Control setting won't be applied.

Please refer to the "11.1.7 Preferences" Access Control Option for Access Control setting and refer to the "7. Access Control" for Access Group setting.

2.4. Using Mifare Card

BioStation Mifare and Bioentry Plus Mifare models support 1K/4K Mifare Card, which is not compatible with Smart Card used in BioEntry Smart model, has

different setting.

Please refer to the “6. Smartcard/Mifare card” for more in detail.

3. Quick start

This chapter explains basic procedures of operating BioEntry, BioEntry Plus, and BioStation device integrated with external system.

3.1. Quick start with BioStation

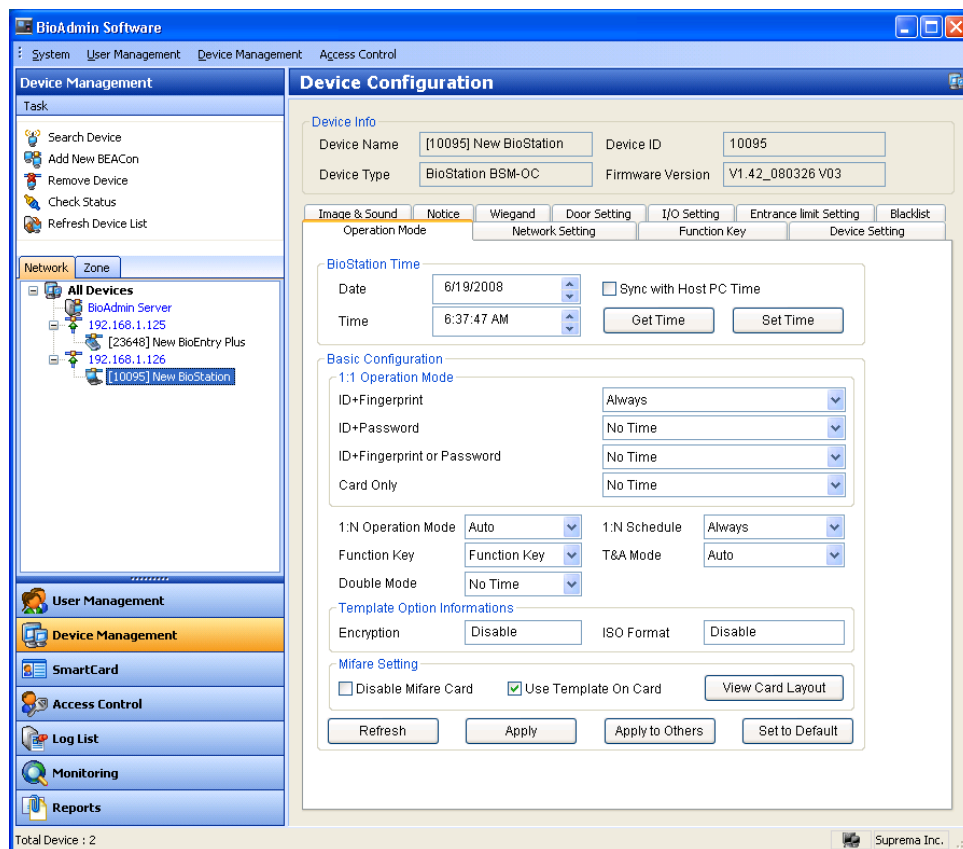
This paragraph describes basic procedures of operating BioStation.

3.1.1. Step 1 : HW installation

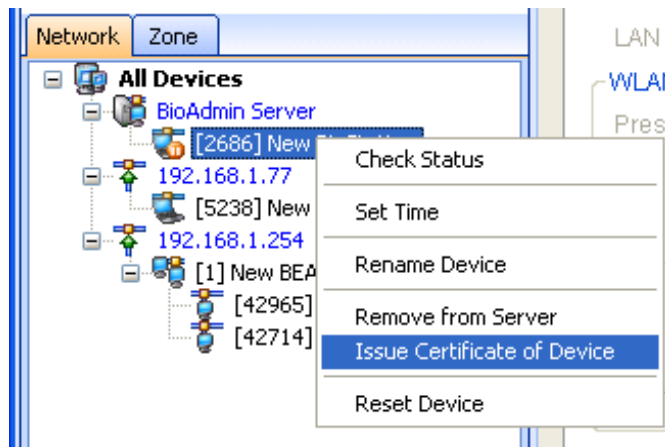
BioStation can be networked by cable/wireless LAN as well as by RS232,422,485. Also, BioStation can be use with host PC via USB interface. For details on installation, refer to BioStation installation manual.

3.1.2. Step 2 : Search new device

- Run BioAdmin software.
- Enter login ID and password.
- Select device management on main menu to display device management page on main window.



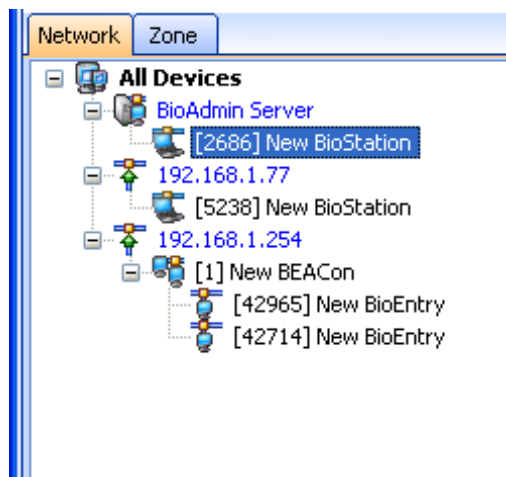
- Once the BioStation is connected to the BioAdmin Server, connected BioStation will be added to the device tree whenever you start the BioAdmin software. Also, you can see the connected BioStation by pressing the **Refresh Device List**. Even though a BioStation is properly connected to the BioAdmin Server, it may take several minutes to show up on the device tree.
-
- If a BioStation is unauthorized one, an orange color is indicated on the BioStation icon. In this case, you cannot communicate with that unauthorized BioStation.



To communicate with the BioStation, select the unauthorized BioStation and press the right button of the mouse. Press **Issue Certificate of Device** menu. After issuing the certificate, you can use this BioStation.

Because the BioStation restart after issuing this certificate, it may take a few minutes to show this BioStation again on the device tree.

-
- After the certificate is issued for the BioStation, orange mark will be removed from the BioStation icon. This means that you can communicate with the BioStation without any problem.



- Select Search device menu, click BioStation search, select a desired network out of serial port TCP/IP and USB device (BioStation) and press search button.

Note : If you find a device from search results

Ex.) searching 192.168.1.101 (port : 1470),

Detected device : new BioStation – device number

Finish device search.

Search result '— device(s) found' is displayed. Press OK button to select a device.

Add New Device

☐ Search BioEntry ☒ Search BioStation ☐ Search BioEntry Plus

☐ Serial Port

COM Port: All COM Port Baudrate: 115200

☒ TCP/IP

IP Addr: 192 . 168 . 1 . 77 Port: 1470

☐ USB Device (BioStation)

☒ USB Virtual BioStation A:

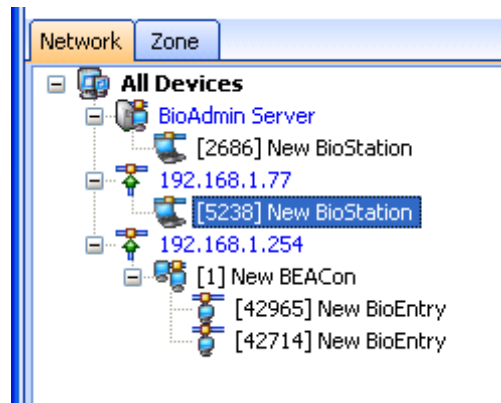
☐ UDP (BioEntry Plus)

Search

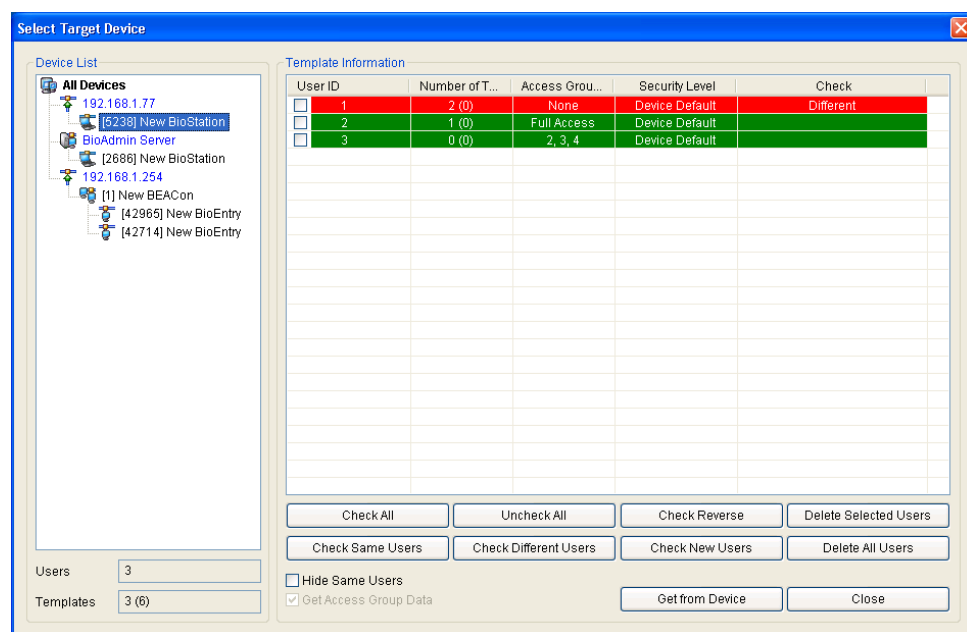
Searching 192.168.1.77 (port:1470)
Detected Device New BioStation - 5238.
Finish Device Search
1 device(s) found.

Ok Cancel

- Once it's connected to device successfully, new device ID and network connected to device are also displayed in device tree window.



- Select user management button on main menu and select Manage users in device on task window.
- Once device is selected, fingerprint information such as user ID, number of fingerprint, access group, security level and select is displayed.



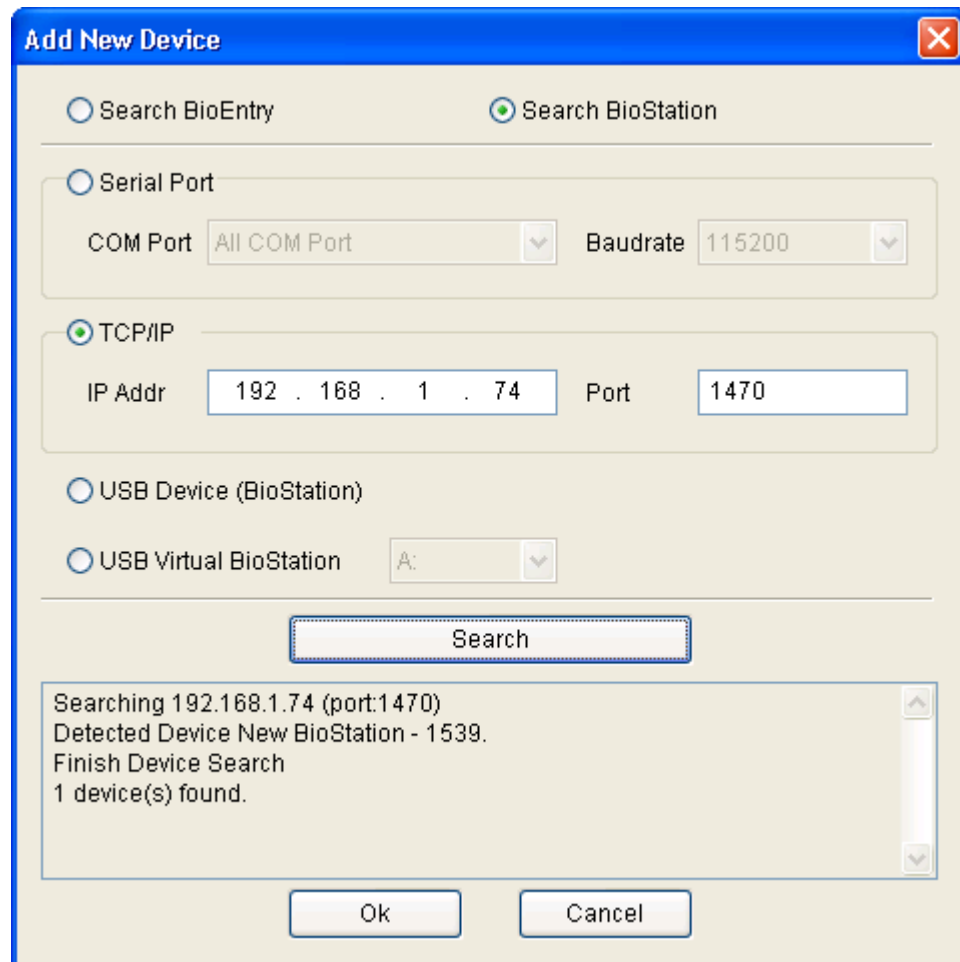
3.1.3. Step 3: Connect device

- Select Device Management menu to display device management page on main window.

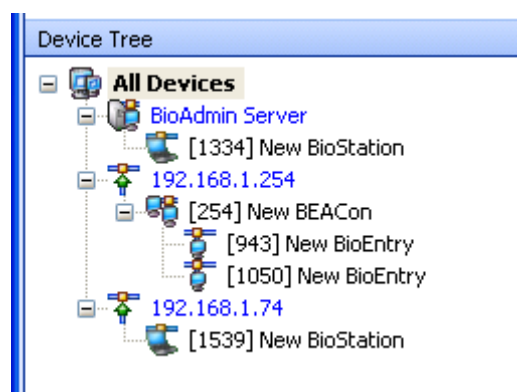
BioAdmin software network setup is divided into network, serial port and USB connection. Change settings and apply them to device.

Network setup is to designate settings for local and wireless network connection.

You need to designate the port as “1470.”



Administrator needs to know IP address and port # (1470). Once device is connected properly, IP address is displayed as one group and device ID is displayed with a bracket [****] on device tree window.

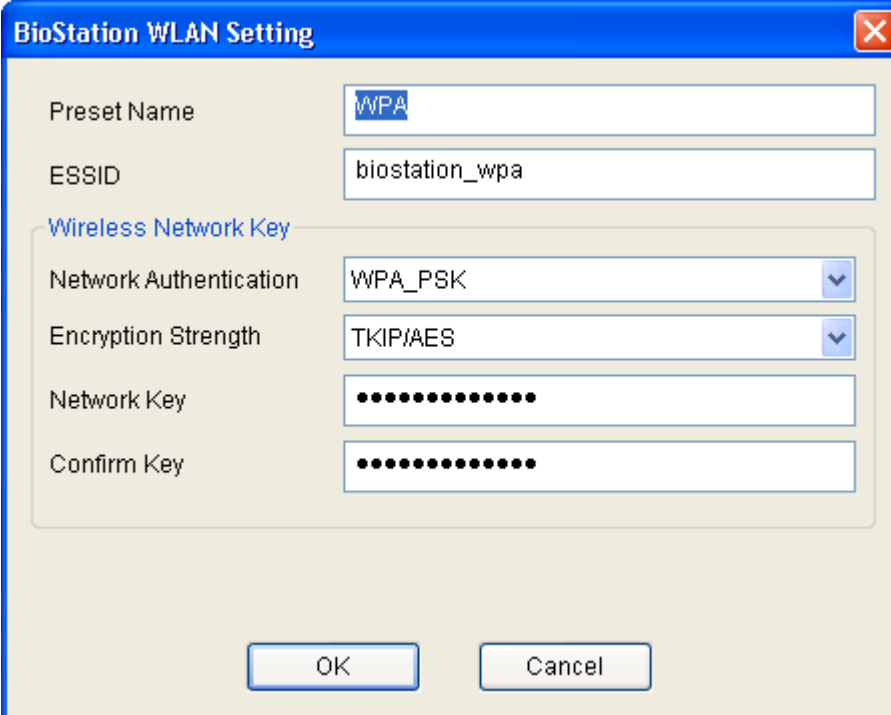


- Wireless network setup

Set up free set name, network name (SSID), data encryption, key type, and network key check on wireless network setup before operation.

Applying DHCP, you can set automatic upload of IP address on BioAdmin in order to get IP address automatically, check such an IP address and search a device in device management.

When setting IP address manually, you can search a device by specifying assigned IP address, gateway and subnet mask.



The image shows a 'BioStation WLAN Setting' dialog box. It has a blue title bar with a close button. The main area is light beige. It contains several input fields and dropdown menus. 'Preset Name' is 'WPA'. 'ESSID' is 'biostation_wpa'. There is a section titled 'Wireless Network Key' in blue. Inside this section, 'Network Authentication' is 'WPA_PSK', 'Encryption Strength' is 'TKIP/AES', 'Network Key' is masked with dots, and 'Confirm Key' is also masked with dots. At the bottom are 'OK' and 'Cancel' buttons.

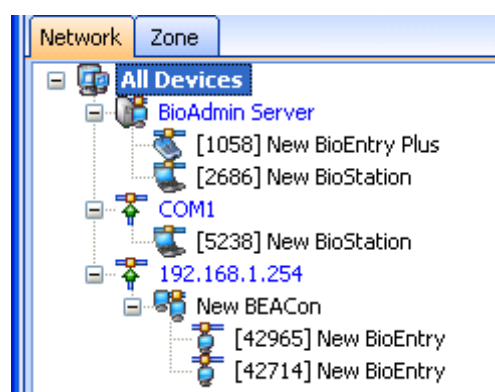
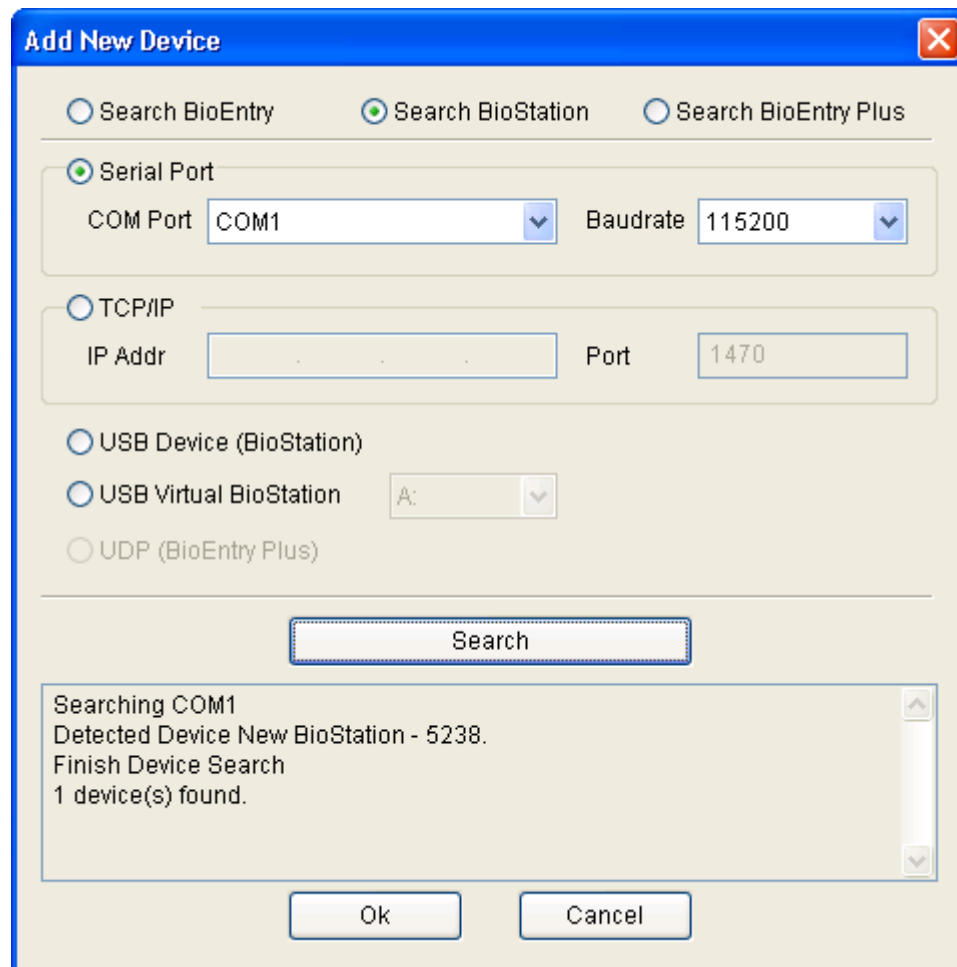
Preset Name	WPA
ESSID	biostation_wpa
Wireless Network Key	
Network Authentication	WPA_PSK
Encryption Strength	TKIP/AES
Network Key
Confirm Key

OK Cancel

- Serial

On RS422/485 network, a new device can be detected automatically or added by new device search menu in device management. Once device is connected to network properly, device ID will be displayed with a bracket [****] under port on device tree window.

Baudrate in RS485 / RS232 interface represents the frequency of carrier wave changing status per sec. In communicating with BioStation device, default is 115200 but if any trouble, lowering the baudrate can solve the problem.



Although a device is disconnected from network, it still remains on device tree window. Remove device menu is used when removing a device from device tree window.

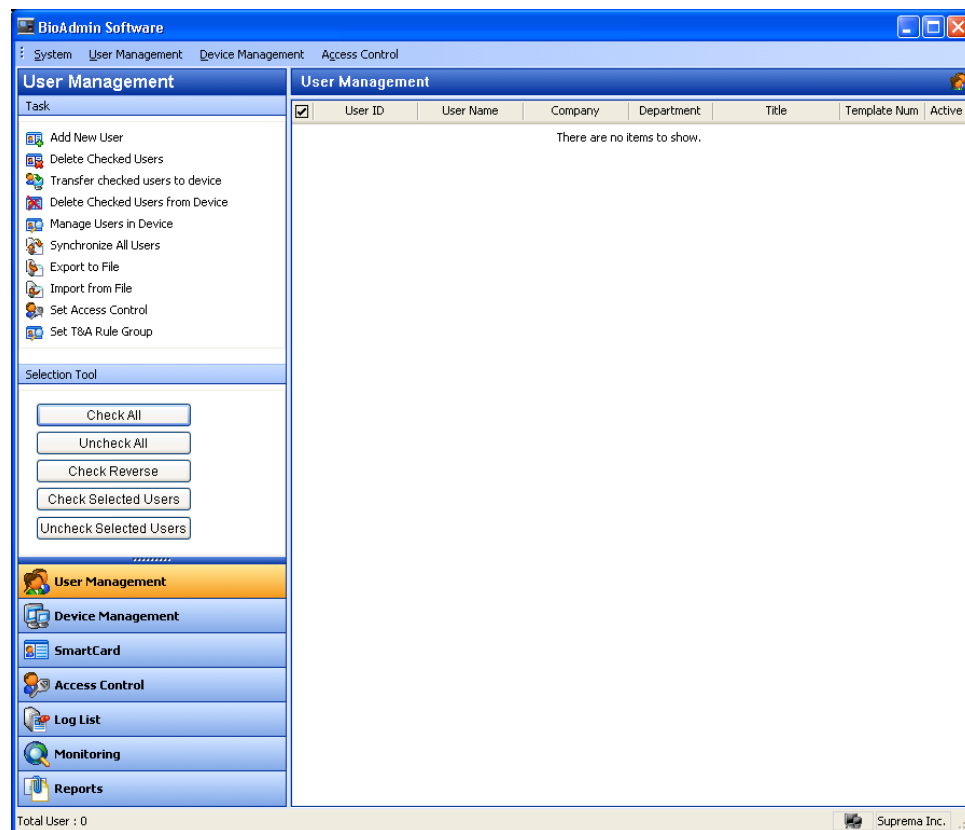
Device name can be changed using change device name menu but device ID

can't be changed as it is fixed as one.

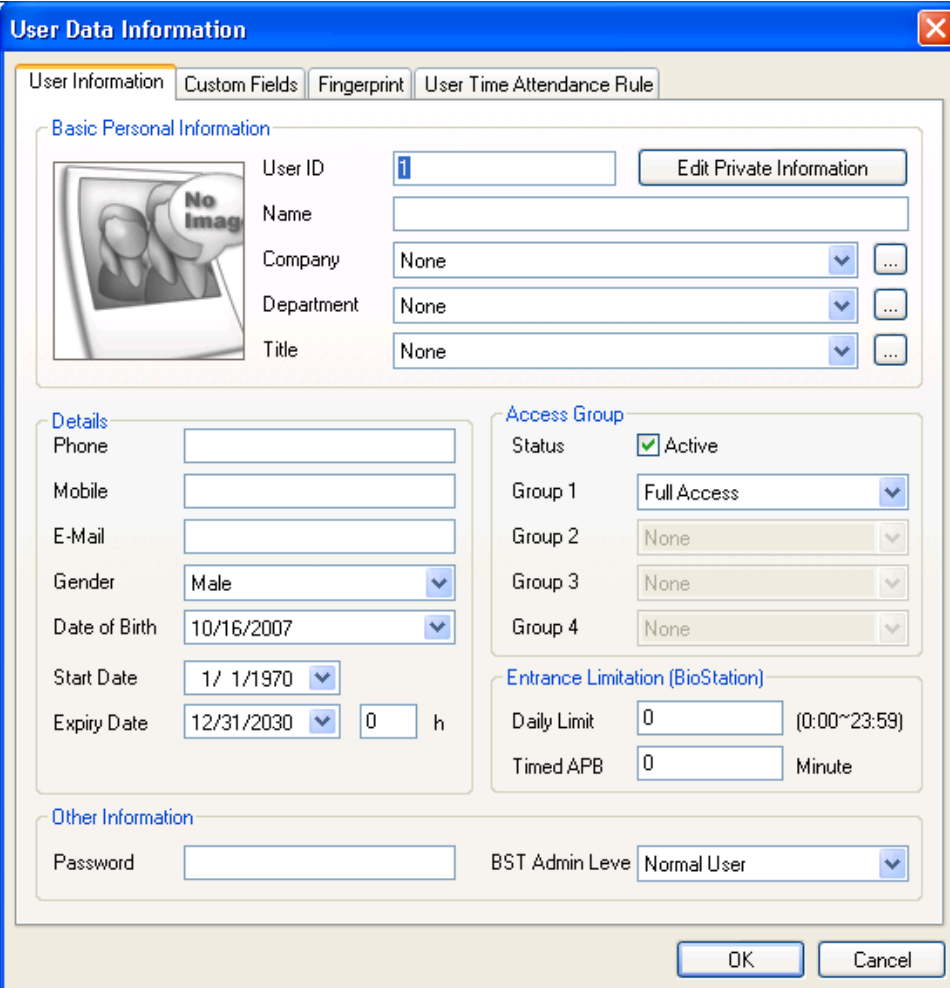
3.1.4. Step 4: User management

- Select user management menu to display user management page on main window.

Note : In user management, user related information can be divided into basic information and fingerprint information. Basic information includes user ID, name, company, dept., position and telephone number. Fingerprint information is about user's fingerprint.



- Select add new user menu on task window to pop up a window.



The dialog box is titled "User Data Information" and has a close button (X) in the top right corner. It contains four tabs: "User Information" (selected), "Custom Fields", "Fingerprint", and "User Time Attendance Rule".

User Information Tab:

- Basic Personal Information:**
 - User ID: Edit Private Information
 - Name:
 - Company: ...
 - Department: ...
 - Title: ...
- Details:**
 - Phone:
 - Mobile:
 - E-Mail:
 - Gender: ...
 - Date of Birth: ...
 - Start Date: ...
 - Expiry Date: ... h
- Access Group:**
 - Status: ☒ Active
 - Group 1: ...
 - Group 2: ...
 - Group 3: ...
 - Group 4: ...
- Entrance Limitation (BioStation):**
 - Daily Limit: (0:00~23:59)
 - Timed APB: Minute
- Other Information:**
 - Password:
 - BST Admin Leve: ...

Buttons: OK, Cancel

- Click user information tab and enter user information.

User Data Information

User Information | Custom Fields | Fingerprint | User Time Attendance Rule

Basic Personal Information

User ID: 853 Edit Private Information

Name: Dongsuk, Suh

Company: Suprema ...

Department: R&D ...

Title: Manager ...

Details

Phone: 012-345-6789

Mobile: 098-765-4321

E-Mail: dsuck@anymail

Gender: Male ▼

Date of Birth: 6/14/1970 ▼

Start Date: 1/ 1/1970 ▼

Expiry Date: 12/31/2030 ▼ 0 h

Access Group

Status: ☒ Active

Group 1: Full Access ▼

Group 2: None ▼

Group 3: None ▼

Group 4: None ▼

Entrance Limitation (BioStation)

Daily Limit: 0 (0:00~23:59)

Timed APB: 0 Minute

Other Information

Password:

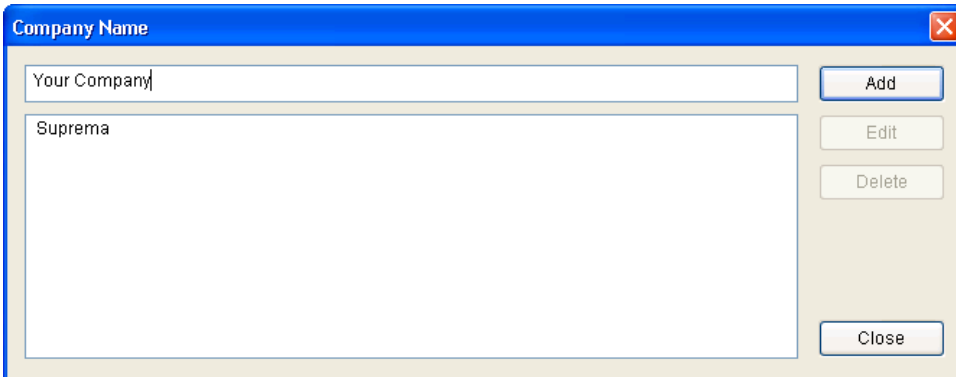
BST Admin Level: Normal User ▼

OK Cancel

- User can type Phone, Mobile, E-mail, Gender, and Date of Birth, then User Data Information will be indicated as Issue Date, which can be configured Expiry Date of user.
- In case of applying access control, please check mark "Active" of Access Group Status and select group what you already generated.
- Daily Limit is to make verification available of daily limitation. In case of setting timed APB, it will be possible to verify it again after at least one time verification.
- In addition, private password can be created, which is used for password verification.
- Please click "Custom Fields" to create more detailed user data information.
- Choose company, dept. and title using a combo box.
- To add a new company, dept., or title information, press ... button or enter

company, dept. or title in information input window and then press add button.

- To save added information, press Close button.

A dialog box titled "Company Name" with a blue header bar and a red close button. It contains a text input field with "Your Company" and a list box with "Suprema". To the right are buttons for "Add", "Edit", "Delete", and "Close".

Company Name

Your Company

Suprema

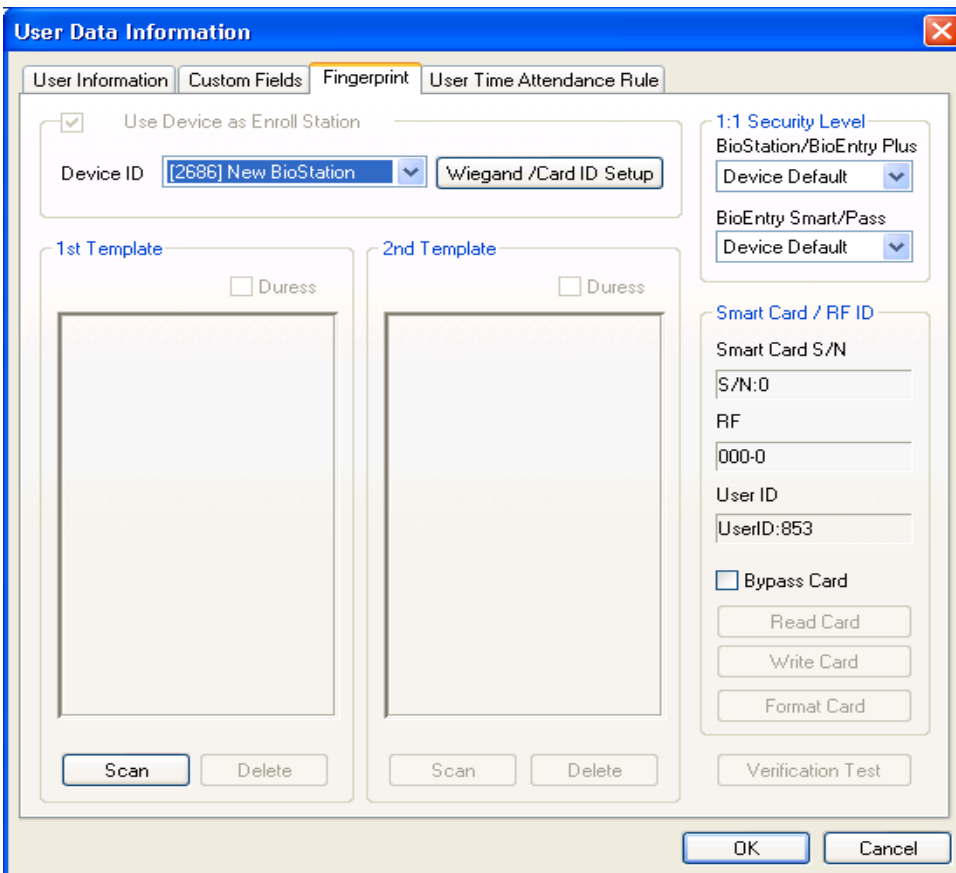
Add

Edit

Delete

Close

- To enroll user's fingerprint information, click fingerprint tab.
- Fingerprint input process is divided into one by USB fingerprint scanner and the other by BioStation device.
- How to input fingerprint information using USB fingerprint scanner is as follows.

A complex dialog box titled "User Data Information" with a blue header bar and a red close button. It has four tabs: "User Information", "Custom Fields", "Fingerprint", and "User Time Attendance Rule". The "Fingerprint" tab is selected. It contains sections for "Use Device as Enroll Station" (with a checked checkbox, "Device ID" dropdown set to "[2686] New BioStation", and a "Wiegand /Card ID Setup" button), "1:1 Security Level" (with "BioStation/BioEntry Plus" and "BioEntry Smart/Pass" options, both set to "Device Default"), "Smart Card / RF ID" (with fields for "Smart Card S/N", "RF", and "User ID", and buttons for "Read Card", "Write Card", "Format Card", and "Verification Test"), and two "Template" sections (1st and 2nd) each with a "Duress" checkbox and a "Scan" button. At the bottom are "OK" and "Cancel" buttons.

User Data Information

User Information Custom Fields Fingerprint User Time Attendance Rule

☒ Use Device as Enroll Station

Device ID [2686] New BioStation Wiegand /Card ID Setup

1:1 Security Level

BioStation/BioEntry Plus Device Default

BioEntry Smart/Pass Device Default

Smart Card / RF ID

Smart Card S/N S/N:0

RF 000-0

User ID UserID:853

☐ Bypass Card

Read Card

Write Card

Format Card

Verification Test

1st Template Duress

2nd Template Duress

Scan Delete

OK Cancel

- Press scan button, place a finger on BioStation scanner twice and input the first fingerprint information.

The screenshot shows the 'User Data Information' dialog box with the 'Fingerprint' tab selected. The dialog has four tabs: 'User Information', 'Custom Fields', 'Fingerprint', and 'User Time Attendance Rule'. The 'Fingerprint' tab contains the following elements:

- Use Device as Enroll Station:** A checked checkbox.
- Device ID:** A dropdown menu showing '[2686] New BioStation' and a 'Wiegand /Card ID Setup' button.
- 1st Template:** A section with a 'Duress' checkbox and a fingerprint scan area. Below the scan area are 'Scan' and 'Delete' buttons.
- 2nd Template:** A section with a 'Duress' checkbox and an empty scan area. Below the scan area are 'Scan' and 'Delete' buttons.
- 1:1 Security Level:** A section with two dropdown menus: 'BioStation/BioEntry Plus' (set to 'Device Default') and 'BioEntry Smart/Pass' (set to 'Device Default').
- Smart Card / RF ID:** A section with input fields for 'Smart Card S/N' (S/N:0), 'RF' (000-0), and 'User ID' (UserID:853). It also includes a 'Bypass Card' checkbox and buttons for 'Read Card', 'Write Card', 'Format Card', and 'Verification Test'.

At the bottom of the dialog are 'OK' and 'Cancel' buttons.

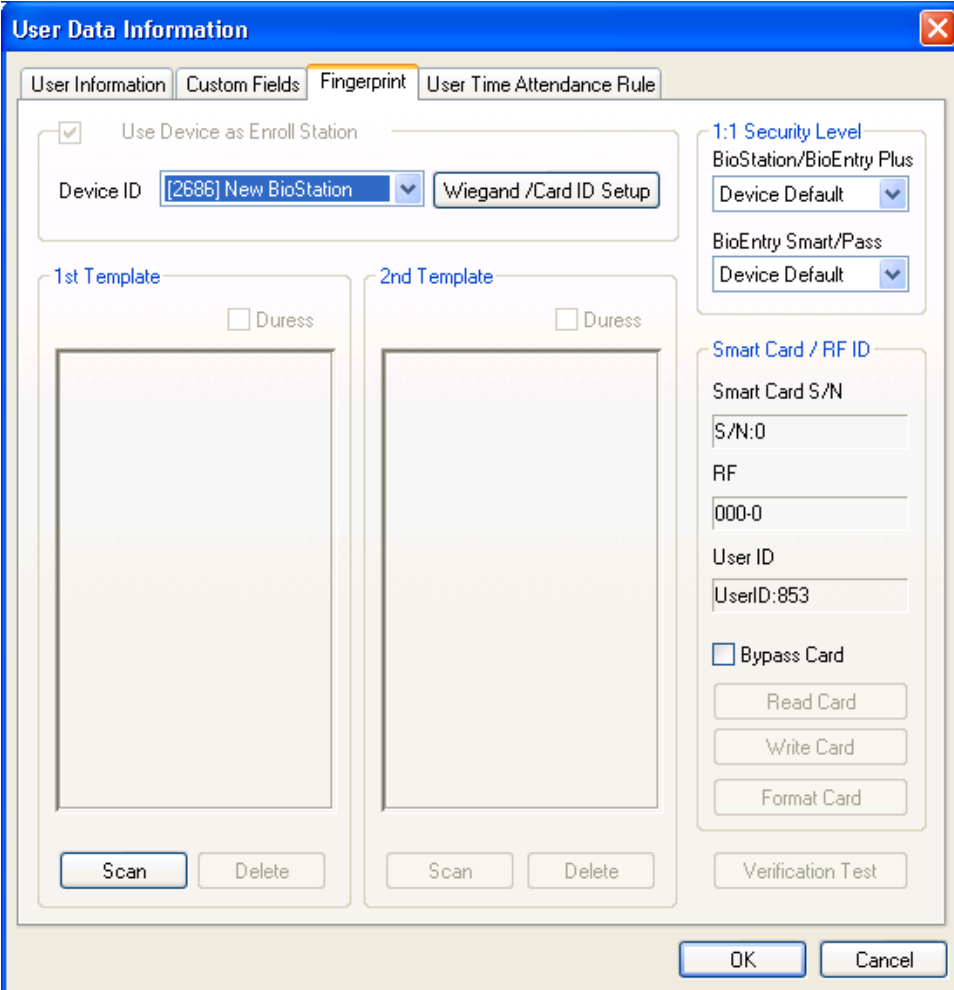
- Input the second fingerprint information in the same way as the first fingerprint information input process.

The screenshot shows the 'User Data Information' dialog box with the 'Fingerprint' tab selected. The dialog has four tabs: 'User Information', 'Custom Fields', 'Fingerprint', and 'User Time Attendance Rule'. The 'Fingerprint' tab contains the following elements:

- ☒ Use Device as Enroll Station
- Device ID: [2686] New BioStation (dropdown menu)
- Wiegand /Card ID Setup (button)
- 1st Template**
 - ☐ Duress
 - Fingerprint scan area with 'Scan' and 'Delete' buttons.
- 2nd Template**
 - ☐ Duress
 - Fingerprint scan area with 'Scan' and 'Delete' buttons.
- 1:1 Security Level**
 - BioStation/BioEntry Plus
 - Device Default (dropdown menu)
 - BioEntry Smart/Pass
 - Device Default (dropdown menu)
- Smart Card / RF ID**
 - Smart Card S/N: S/N:0 (text field)
 - RF: 000-0 (text field)
 - User ID: UserID:853 (text field)
 - ☐ Bypass Card
 - Read Card (button)
 - Write Card (button)
 - Format Card (button)
 - Verification Test (button)

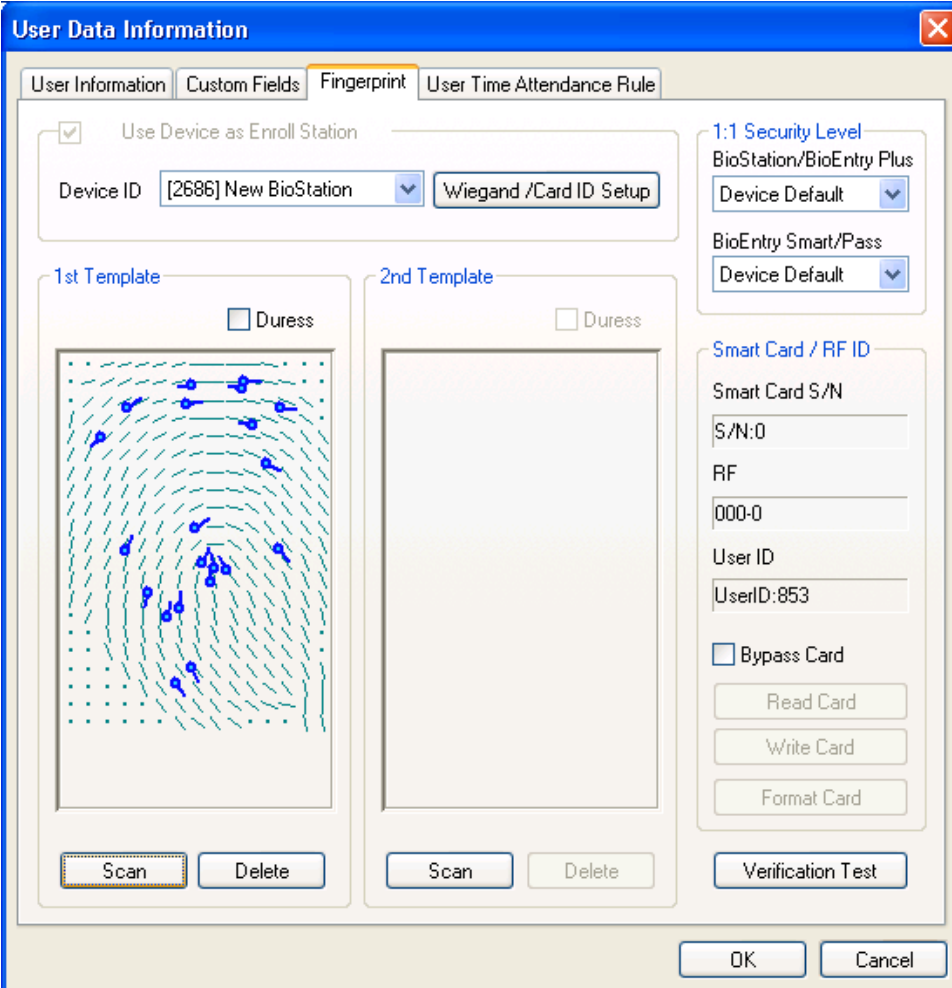
At the bottom of the dialog are 'OK' and 'Cancel' buttons.

- How to enter fingerprint information by BioStation device is as follows.



The image shows a software window titled "User Data Information" with a blue title bar and a close button. It contains four tabs: "User Information", "Custom Fields", "Fingerprint", and "User Time Attendance Rule". The "Fingerprint" tab is selected. Inside the tab, there is a section "Use Device as Enroll Station" with a checked checkbox. Below it, a "Device ID" dropdown menu shows "[2686] New BioStation" and a "Wiegand /Card ID Setup" button. To the right, under "1:1 Security Level", there are two dropdown menus: "BioStation/BioEntry Plus" set to "Device Default" and "BioEntry Smart/Pass" also set to "Device Default". Below these, under "Smart Card / RF ID", there are text fields for "Smart Card S/N" (containing "S/N:0"), "RF" (containing "000-0"), and "User ID" (containing "UserID:853"). There is a checkbox for "Bypass Card" which is unchecked. Below the text fields are three buttons: "Read Card", "Write Card", and "Format Card". At the bottom right of the dialog are "OK" and "Cancel" buttons. On the left side of the dialog, there are two large rectangular areas labeled "1st Template" and "2nd Template". Each has a "Duress" checkbox (unchecked) and a "Scan" button. Below each template area is a "Delete" button.

- In case of stand alone mode without USB scanner, check Use BioStation as Enroll Station, press scan button, place a finger twice on device and then input the first fingerprint information. In case that device is configured by 2 or more networks, specify BioStation ID, press scan button, place a finger on device twice and then input the first fingerprint information.



The image shows a software window titled "User Data Information" with a blue title bar and a close button (X) in the top right corner. The window has four tabs: "User Information", "Custom Fields", "Fingerprint" (which is selected and highlighted with a yellow border), and "User Time Attendance Rule".

Inside the "Fingerprint" tab, there is a section at the top with a checked checkbox labeled "Use Device as Enroll Station". Below this, there is a "Device ID" dropdown menu showing "[2686] New BioStation" and a button labeled "Wiegand /Card ID Setup".

Below the device information, there are two main sections for fingerprint templates:

- 1st Template:** Contains a checkbox for "Duress" (unchecked), a large rectangular area for the fingerprint scan (showing a blue fingerprint pattern), and two buttons at the bottom: "Scan" and "Delete".
- 2nd Template:** Contains a checkbox for "Duress" (unchecked), a large rectangular area for the fingerprint scan (currently blank), and two buttons at the bottom: "Scan" and "Delete".

On the right side of the dialog, there are two sections:

- 1:1 Security Level:** Includes a dropdown menu for "BioStation/BioEntry Plus" (set to "Device Default") and another dropdown for "BioEntry Smart/Pass" (also set to "Device Default").
- Smart Card / RF ID:** Includes text boxes for "Smart Card S/N" (containing "S/N:0"), "RF" (containing "000-0"), and "User ID" (containing "UserID:853"). Below these are three buttons: "Read Card", "Write Card", and "Format Card". There is also a checkbox for "Bypass Card" (unchecked) and a "Verification Test" button.

At the bottom right of the dialog are "OK" and "Cancel" buttons.

- Input the second fingerprint information in the same way as the process of first fingerprint information input.

The 'User Data Information' dialog box has four tabs: 'User Information', 'Custom Fields', 'Fingerprint', and 'User Time Attendance Rule'. The 'Fingerprint' tab is active.

Use Device as Enroll Station: ☒ This section includes a 'Device ID' dropdown menu showing '[2686] New BioStation' and a 'Wiegand /Card ID Setup' button.

1:1 Security Level: Includes dropdowns for 'BioStation/BioEntry Plus' (set to 'Device Default') and 'BioEntry Smart/Pass' (set to 'Device Default').

Smart Card / RF ID: Includes fields for 'Smart Card S/N' (S/N:0), 'RF' (000-0), and 'User ID' (UserID:853). There is a 'Bypass Card' checkbox and buttons for 'Read Card', 'Write Card', 'Format Card', and 'Verification Test'.

Fingerprint Templates: There are two sections, '1st Template' and '2nd Template'. Each has a 'Duress' checkbox and a fingerprint scan area. Below each scan area are 'Scan' and 'Delete' buttons. The 'Scan' button in the '2nd Template' section is highlighted with a yellow border.

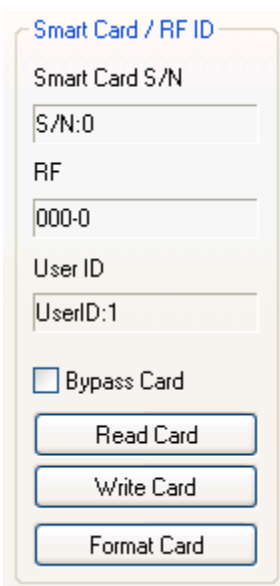
At the bottom are 'OK' and 'Cancel' buttons.

- To close enroll process, click OK button. Then you can see enrolled user information on user list window. This means user information has been added to Database in host PC.

User Management							
<input checked="" type="checkbox"/>	User ID	User Name	Company	Department	Title	Template Num	Active
<input type="checkbox"/>	853	Dongsuk, Suh	Suprema	R&D	Manager	2	Y

3.1.5. Step 5: Issue Mifare card

- In case of selecting BioStation Mifare / BioEntry Plus Mifare (2.4 Using Mifare Card), user Mifare card can be issued using BioStation Mifare.
- Double click the user on the “User Management”, then it will be appeared ‘User Data Information’.
- Click Fingerprint tab on the ‘User Data Information’.
- Select Mifare card as PC USB smart card device and click ‘Write Card’ button.



Smart Card / RF ID

Smart Card S/N

S/N:0

RF

000-0

User ID

UserID:1

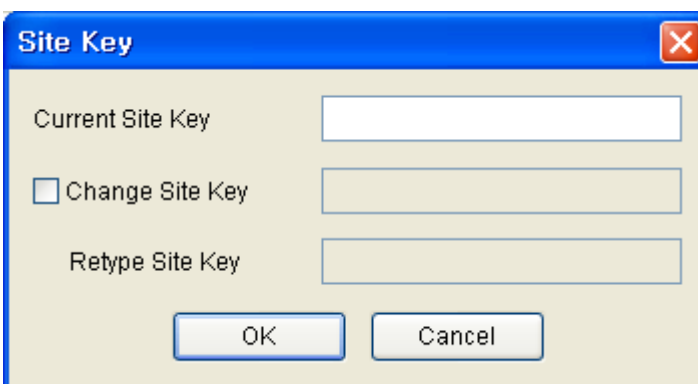
☐ Bypass Card

Read Card

Write Card

Format Card

- ‘Site Key’ window will be appeared for the first time use. Please type correct site key and press OK button to complete issue process (in case of ‘Blank’ type, the default value will be used)



Site Key

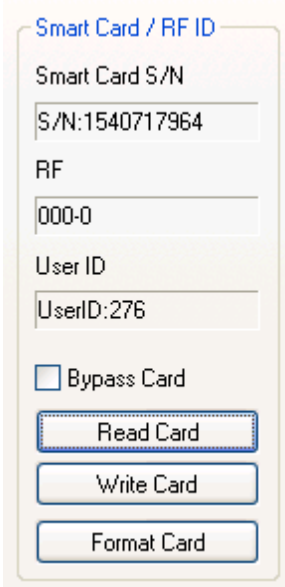
Current Site Key

☐ Change Site Key

Retype Site Key

OK Cancel

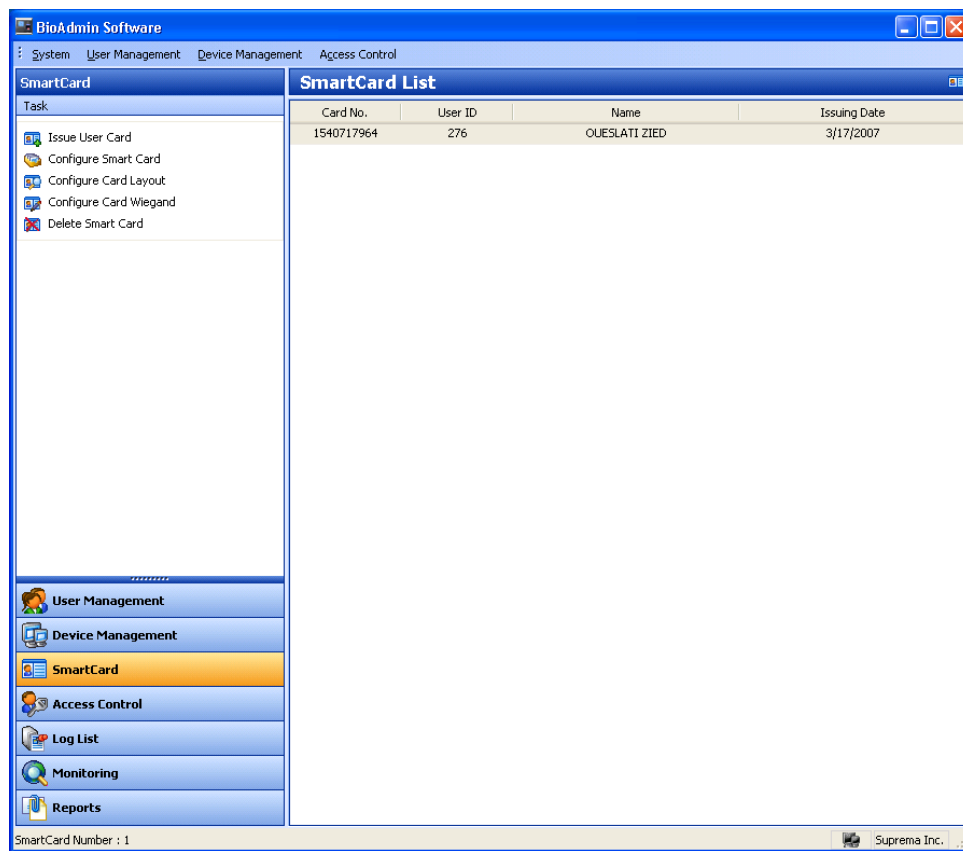
- Smart Card information for the stored user data on the “User Management”.



A screenshot of a software window titled "Smart Card / RF ID". The window contains several input fields and buttons. The "Smart Card S/N" field displays "S/N:1540717964". The "RF" field displays "000-0". The "User ID" field displays "UserID:276". Below these fields is a checkbox labeled "Bypass Card" which is currently unchecked. At the bottom of the window are three buttons: "Read Card", "Write Card", and "Format Card".

This Smart Card S/N is read only when issued for using PC USB smart card device, BioStation Mifare or BioEntry Plus Mifare can be used through 'Read Card'.

- Select “Smart Card” menu, then you will see the added smart card list.



3.1.6. Step 6 : Rules on user T&A event control

New T&A rule can be applied by day.

User Data Information

Rule group:

Daily Schedule

Sunday:
 Monday:
 Tuesday:
 Wednesday:
 Thursday:
 Friday:
 Saturday:
 Holiday:
 Holiday Group:

Monthly Schedule

Name:

First Week:
 Second Week:
 Third Week:
 Fourth Week:
 Fifth Week:
 Sixth Week:

☐ Working Day
☐ Holiday

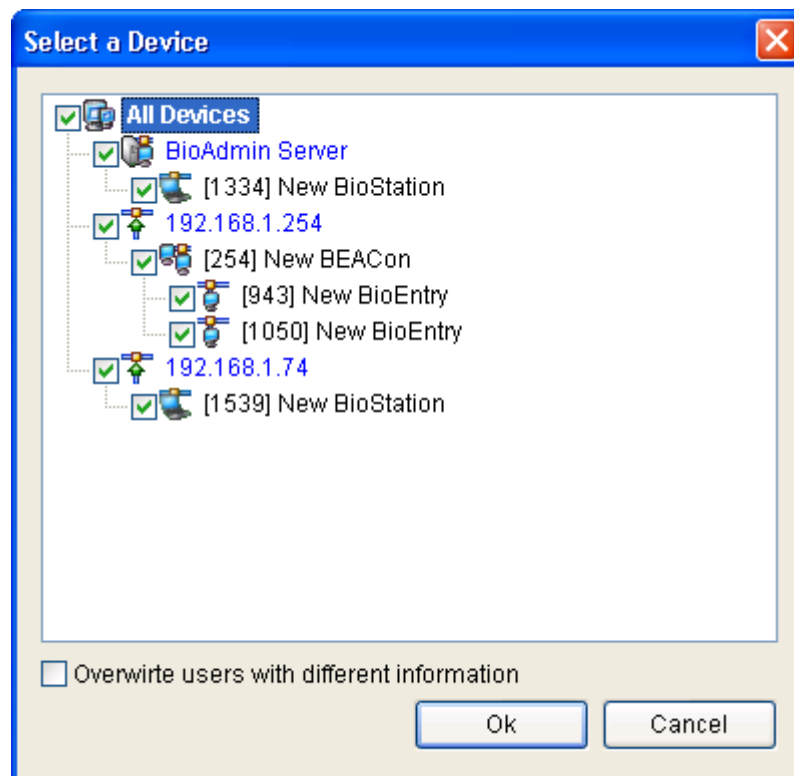
3.1.7. Step 7 : Enroll user with 'transfer checked user to device' menu

Transfer checked user to device is used to transfer user database from host PC to BioStation. User information such as user ID, fingerprint information, access group and security level is transferred through this process.

- Check enrolled user

User Management							
<input checked="" type="checkbox"/>	User ID	User Name	Company	Department	Title	Template Num	Active
<input checked="" type="checkbox"/>	853	Dongsuk, Suh	Suprema	R&D	Manager	2	Y

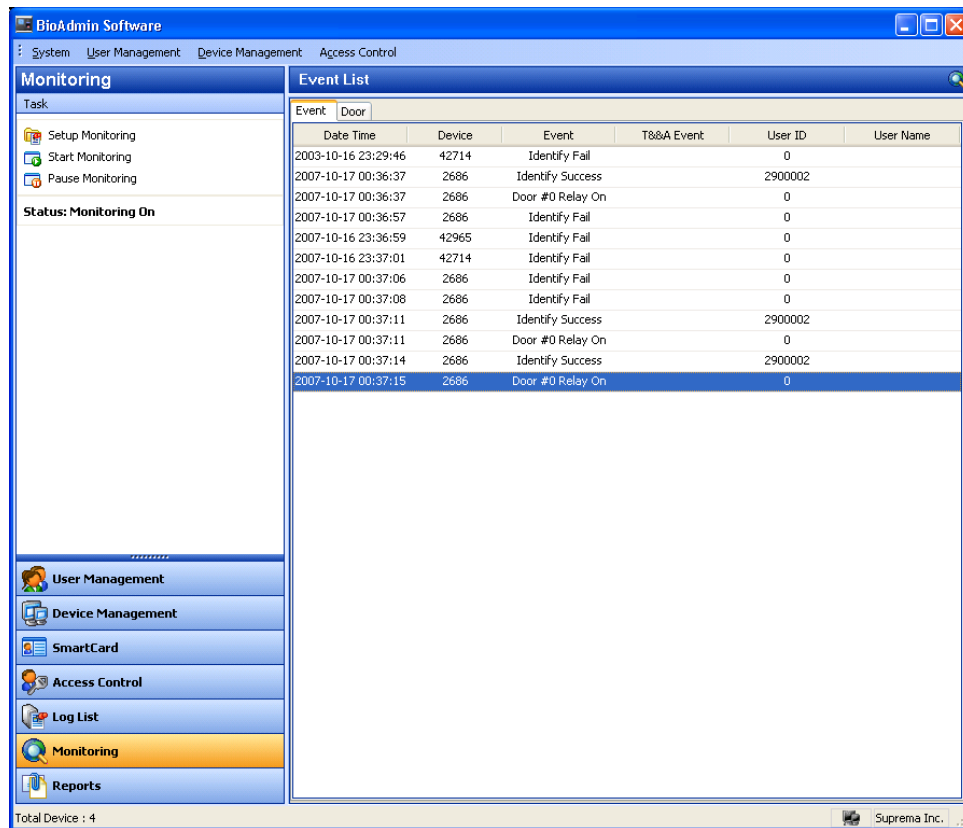
- Click '**transfer checked user to device**', check '**device**' and click **ok** (select) button.



Press **Manage users in device** button and click device. If user information fields are indicated in yellow, it means user information has been transferred to device successfully.

3.1.8. Step 8: Monitoring

- Select **Monitoring** menu to show Monitoring display on main window.
- Select **Monitoring setting** menu and double click Monitoring on/off. To save, click ok button. To start monitoring for linked all BioStation devices, select **start monitoring**.



3.1.9. Step 9: Log List

- Select the **Log List** menu. Then, the log list window appears on the main window.
- Select the **Get Recent Logs / Auto Upload** button to see the updated event log data added to the existing log list of BioAdmin.

Log List						
Date Time	Device ID	Event	T&A Event	User ID	User Name	Source
2007-02-28 11:31:05	1334	Enroll Success		2		BioStation
2007-02-28 11:31:06	1334	Enroll Success		3		BioStation
2007-02-28 11:31:07	1334	Enroll Success		853	Dongsuk, Suh	BioStation
2007-02-28 11:31:08	1334	Enroll Success		861	Nakwon, Lee	BioStation
2007-02-28 11:31:09	1334	Enroll Success		934	ChangGyun, Lee	BioStation
2007-02-28 11:36:26	1334	Identify Mode...		1		BioStation
2007-02-28 12:00:51	1334	Delete Success		1		BioStation
2007-02-28 12:00:51	1334	Delete Success		2		BioStation

3.1.10. Step 10: Report

Select report menu to display report list on main window. You can specify company name, dept. name, user ID and user name for setting and select required type of

report such as daily report by setting period or individual report.

Upload log is a button to upload a log saved in device and **update report** button is a button which implements display prior to output listing a log uploaded device by date and individual. Lastly, view report is a button to preview a report. Press print button to print.

3.2. Quick start with BioEntry Plus

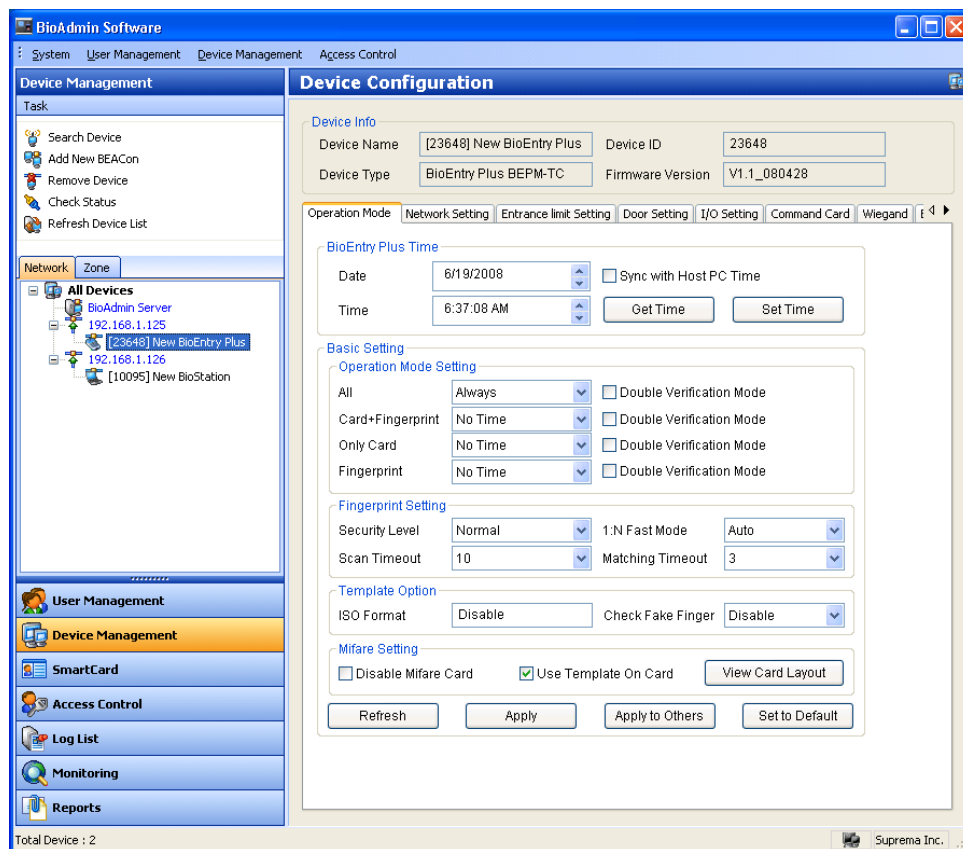
3.2.1. Step 1 : Hardware Installation

BioEntry Plus may set the network by using wired LAN. For the detail information of installation, please refer to the BEPlus Installation Guide.

Note: The LED color of BioEntry Plus can be changed by BioEntry Plus status. Please refer to the page 10 of “BioEntry Plus Install Guide V1.0” for further color status.

3.2.2. Step 2 : Search a New Device

- Run BioAdmin Software.
- Enter login ID and Password.
- Select “Device Management” at the Main Window.



- BioEntry Plus connected to the server is automatically added to the list and also if selecting 'Refresh Device List', it shows the list of newly connected devices. Even though accessing BioEntry Plus to the server, it may take several minutes until it is actually connected to the server and listed on the window.

3.2.3. Step 3 : Connect a New Device

- Select "Device Management" at the Main Window.
- Select "Search Device" and click "Search BioEntry Plus".
- Check "UDP (BioEntry Plus)" and press "Search" button.
- If detected BioEntry Plus, press 'OK' button
- Select the detected BioEntry Plus and press 'OK' button again.

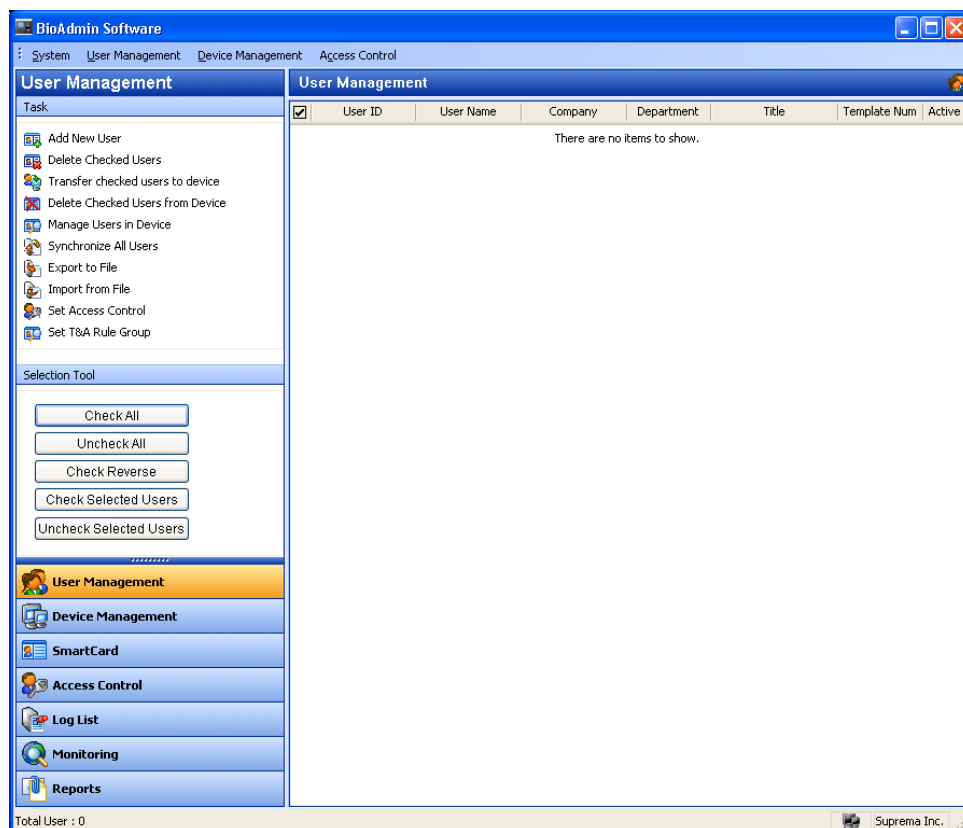
Note : BioEntry Plus supports DHCP function, so you can easily verify assigned IP address in your network, which can also distinguish as its own device ID. In case of static IP network environment, you can type your own

static IP address. For more than two static IP address, you have to register each one separately. After finishing registration, you need to type it at the network tab of the corresponding device..

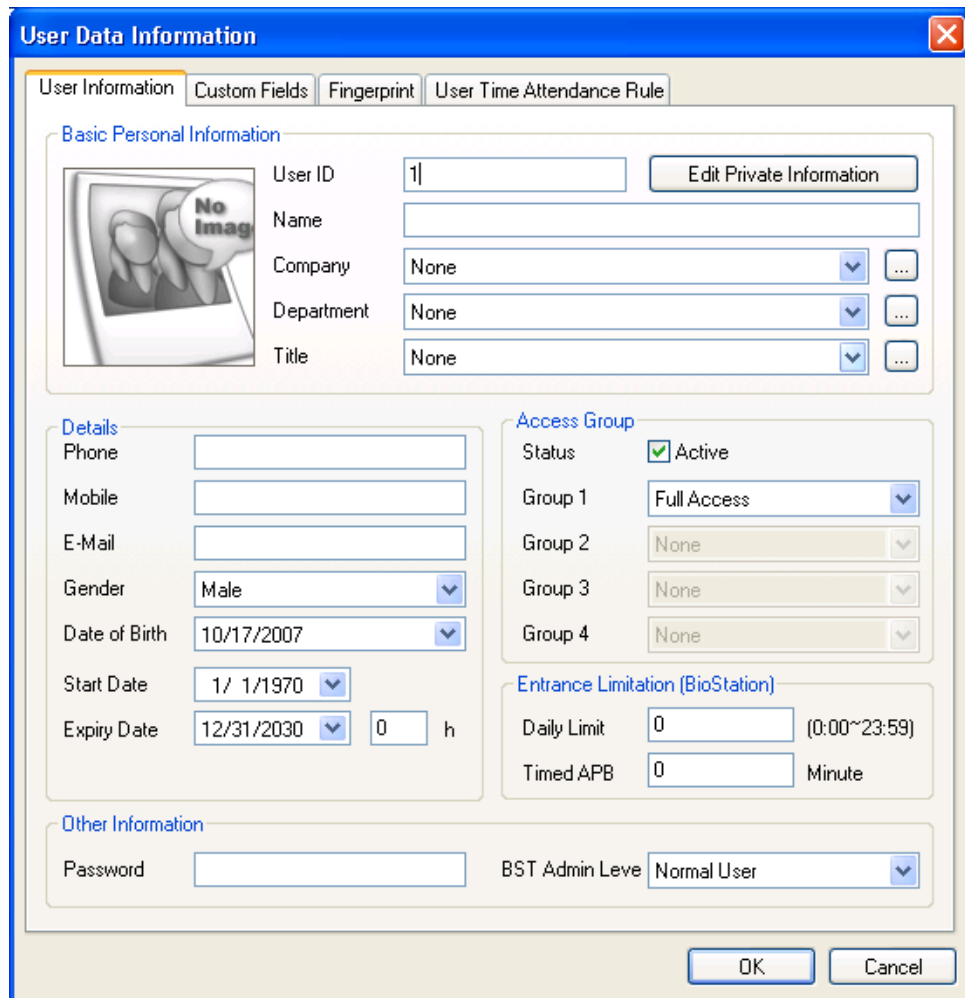
3.2.4. Step 4 : User Management

- If clicking User Management menu, you can see User Management at the Main Window.

Note : User Data Information mainly divides by User Information and Fingerprint. User Information is consists of User ID, Name, Company, Department, Title, and Phone number. Fingerprint is mainly for fingerprint information of user.



- Click “Add New User” to register new user..
- Type user information in the tab of User Data Information..



User Data Information

User Information | Custom Fields | Fingerprint | User Time Attendance Rule

Basic Personal Information

User ID: 1 |

Name:

Company: None

Department: None

Title: None

Details

Phone:
 Mobile:
 E-Mail:
 Gender: Male
 Date of Birth: 10/17/2007
 Start Date: 1/ 1/1970
 Expiry Date: 12/31/2030 0 h

Access Group

Status: ☒ Active

Group 1: Full Access
 Group 2: None
 Group 3: None
 Group 4: None

Entrance Limitation (BioStation)

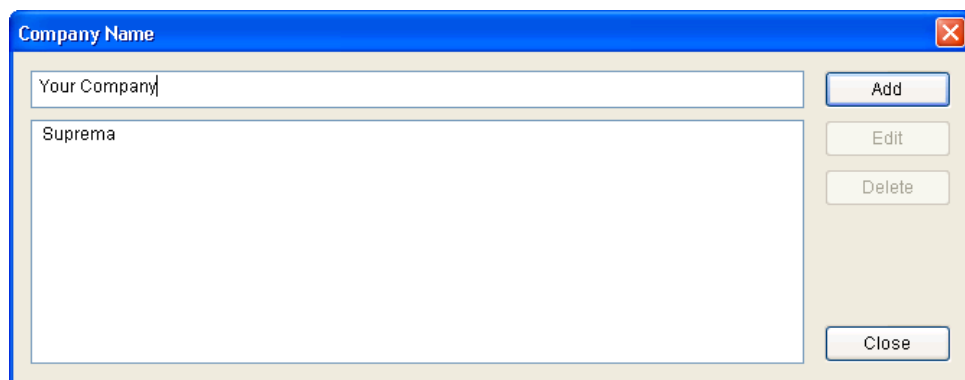
Daily Limit: 0 (0:00~23:59)
 Timed APB: 0 Minute

Other Information

Password:

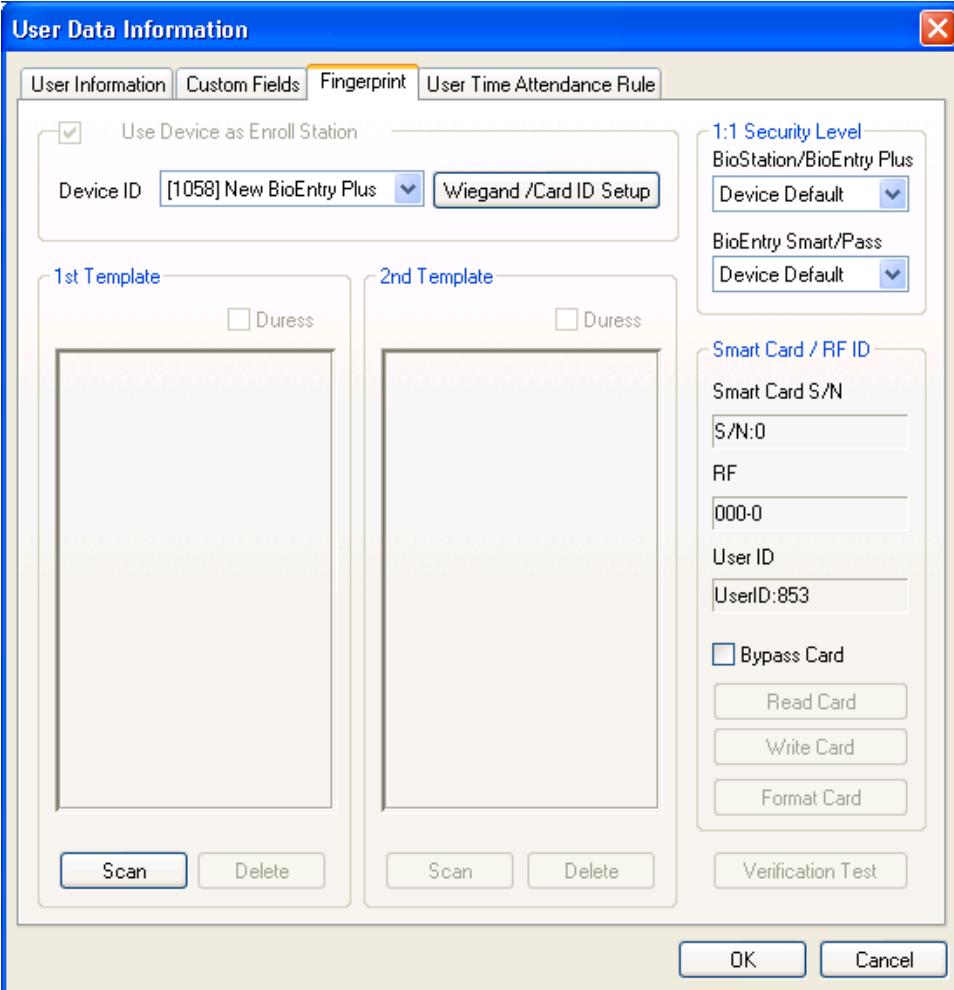
BST Admin Level: Normal User

- You can select your department & title using combo box.
- To add new company, department or title information, press button or type company, department, title in information input window.
- To save added information, press Close button.



Company Name

- You can type phone, mobile, e-mail, gender, date of birth details and User Data Information will be indicated as Start Date, which can be configured Expiry Date of user.
- In case of applying access control, please check mark “Active” of Access Group Status and select group what you already generated.
- In addition, private password can be generated, which is used for password verification.
- Daily Limit is to make verification available of daily limitation. In case of setting timed APB, it will be possible to verify it again after at least one time verification.
- Please click Custom Fields to create more detailed user data information.
- Click fingerprint tab to register user's fingerprint information.
- The method of fingerprint registration is divided by two, via USB fingerprint scanner and BioEntry Plus device (Same as BioStation)
- The method via USB fingerprint scanner is following as:



The image shows a software window titled "User Data Information" with a blue title bar and a close button. It contains four tabs: "User Information", "Custom Fields", "Fingerprint" (which is selected), and "User Time Attendance Rule".

Under the "Fingerprint" tab, there is a section "Use Device as Enroll Station" with a checked checkbox. Below it, the "Device ID" is set to "[1058] New BioEntry Plus" with a dropdown arrow, and a button labeled "Wiegand /Card ID Setup" is next to it.

Below this, there are two columns for fingerprint templates. The left column is labeled "1st Template" and contains a checkbox for "Duress" (unchecked), a large rectangular area for the fingerprint, and "Scan" and "Delete" buttons at the bottom. The right column is labeled "2nd Template" and has an identical layout with a "Duress" checkbox, a fingerprint area, and "Scan" and "Delete" buttons.

On the right side of the dialog, there are two sections. The first is "1:1 Security Level" with a dropdown menu currently set to "BioStation/BioEntry Plus". Below it is another dropdown menu set to "BioEntry Smart/Pass". The second section is "Smart Card / RF ID" and contains text boxes for "Smart Card S/N" (with "S/N:0" entered), "RF" (with "000-0" entered), and "User ID" (with "UserID:853" entered). Below these text boxes is a checkbox for "Bypass Card" (unchecked) and three buttons: "Read Card", "Write Card", and "Format Card". At the bottom of this section is a "Verification Test" button.

At the very bottom of the dialog are "OK" and "Cancel" buttons.

- Press 'Scan' button and put your 1st fingerprint twice for 1st template.

The dialog box is titled "User Data Information" and has four tabs: "User Information", "Custom Fields", "Fingerprint", and "User Time Attendance Rule". The "Fingerprint" tab is selected.

Under the "Fingerprint" tab, there is a section "Use Device as Enroll Station" with a checked checkbox. Below it, the "Device ID" is set to "[1058] New BioEntry Plus" and the "Wiegand /Card ID Setup" button is visible.

There are two template sections: "1st Template" and "2nd Template". Each has a "Duress" checkbox (unchecked) and a "Scan" button. The "1st Template" section shows a fingerprint scan visualization.

On the right side, there are sections for "1:1 Security Level" (set to "BioStation/BioEntry Plus" with a "Device Default" dropdown), "BioEntry Smart/Pass" (set to "Device Default" with a dropdown), and "Smart Card / RF ID". The "Smart Card / RF ID" section includes fields for "Smart Card S/N" (S/N:0), "RF" (000-0), and "User ID" (UserID:853). There is a "Bypass Card" checkbox (unchecked) and buttons for "Read Card", "Write Card", and "Format Card". A "Verification Test" button is also present.

At the bottom, there are "OK" and "Cancel" buttons.

- Put your 2nd template same as 1st method above.

The screenshot shows the 'User Data Information' dialog box with the 'Fingerprint' tab selected. The dialog has four tabs: 'User Information', 'Custom Fields', 'Fingerprint', and 'User Time Attendance Rule'. The 'Fingerprint' tab contains the following elements:

- ☒ Use Device as Enroll Station
- Device ID: [1058] New BioEntry Plus (dropdown menu)
- Wiegand /Card ID Setup (button)
- 1st Template**
 - ☐ Duress
 - Fingerprint scan area with 'Scan' and 'Delete' buttons.
- 2nd Template**
 - ☐ Duress
 - Fingerprint scan area with 'Scan' and 'Delete' buttons.
- 1:1 Security Level**
 - BioStation/BioEntry Plus: Device Default (dropdown)
 - BioEntry Smart/Pass: Device Default (dropdown)
- Smart Card / RF ID**
 - Smart Card S/N: S/N:0 (text field)
 - RF: 000-0 (text field)
 - User ID: UserID:853 (text field)
 - ☐ Bypass Card
 - Read Card (button)
 - Write Card (button)
 - Format Card (button)
 - Verification Test (button)
- OK (button) and Cancel (button) at the bottom.

- The method via BioEntry Plus is following as:

The 'User Data Information' dialog box has four tabs: 'User Information', 'Custom Fields', 'Fingerprint' (selected), and 'User Time Attendance Rule'. In the 'Fingerprint' tab, the 'Use Device as Enroll Station' checkbox is checked. Below it, the 'Device ID' is set to '[1058] New BioEntry Plus' with a dropdown arrow, and a 'Wiegand /Card ID Setup' button is present. To the right, under '1:1 Security Level', 'BioStation/BioEntry Plus' is selected with a dropdown arrow, and 'BioEntry Smart/Pass' is also selected with a dropdown arrow. Below these, the 'Smart Card / RF ID' section contains fields for 'Smart Card S/N' (S/N:0), 'RF' (000-0), and 'User ID' (UserID:853). There is a 'Bypass Card' checkbox and three buttons: 'Read Card', 'Write Card', and 'Format Card'. At the bottom right of the dialog are 'OK' and 'Cancel' buttons.

User Data Information

User Information Custom Fields **Fingerprint** User Time Attendance Rule

☒ Use Device as Enroll Station

Device ID [1058] New BioEntry Plus Wiegand /Card ID Setup

1:1 Security Level

BioStation/BioEntry Plus Device Default

BioEntry Smart/Pass Device Default

Smart Card / RF ID

Smart Card S/N S/N:0

RF 000-0

User ID UserID:853

☐ Bypass Card

Read Card

Write Card

Format Card

Verification Test

1st Template

☐ Duress

Scan Delete

2nd Template

☐ Duress

Scan Delete

OK Cancel

- In case of stand-alone usage, check the registration using BioEntry Plus, press 'Scan' button, and put your finger twice to register 1st template.
- In case of more than two devices via networking, set BioEntry Plus ID, press 'Scan' button, and put your finger twice to register 1st template.

The dialog box is titled "User Data Information" and has four tabs: "User Information", "Custom Fields", "Fingerprint", and "User Time Attendance Rule". The "Fingerprint" tab is selected.

At the top, there is a checkbox labeled "Use Device as Enroll Station" which is checked. Below it, the "Device ID" is set to "[1058] New BioEntry Plus" with a dropdown arrow, and a button labeled "Wiegand /Card ID Setup" is next to it.

Below the device settings, there are two sections for fingerprint templates:

- 1st Template:** Includes a checkbox for "Duress" (unchecked), a fingerprint scan area showing a blue fingerprint, and buttons for "Scan" and "Delete".
- 2nd Template:** Includes a checkbox for "Duress" (unchecked), an empty scan area, and buttons for "Scan" and "Delete".

On the right side of the dialog, there are three sections:

- 1:1 Security Level:** Includes a dropdown for "BioStation/BioEntry Plus" (set to "Device Default") and a dropdown for "BioEntry Smart/Pass" (set to "Device Default").
- Smart Card / RF ID:** Includes text boxes for "Smart Card S/N" (S/N:0), "RF" (000-0), and "User ID" (UserID:853). Below these are checkboxes for "Bypass Card" (unchecked) and buttons for "Read Card", "Write Card", and "Format Card".
- A "Verification Test" button is located below the Smart Card / RF ID section.

At the bottom of the dialog are "OK" and "Cancel" buttons.

- Please follow same procedure for 2nd template.

The 'User Data Information' dialog box has four tabs: 'User Information', 'Custom Fields', 'Fingerprint', and 'User Time Attendance Rule'. The 'Fingerprint' tab is active.

Use Device as Enroll Station: ☒ This section includes a 'Device ID' dropdown menu showing '[1058] New BioEntry Plus' and a 'Wiegand /Card ID Setup' button.

1:1 Security Level: This section has two dropdown menus: 'BioStation/BioEntry Plus' (set to 'Device Default') and 'BioEntry Smart/Pass' (set to 'Device Default').

Smart Card / RF ID: This section includes:

- 'Smart Card S/N' with a text field containing 'S/N:0'.
- 'RF' with a text field containing '000-0'.
- 'User ID' with a text field containing 'UserID:853'.
- A checkbox for 'Bypass Card'.
- Buttons for 'Read Card', 'Write Card', and 'Format Card'.
- A 'Verification Test' button.

Fingerprint Templates: There are two template areas, '1st Template' and '2nd Template'. Each has a 'Duress' checkbox (unchecked) and a fingerprint scan area. Below each scan area are 'Scan' and 'Delete' buttons.

At the bottom of the dialog are 'OK' and 'Cancel' buttons.

- Press 'OK' button for exit, then you can see the registered user data in the User Management window, which means that it was recorded in database of host PC.

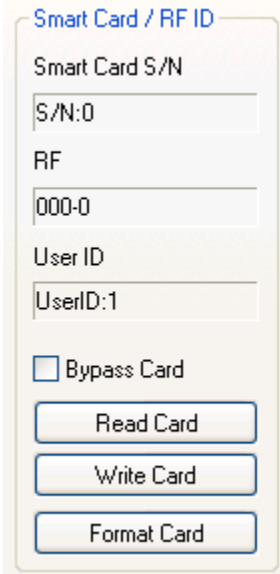
User Management							
<input checked="" type="checkbox"/>	User ID	User Name	Company	Department	Title	Template Num	Active
<input type="checkbox"/>	853	Dongsuk, Suh	Suprema	R&D	Manager	2	Y

3.2.5. Step 5: Issue Mifare card

- In case of selecting BioStation Mifare / BioEntry Plus Mifare (2.4 Using Mifare Card), user Mifare card can be issued using BioStation Mifare.
- Double click the user on the "User Management", then it will be appeared 'User

Data Information'.

Click Fingerprint tab on the 'User Data Information'. Select Mifare card as PC USB smart card device and click 'Write Card' button.



Smart Card / RF ID

Smart Card S/N

S/N:0

RF

000-0

User ID

UserID:1

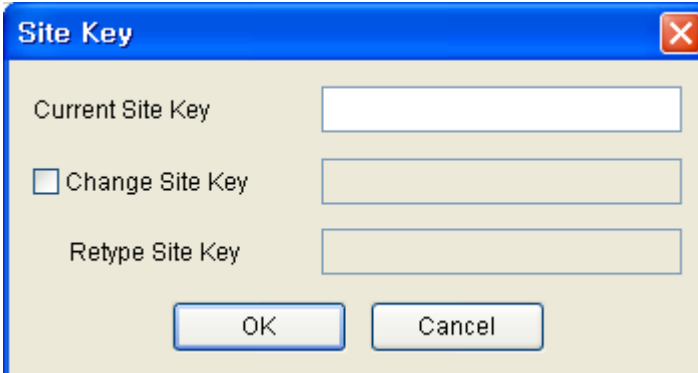
☐ Bypass Card

Read Card

Write Card

Format Card

- 'Site Key' window will be appeared for the first time use. Please type correct site key and press OK button to complete issue process (in case of 'Blank' type, the default value will be used)



Site Key

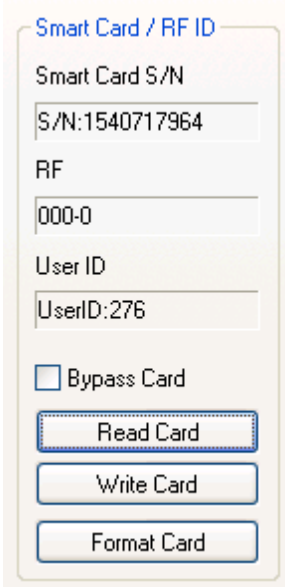
Current Site Key

☐ Change Site Key

Retype Site Key

OK Cancel

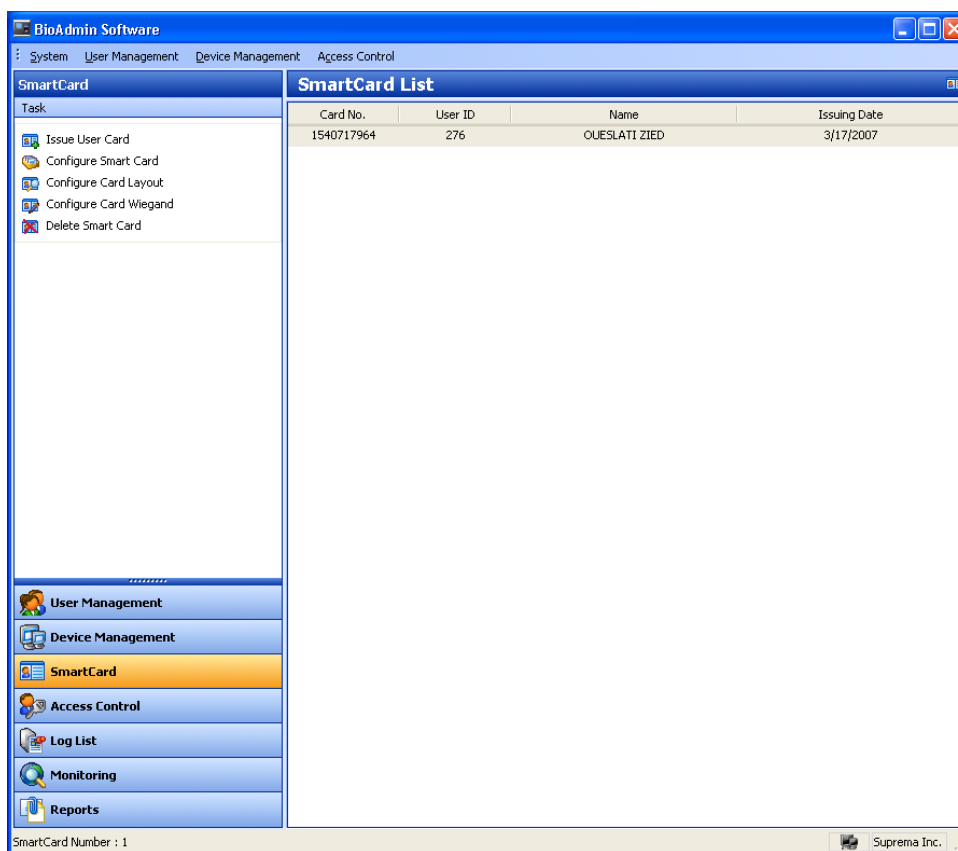
- Smart Card information for the stored user data on the “User Management”.



A screenshot of a software window titled "Smart Card / RF ID". The window contains several input fields and buttons. The "Smart Card S/N" field displays "S/N:1540717964". The "RF" field displays "000-0". The "User ID" field displays "UserID:276". Below these fields is a checkbox labeled "Bypass Card" which is currently unchecked. At the bottom of the window are three buttons: "Read Card", "Write Card", and "Format Card".

This Smart Card S/N is read only when issued for using PC USB smart card device, BioStation Mifare or BioEntry Plus Mifare can be used through 'Read Card'.

Select “Smart Card” menu, then you will see the added smart card list.



3.2.6. Step 6 : User Time Attendance Rule

By applying already registered 'User time attendance rule group' to the user, it will be used for a reference when generated a report.

User Data Information

☐ User Information
 ☐ Custom Fields
 ☐ Fingerprint
 ☒ User Time Attendance Rule

Rule group: New T&A rule group
Apply to all user

Daily Schedule

Sunday: New Attendance Code
 Monday: New Attendance Code
 Tuesday: New Attendance Code
 Wednesday: New Attendance Code
 Thursday: New Attendance Code
 Friday: New Attendance Code
 Saturday: New Attendance Code
 Holiday: New Attendance Code
 Holiday Group: All holiday

Monthly Schedule

Name: New monthly schedule

First Week: Sun Mon Tue Wed Thu Fri Sat
 Second Week: Sun Mon Tue Wed Thu Fri Sat
 Third Week: Sun Mon Tue Wed Thu Fri Sat
 Fourth Week: Sun Mon Tue Wed Thu Fri Sat
 Fifth Week: Sun Mon Tue Wed Thu Fri Sat
 Sixth Week: Sun Mon Tue Wed Thu Fri Sat

☒ Working Day
☐ Holiday

OK Cancel

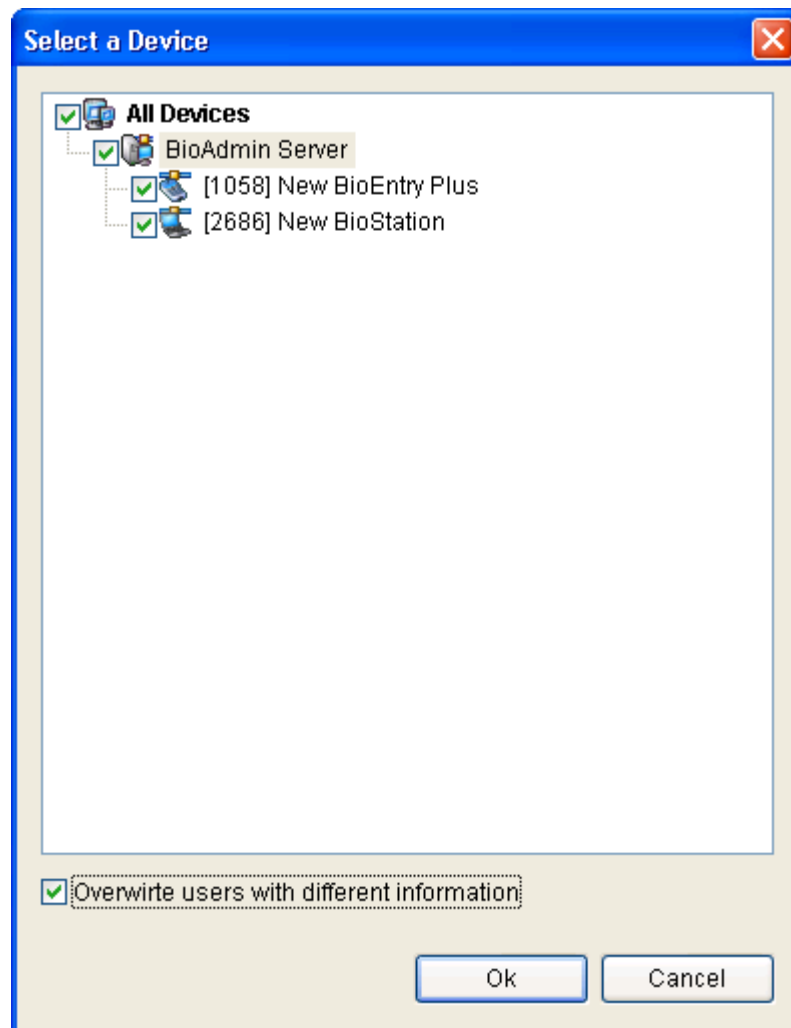
3.2.7. Step 7 : User registration with “Transfer Checked Users to Device” menu

‘Transfer checked users to device’ is used for transferring user database from host PC to BioEntry Plus device, which are User ID, Fingerprint, Access Group, Admin Level, and so on.

- Check registered user

User Management							
<input checked="" type="checkbox"/>	User ID	User Name	Company	Department	Title	Template Num	Active
<input checked="" type="checkbox"/>	853	Dongsuk, Suh	Suprema	R&D	Manager	2	Y

- Click “Transfer checked users to device” button and check mark to transfer.

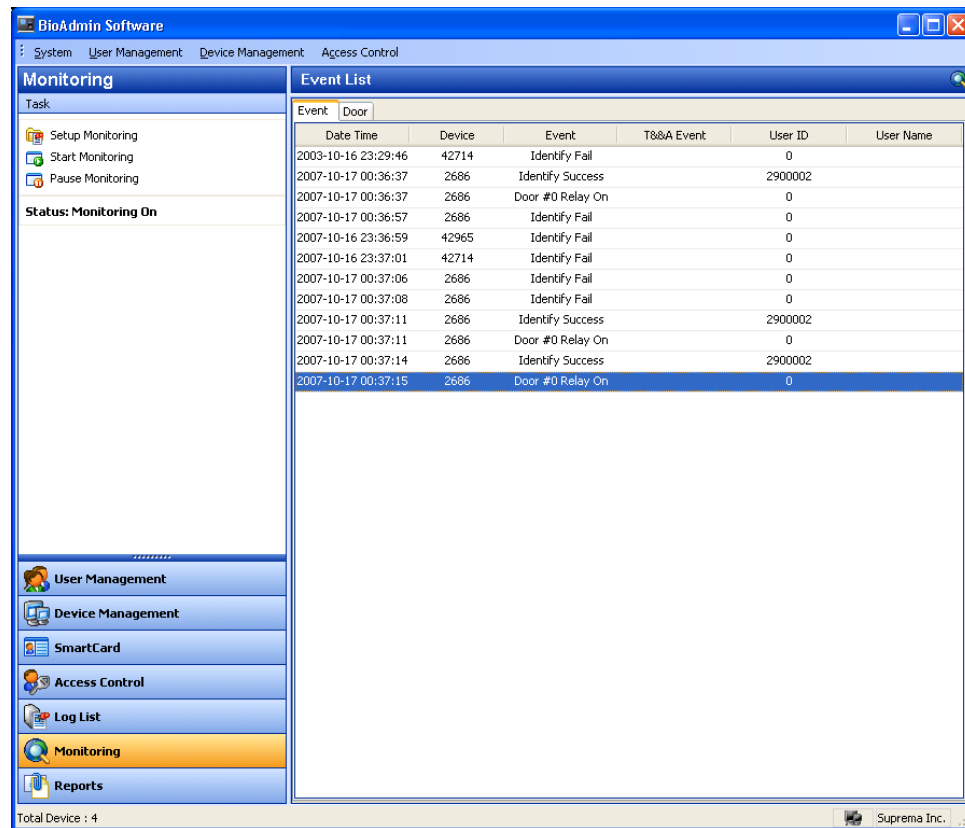


- Press "Manage Users in Device" button and click the device. If the area of user information is marked in yellow color, it is successfully transferred.

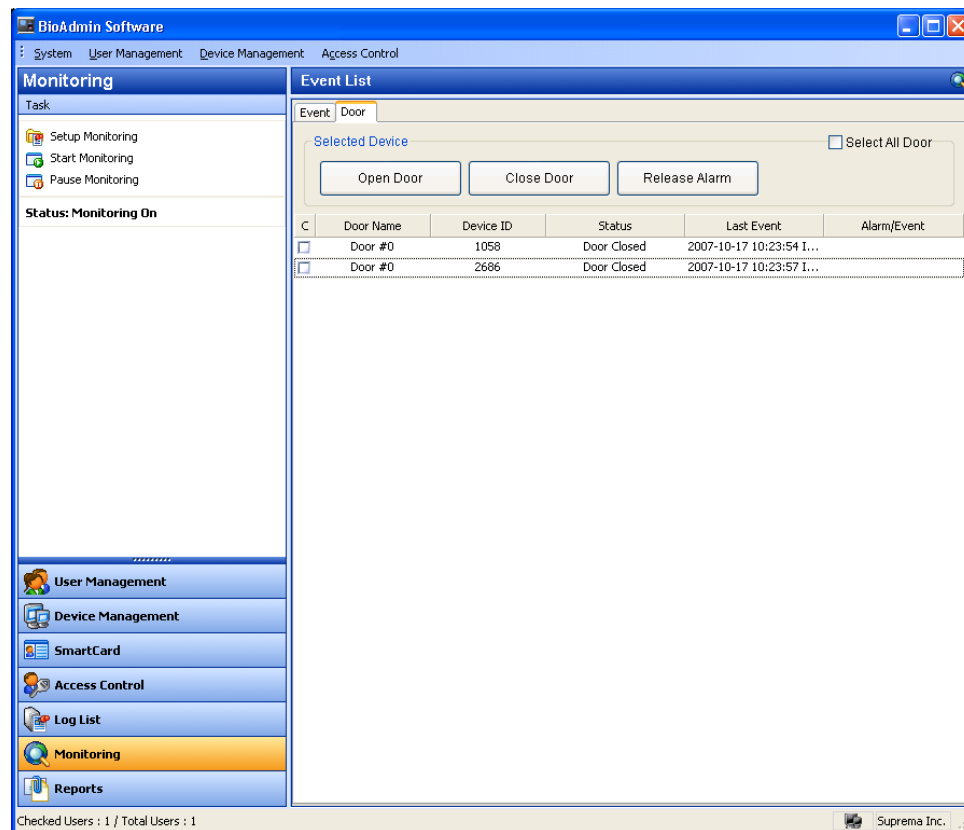
-

3.2.8. Step 8 : Monitoring

- Event list windows will be appeared if selecting "Monitoring" menu.
- Select "Setup Monitoring" and double-click each event of Real-Time Monitoring to change its status as Yes or No/.
- Press 'OK' button.
- Press "Start Monitoring" to start real-time event.



- Door : If there are already door setting, you can see “Door” monitoring shown as below figure, which can be Open Door, Close Door, and Release Alarm.
 - Open Door : Apply to actual device
 - Close Door : Apply to actual device
 - Release Alarm : Does not apply to actual device, but only in PC



●

3.2.9. Step 9 : Log List

- If selecting Log List menu, it will be appeared in the main window.
- Click “Get Recent Logs / Auto Upload”, select a device, press OK button, then you can see event log data added at log database of host PC.

Log List						
Date Time	Device ID	Event	T&A Event	User ID	User Name	Source
2007-02-28 11:31:05	1334	Enroll Success		2		BioStation
2007-02-28 11:31:06	1334	Enroll Success		3		BioStation
2007-02-28 11:31:07	1334	Enroll Success		853	Dongsuk, Suh	BioStation
2007-02-28 11:31:08	1334	Enroll Success		861	Nakwon, Lee	BioStation
2007-02-28 11:31:09	1334	Enroll Success		934	ChangGyun, Lee	BioStation
2007-02-28 11:36:26	1334	Identify Mode...		1		BioStation
2007-02-28 12:00:51	1334	Delete Success		1		BioStation
2007-02-28 12:00:51	1334	Delete Success		2		BioStation

●

3.2.10. Step 10 : Reports

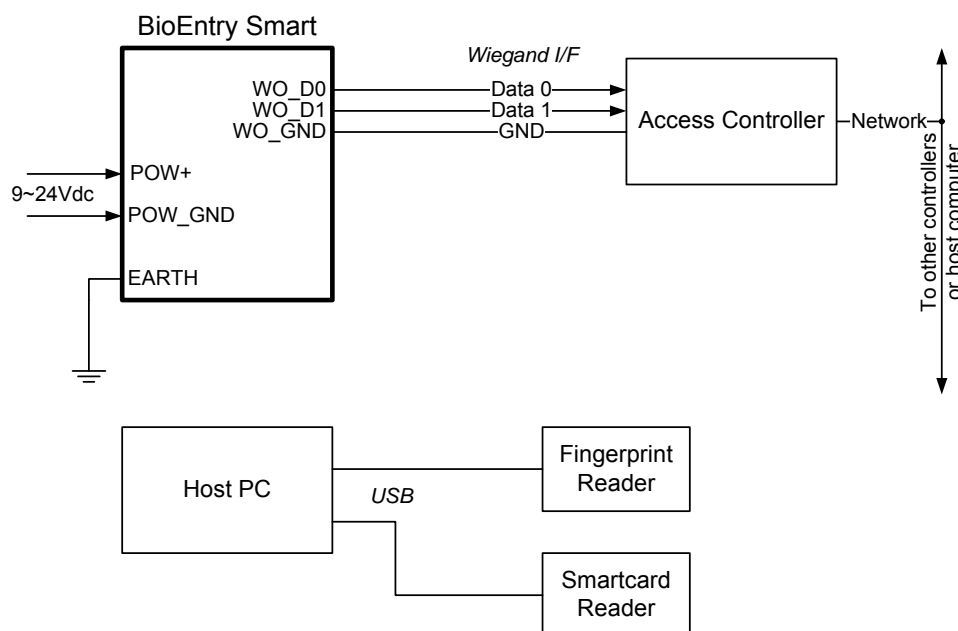
- Select report menu to display report list on main window. You can specify company name, dept. name, user ID and user name for setting and select required type of report such as daily report by setting period or individual report.
- **Upload log** is a button to upload a log saved in device and **update report** button is a button which implements display prior to output listing a log uploaded device by date and individual. Lastly, **view report** is a button to preview a report. Press print button to print.

3.3. Quick start with BioEntry Smart

This section describes the basic procedures to operate BioEntry Smart using a USB fingerprint scanner and smart card device as its enrollment device.

3.3.1. Step 1: Hardware installation

In this hardware configuration, the device is not connected to the host PC, but to an external controller via Wiegand interface. It is assumed that the controller supports the standard 26 bit Wiegand format as default on BioEntry device. Connect the device with the controller as shown on the following configuration.

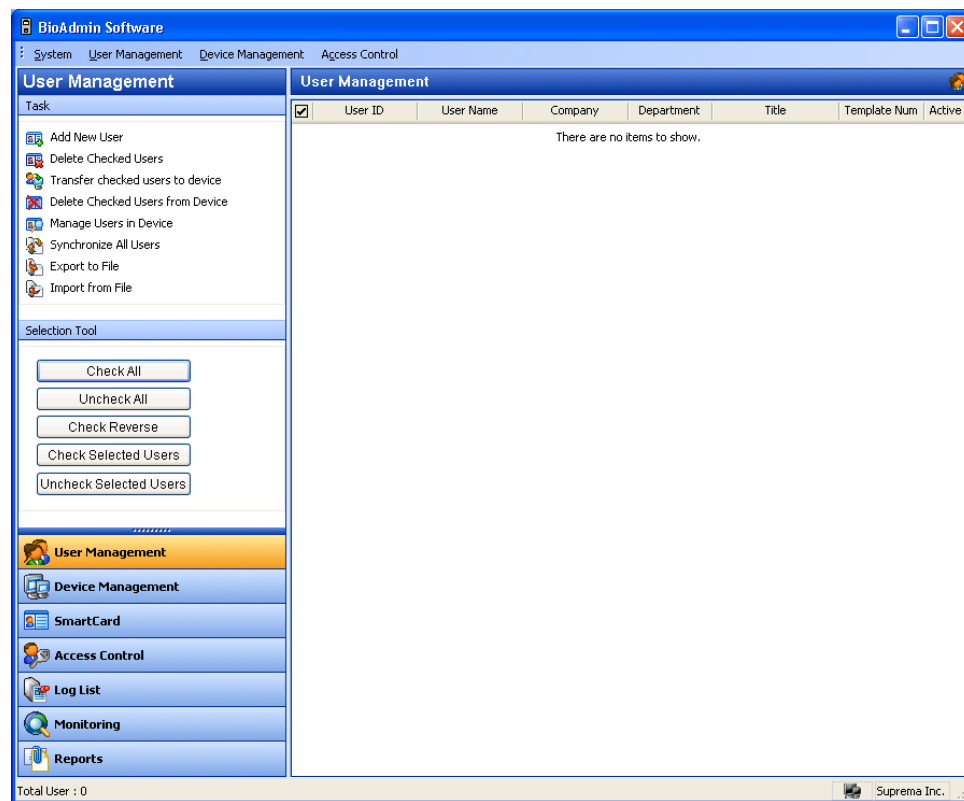


For more details on the installation, refer to the BioEntry Installation manual or

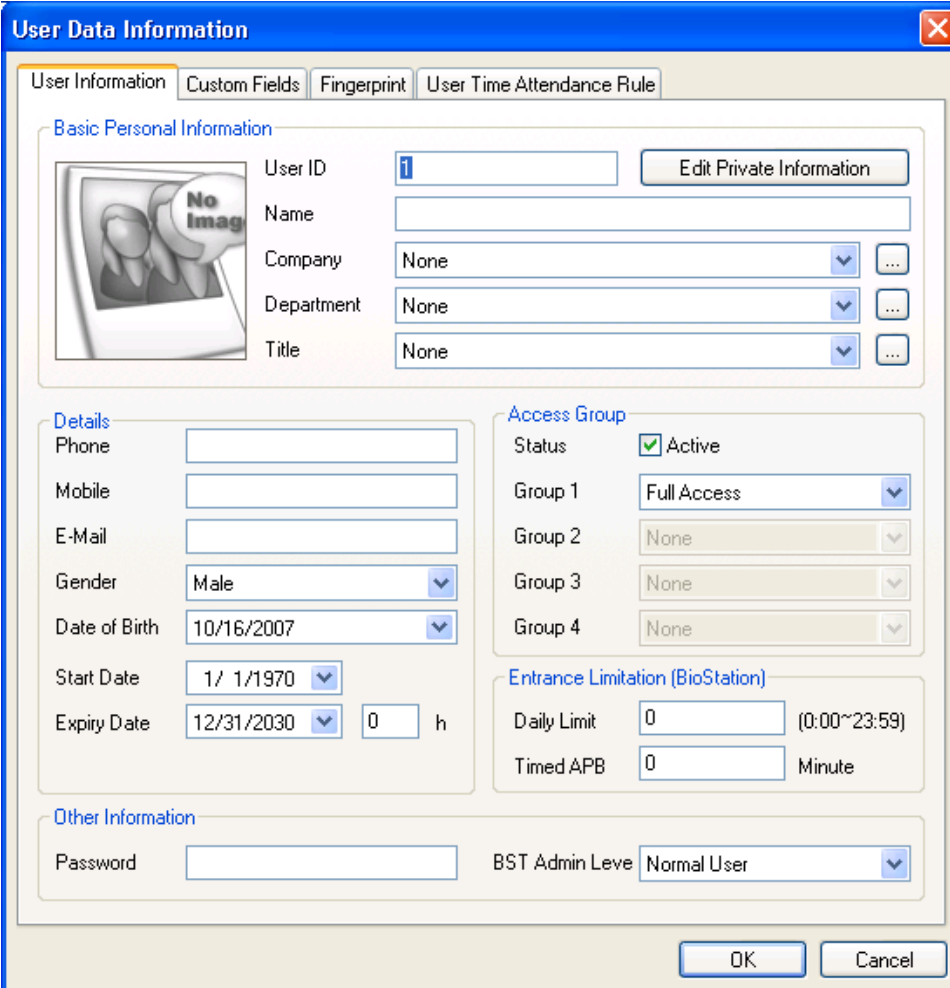
BEACon Operation Manual.

3.3.2. Step 2: Enroll user

- Run BioAdmin software.
- Enter Login ID and password. By factory default, the initial Login ID is “**admin**” and the password is blank.
- Select **User Management** on the main menu, then the user management page appears on the main window.



- Select the **Add New User** menu on the task window, then the pop-up window appears



The dialog box is titled "User Data Information" and has a close button (X) in the top right corner. It contains four tabs: "User Information", "Custom Fields", "Fingerprint", and "User Time Attendance Rule". The "User Information" tab is selected.

Basic Personal Information

On the left is a placeholder for a user photo with the text "No Image". To the right are the following fields:

- User ID: Edit Private Information
- Name:
- Company: ...
- Department: ...
- Title: ...

Details

On the left are the following fields:

- Phone:
- Mobile:
- E-Mail:
- Gender: ...
- Date of Birth: ...
- Start Date: ...
- Expiry Date: h

Access Group

On the right are the following fields:

- Status: ☒ Active
- Group 1: ...
- Group 2: ...
- Group 3: ...
- Group 4: ...

Entrance Limitation (BioStation)

On the right are the following fields:

- Daily Limit: (0:00~23:59)
- Timed APB: Minute

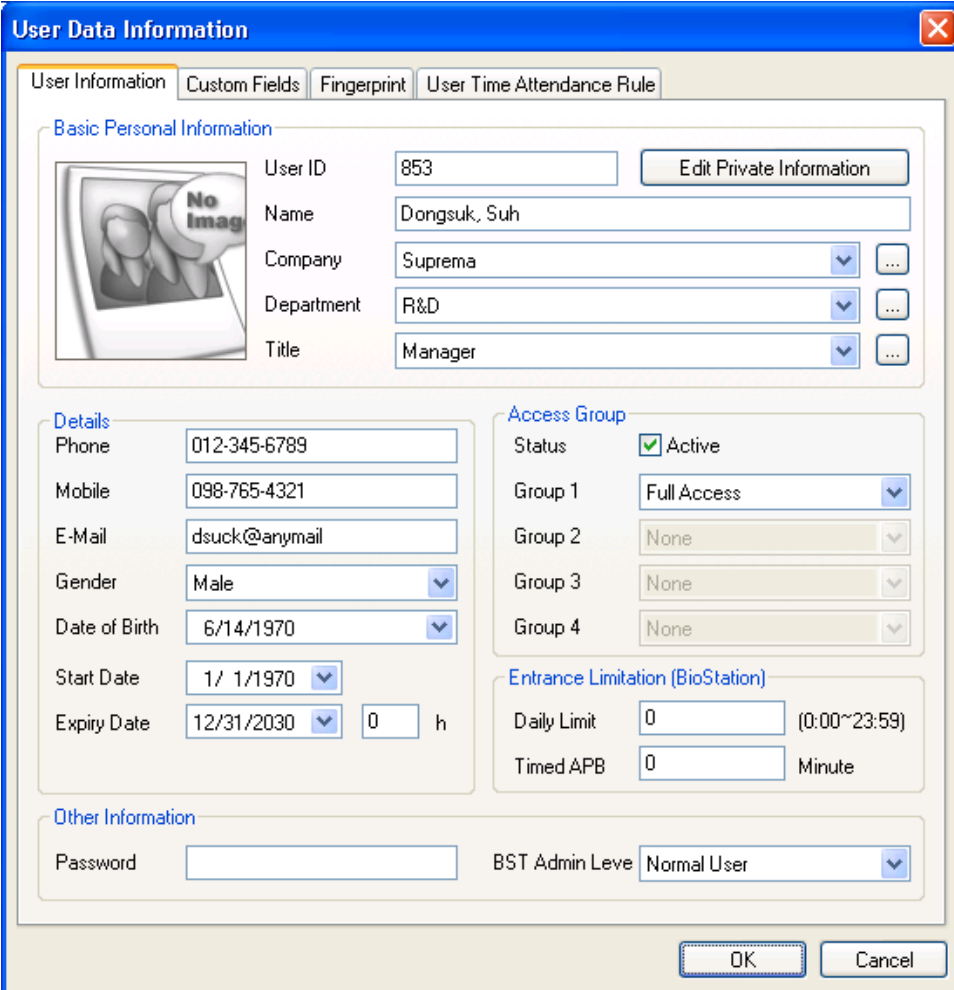
Other Information

On the left are the following fields:

- Password:
- BST Admin Leve: ...

At the bottom right are "OK" and "Cancel" buttons.

- Enter the **user information** on the User Information tab.



The dialog box is titled "User Data Information" and has a close button (X) in the top right corner. It contains four tabs: "User Information", "Custom Fields", "Fingerprint", and "User Time Attendance Rule". The "User Information" tab is selected.

Basic Personal Information

On the left is a placeholder for a user photo with the text "No Image". To the right are the following fields:

- User ID: 853
- Name: Dongsuk, Suh
- Company: Suprema (dropdown menu with a "..." button)
- Department: R&D (dropdown menu with a "..." button)
- Title: Manager (dropdown menu with a "..." button)

An "Edit Private Information" button is located next to the User ID field.

Details

Fields include:

- Phone: 012-345-6789
- Mobile: 098-765-4321
- E-Mail: dsuck@anymail
- Gender: Male (dropdown menu)
- Date of Birth: 6/14/1970 (dropdown menu)
- Start Date: 1/ 1/1970 (dropdown menu)
- Expiry Date: 12/31/2030 (dropdown menu) 0 h

Access Group

Fields include:

- Status: ☒ Active
- Group 1: Full Access (dropdown menu)
- Group 2: None (dropdown menu)
- Group 3: None (dropdown menu)
- Group 4: None (dropdown menu)

Entrance Limitation (BioStation)

Fields include:


- Daily Limit: 0 (0:00~23:59)
- Timed APB: 0 Minute

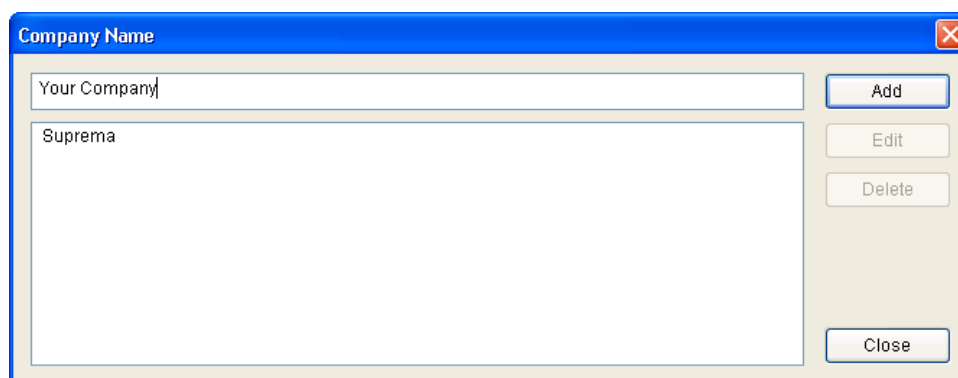
Other Information

Fields include:

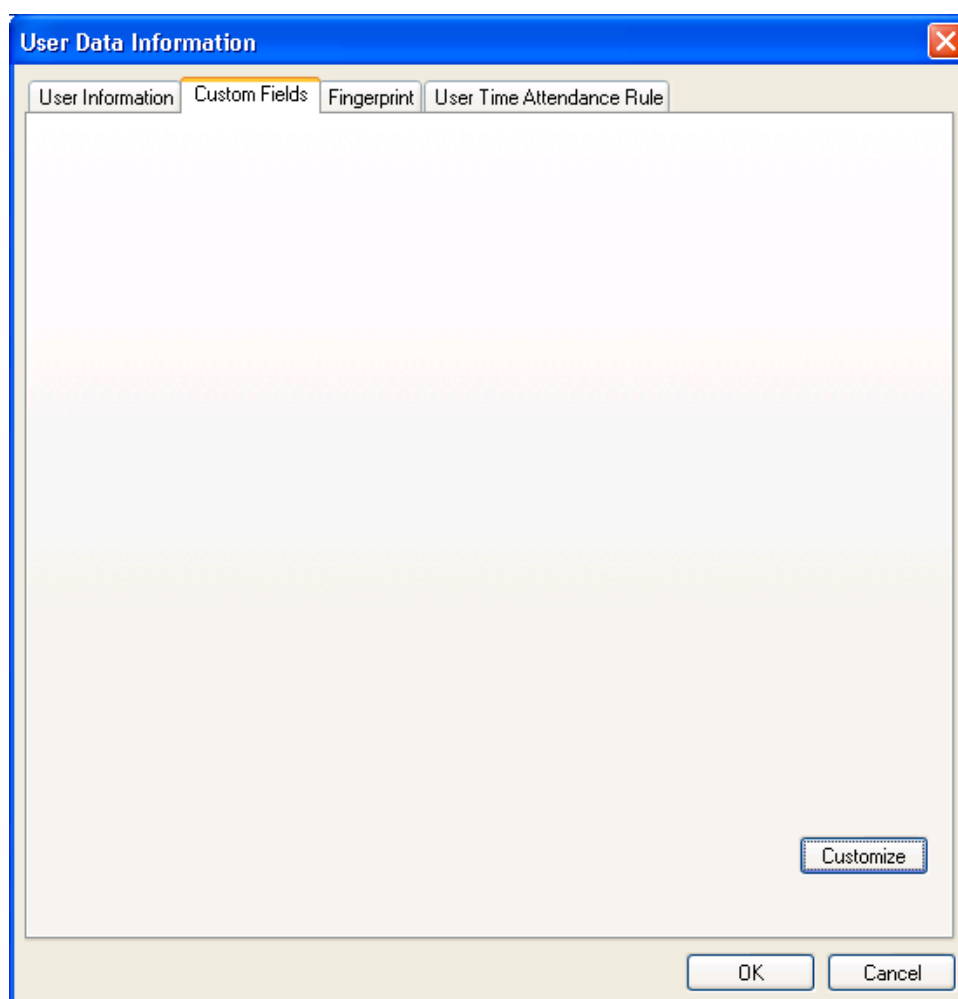
- Password: (empty text box)
- BST Admin Leve: Normal User (dropdown menu)

At the bottom are "OK" and "Cancel" buttons.

- Especially, you can select the Company, Department, and Title on the drag down menu.
- To add new Company, Department, or Title information, press  button. After entering the required information, press **Add** button. Press **Save** button to save the added information.



- In addition to the basic user information, you can add **Custom Fields** to the user information. If you do not need these **custom fields**, just skip the custom fields setting. To set up the custom fields, press Custom Fields tab.



- Click the **Customize...** button.
- Check on the required Fields and enter the user information for those selected fields.

Custom Fields

Text Fields

<input checked="" type="checkbox"/> Text 1	Hobby	<input type="checkbox"/> Text 5	
<input checked="" type="checkbox"/> Text 2	Fax.	<input type="checkbox"/> Text 6	
<input checked="" type="checkbox"/> Text 3	Ip Addr	<input type="checkbox"/> Text 7	
<input type="checkbox"/> Text 4		<input type="checkbox"/> Text 8	

Number Fields

<input checked="" type="checkbox"/> Number 1	Room No.	<input type="checkbox"/> Number 3	
<input type="checkbox"/> Number 2		<input type="checkbox"/> Number 4	

Date Fields

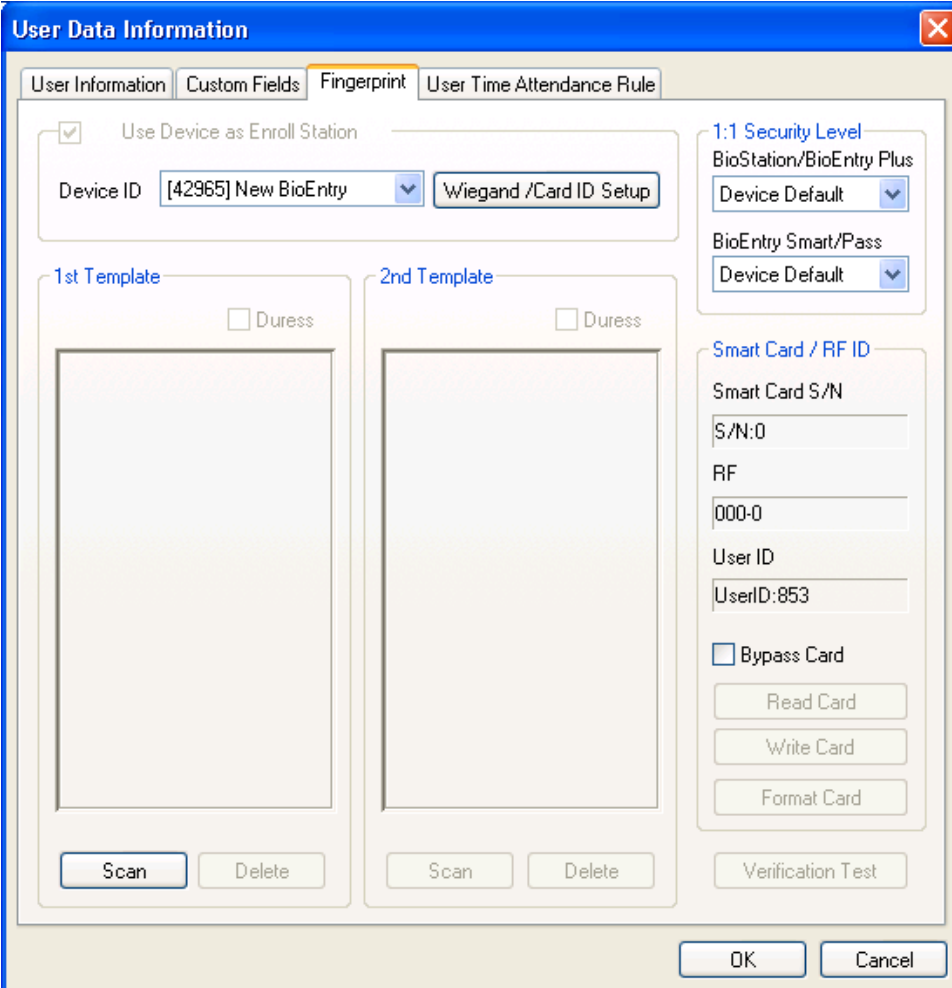
<input checked="" type="checkbox"/> Date 1	A Memorial Day	<input type="checkbox"/> Date 3	
<input type="checkbox"/> Date 2		<input type="checkbox"/> Date 4	

Checkboxes

<input checked="" type="checkbox"/> Checkbox 1	Married	<input type="checkbox"/> Checkbox 3	
<input checked="" type="checkbox"/> Checkbox 2	Car	<input type="checkbox"/> Checkbox 4	

OK Cancel

- After entering the user information, press the **OK** button.
- After filling out the custom fields, the following pop-up window will appear. On this window, you can see the details of your selected custom fields. Press **OK** button to save these custom fields.
- After entering the user information, press the **Fingerprint** tab to enroll user's fingerprint templates.



The image shows a software window titled "User Data Information" with a blue title bar and a close button (X) in the top right corner. The window has four tabs: "User Information", "Custom Fields", "Fingerprint" (which is selected and highlighted with a yellow border), and "User Time Attendance Rule".

Inside the "Fingerprint" tab, there is a section with a checked checkbox labeled "Use Device as Enroll Station". Below this, there is a "Device ID" dropdown menu showing "[42965] New BioEntry" and a button labeled "Wiegand /Card ID Setup".

Below the device ID section, there are two columns for fingerprint templates. The left column is labeled "1st Template" and the right column is labeled "2nd Template". Each column has a "Duress" checkbox (unchecked) and a large rectangular area for the fingerprint scan. Below each scan area are "Scan" and "Delete" buttons.

On the right side of the dialog, there are several sections:

- 1:1 Security Level:** Includes a dropdown menu showing "BioStation/BioEntry Plus" and another dropdown menu showing "Device Default".
- BioEntry Smart/Pass:** Includes a dropdown menu showing "Device Default".
- Smart Card / RF ID:** Includes fields for "Smart Card S/N" (showing "S/N:0"), "RF" (showing "000-0"), and "User ID" (showing "UserID:853").
- A checkbox labeled "Bypass Card" (unchecked).
- Three buttons: "Read Card", "Write Card", and "Format Card".
- A "Verification Test" button.

At the bottom right of the dialog are "OK" and "Cancel" buttons.

- Acquire first template by pressing the **Scan** button followed by touching finger on the USB fingerprint scanner twice.

The dialog box is titled "User Data Information" and has four tabs: "User Information", "Custom Fields", "Fingerprint", and "User Time Attendance Rule". The "Fingerprint" tab is selected.

At the top, there is a checkbox labeled "Use Device as Enroll Station" which is checked. Below it, the "Device ID" is set to "[42965] New BioEntry" with a dropdown arrow, and a button labeled "Wiegand /Card ID Setup" is next to it.

There are two main sections for fingerprint templates:

- 1st Template:** Includes a checkbox for "Duress" (unchecked), a large rectangular area showing a blue fingerprint pattern, and buttons for "Scan" and "Delete" at the bottom.
- 2nd Template:** Includes a checkbox for "Duress" (unchecked), a large empty rectangular area, and buttons for "Scan" and "Delete" at the bottom.

On the right side, there are two sections:

- 1:1 Security Level:** Includes a dropdown menu for "BioStation/BioEntry Plus" set to "Device Default", and another dropdown for "BioEntry Smart/Pass" also set to "Device Default".
- Smart Card / RF ID:** Includes text boxes for "Smart Card S/N" (containing "S/N:0"), "RF" (containing "000-0"), and "User ID" (containing "UserID:853"). Below these are a checkbox for "Bypass Card" (unchecked) and three buttons: "Read Card", "Write Card", and "Format Card".

At the bottom right, there is a "Verification Test" button. At the very bottom of the dialog are "OK" and "Cancel" buttons.

- Acquire second template similarly to the acquisition of first template.

The 'User Data Information' dialog box has four tabs: 'User Information', 'Custom Fields', 'Fingerprint', and 'User Time Attendance Rule'. The 'Fingerprint' tab is active.

Use Device as Enroll Station: ☒ This section includes a 'Device ID' dropdown menu showing '[42965] New BioEntry' and a 'Wiegand /Card ID Setup' button.

1:1 Security Level: Includes dropdowns for 'BioStation/BioEntry Plus' (set to 'Device Default') and 'BioEntry Smart/Pass' (set to 'Device Default').

Smart Card / RF ID: Includes fields for 'Smart Card S/N' (S/N:0), 'RF' (000-0), and 'User ID' (UserID:853). There is a 'Bypass Card' checkbox and buttons for 'Read Card', 'Write Card', 'Format Card', and 'Verification Test'.

Fingerprint Templates: There are two template areas, '1st Template' and '2nd Template'. Each has a 'Duress' checkbox and a fingerprint scan visualization. Below each visualization are 'Scan' and 'Delete' buttons.

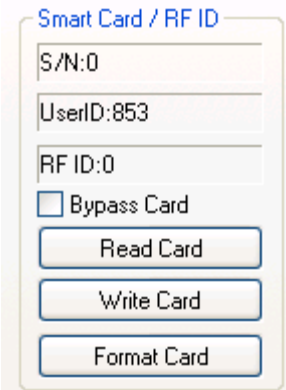
At the bottom are 'OK' and 'Cancel' buttons.

- Press the **OK** button to complete the registration process. Then, you can see the information of the registered user on the user list window. It means that user's information is added to the database on host PC.

User Management							
<input checked="" type="checkbox"/>	User ID	User Name	Company	Department	Title	Template Num	Active
<input type="checkbox"/>	853	Dongsuk, Suh	Suprema	R&D	Manager	2	Y

3.3.3. Step 3: Issuing user smart card

- Double click the registered user on the user list. Then, the user information window appears showing the registered information of the user.
- Click **Fingerprint** tab on user information window.
- Place a smart card on PC USB smart card device and press **Write** button.



Smart Card / RF ID

S/N:0

UserID:853

RF ID:0

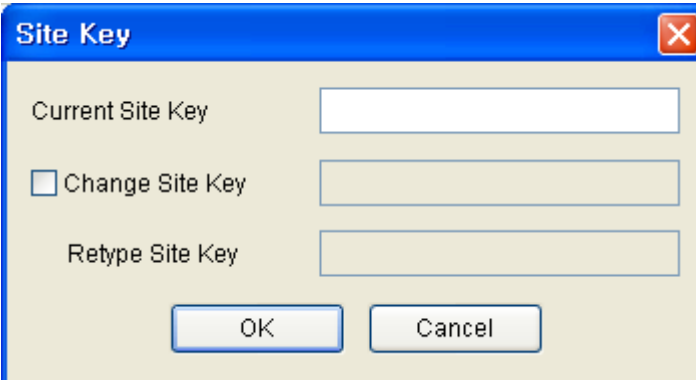
☐ Bypass Card

Read Card

Write Card

Format Card

- At first trial, site key management window appears. If the key input remains blank, factory default key is used. So, just press **OK** button to complete issuing process if the site key was not changed from factory setting.



Site Key

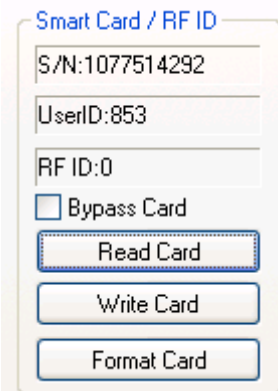
Current Site Key

☐ Change Site Key

Retype Site Key

OK Cancel

- On the user list window, you can see the serial number of the smart card.



Smart Card / RF ID

S/N:1077514292

UserID:853

RF ID:0

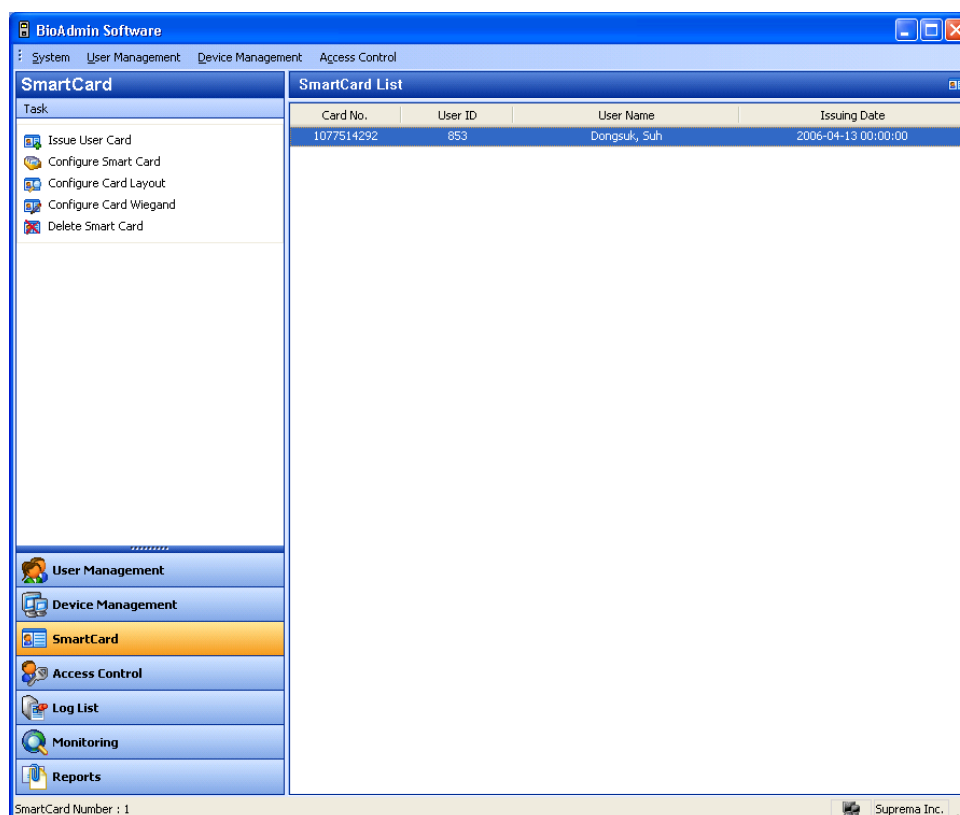
☐ Bypass Card

Read Card

Write Card

Format Card

- Select the **Smart Card** menu. Then you can see smart card is added on the list.



3.3.4. Step 4: Enroll user ID in the external controller

It is required that the issued user ID is also registered to the controller to grant access when the Wiegand string for the user is received.

If you are using Suprema's BEACon controller, you can just skip this additional registration to the controller.

3.3.5. Step 5: Authentication Test

Procedure to test verification using the user's smart card is as follows :

- First, place the user's smart card in front of the device below the sensor. Then, amber LED blinks rapidly indicating that the device is waiting for finger scan for verification.
- Place a finger on the sensor. If the user is successfully verified steady green LED appears with one beep sound. Otherwise, red LED appears with 3 beep sounds.

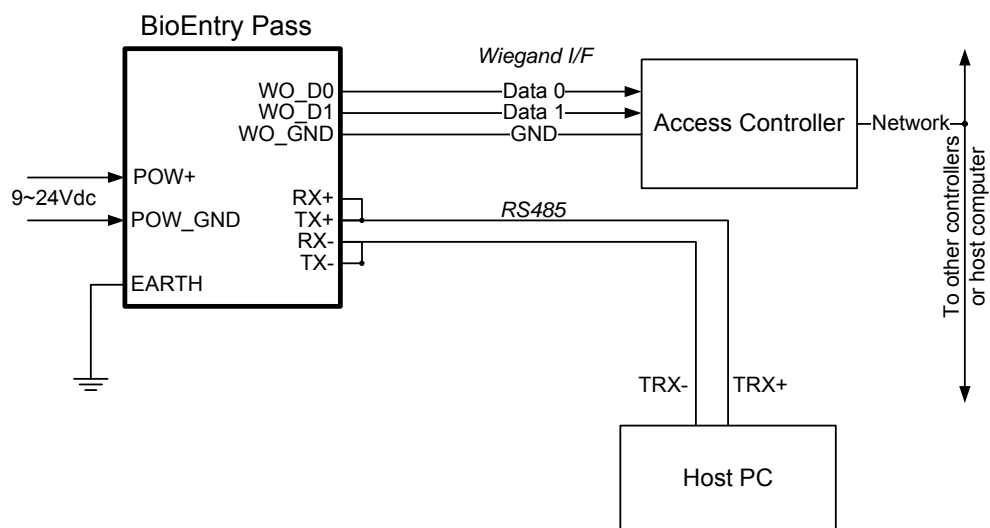
- On successful verification, the Wiegand string is also sent to the controller, which can be checked by operation of relay on the controller.

3.4. Quick start with BioEntry Pass

This section describes the basic procedures to operate BioEntry Pass without a PC device.

3.4.1. Step 1: Hardware installation

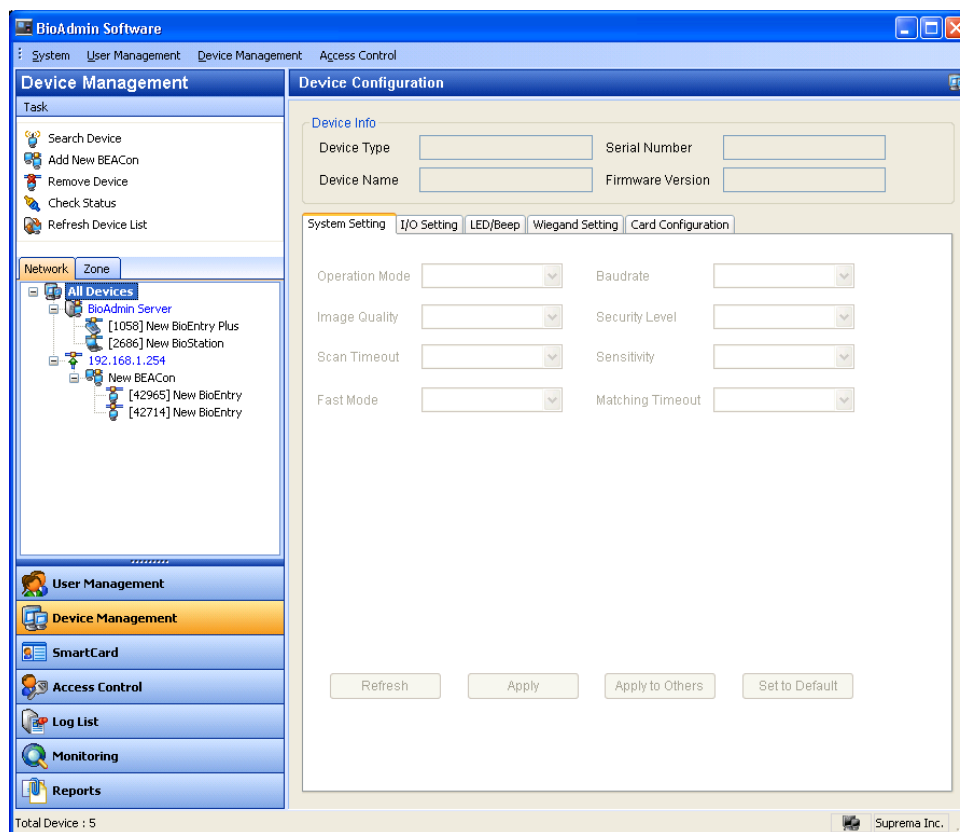
In this configuration, the device is connected to an external controller via Wiegand interface as well as to the host PC through RS485 interface. It is assumed that the controller supports the standard 26 bit Wiegand format as default of BioEntry device.



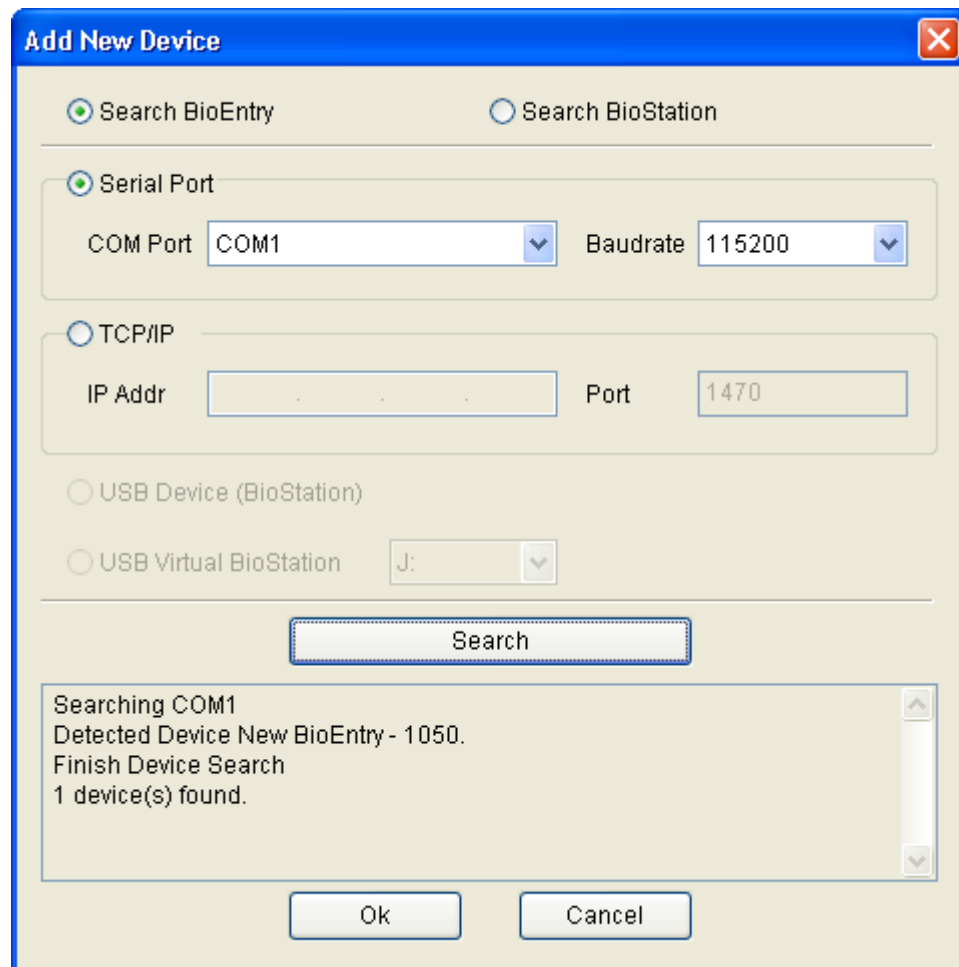
For more details on the installation, refer to the BioEntry Installation manual or BEACon Operation Manual.

3.4.2. Step 2: Search new device

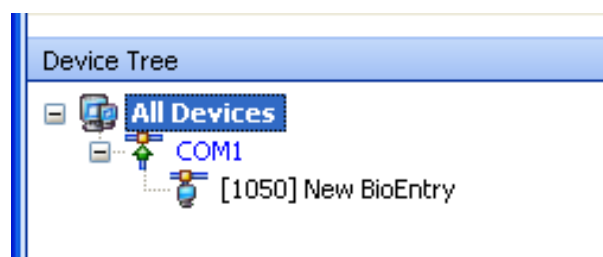
- Run BioAdmin software.
- Enter Login ID and password. By factory default, the initial Login ID is “**admin**” and the password is blank
- Select **Device Management** on the Main menu, then device management page will appear on the main window.



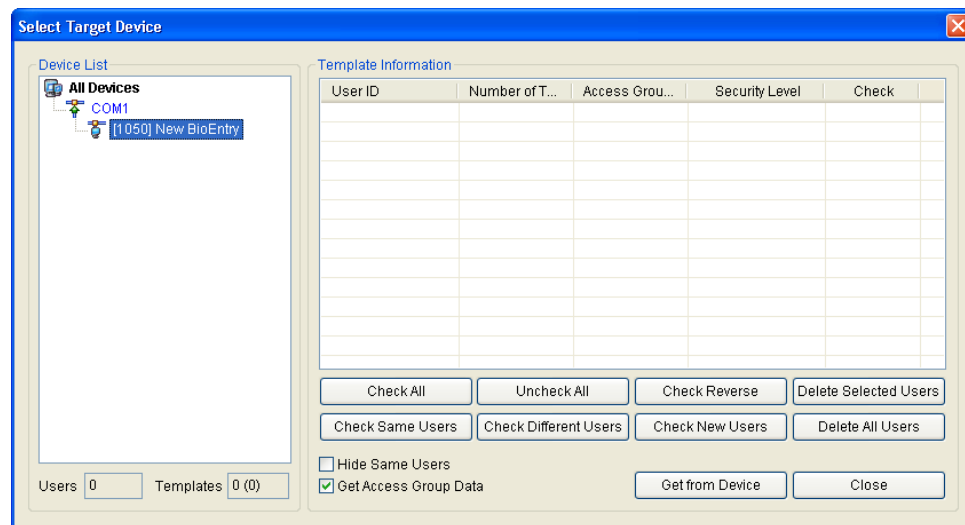
- Select **Search Device** menu, click **Search BioEntry**, select either serial port or TCP/PI and then press search button. If device is found as a result of search, result report reading '— device(s) found' is shown. Press **OK** button to select device.



- If the devices are connected properly, new device ID appears on the Device Tree window.

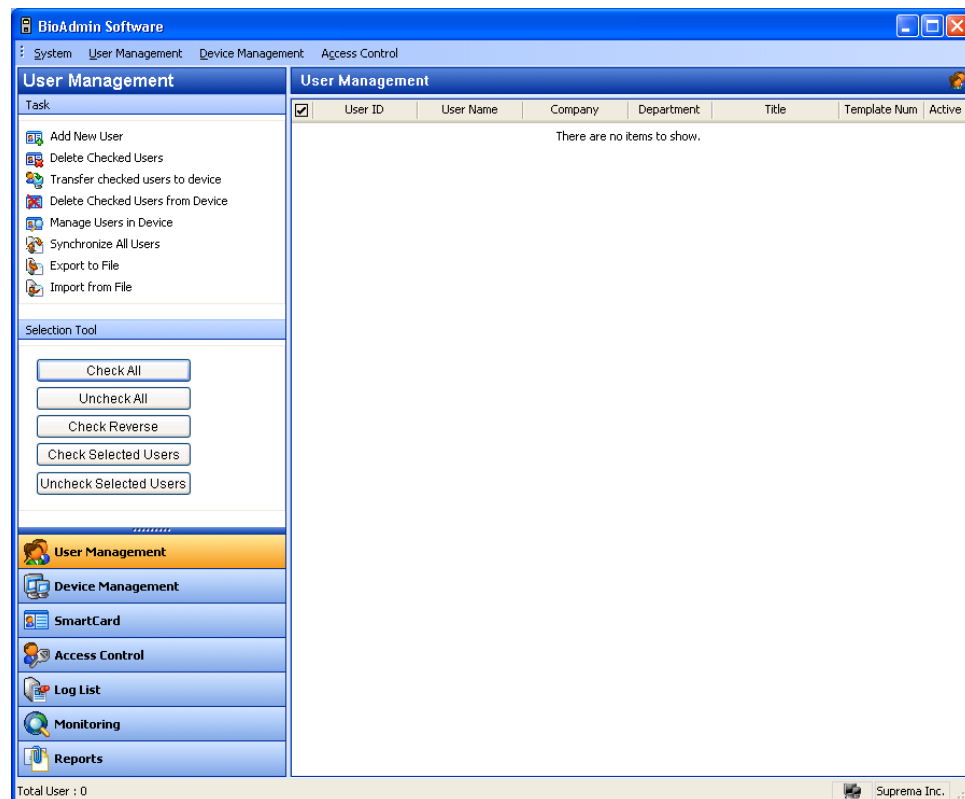


- Select **User Management** button on main menu and select **Manage users in device** on task window.
- Once device is selected, fingerprint information such as user ID, number of fingerprint, access group, security level and Check (to select) is displayed.

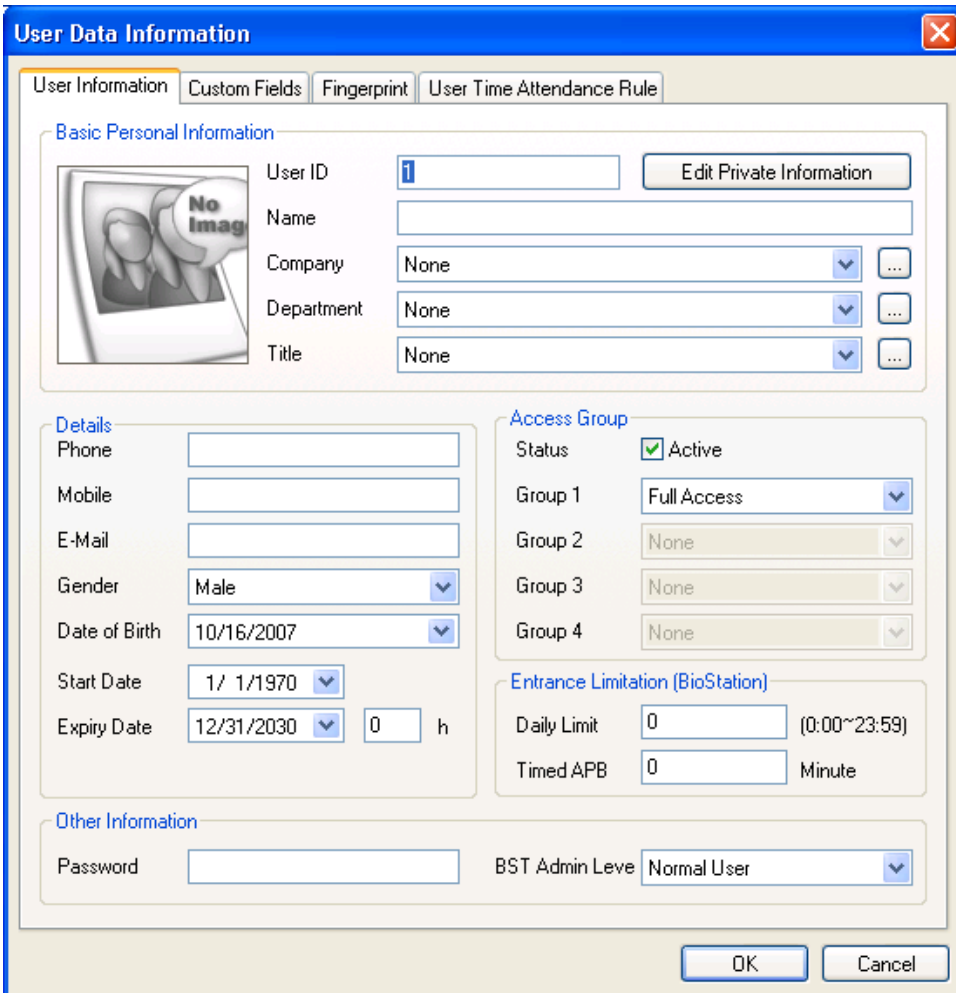


3.4.3. Step 3: Enroll user

- Select the **User Management** menu, then the user management page appears on the main window



- Select the **Add New User** menu on the task window, and then the pop-up window appears.



The **User Data Information** dialog box is shown with the **User Information** tab selected. It contains several sections for user data entry:

- Basic Personal Information:** Includes fields for User ID (with an 'i' icon), Name, Company, Department, and Title. Each dropdown menu is currently set to 'None'. There is an 'Edit Private Information' button.
- Details:** Includes fields for Phone, Mobile, E-Mail, Gender (set to 'Male'), Date of Birth (set to '10/16/2007'), Start Date (set to '1/ 1/1970'), and Expiry Date (set to '12/31/2030').
- Access Group:** Includes a Status checkbox (checked 'Active') and four Group dropdown menus (Group 1 is 'Full Access', Groups 2-4 are 'None').
- Entrance Limitation (BioStation):** Includes fields for Daily Limit (set to '0') and Timed APB (set to '0').
- Other Information:** Includes a Password field and a BST Admin Level dropdown menu (set to 'Normal User').

At the bottom right are **OK** and **Cancel** buttons.

- Enter the user information on the **User Information** tab.

User Data Information

User Information | Custom Fields | Fingerprint | User Time Attendance Rule

Basic Personal Information

User ID: 853 Edit Private Information

Name: Dongsuk, Suh

Company: Suprema ...

Department: R&D ...

Title: Manager ...

Details

Phone: 012-345-6789

Mobile: 098-765-4321

E-Mail: dsuck@anymail

Gender: Male ▼

Date of Birth: 6/14/1970 ▼

Start Date: 1/1/1970 ▼

Expiry Date: 12/31/2030 ▼ 0 h

Access Group

Status: ☒ Active

Group 1: Full Access ▼

Group 2: None ▼

Group 3: None ▼

Group 4: None ▼

Entrance Limitation (BioStation)

Daily Limit: 0 (0:00~23:59)

Timed APB: 0 Minute

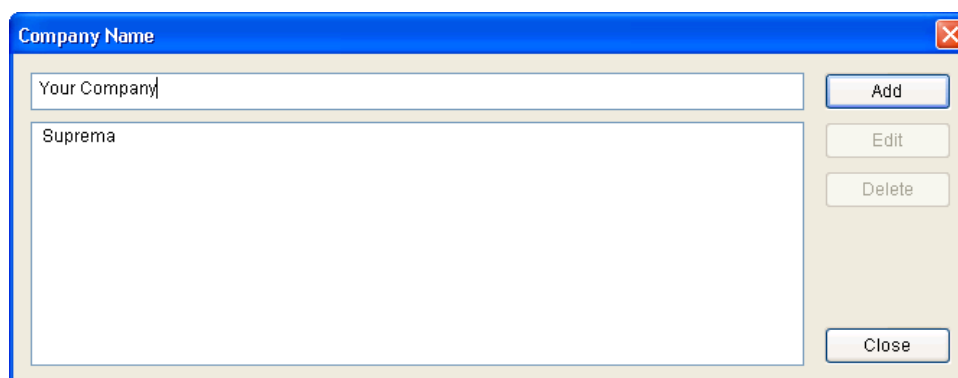
Other Information

Password:

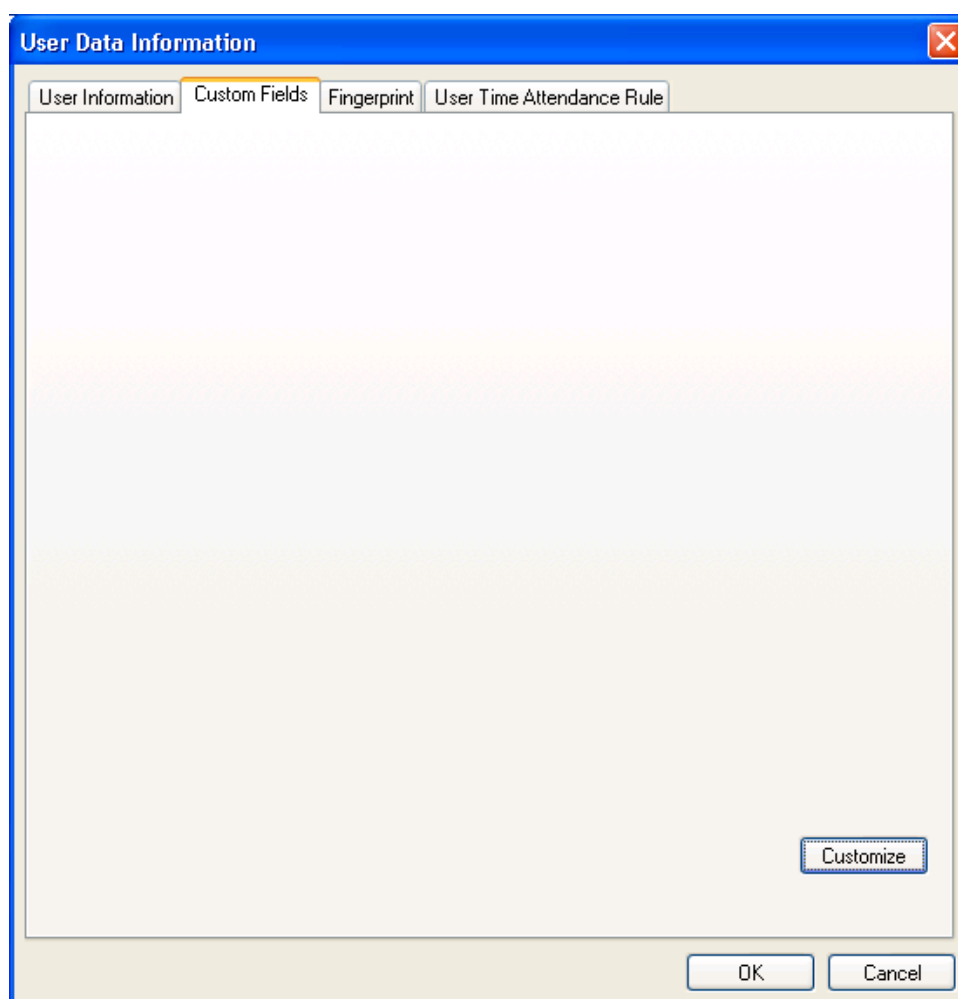
BST Admin Level: Normal User ▼

OK Cancel

- Especially, you can select the Company, Department, and Title on the drag down menu.
- To add new Company, Department, or Title information, press the ... button. After entering the required information, press the **Add** button. Press the **Save** button to save the added information.



- In addition to the basic user information, you can add the **Custom Fields** to the user information. If you do not need these custom fields, just skip the custom fields setting. To set up the custom fields, press the **Custom Fields** tab.



- Click the **Customize...** button.
- Check on the required fields and enter the user information for those selected fields.
- After entering the user information, press the **OK** button.

Custom Fields

Text Fields

<input checked="" type="checkbox"/> Text 1	Hobby	<input type="checkbox"/> Text 5	
<input checked="" type="checkbox"/> Text 2	Fax.	<input type="checkbox"/> Text 6	
<input checked="" type="checkbox"/> Text 3	Ip Addr	<input type="checkbox"/> Text 7	
<input type="checkbox"/> Text 4		<input type="checkbox"/> Text 8	

Number Fields

<input checked="" type="checkbox"/> Number 1	Room No.	<input type="checkbox"/> Number 3	
<input type="checkbox"/> Number 2		<input type="checkbox"/> Number 4	

Date Fields

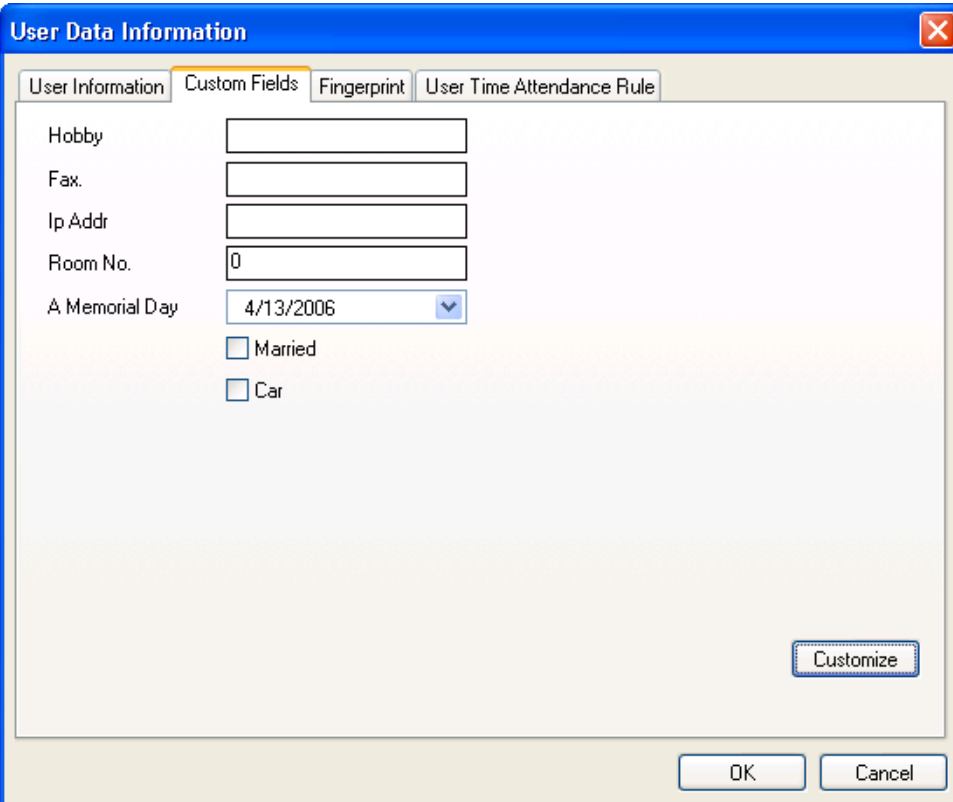
<input checked="" type="checkbox"/> Date 1	A Memorial Day	<input type="checkbox"/> Date 3	
<input type="checkbox"/> Date 2		<input type="checkbox"/> Date 4	

Checkboxes

<input checked="" type="checkbox"/> Checkbox 1	Married	<input type="checkbox"/> Checkbox 3	
<input checked="" type="checkbox"/> Checkbox 2	Car	<input type="checkbox"/> Checkbox 4	

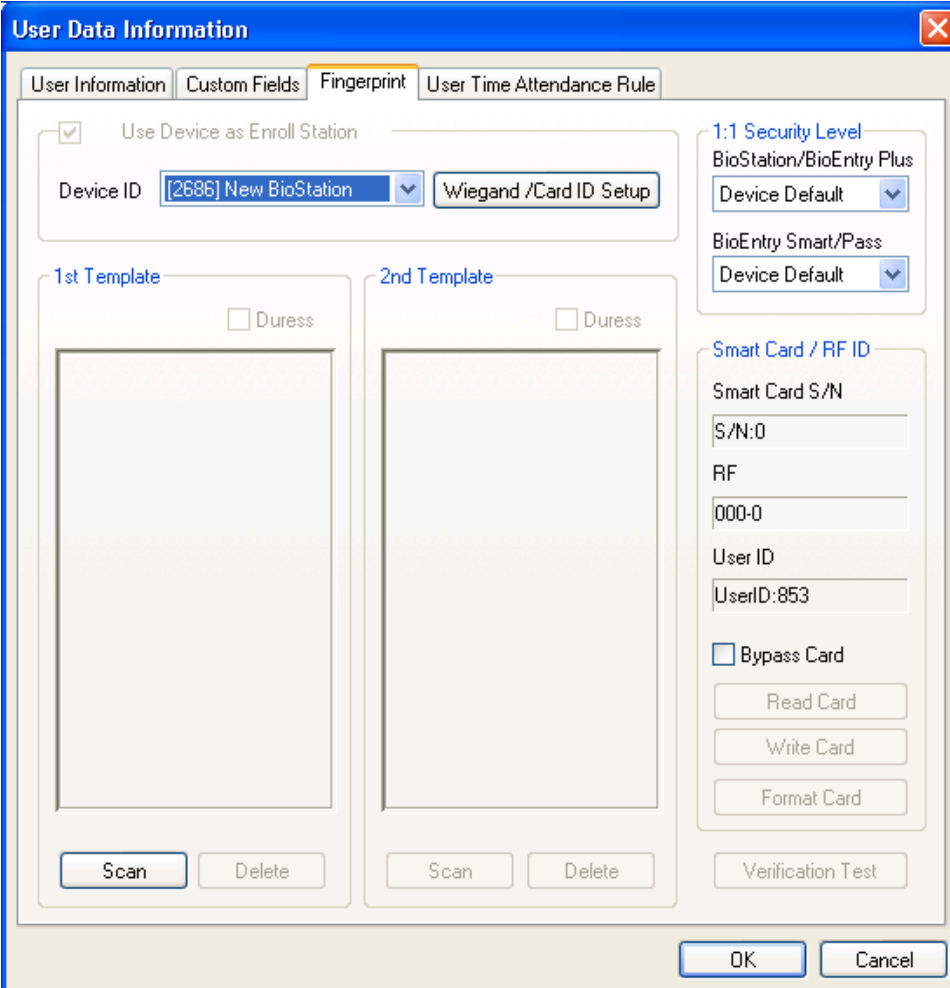
OK Cancel

- After filling out the custom fields, following the pop-up window will appear. On this window, you can see the detail of your selected custom fields. Press the **OK** button to save these custom fields.



The image shows a Windows-style dialog box titled "User Data Information". It has four tabs: "User Information", "Custom Fields", "Fingerprint", and "User Time Attendance Rule". The "User Information" tab is currently selected. Inside the dialog, there are several input fields: "Hobby" (text box), "Fax." (text box), "Ip Addr" (text box), "Room No." (text box containing "0"), and "A Memorial Day" (calendar picker showing "4/13/2006"). Below these fields are two checkboxes: "Married" and "Car", both of which are unchecked. At the bottom right of the dialog area is a "Customize" button. At the very bottom of the dialog are "OK" and "Cancel" buttons.

- After entering the user information, press the **Fingerprint** tab to enroll user's fingerprint templates.



The image shows a software window titled "User Data Information" with a blue title bar and a close button. It contains four tabs: "User Information", "Custom Fields", "Fingerprint" (which is selected), and "User Time Attendance Rule".

Under the "Fingerprint" tab, there is a section "Use Device as Enroll Station" with a checked checkbox. Below it, the "Device ID" is set to "[2686] New BioStation" with a dropdown arrow, and a button labeled "Wiegand /Card ID Setup" is next to it.

Below this, there are two template acquisition areas, "1st Template" and "2nd Template". Each has a "Duress" checkbox (unchecked) and a large rectangular area for the fingerprint scan. Below each area are "Scan" and "Delete" buttons.

On the right side of the dialog, there are three sections:

- 1:1 Security Level**: Includes "BioStation/BioEntry Plus" with a "Device Default" dropdown, and "BioEntry Smart/Pass" also with a "Device Default" dropdown.
- Smart Card / RF ID**: Includes fields for "Smart Card S/N" (S/N:0), "RF" (000-0), and "User ID" (UserID:853). Below these is an unchecked "Bypass Card" checkbox and three buttons: "Read Card", "Write Card", and "Format Card".
- A "Verification Test" button is located below the Smart Card section.

At the bottom right of the dialog are "OK" and "Cancel" buttons.

- Acquire first template by pressing the **Scan** button followed by touching a finger on the USB fingerprint scanner twice.

The dialog box is titled "User Data Information" and has four tabs: "User Information", "Custom Fields", "Fingerprint", and "User Time Attendance Rule". The "Fingerprint" tab is selected.

At the top, there is a checkbox labeled "Use Device as Enroll Station" which is checked. Below it, the "Device ID" is set to "[2686] New BioStation" with a dropdown arrow, and a button labeled "Wiegand /Card ID Setup" is next to it.

There are two main sections for fingerprint templates:

- 1st Template:** Includes a checkbox for "Duress" (unchecked), a large area showing a fingerprint scan with blue dots indicating the sensor's field of view, and buttons for "Scan" and "Delete".
- 2nd Template:** Includes a checkbox for "Duress" (unchecked), a large empty area for the second fingerprint scan, and buttons for "Scan" and "Delete".

On the right side, there are two sections:

- 1:1 Security Level:** Includes a dropdown menu for "BioStation/BioEntry Plus" set to "Device Default", and another dropdown for "BioEntry Smart/Pass" also set to "Device Default".
- Smart Card / RF ID:** Includes text boxes for "Smart Card S/N" (containing "S/N:0"), "RF" (containing "000-0"), and "User ID" (containing "UserID:853"). Below these are checkboxes for "Bypass Card" (unchecked) and three buttons: "Read Card", "Write Card", and "Format Card".

At the bottom right, there is a "Verification Test" button. At the very bottom of the dialog are "OK" and "Cancel" buttons.

- Acquire second template similarly to the acquisition of first template.

The 'User Data Information' dialog box has four tabs: 'User Information', 'Custom Fields', 'Fingerprint', and 'User Time Attendance Rule'. The 'Fingerprint' tab is active.

Use Device as Enroll Station: ☒ This section includes a 'Device ID' dropdown menu showing '[2686] New BioStation' and a 'Wiegand /Card ID Setup' button.

1:1 Security Level: Includes dropdowns for 'BioStation/BioEntry Plus' (set to 'Device Default') and 'BioEntry Smart/Pass' (set to 'Device Default').

Smart Card / RF ID: Includes fields for 'Smart Card S/N' (S/N:0), 'RF' (000-0), and 'User ID' (UserID:853). There is a 'Bypass Card' checkbox and buttons for 'Read Card', 'Write Card', 'Format Card', and 'Verification Test'.

Fingerprint Templates: There are two template areas, '1st Template' and '2nd Template'. Each has a 'Duress' checkbox and a 'Scan' button. The '1st Template' 'Scan' button is highlighted with a yellow border.

At the bottom are 'OK' and 'Cancel' buttons.

- Press the **OK** button to complete the registration process. Then, you can see the information on the registered user on the user list window. It means that the user's information is added to the database on host PC.

User Management							
<input checked="" type="checkbox"/>	User ID	User Name	Company	Department	Title	Template Num	Active
<input type="checkbox"/>	853	Dongsuk, Suh	Suprema	R&D	Manager	2	Y

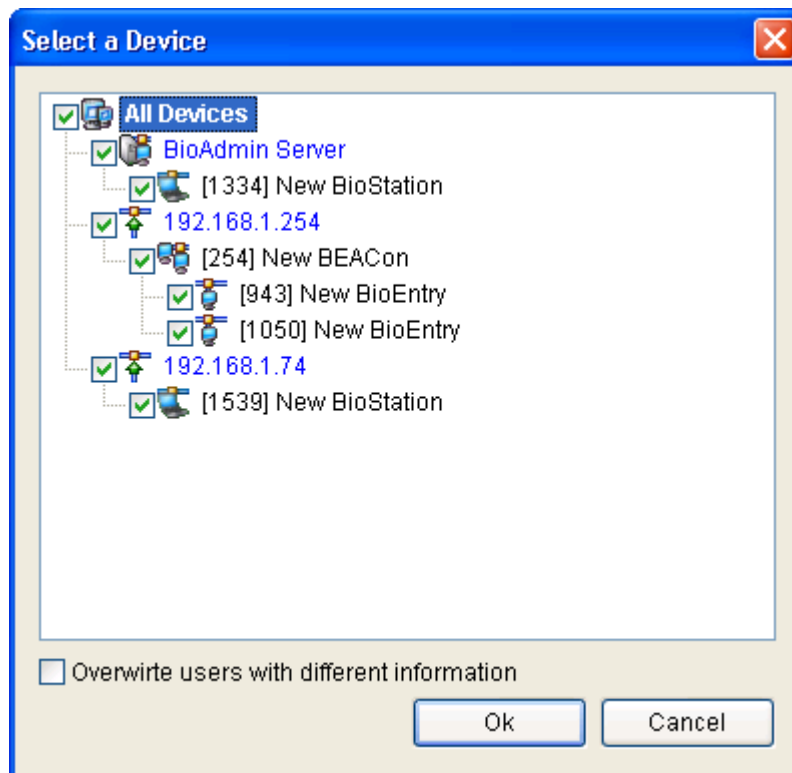
3.4.4. Step 4: Enroll user with 'transfer checked user to device' menu.

Transfer to Device is used to transfer the user database of the host PC to BioEntry™ devices. The user information such as User ID, templates, access group, and security level is transferred by this process.

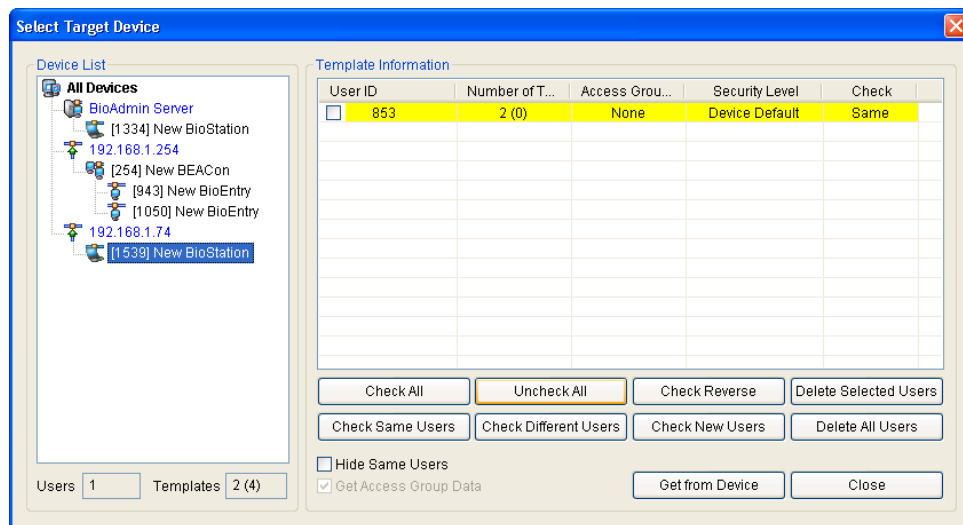
- Check the registered user to transfer

User Management							
<input checked="" type="checkbox"/>	User ID	User Name	Company	Department	Title	Template Num	Active
<input checked="" type="checkbox"/>	853	Dongsuk, Suh	Suprema	R&D	Manager	2	Y

- Select the Transfer Checked Users to Device button and select the devices to transfer the user data.



- Select the **Manage Users in Device** button to see the user list enrolled in the selected device. If the color of user data is yellow, it means the user data has been successfully transferred to the device.



3.4.5. Step 5: Enroll user ID in the external controller

It is required that the issued user ID is also registered to the external controller to grant access when the Wiegand string for the user is received.

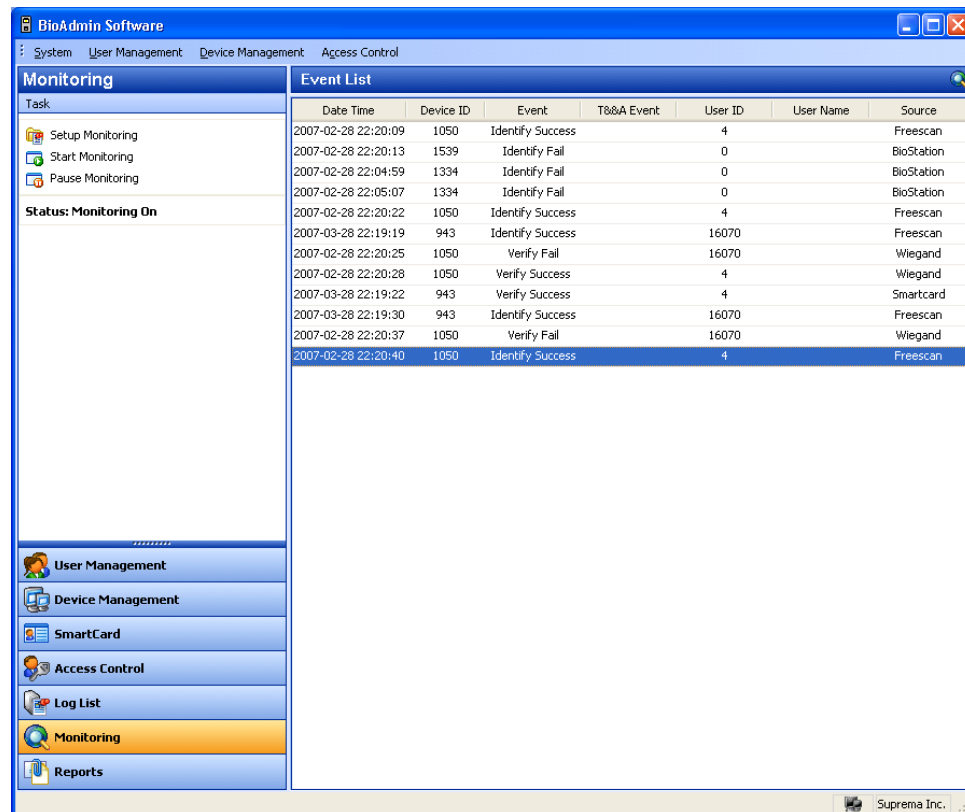
If you are using Suprema's BEACon controller, you can just skip this additional registration to the controller.

3.4.6. Step 6: Authentication test

- Amber LED on the device blinks slowly indicating that the device is waiting for finger scan for identification.
- Swipe finger on the sensor. If the user is successfully identified steady green LED appears with one beep sound. Otherwise, red LED appears with 3 beep sounds.
- On successful identification, the Wiegand string is also sent to the controller, which can be checked by operation of relay on the controller.

3.4.7. Step 7: Monitoring

Select **Start Monitoring** menu to start the real-time monitoring on all of the connected BioEntry devices.



3.4.8. Step 8 : Check log

- Select the **Reports** menu. Then, the report list window appears on the main window.
- Select the **Get Recent Logs / Auto Upload** button to see the updated event log data added to the existing log list of BioAdmin.

Log List						
Date Time	Device ID	Event	T&A Event	User ID	User Name	Source
2007-02-28 11:31:05	1334	Enroll Success		2		BioStation
2007-02-28 11:31:06	1334	Enroll Success		3		BioStation
2007-02-28 11:31:07	1334	Enroll Success		853	Dongsuk, Suh	BioStation
2007-02-28 11:31:08	1334	Enroll Success		861	Nakwon, Lee	BioStation
2007-02-28 11:31:09	1334	Enroll Success		934	ChangGyun, Lee	BioStation
2007-02-28 11:36:26	1334	Identify Mode...		1		BioStation
2007-02-28 12:00:51	1334	Delete Success		1		BioStation
2007-02-28 12:00:51	1334	Delete Success		2		BioStation

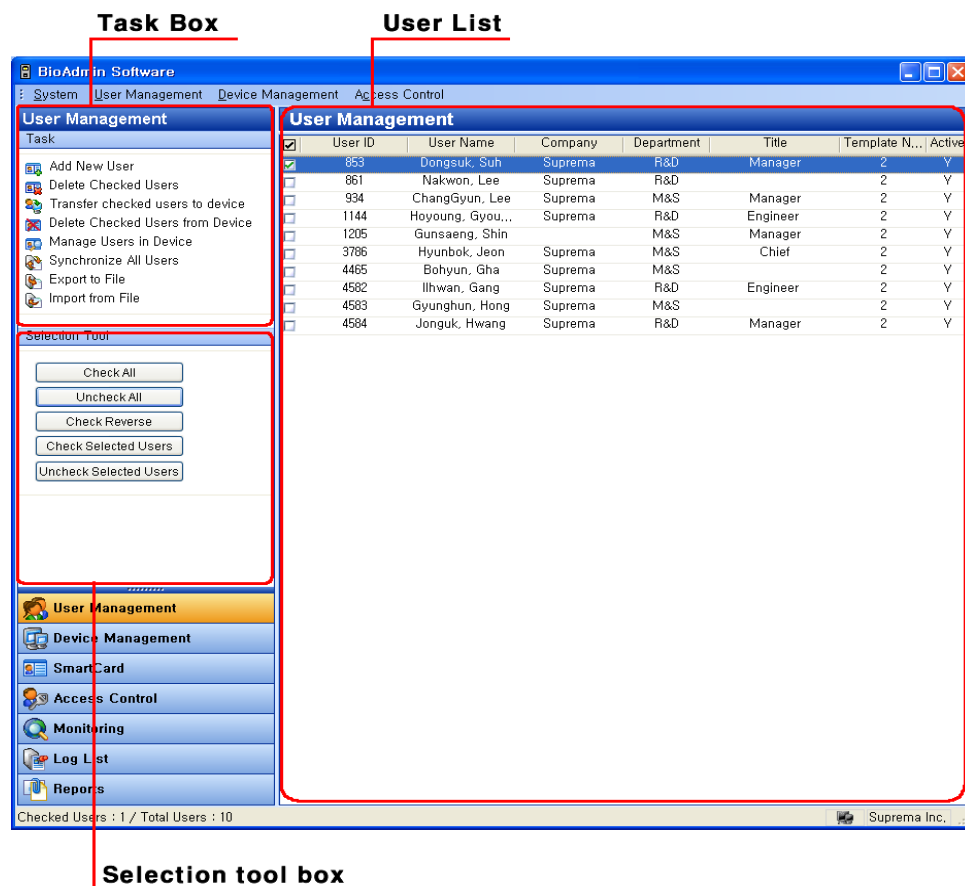
4. User Management

User management covers the following operations:

- Add new user
- Delete checked user
- Transfer checked user to device
- Delete checked user from device
- Manage users in device
- Synchronize all users
- Export to file
- Upload from file

4.1. Configuration of user management page

By selecting User Management menu, user management page is updated on the main window.



The user management page is divided into 3 sectors:

- User List

The user database is under central management on host PC. The user management page includes detailed list of user database and summarized information.

- Selection tool box

Selection tool box includes buttons to select users.

- Task box

Task box includes buttons to control basic operations of the user management page.

4.2. User List window

User list includes the following information on the users.

- Shows basic information such as user ID, name, company, dept., position title, number of enrolled fingerprint and status.
- Double click user ID to pop up user information window. User information has 4 tabs, i.e. User information, custom field, fingerprint, and user time attendance rule.
- Fingerprint templates (fingerprint image is never stored)

Note : What is activation in access group setting? It is used when transferring user data in host PC to device. If activation is not on (checked) upon transferring checked in user list to device, user data can't be transferred and data in device is deleted.

For instance, when one returns to work after having been excluded from access group and inactive due to dispatch or long term leave, activate him/her and manage user list.

4.3. User List Display Setting

You can customize the display of the user list.

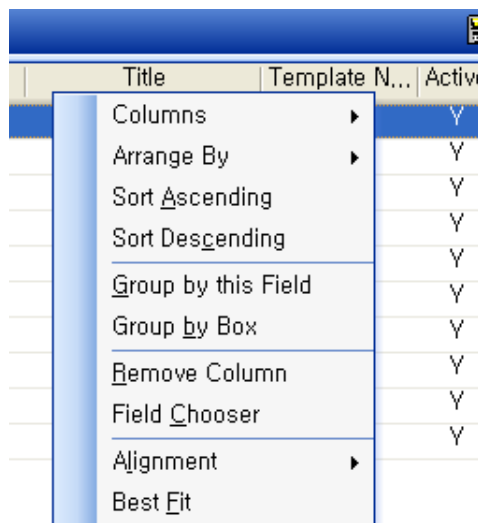
Detailed operations are as follows.

- Press the right button of your mouse on the column header of User List.

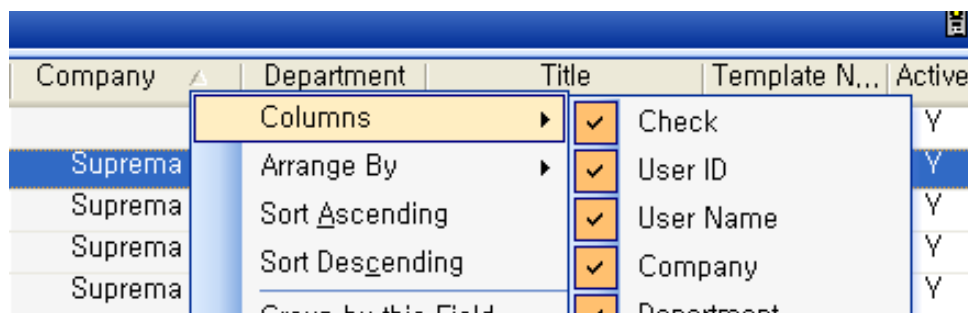
Note : What is "Column Header"? It is on the head of row (user ID, name,

company, dept.) on user list window.

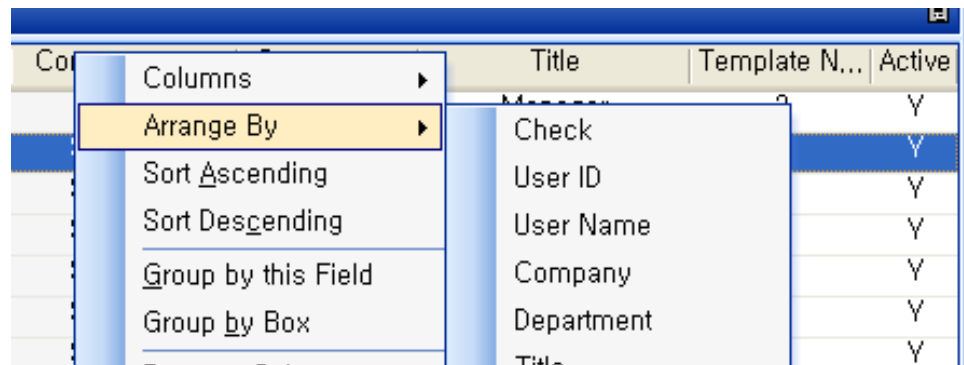
User Management						
<input checked="" type="checkbox"/>	User ID	User Name	Company	Department	Title	Template N... Active
<input checked="" type="checkbox"/>	853	Dongsuk, Suh	Suprema	R&D	Manager	2 Y
<input type="checkbox"/>	861	Nakwon, Lee	Suprema	R&D		2 Y
<input type="checkbox"/>	934	ChangGyun, Lee	Suprema	M&S	Manager	2 Y
<input type="checkbox"/>	1144	Hoyoung, Gyou...	Suprema	R&D	Engineer	2 Y



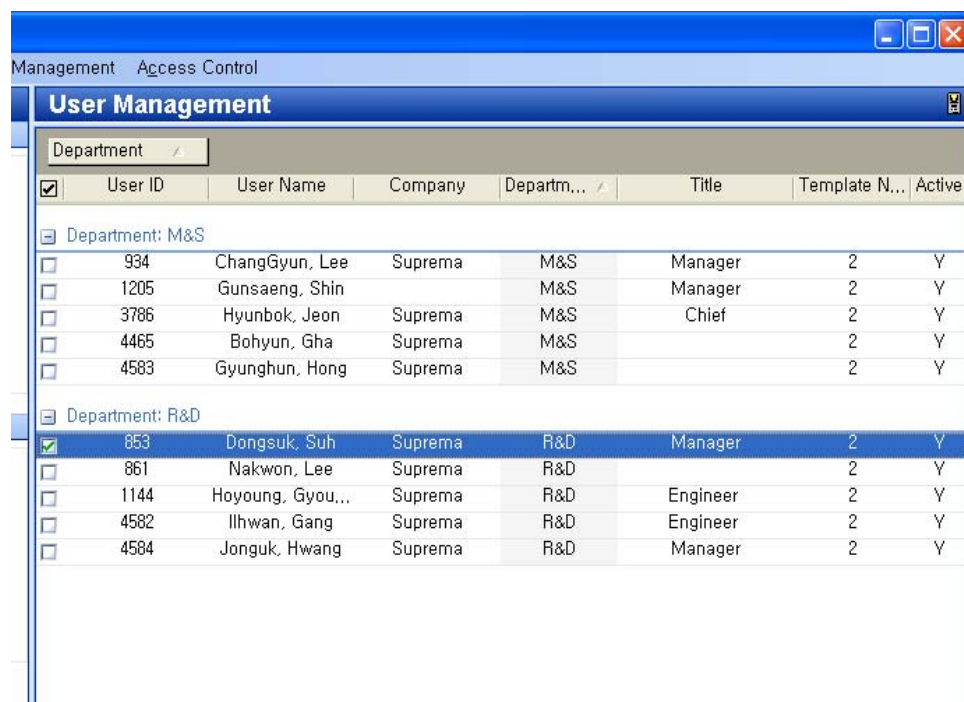
- Press the **Columns** button and check on your required columns to show them on the user list.



- Press the **Arrange By** button and select your required columns to array the user list by your selected column.



- Press the **Sort Ascending** button to array the user list in ascending order.
- Press the **Sort Descending** button to array the user list in descending order.
- Press the **Group by this field** button and **Group by box** button to manage the user list as a group by your required columns. Also, you can add a column to the group simply by dragging up the column to the header box.



- Press the **Remove Column** button to remove a column from the header. Also, you can remove a column simply by dragging down the column from the column header.

User Management							
Department							
<input checked="" type="checkbox"/>	User ID	User Name	Company	Departm...	Title	Template N...	Active
Department: M&S							
<input type="checkbox"/>	934	ChangGyun, Lee	Suprema	M&S	Manager	2	Y
<input type="checkbox"/>	1205	Gunsæeng, Shin		M&S	Manager	2	Y

- Press the **Alignment** button to array the content in your preferred way.
- Press the **Best Fit** button to optimize the width of a column.

4.4. Select user

Users can be chosen for selective processing of operations, such as transfer, removal, or exportation. You can select the required user simply by using the check box on the user list,

Selection Tool
Check All
Uncheck All
Check Reverse
Check Selected Users
Uncheck Selected Users

- Check All : Check all users
- Uncheck All : Uncheck all users
- Check Reverse : Check all users except the users who were originally checked
- Check Selected Users : Check the selected users
- Uncheck Selected Users : Uncheck the selected users

4.5. Add New User

The **Add New User** button enables the pop-up window to register user data on host PC.

User Data Information

User Information | Custom Fields | Fingerprint | User Time Attendance Rule

Basic Personal Information

User ID: 853 Edit Private Information

Name: Dongsuk, Suh

Company: Suprema

Department: R&D

Title: Manager

Details

Phone: 012-345-6789

Mobile: 098-765-4321

E-Mail: dsuck@anymail

Gender: Male

Date of Birth: 6/14/1970

Start Date: 1/ 1/1970

Expiry Date: 12/31/2030 0 h

Access Group

Status: ☒ Active

Group 1: Full Access

Group 2: None

Group 3: None

Group 4: None

Entrance Limitation (BioStation)

Daily Limit: 0 (0:00~23:59)

Timed APB: 0 Minute

Other Information

Password:

BST Admin Level: Normal User

OK Cancel

4.5.1. User information

- In user information, you can enter basic personal information, details information, access group, other information, and additional information for BioStation. In basic personal information, enter user ID, name, company, dept. and title. For details, enter telephone number, mobile phone number, email, gender, and date of birth. Make sure to check 'Active' in access group. Otherwise, database in device will be deleted.
- Edit Private Information

A screenshot of a 'Private Information' dialog box. The dialog has a blue title bar with the text 'Private Information' and a red close button. It is divided into two main sections. The left section, titled 'Photo', contains a placeholder image with the text 'No Image' and two buttons: 'Change Photo' and 'Delete Photo'. The right section contains several input fields: 'User ID' with the value '853', 'Name' with the value 'Dongsuk, Suh', 'Display Setting' with a dropdown menu set to 'No Limit', and 'Private Message' with the text 'Welcome!!'. At the bottom of the dialog are 'Save' and 'Cancel' buttons.

Private Information

Photo

No Image

Change Photo

Delete Photo

User ID

853

Name

Dongsuk, Suh

Display Setting

No Limit

Private Message

Welcome!!

Save

Cancel

- Change photo and message when succeeded in verification, and configure display condition, which should be used 'Private Information' of the device.
- Access Group
 - Enter the access group information for each user.
 - To apply the designated access group information to each user, please check on the **Active** option and sent transmit this user to the BioStation and BioEntry. If you do not check on this option or do not transmit the user to the BioStation or BioEntry, access group will not be applied to each user.
 - If you check on **Bypass ID** option, that user will be able to access the door just by placing this card to the BioStation without fingerprint or password.
 - **Auth Limit** means the number of access that the user is allowed in a day (from 00:00 to 24:00 of the day). If you do not want to restrict the number of access for a user, leave this menu as the default, 0.
 - **Timed** means the minimum time interval required for access of the same user. If you set this menu as 5, that user will not be able to enter the door again within 5 minutes.
-
- Other Information
 - The Password on this menu is required when the BioStation requires the

user's password. Also, users should enter this password when they log in to the BioAdmin Client to check their log information.

- BioStation admin level : On this menu, you can select the user as an administrator for BioStation terminal.

Note : in user information, user ID should be entered as it's a required field but the rest fields can be left blank.

4.5.2. Custom field

You can add customized user information columns on the user management window by designating required fields on the Custom Fields menu.

- Customize... button enables the pop-up window to add the customized user information column. After filling out the required contents, press the OK button.

The screenshot shows a dialog box titled "User Data Information" with a close button (X) in the top right corner. It has four tabs: "User Information", "Custom Fields" (which is selected), "Fingerprint", and "User Time Attendance Rule". The "Custom Fields" tab contains a list of fields with corresponding input boxes:

Hobby	Fishing
Fax.	031-4567-8562
IP Addr	123.123.12.1
Room No.	0
A Memorial Day	6/14/2007

Below the date field, there are two checkboxes: "Married" (checked) and "Car" (unchecked). At the bottom right of the dialog, there is a "Customize" button. At the very bottom, there are "OK" and "Cancel" buttons.

Custom Fields

Text Fields

<input checked="" type="checkbox"/> Text 1	Hobby	<input type="checkbox"/> Text 5	
<input checked="" type="checkbox"/> Text 2	Fax	<input type="checkbox"/> Text 6	
<input checked="" type="checkbox"/> Text 3	Ip Addr	<input type="checkbox"/> Text 7	
<input type="checkbox"/> Text 4		<input type="checkbox"/> Text 8	

Number Fields

<input checked="" type="checkbox"/> Number 1	Room No.	<input type="checkbox"/> Number 3	
<input type="checkbox"/> Number 2		<input type="checkbox"/> Number 4	

Date Fields

<input checked="" type="checkbox"/> Date 1	A Memorial Day	<input type="checkbox"/> Date 3	
<input type="checkbox"/> Date 2		<input type="checkbox"/> Date 4	

Checkboxes

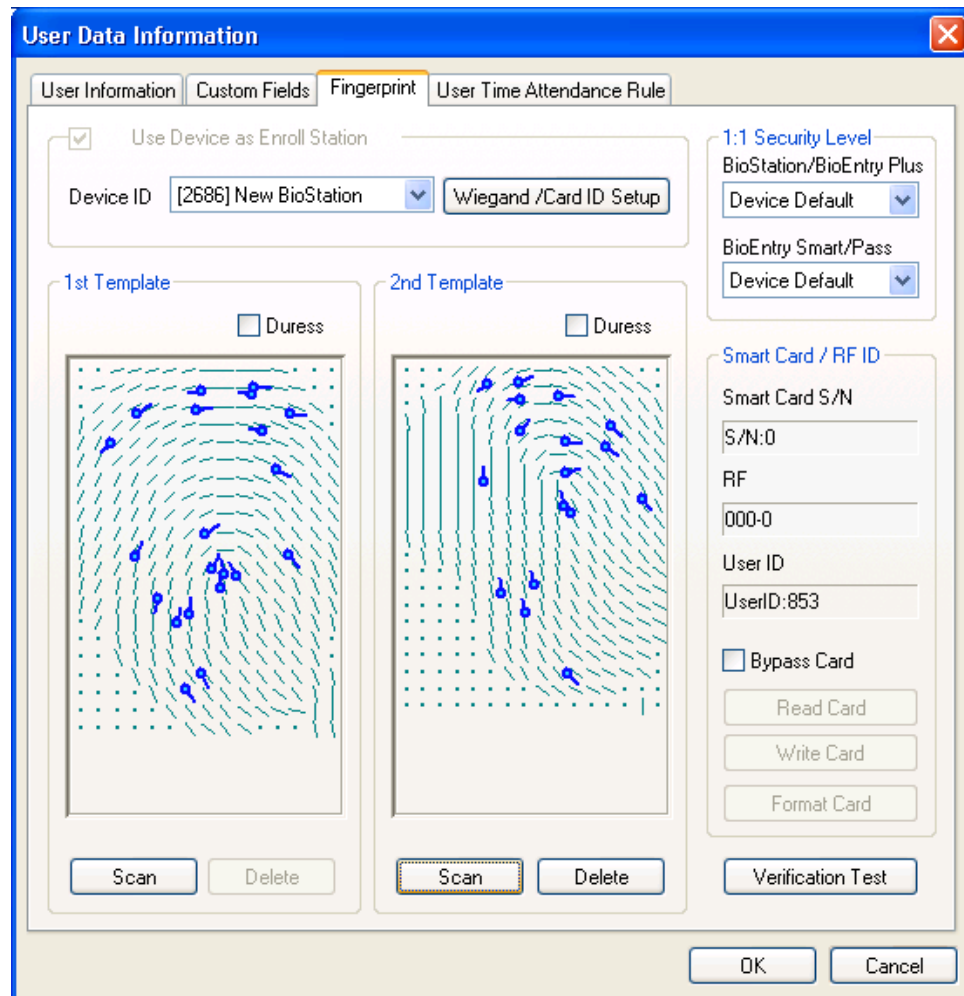
<input checked="" type="checkbox"/> Checkbox 1	Married	<input type="checkbox"/> Checkbox 3	
<input checked="" type="checkbox"/> Checkbox 2	Car	<input type="checkbox"/> Checkbox 4	

OK Cancel

Note : Custom fields may look like a blank page but if you click settings on the right lower end, a display where you are to set custom fields such as string, number, date and checkbox appears. If you check such fields, items are generated in blank custom fields.

4.5.3. Fingerprint

The next step of registration is adding user's fingerprint templates to database.



Templates can be enrolled by two methods:

- Enrollment using PC USB scanner
- Enrollment using BioEntry device connected to host PC

By default, USB scanner is used for enrollment. By enabling the **Use BioEntry as Enroll Station** check box and selecting a device ID, BioEntry™ device is used to get user's templates. Up to 2 fingerprint templates can be included in the user database.

- Acquisition of template

Press the **Scan** button and touch the same finger twice. If the acquisition of template is successful, scanned template is depicted on the template window. To register the second template for different finger, press the **Scan** button at the right section.

- Enrollment of duress finger

Duress finger can be enrolled to generate duress signal when the specified finger is detected on the device. After a template is acquired, enable the **Duress** check box to indicate that the template should be saved as duress mode.

Note : What is duress mode?

Duress finger can be used in a situation when one is threatened by a thief in front of a door. If duress finger is entered, door is opened normally but it can be set to sound an emergency alarm or ring an emergency call which has been set as output port. For instance, in case of enrolling 2 fingers, the first finger can be enrolled as normal finger whereas the second finger as duress finger. Duress finger should be a different finger from a normal finger enrolled beforehand.

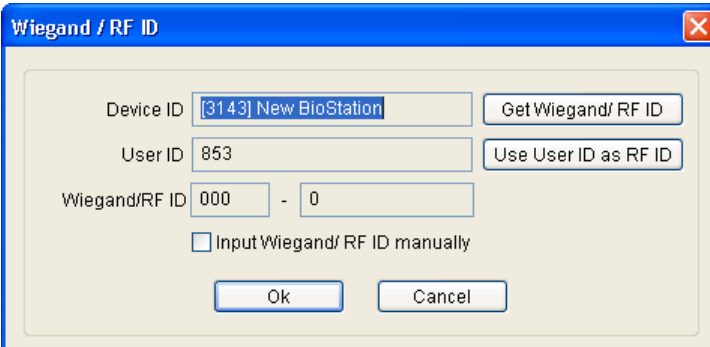
- Delete fingerprint

To delete fingerprint, delete from the second fingerprint information on the right. The first fingerprint information can be deleted after the second fingerprint information is deleted.

- Test matching

In order to check that enrollment of template is properly completed, matching test can be processed. Press the **Test Matching** button and touch the registered finger on the specified device. Then, a message will appear to show the matching result.

- Wiegand / RF ID Set up



The image shows a Windows-style dialog box titled "Wiegand / RF ID". It contains several input fields and buttons. The "Device ID" field is populated with "[3143] New BioStation". The "User ID" field is populated with "853". The "Wiegand/RF ID" field is split into two parts: "000" and "0", separated by a hyphen. There are two buttons on the right: "Get Wiegand/ RF ID" and "Use User ID as RF ID". At the bottom, there is a checkbox labeled "Input Wiegand/ RF ID manually" which is currently unchecked. Below the checkbox are "Ok" and "Cancel" buttons.

If you use BioStation RF or use the normal BioStation along with an external Wiegand card reader, you need to allocate the card ID to each user. Press this

button to designate the users' card ID.

- **Get Wiegand / RF ID** : If you press **Get Wiegand / RF ID** button, BioStation RF (or external Wiegand card reader) will be waiting for the card. If the user put his card to the BioStation (or to the external Wiegand card reader), the Wiegand ID of that card will be registered as the user's card ID. Therefore, you can use this option to get the Wiegand ID from the card and apply it to the user.
 - **Use User ID as RF ID** : If you press **Use User ID as RF ID** button, Wiegand card ID is entered as same as the user ID. This menu is useful when the users were already using Wiegand cards of which card ID was set as same as the user ID.
 - **Input Wiegand / RF ID manually** : If you press **Input Wiegand / RF ID manually** button, you can enter the Wiegand / RF ID manually.
- 1:1 Security Level.

You can change the security level for the 1:1 verification of BioEntry and BioStation. If a user's fingerprint condition is very poor and he often fails in 1:1 verification, administrator may enroll his fingerprint after lowering the 1:1 security level for that user.

4.5.4. Issue user smart card

BioEntry Smart basically operates with user's smart card containing user information and fingerprint templates. Issuing is required to create the user's smart card.

Issuing of user's smart card is processed on the user management window, which is initiated by double clicking a user on the user list or by pressing the **Register New User** button on the main window.

Smart card can be issues by two methods:

- Issuing with PC USB smart card device
- Issuing with BioEntry™ Smart connected with host PC

To use a BioEntry™ Smart as a card issuer, enable the **Use BioEntry as Enroll Station** check box and select a device ID. Otherwise, PC USB device is used as a card issuer.

4.5.5. Issue with PC USB smart card device

- Place the target smart card on the PC smart card device
- Press the **Write** button to initiate issuing.
- The site key management window will appear at the first trial of issuing after starting of BioAdmin software. Also, the window will appear if it fails to access the smart card due to the mismatch of the site key.
- Type the current site key to access the smart card. If it remains blank, BioAdmin software uses default key (0xFFFFFFFF) as a current site key.
- If it is desired to change the site key on issuing, enable the **Change Site Key** check box and type new site key. Then, new site key is updated on the smart card. The new site key should be correspondent with the site key on BioEntry Smart device.

4.5.6. Issue with BioEntry Smart

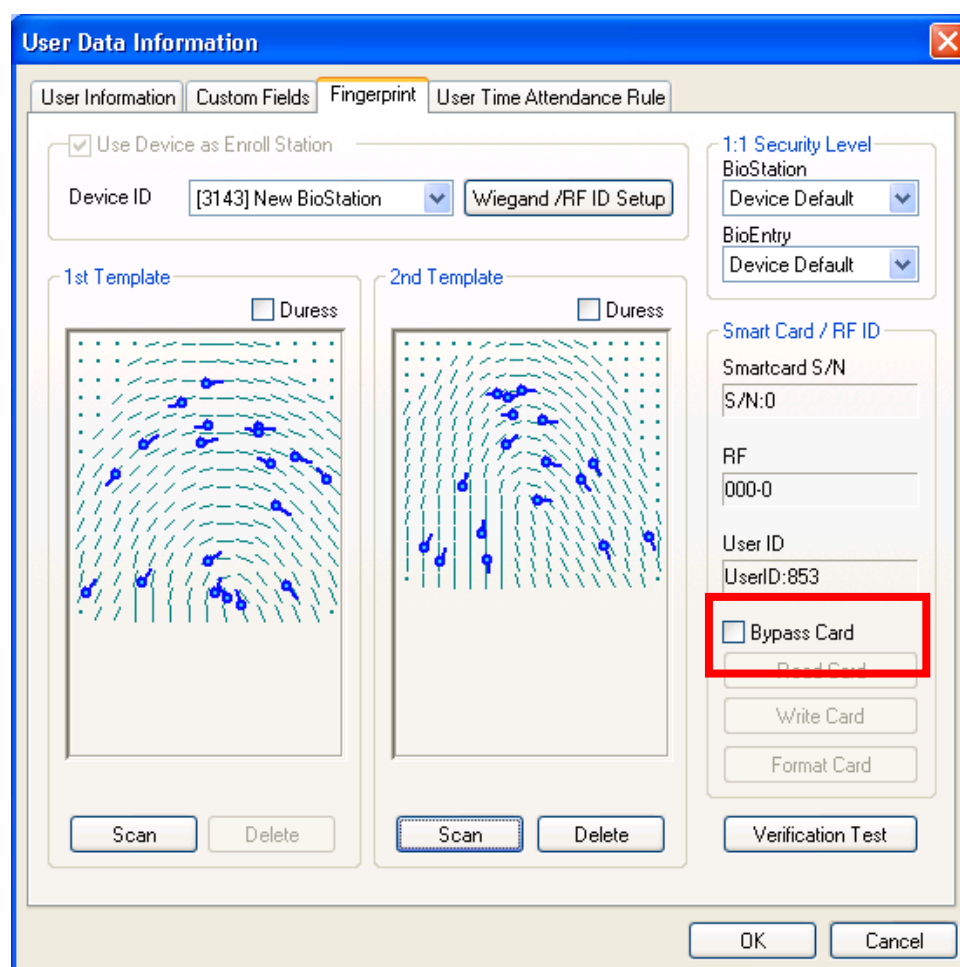
- Place the target smart card at selected BioEntry Smart
- Press the **Write** button to initiate issuing. Since the site key management information is stored on BioEntry, issuing is processed without requesting site key.

4.5.7. User security level and all-time pass card (Bypass) setting

On issuing, security level can be specified for each user. By changing Security Level dropdown list, user's security level can be specified from 1/1,000 to 1/100,000,000. If **Device Default** is selected, security level configured on BioEntry Smart device is used.

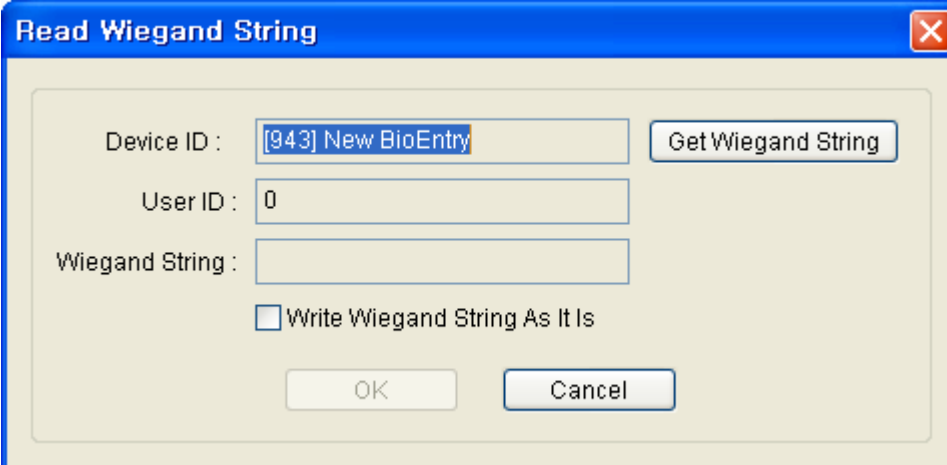
To issue all-time pass card (bypass card), you can choose bypass card option.

Note : What is bypass card? Device authorizes a user with a card without fingerprint authentication process.



4.5.8. Wiegand string setting using ID card

On issuing a smart card, the specific Wiegand string contained in customer's ID card can be transferred to the smart card. For this operation, RF Wiegand device should be connected to the Wiegand input port of the selected BioEntry device.

A screenshot of a Windows-style dialog box titled "Read Wiegand String". The dialog has a blue title bar with a close button (X) in the top right corner. The main area is light gray and contains several input fields and buttons. The "Device ID" field is pre-filled with "[943] New BioEntry". To its right is a "Get Wiegand String" button. Below "Device ID" is the "User ID" field, which contains the value "0". Below "User ID" is the "Wiegand String" field, which is currently empty. Below the "Wiegand String" field is a checkbox labeled "Write Wiegand String As It Is", which is currently unchecked. At the bottom of the dialog are two buttons: "OK" and "Cancel".

Detailed operations are as follows.

- Press the **Wiegand String Setup** button
- Press the **Get Wiegand String** button and touch the ID card containing Wiegand string on the Wiegand device.
- The Wiegand string received from the device is displayed on the user management window.
- Enable **Write Wiegand String As It Is** check box to use the Wiegand string instead of the user ID
- Press **OK** button to issue the user's smart card. Then, the received Wiegand string is stored on the smart card. If the check box is disabled, the Wiegand string converted from user ID is written to the smart card.

4.5.9. Read issued smart card

The information stored on the issued smart card can be retrieved by **Read Card** button on the user data information window. When PC USB smart card device is used, the site key management window will also appear if the site key is mismatched. In reading process, the site key change option is neglected.

4.5.10. Card format

Formatting is the process of erasing issued information on the smart card. The **Format Card** button on the user data information window initiates formatting process. The site key change option is effective in this process.

4.5.11. Notes on card issue

- Before writing on a new smartcard, you should format the new smart card first.
- Site key is not stored in BioAdmin software to improve the security of the system.

Note : It is the necessary for the administrator to remember and keep in secret the custom site key for proper management of the system. Also, please pay keen attention to changing the site key on the smart card.

- If writing to smart card is stopped accidentally in issuing process, the smart card might be corrupted and irrecoverable. Be careful to avoid accidental stop in writing smart card.

4.5.12. Rules on user T&A event control

This menu is used to set user time attendance rule. For the detailed operation, refer to Chapter 12 Report.

4.6. Delete checked user

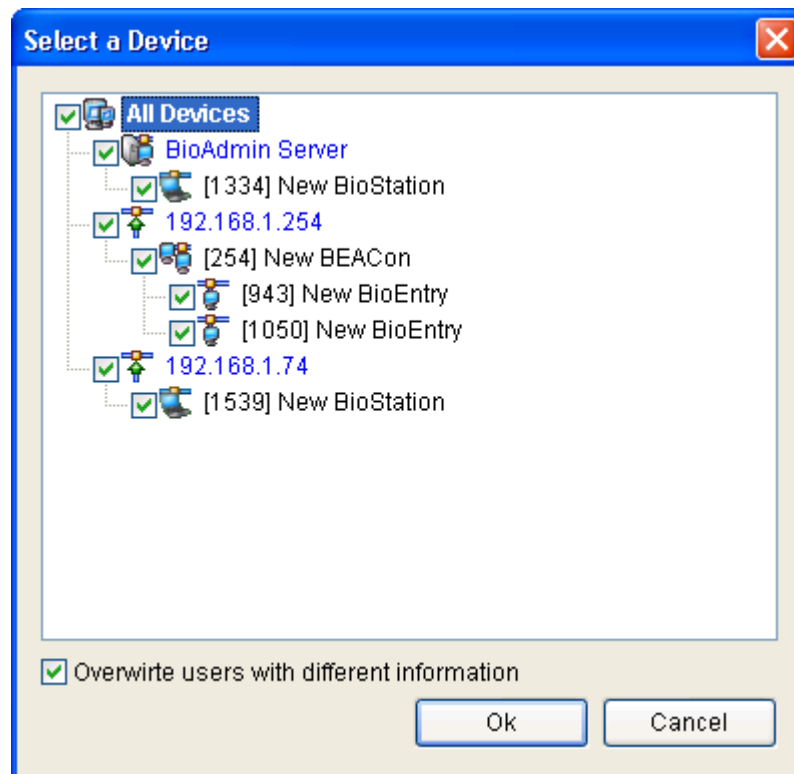
4.6.1. Delete checked user from BioAdmin software

Delete checked user information on user list window. If you check a user and click **delete checked user** in task box, a message “do you want to delete checked (selected) user?” appears. If you press ok button, checked user is deleted from BioAdmin of the host PC.

4.6.2. Synchronization deleted user information with device

If you transfer remaining user information after deleting a specific user, you can also delete such deleted user information from device.

4.7. Transfer checked user to device



Transfer checked users to device is to transfer user DB in host PC to device. To run a device, user data including fingerprint information should be transferred to device after user enrollment.

User information such as user ID, finger scan information, access group and security level is transferred through this process. Transfer procedure is processed in selected device, selected group or all devices linked on network. In how to select (check) user, user information can be transferred selectively.

Detailed operating process is as follows.

- Check a user to transfer.
- Press **transfer checked users to device** button.
- Select a device on select device window.
- In case user ID is same but user information is different, if you check overwrite, data in host PC will overwrite the same user's information in device.
- If not able to find a selected user in device, new user data is transferred from host PC database to device.

4.8. Delete checked users from device

On user list window, enrolled user can be deleted by **delete checked user from device** button.

Detailed operating process is as follows.

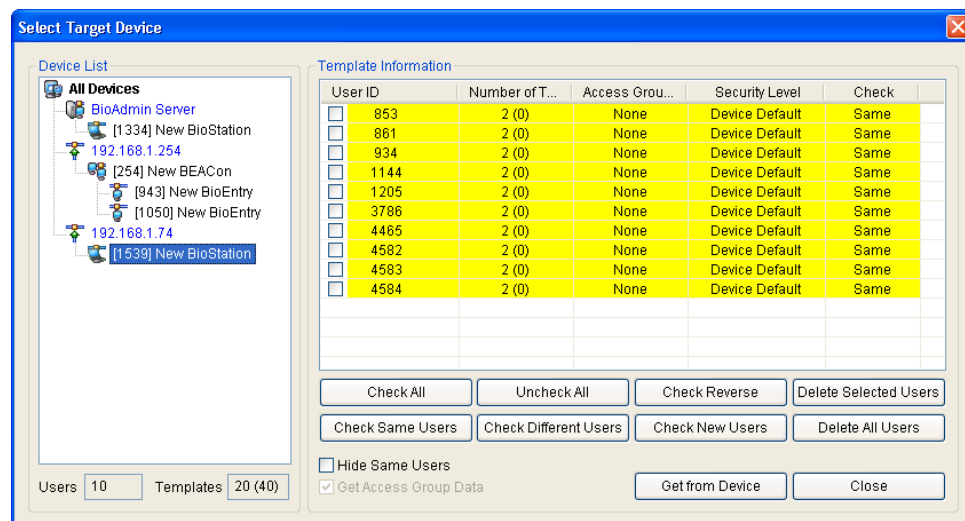
- Select a user to delete
- Press **delete checked user from device** button on task window.
- Select a corresponding device on select device display.
- Selected (checked) user is not deleted on host PC user list. To delete it from host PC user list, press 'delete checked user' button.

Note : Be careful in selecting a device in a network because it is a task to delete user information from selected device.

4.9. Manage users in device

Manage users in device is to upload user information from device to host PC database. User information such as user ID, fingerprint information, access group number, security level is uploaded thru this process.

In this menu, you can upload user database selectively from chosen device on network.



Detailed operating process is as follows.

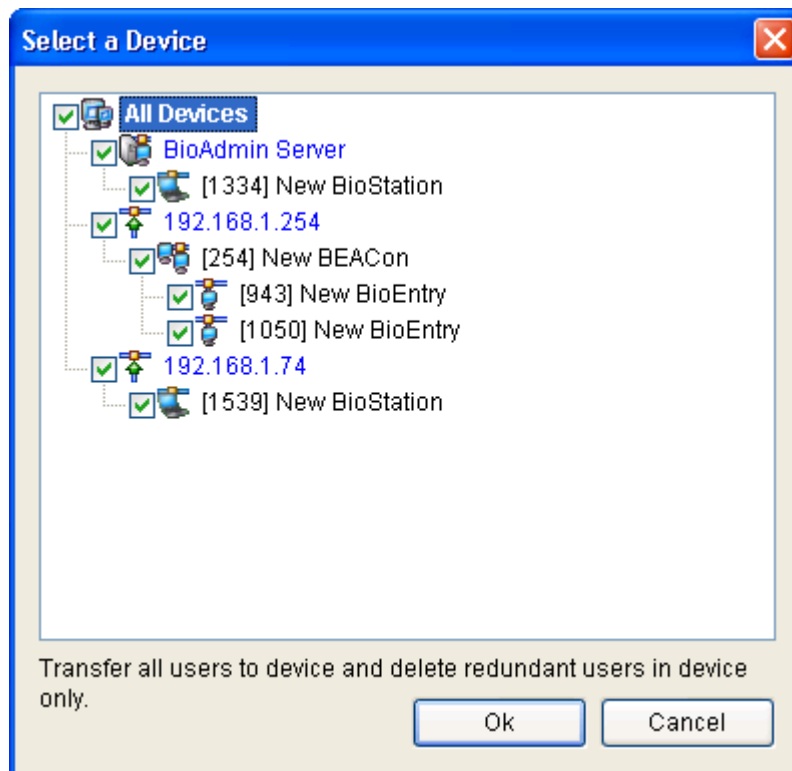
- Press **Manage users in device** button.
- Select a corresponding device on device list window.
- Under device list window, you can see user and number of fingerprint information enrolled in the selected device.
- User classification
 - Same user : user whose user information in BioAdmin software corresponds to user information uploaded from device.
 - Different user : user whose user information in BioAdmin software doesn't correspond to user information uploaded from device.
 - New user : user information uploaded from device doesn't exist in BioAdmin software. it can be construed as surplus user in device.
- Color classification
 - Same user : indicated in yellow.
 - Different user : indicated in red.
 - New user : indicated in white.
- Check classification
 - Check all: check (select) all user information
 - Uncheck all : to uncheck after checking all user information
 - Check reverse : to uncheck checked user or check unchecked user
 - Delete selected user : to delete selected user
 - Check same users : select users whose user information in BioAdmin software corresponds to user information uploaded from device.
 - Check different users : select users whose user information in BioAdmin software doesn't correspond to user information uploaded from device.
 - Check new users : select users who are enrolled in device only but do not exist in BioAdmin software.
 - Delete all : to delete selected users and the other all users
- Hide same users

If you press check same users, checkbox of a user whose data is same both in device and host PC is checked. If you display hide same users, these users can be hidden on finger scan information window.
- Get access group data

Check a checkbox of get access group data and execute Get from device, to upload user access group information.

4.10. Synchronize all users

Synchronization all users button transfers all user data base in host PC to device and surplus users remaining in device only are deleted. User information such as user ID, fingerprint information, access group number and security level is uploaded thru this process.



Detailed operating process is as follows.

- Press **synchronize all users** button.
- Select applicable device on device list window.
- Press select button to transfer user information database in device from host PC to device.

Note : By transferring all users to device, surplus users in devices will be deleted.

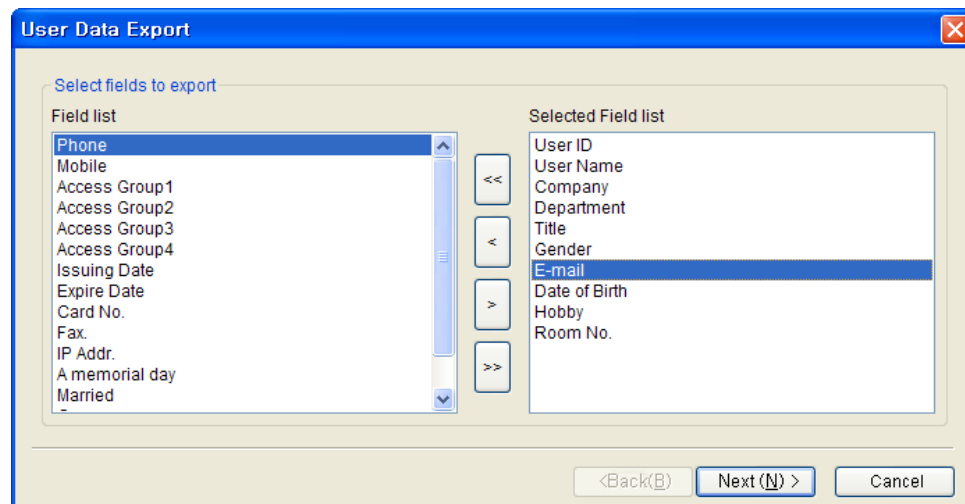
4.11. Export to file

The **Export to file** button initiates saving information of selected users in CSV format. Fingerprint templates are not included in this exportation. Exported CSV file

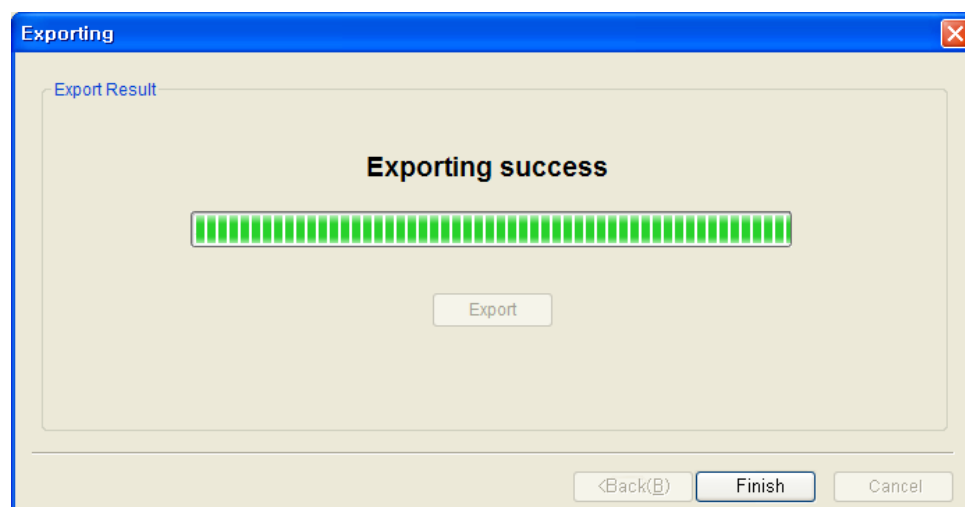
can be edited using Microsoft Office Excel or usual text editor.

Detailed operations are as follows.

- Check on the users to export.
- Press the **Export to file** button.



- Select fields to export. You can select the target fields simply by moving the target fields from Field list to Selected Field list.
- After selecting the fields, press the **Next** button.
- Select a file to export.
- After selecting the file, press **Next** button.
- Press **Export** button.

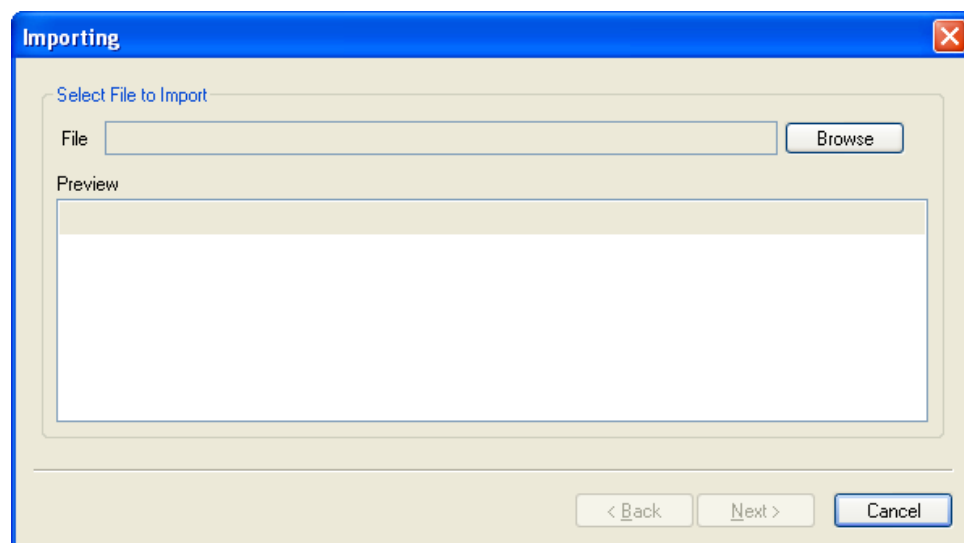


4.12. Import from file

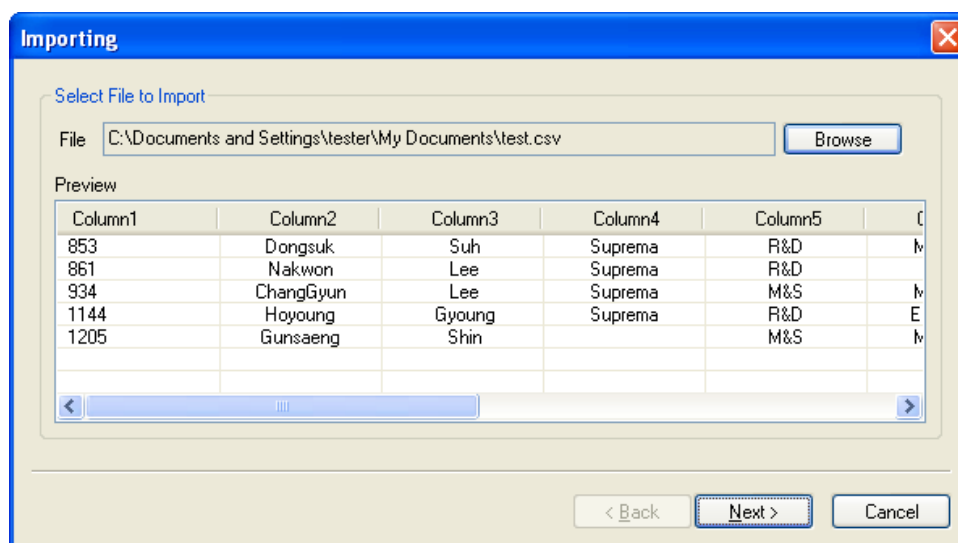
The **Import from file** button is used to upload user database from an external database to BioAdmin Software user database. User list saved as CSV (Comma Separated Values) format can be loaded into user database list.

Detailed operations are as follows.

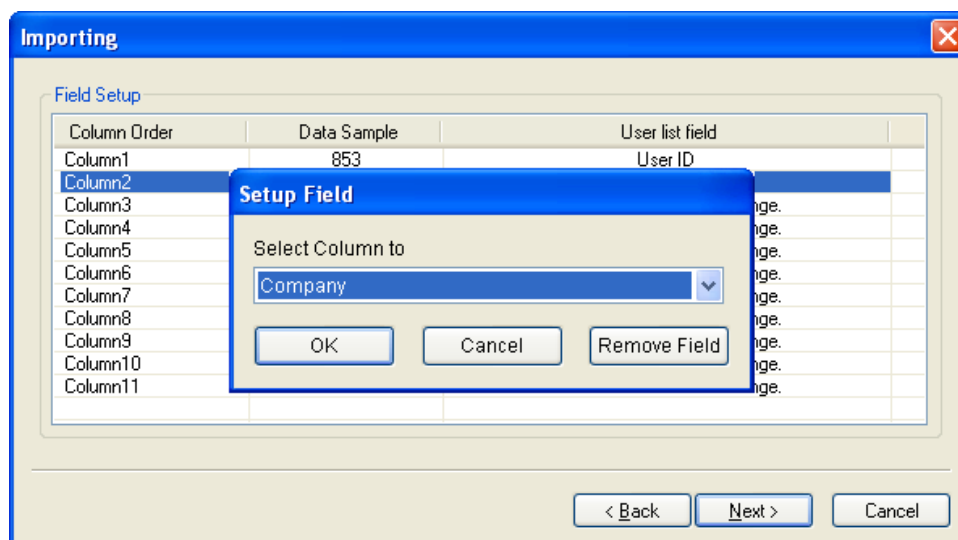
- Press the **Import from file** button.



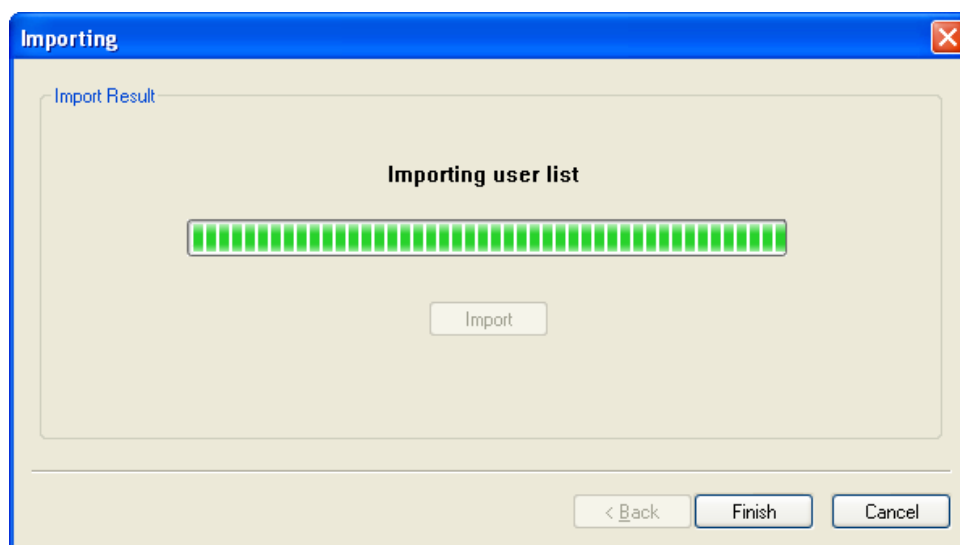
- Select a file to upload.
- After selecting the file, you can see the content examples of 5 users on the preview window. Check the preview window to confirm the selected file is the right file from which you want to upload the database.



- If the file is correct, press the **Next** button.
- Select a column to upload.

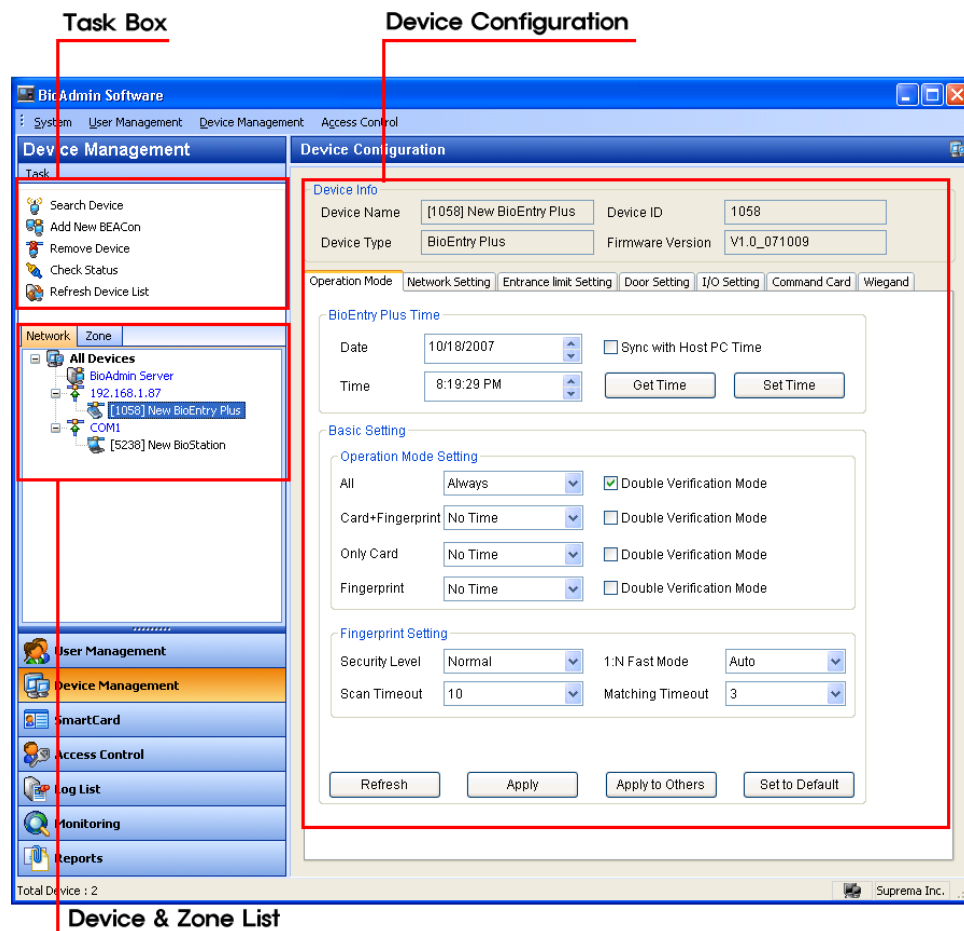


- Press the **Upload** button.



5. Device Management

By selecting the **Device Management** menu, the device management page is updated on the main window.



Device management page is divided into 3 sectors:

- Device configuration

The configuration set up window shows the current configurations of networked BioEntry, BioStation, and BEACon. Also, this window shows the configurations to be changed.
- Task box

The Task box includes buttons to control basic operations of the Device Management page.
- List Window

List Window divides into Device List and Zone List.

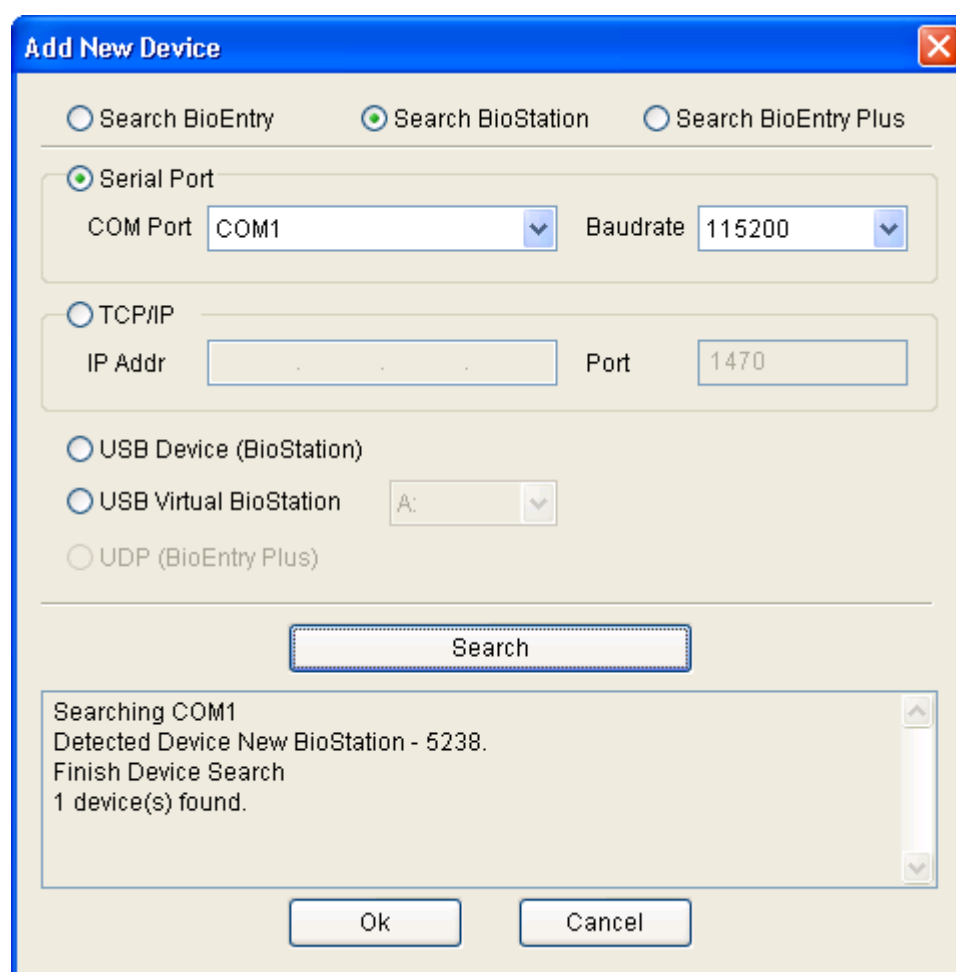
“Device List” displays a list of connected devices, and it can be changed its setting value by selecting a certain device. “Zone List” displays the defined zone of the connected device. Please refer to ‘4.4 List Window’ section for further information.

5.1. Search New device

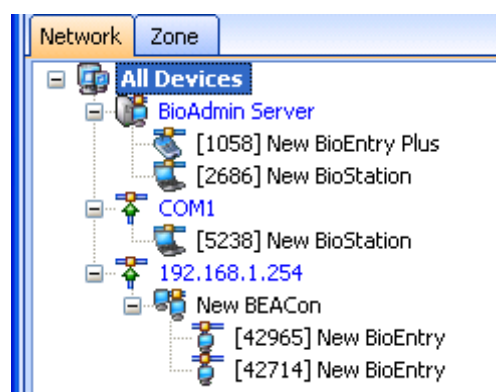
To search new BioStation, BioEntry, or BioEntry Plus device and add, click search device menu in task box. If add new device window pops up, select a device for search from BioEntry, BioEntry Plus, or BioStation and select serial port, TCP/IP (Ethernet) or USB device according to interface between device and host PC. The USB connection is available only with BioStation and UDP can be used for BioEntry Plus.

5.1.1. Serial port

In case device and host PC are linked by serial network, set applicable COM port of host PC and select baudrate. Default baudrate of BioStation, BioEntry and BEACon is 115,200 bps.



Press search button to display search result. Press ok button to display searched device on device list. The number in bracket [] ahead of searched device name is device ID. To change device name, place a cursor on applicable device and press the right button of the mouse to display a menu. Choose 'change name' then input window appears where a new name can be entered.



5.1.2. Ethernet

In case device and host PC is connected by Ethernet, enter IP address and port in TCP/IP field on add new device window.

In case of BioStation and BEACon, IP address can be checked in device. For details, refer to manual of each device. In case of BioEntry, Ethernet interface is not supported but can be linked by Ethernet using Ethernet to Serial converter in host PC. Input IP address of mounted Ethernet to Serial converter.

Input 1470 for all ports.

Add New Device

☐ Search BioEntry ☒ Search BioStation ☐ Search BioEntry Plus

☐ Serial Port

COM Port: COM1 Baudrate: 115200

☒ TCP/IP

IP Addr: 192 . 168 . 1 . 77 Port: 1470

☐ USB Device (BioStation)

☐ USB Virtual BioStation A:

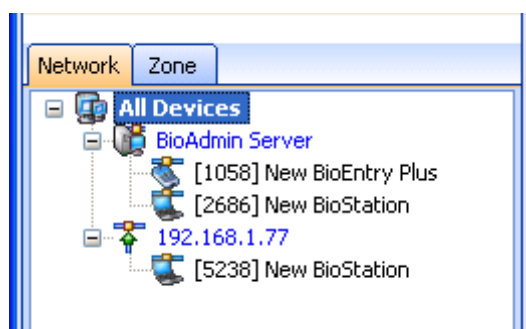
☐ UDP (BioEntry Plus)

Search

Searching 192.168.1.77 (port:1470)
Detected Device New BioStation - 5238.
Finish Device Search
1 device(s) found.

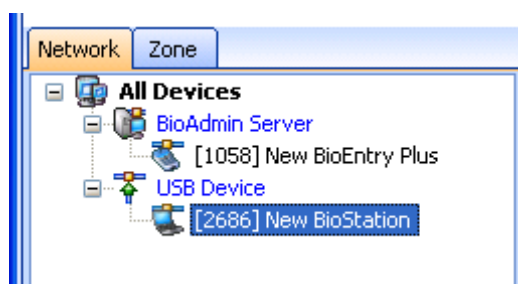
Ok Cancel

Once device is linked correctly with network, searched device ID appears with bracket [****] under port on device tree window.



5.1.3. USB device

In case of connecting BioStation with host PC by USB, select USB device and search.



5.1.4. Virtual Terminal

You can use a USB memory as a virtual BioStation terminal. After connecting a USB memory to BioStation, store the necessary information such as user information, log, and various setting values of the BioStation. Then, by connecting the USB memory to the host PC, you can utilize most of the BioAdmin menus with the connected virtual terminal.



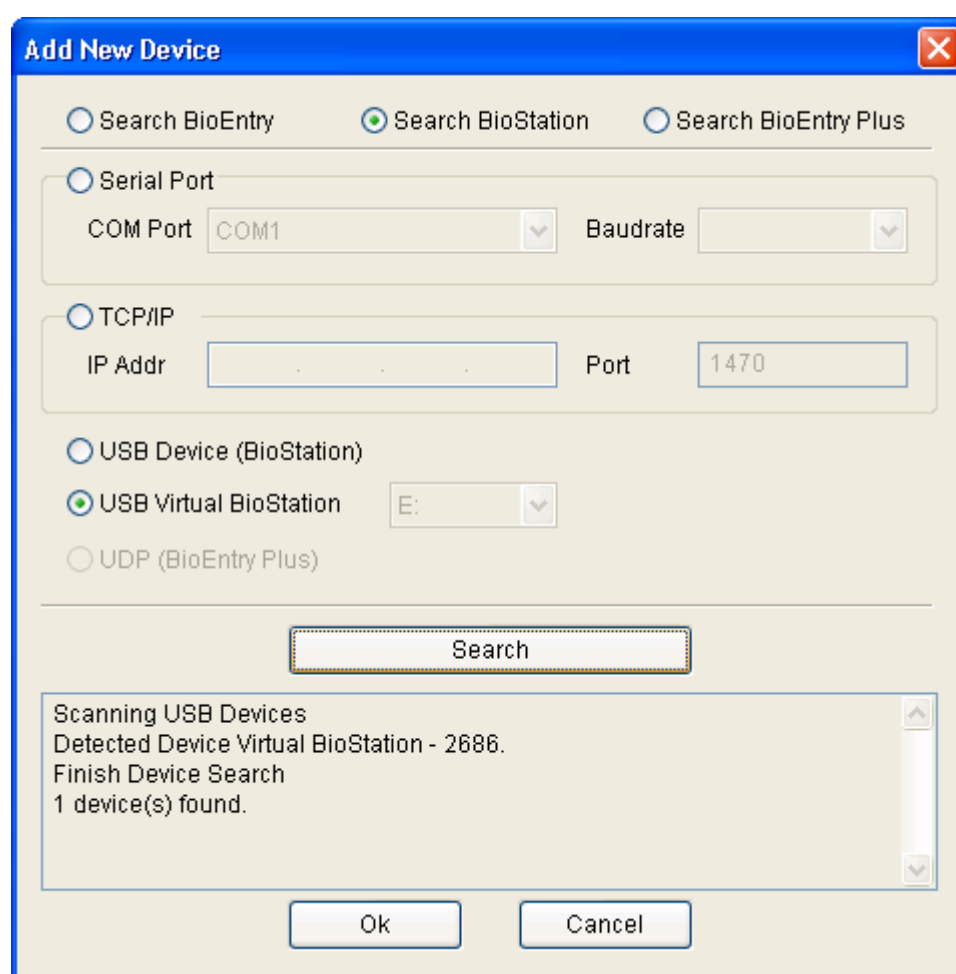
Note : To use a virtual terminal, OS of your host PC should recognize the USB memory as a correct USB drive. Thus, user should not change or remove the file in the USB drive.

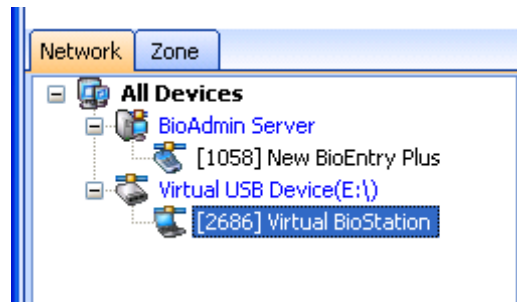
You can add a virtual terminal to the network by the following procedures.

- Register a USB memory as a virtual terminal. You can do so with the **Initialize** menu of the Network / USB memory menu on BioStation. For the detailed

operation, please refer to the BioStation User Guide.

- After registering a USB memory as a virtual terminal, connect it to the host PC.
- Check whether your host PC properly recognizes the virtual terminal as a drive.
- Select the virtual terminal on the **Search Device** menu.
- Select the drive of the connected virtual terminal and press **Search** button.
- After finding the virtual terminal, press **OK** button.





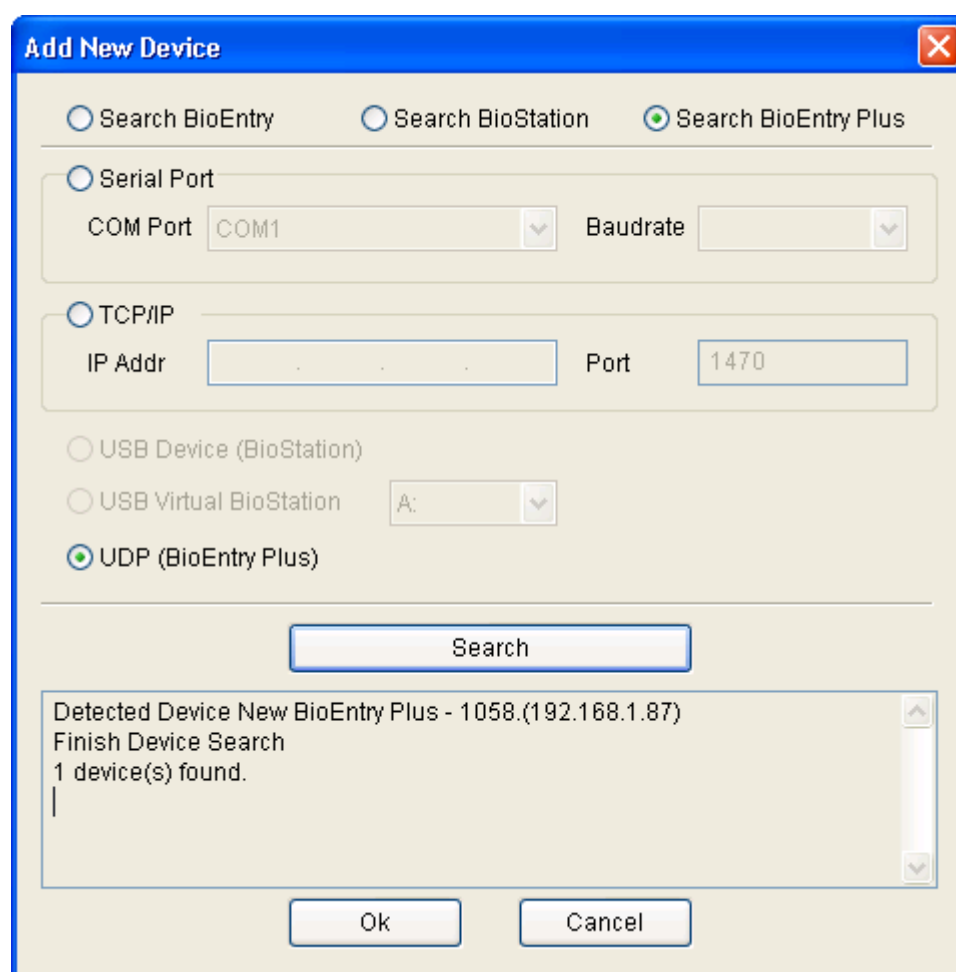
5.1.5. UDP (BioEntry Plus)

BioEntry Plus is to add a device using UDP function rather than BioStation.

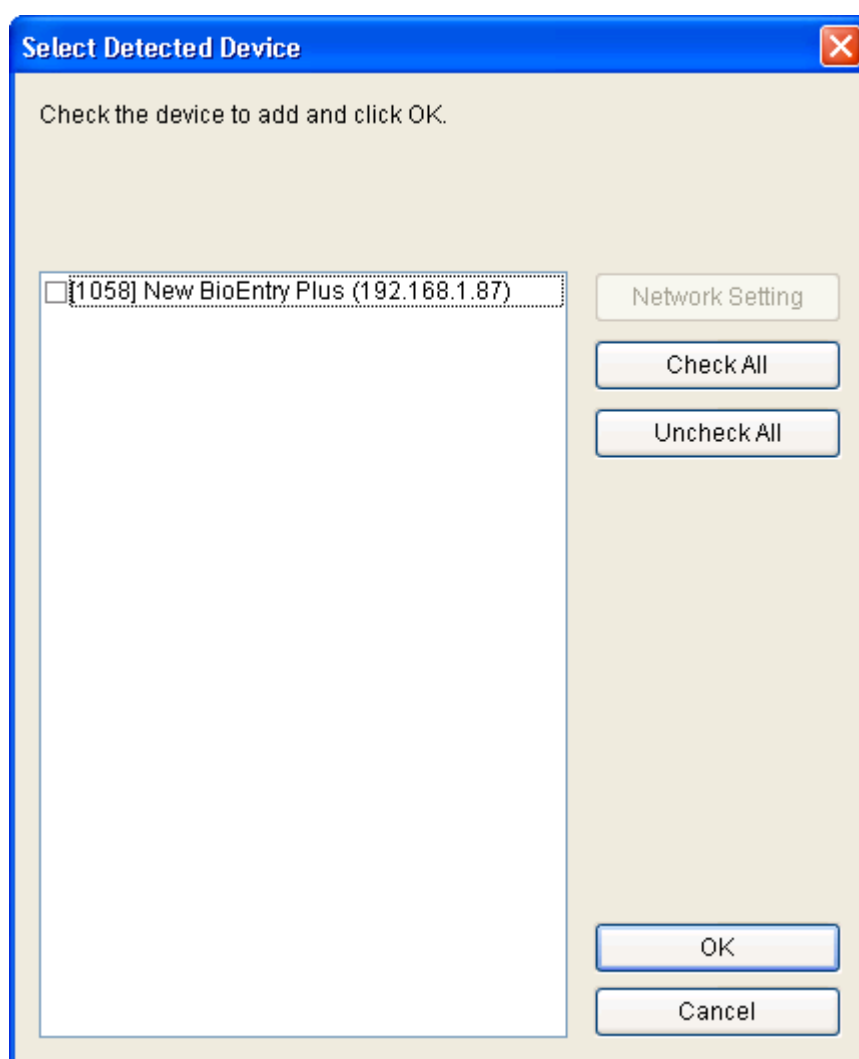
- Search new installed BioEntry Plus within same network bandwidth.
- Select the detected BioEntry Plus device.
- Make BioEntry Plus network setting.

In case of DHCP environment, BioEntry Plus is automatically assigned IP address.

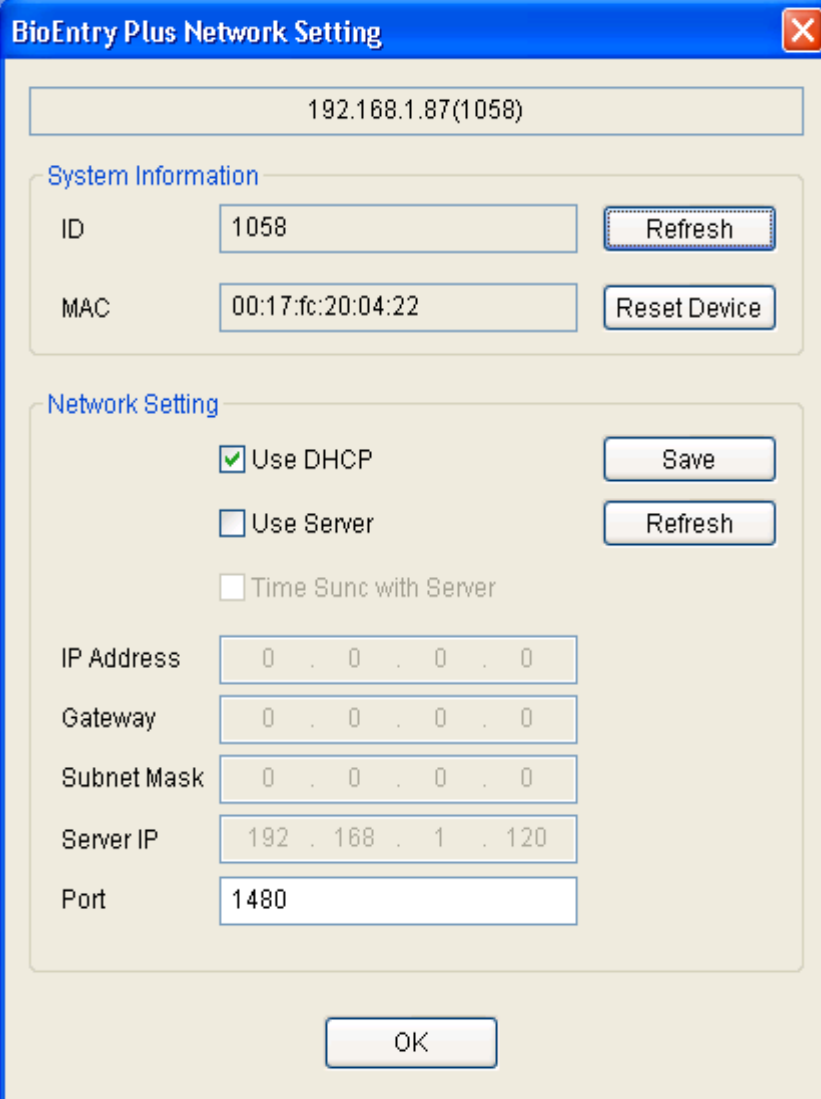
In case of not supporting DHCP environment, BioEntry Plus is temporarily assigned IP address, so network administrator has to assign valid IP address. Not to conflict with other IP address, only one device is detected and administrator has to assign each device in sequence.



- Check mark 'UDP (BioEntry Plus)' in "Search New Device" window, click Search button, then all connected BioEntry Plus devices are detected, which may take a certain minutes depending on the network traffic or line condition. You may click Search button again for not detected devices.



- Press OK button, then "Detected Device Selection" windows is appeared.
- Check mark new device to modify network setting
- Depending on the network environment, administrator can select DHCP or USE Server.



The image shows a 'BioEntry Plus Network Setting' dialog box. At the top, there is a text field displaying '192.168.1.87(1058)'. Below this, the 'System Information' section contains two rows: 'ID' with a text field '1058' and a 'Refresh' button, and 'MAC' with a text field '00:17:fc:20:04:22' and a 'Reset Device' button. The 'Network Setting' section follows, featuring three checkboxes: 'Use DHCP' (checked), 'Use Server' (unchecked), and 'Time Sync with Server' (unchecked). To the right of these checkboxes are 'Save' and 'Refresh' buttons. Below the checkboxes are five text fields for 'IP Address', 'Gateway', 'Subnet Mask', 'Server IP', and 'Port'. The 'IP Address', 'Gateway', and 'Subnet Mask' fields each contain '0 . 0 . 0 . 0'. The 'Server IP' field contains '192 . 168 . 1 . 120'. The 'Port' field contains '1480'. An 'OK' button is located at the bottom center of the dialog.

- The default port of BioEntry Plus is 1471. (Can be modified)
- After finishing network setting, you can find the added new device in Device List.
- The right click of mouse button on the device is also available.

Note : In case of checking 'Use Server' in the BioEntry Plus Network Setting, please follow the below setting as:

- Server IP : IP address of PC installed BioAdmin Server program
- Port : Port number used in BioAdmin Server program (Default: 1480)

5.2. Add New BEACon

Searching and adding process of BEACon.

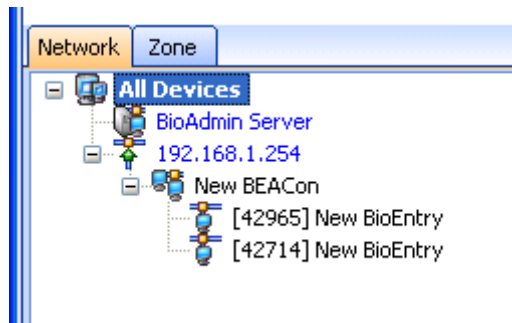
The screenshot shows the 'Add BEACon' dialog box. It has a title bar with the text 'Add BEACon' and a close button. The dialog is divided into two main sections. The first section has two radio buttons: 'Serial' and 'TCP/IP'. The 'TCP/IP' radio button is selected. Below the radio buttons are two rows of fields. The first row has 'COM Port' and 'Baudrate' fields, which are disabled for the TCP/IP option. The second row has 'IP Address' and 'Port' fields. The 'IP Address' field contains the text '192 . 168 . 1 . 254' and the 'Port' field contains '1470'. Below these fields is a section titled 'New BEACon'. This section contains four fields: 'BEACon ID' (containing '1'), 'BEACon Name' (containing 'New BEACon'), 'BioEntry #1' (containing '42714'), and 'BioEntry #2' (containing '42965'). To the right of the 'BEACon ID' field is a button labeled 'Update Attached BioEntry'. At the bottom of the dialog are two buttons: 'OK' and 'Cancel'.

Detailed operations are as follows.

- Press the Add New BEACon button on the task box.
- Select the communication method between Serial and TCP/IP.
- In case of serial, set COM port and network baudrate and incase of TCP/IP, input IP address of BEACon to add. For how to check IP address in BEACon, refer to BEACon manual.
- Input BEACon ID to add in BEACon ID field. For how to check ID in BEACon, refer to BEACon manual.
- Designate and input BEACon name in Name field.
- If you press update attached BioEntry button, it starts searching applicable BEACon and linked BioEntry device.
- As a result of search, linked BioEntry ID is indicated in BioEntry #1 and BioEntry #2 fields. In case of failing to search BEACon due to wrong input of IP address

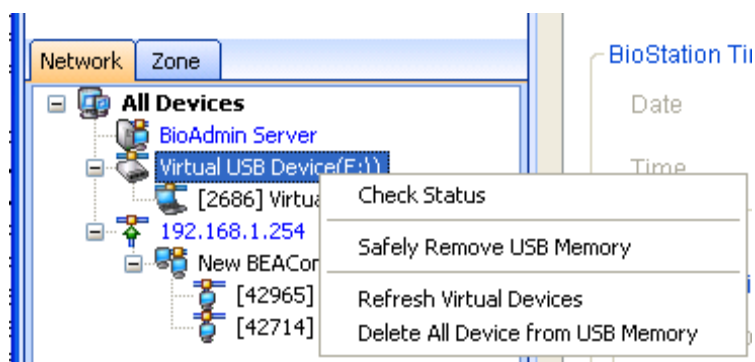
or ID, none is indicated here.

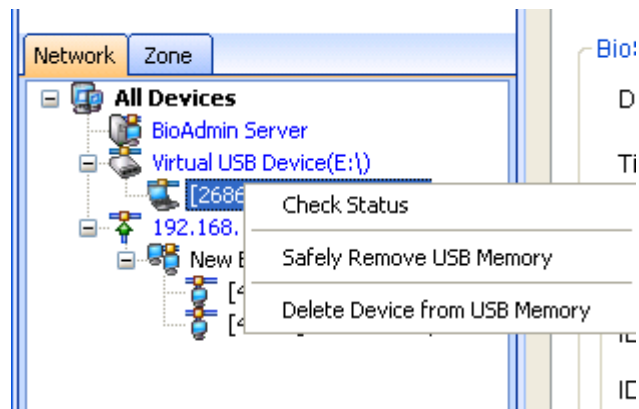
- Press ok button to view searched BEACon and linked BioEntry on device list.



5.3. Remove device

- Select a device on task list and click **Remove Device** on task box to remove the selected device. You can also remove a device by selecting a device on device list and clicking a right button of the mouse.
- You can remove virtual terminal from the network by the following procedures.
 - Select a virtual terminal on the device tree and click the right button of your mouse.
 - Safely Remove USB Memory: Click this menu to detach the virtual terminal from your host PC after storing data on it. If you detach the virtual terminal while storing or using data, it can cause a data loss from the virtual terminal
 - Delete All Device From USB Memory: Remove the data of all virtual terminals from the USB memory. To use the USB memory again as a virtual terminal, you need to register the USB memory as a virtual terminal.
 - Delete Device from USB Memory: Remove the data of the selected virtual terminal from the USB memory.





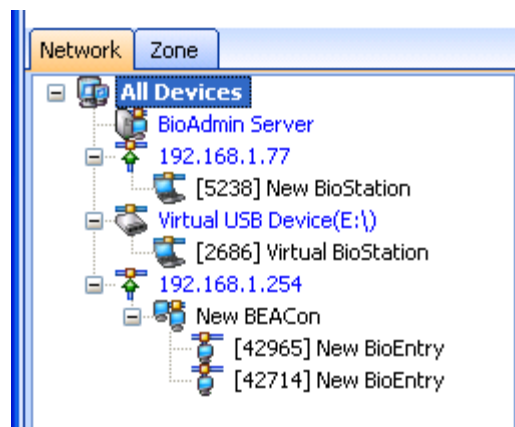
5.4. List Window

List Window divides into Device List and Zone List.

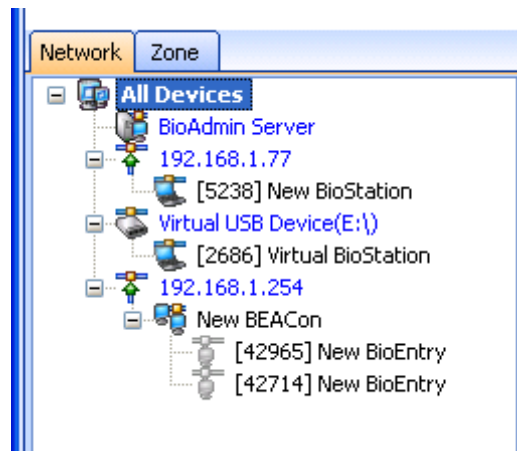
“Device List” displays a list of connected devices as Icon type and “Zone List” displays the defined zone of the connected device.

5.4.1. Device List

- If Device List is connected, icon is active.



- If Device List is not connected, icon is inactive.

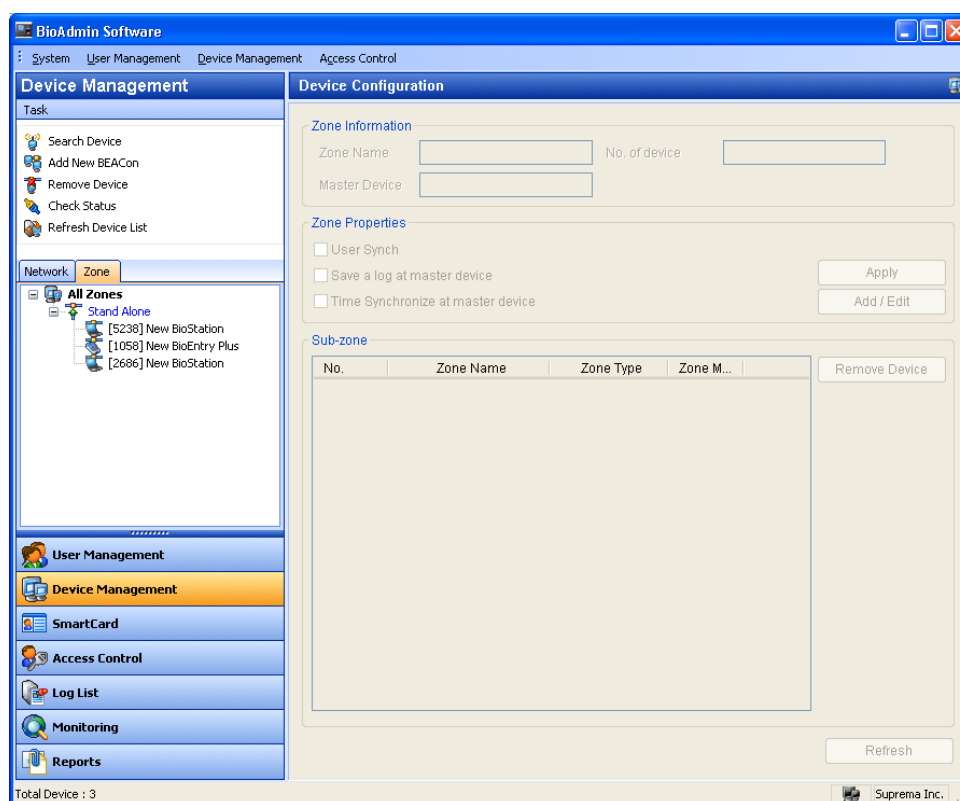


Status of each device is updated in case of the followings.

- When BioAdmin software starts
- When a device is selected anew
- When clicking check status menu
- When connecting BioStation to host PC via USB
-

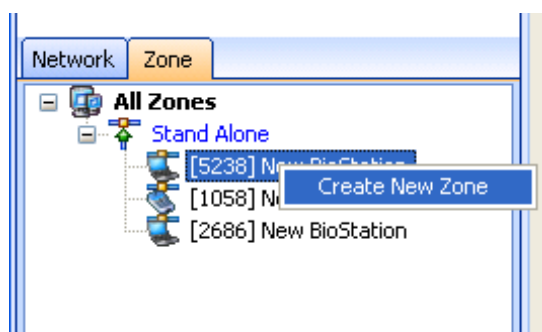
5.4.2. Zone List

- Zone List can be configured as some grouping to manage and control connected each device, then display a list. If you click "Zone List", you can see zone list combination of each device. In case of no Zone setting, it display as "Stand Alone" in the sub device.

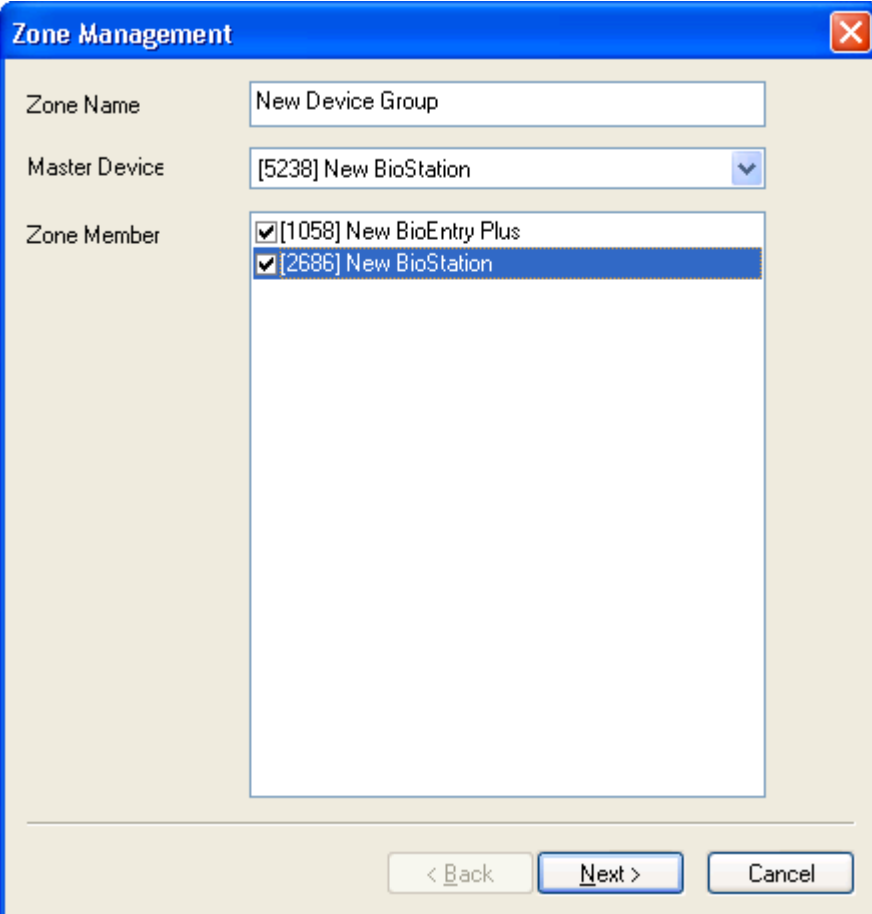


- Add a Sub Zone

- Click right button of mouse on the device to make Master Device for a zone, and you will see “Create New Zone”, and click it.



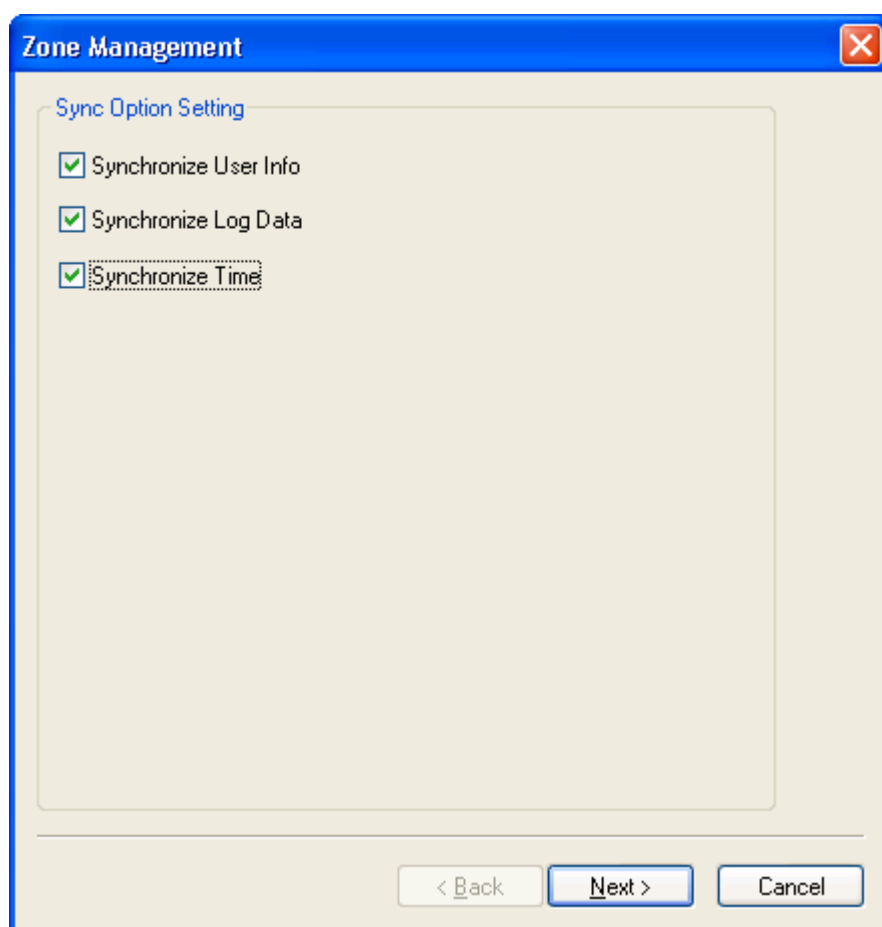
- Type “Zone Name” as you want and select a device as Master Device
- Check a mark a device to be Zone Member and press Next button.



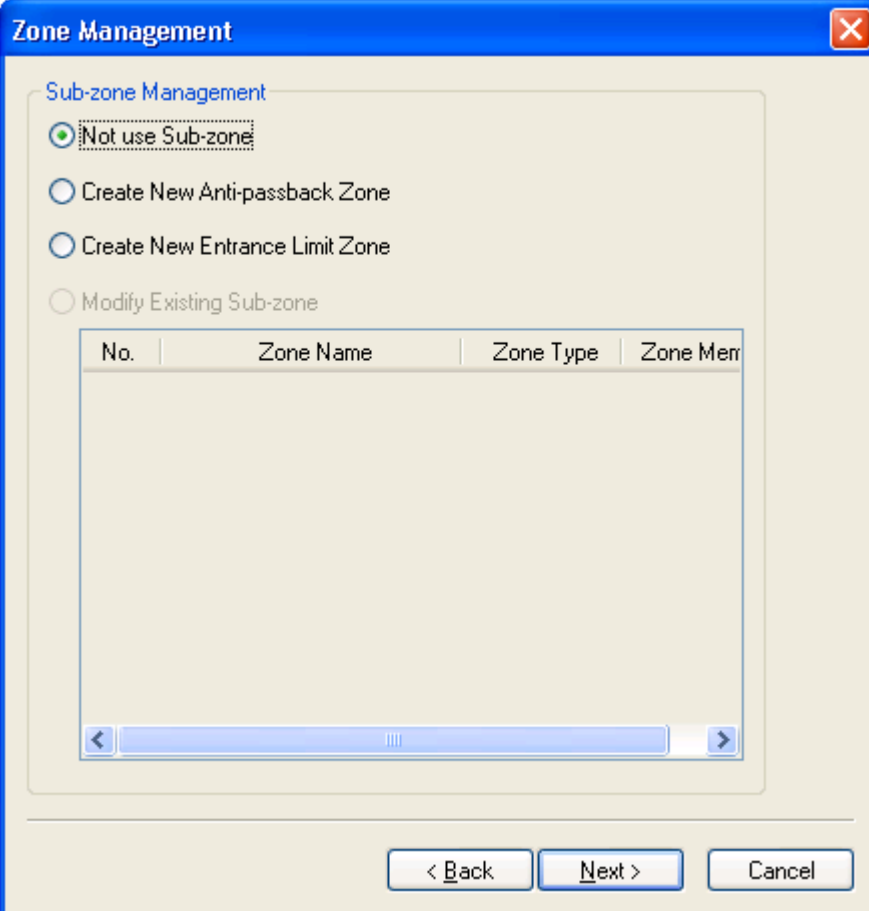
The image shows a 'Zone Management' dialog box with a blue title bar and a close button in the top right corner. It contains three main sections: 'Zone Name' with a text input field containing 'New Device Group'; 'Master Device' with a dropdown menu showing '[5238] New BioStation'; and 'Zone Member' with a list box containing two checked items: '[1058] New BioEntry Plus' and '[2686] New BioStation'. The second item is highlighted. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

Field	Value
Zone Name	New Device Group
Master Device	[5238] New BioStation
Zone Member	<ul style="list-style-type: none"><input checked="" type="checkbox"/> [1058] New BioEntry Plus<input checked="" type="checkbox"/> [2686] New BioStation

- You can select synchronization what you want among same zone device.



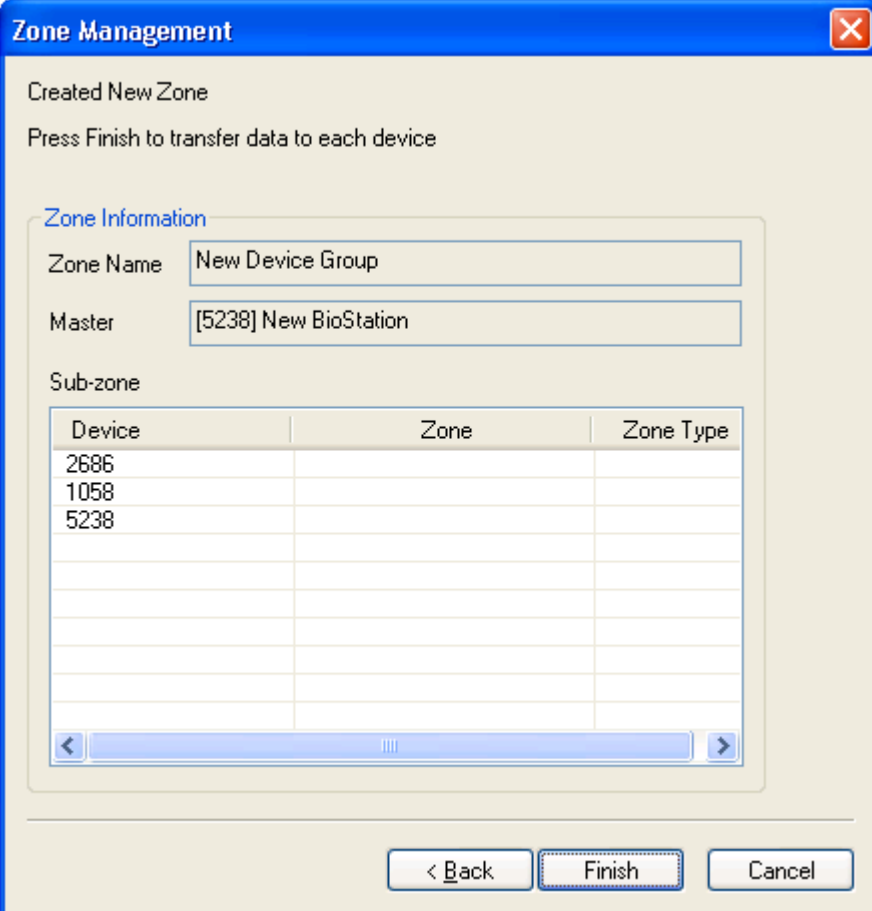
- Select Sub Zone whether it is APB, Entrance Limit, or No Sub Zone.



The image shows a 'Zone Management' dialog box with a blue title bar and a close button (X) in the top right corner. Inside the dialog, there is a section titled 'Sub-zone Management'. Below this title, there are four radio button options: 'Not use Sub-zone' (which is selected), 'Create New Anti-passback Zone', 'Create New Entrance Limit Zone', and 'Modify Existing Sub-zone'. Below these options is a table with four columns: 'No.', 'Zone Name', 'Zone Type', and 'Zone Merr'. The table is currently empty. At the bottom of the dialog, there are three buttons: '< Back', 'Next >', and 'Cancel'.

No.	Zone Name	Zone Type	Zone Merr
-----	-----------	-----------	-----------

- (For the purpose of synchronization only within same zone device, please select 'Not use Sub Zone'.



The image shows a 'Zone Management' dialog box with a blue title bar and a close button. The main area is light beige. At the top, it says 'Created New Zone' and 'Press Finish to transfer data to each device'. Below this is a section titled 'Zone Information' in blue. It contains two text boxes: 'Zone Name' with the value 'New Device Group' and 'Master' with the value '[5238] New BioStation'. Below these is a 'Sub-zone' section containing a table with three columns: 'Device', 'Zone', and 'Zone Type'. The table has three rows of data: 2686, 1058, and 5238. The table is scrollable, as indicated by the scrollbar at the bottom. At the bottom of the dialog are three buttons: '< Back', 'Finish', and 'Cancel'.

Zone Management

Created New Zone

Press Finish to transfer data to each device

Zone Information

Zone Name: New Device Group

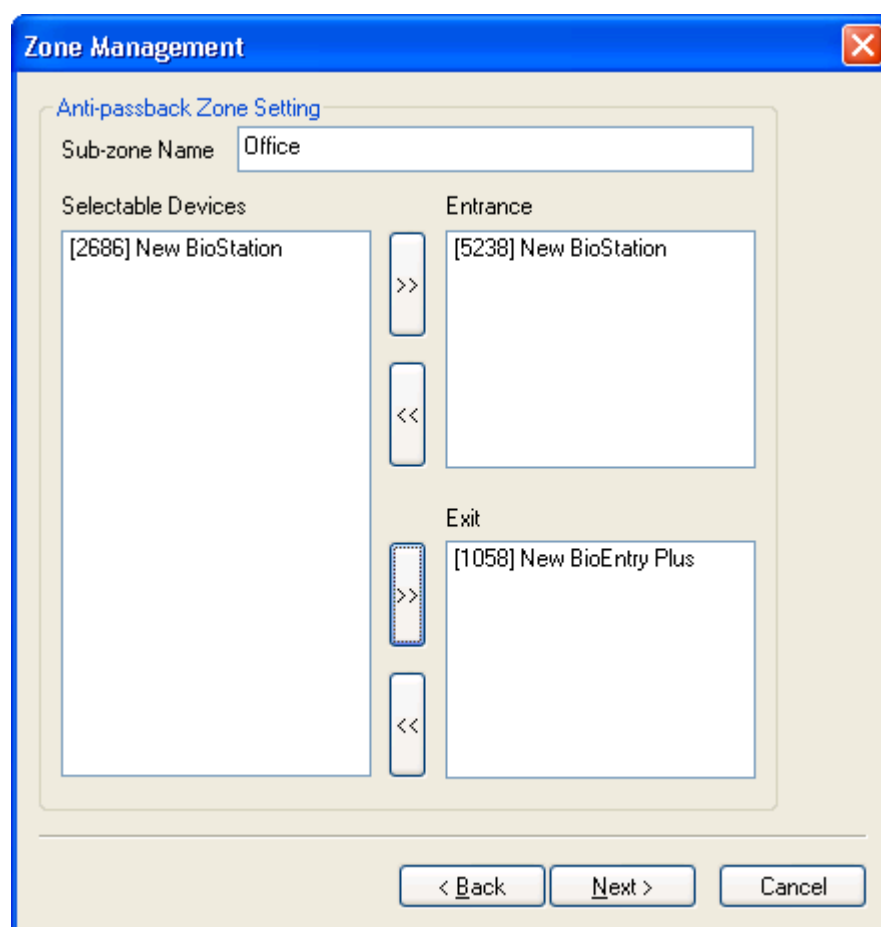
Master: [5238] New BioStation

Sub-zone

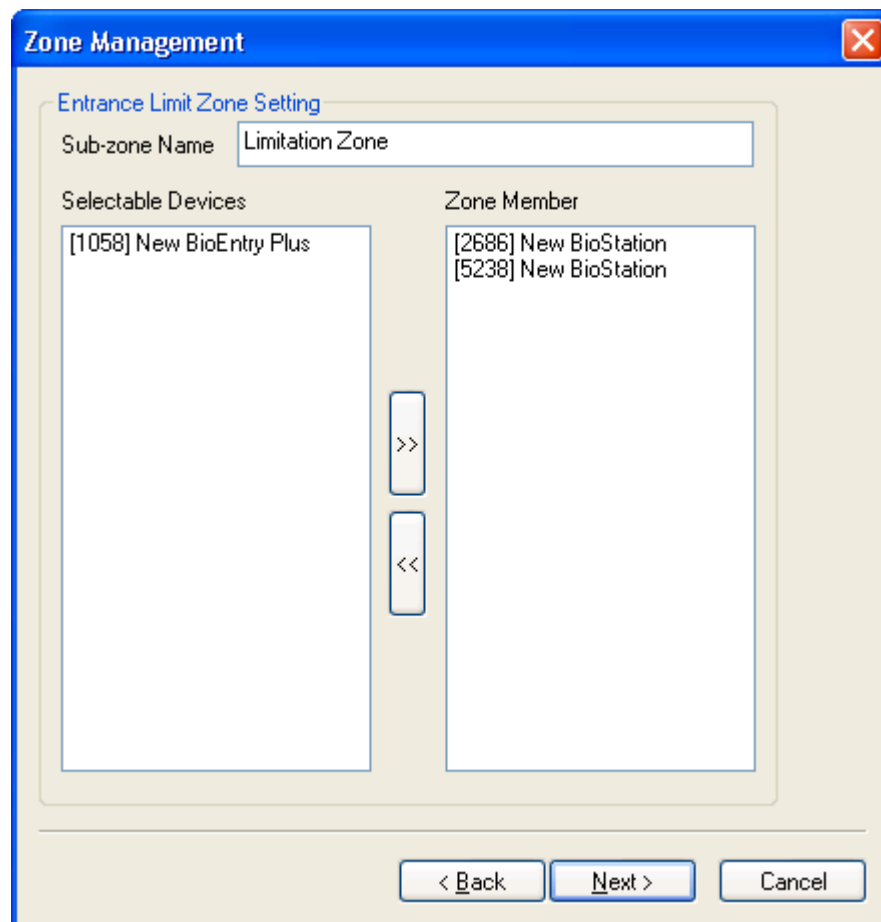
Device	Zone	Zone Type
2686		
1058		
5238		

< Back Finish Cancel

- APB (Anti PassBack) Zone information divides into for Entrance and Exit.



- Only user who has fingerprint verification successful for Entrance device can be verified for the Exit device, which is used to manages entrance members.
- Entrance Limit Zone setting can be applied for entrance limit function at once based on synchronized entrance log within same zone devices.



- If a setting is limited for repeat entrance within same zone devices, other devices follow the same setting, which deny repeat entrance though a user is successful for entrance within same zone devices.
- Select a device from “Zone Member Device” and press Next button.

Zone Management

Entrance Limit Zone Setting

Sub-zone Nam: Limitation Zone

Entrance Limit By Time Period

Check	Time Period	Max Number of Entrance
<input checked="" type="checkbox"/>	0900 ~ 1000	3
<input type="checkbox"/>	0000 ~ 0000	0
<input type="checkbox"/>	0000 ~ 0000	0
<input type="checkbox"/>	0000 ~ 0000	0

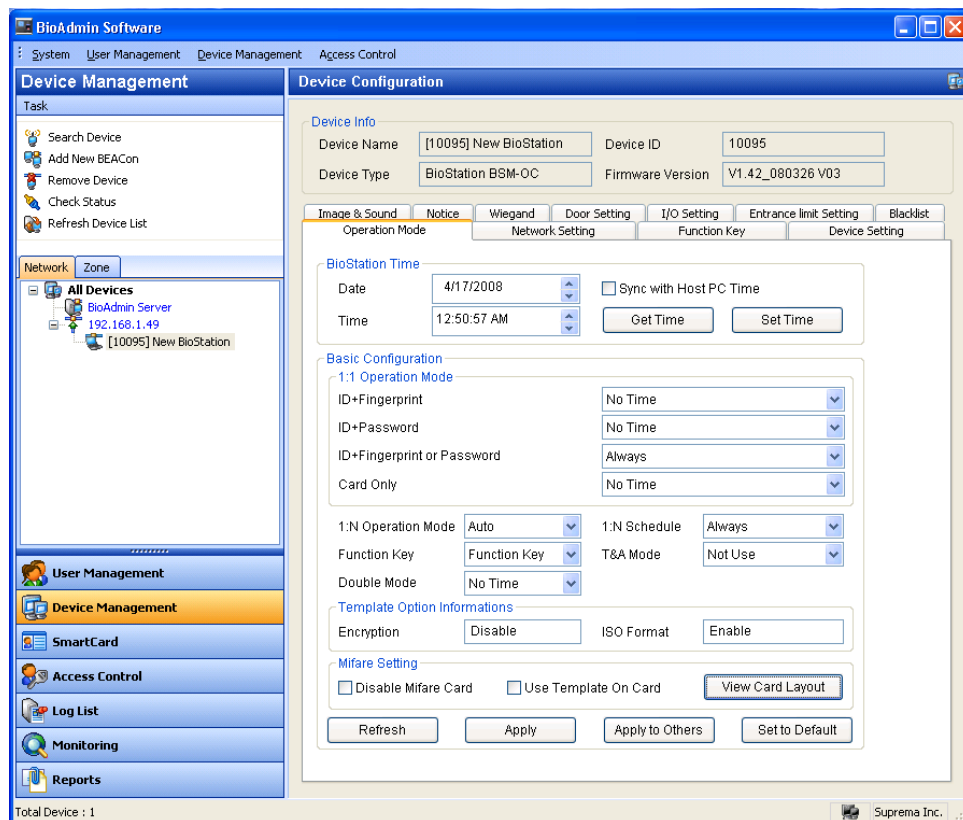
30 : Time Limit for Re-entrance (min) (0: No Limit)

< Back Next > Cancel

- You can type 'Entrance Limit By Time Period' and 'Max. Number of Entrance'.
- You can also set minimum time in minute to allow repeat entrance.

5.5. Manage BioStation device

If you select BioStation on device list, the device setup window of selected BioStation is updated on main window.



Device setup window is divided into 2 areas.

- Device information

Device information displays type, name, serial number and FW version of selected device.

- Configuration window

Configuration window shows settings of selected BioStation device and enables user to correct those settings. Configuration menu consists of separated tabs, i.e. operation mode, network, setting, function key, device setting, image & sound, and notice.

At lower part of configuration window are 4 buttons, i.e. refresh, apply, apply to others and set to default.

- **Refresh** : call device setting again.
- **Apply** : apply corrected setting on the current window to device.
- **Apply to others** : apply corrected setting on current window to another device. Device can be selected on select device window.

- **Set to default** : change setting as default. To apply this value to device, make sure to press apply button.

5.5.1. Device information

You can check device name, device type, device ID and firmware version of selected BioStation. Device ID number and firmware version are necessary information to check a product for technical support after installation.



- Device Name
- Device Type
- Device ID
- Firmware Version

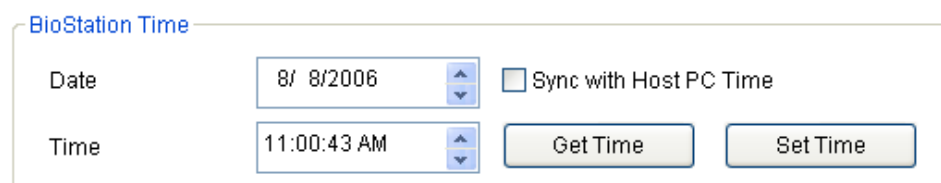
5.5.2. Operation mode

- Time setting

Date and time shown first are those read from BioStation. If you click get time button, it reads date and time from BioStation once again.

Method of BioStation time change is divided into direct input and synchronization with current PC time.

- Direct input : either input numbers directly in date and time window or place a cursor on a number and click up/down arrow keys for input. Press set time button after input to transfer input date and time to the selected BioStation.
- Synchronization with PC time : check **sync with current PC time** and set time button, then selected BioStation time is set by current PC time.



- Basic Configuration

- 1:1 Operation Mode : if you select 1:1 operation mode on BioStation, user ID should be suggested first and then the user should authorized himself with his fingerprint or password, which can be assigned by pre defined 'Time Zone' of "Access Control" at main menu. Please refer to "6.1 Time Zone Setting" (Time Zone should be transferred to all devices to select in 1:1 operation mode). Default is 'Always' or 'No Time'.

'Always' can be selected only one in below.

- ID + Fingerprint
- ID + Password
- ID + Fingerprint or Password
- Card Only

1:1 Operation Mode

ID+Fingerprint	No Time
ID+Password	No Time
ID+Fingerprint or Password	Always
Card Only	No Time

- 1:N Operation Mode : in 1:N Operation mode, user is authorized by fingerprint without user ID input. About how to start fingerprint input, user can choose one of 3 modes, i.e. auto, OK button/Function Key and none.
 - **Auto** mode : Because BioStation sensor is always on as standby mode, scan starts right after a finger is placed on the sensor.
 - If you choose **OK button** or Function Key button mode, you have to place a finger after pressing OK button or Function Key button on BioStation when entering fingerprint.
 - In case of not using 1:N mode but using 1:1 mode only, choose **None** mode.

1:N Identification	Auto	1:N Schedule	Always
Function Key	Function Key	T&A Mode	Not Use
Double Mode	No Time		

- 1:N Schedule : Select time zone of 1:N Operation mode, which can be also assigned by pre defined 'Time Zone' of "Access Control" at main menu. Please refer to "6.1 Time Zone Setting" (Time Zone should be transferred to all devices to select in 1:N operation mode).
- T&A function key : T&A function key is to enter T&A event before entering fingerprint for T&A control such as in, out, in duty, out duty. In BioStation, usually from F1 to F4 function keys are used for this and, if necessary, function key can be increased up to 16 keys. T&A key mode can be chosen from **function key** mode and **none** mode. In case of using BioStation for exclusive use of access control, choose none while in case of using for T&A control, choose function key. Pressing T&A key on BioStation first and then enter fingerprint to record applicable T&A event in a log. In the future T&A software, this log information can be used for various T&A and salary control data.
- T&A Mode : BioStation Function Key can be changed by below
 - Auto : T&A mode is automatically changed by pre defined function key of BioStation. If selecting this Auto mode and go to 'Function Key' tab, you will see highlighted 'Auto Mode' You can also select 'Time Zone' of "Access Control" at main menu.
 - Manual : If a user verify by pressing T&A Function Key, its function key keeps same function to the following users until disabling manual mode.
Please pay attention to when you select manual mode!!
 - Fixed Key: If selecting Fixed mode and go to 'Function Key' tab, you will see highlighted 'Fix' check box. For example, if you fix 'F1' key, it is not necessary to push 'F1' key, but just paste your finger to work for 'F1' function.
- Double Mode : In case of verifying two user's fingerprint, it is possible to

send relay for door opening or siren, which is special option for higher security level.

- Always
- No Time
- Defined 'Time Zone' of "Access Control"

Note : Double mode is specially designed for two user's verification for secure access control. Please pay attention to select this mode!

● Template Option Information

Template Option Informations

Encryption

Disable

ISO Format

Enable

- Encryption : Enable or Disable
- ISO Format : Enable or Disable

Note : Go to System->Preference Menu to make availability by selecting 'Security Option' and 'Template Format Option.'

The Preference dialog box contains the following sections and options:

- Device Time Setting**
 - ☐ Synchronize with current PC time at startup
- Automatic Locking**
 - ☐ Lock all BioEntry readers when exit BioAdmin
 - [Change Lock Password](#)
- Backup Options**
 - Default Backup Directory**
 - [Browse](#)
 - Automatic Backup Option**
 - ☐ Use Automatic Backup
 - [Browse](#)
 - Backup database when exit Bioadmin(☒ on everyday / ☐ on every month)
- Security Option**
 - ☐ Use Fingerprint Template Encryption [Change Encryption Key](#)
- Template Format Option**
 - ☐ Use ISO Format Template
- Access Control Option**
 - ☐ Use New Access Group for BioAdmin V4.2 (BioEntry Pass/Smart not support)

Buttons: [OK](#) [Cancel](#)

In case of changing settings such as various modes, changes are applied only after apply button is pressed.

● Mifare Setting (Mifare Model Only)

The Mifare Setting dialog box contains the following options:

- ☐ Disable Mifare Card
- ☐ Use Template On Card
- [View Card Layout](#)

- Disable Mifare Card :Not to use Mifare feature
 - Use Template On Card : Determine whether user information is stored on

the Mifare card by selecting it.

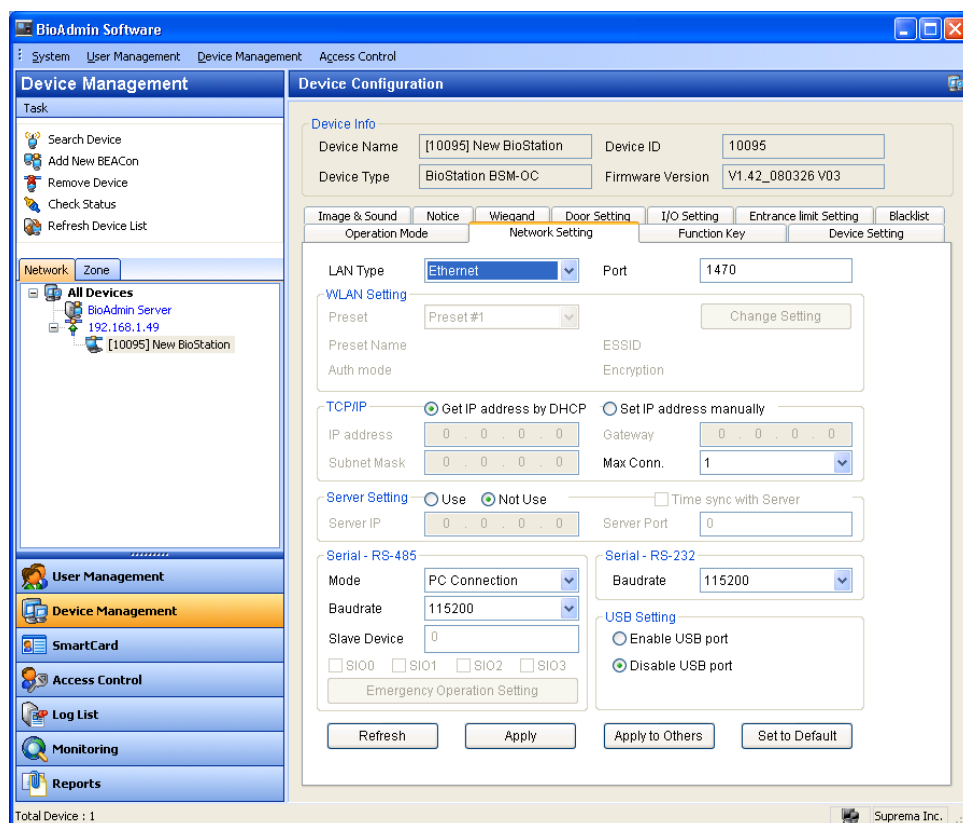
- View Card Layout : Display Mifare Layout stored on the current BioStation. Please refer to the “6. Smartcard / Mifare card” for Mifare Layout.

5.5.3. Network setting

This window shows setup for various networks of a device. As per interface methods, it is divided into LAN, serial, and USB.

● LAN

In network setup list box at upper part of a window, set whether or not to use LAN and if yes, whether to use cable LAN or wireless LAN. Specify a port as 1470.



● WLAN Setting

To setup the wireless network, you need the following procedures.

First, you need an access point. Each access point has its own SSID, and, in some cases, it use the data encryption. BioStation supports WPA_PSK and

WEP as the data encryption methods. Refer to the manual of your access point device and check whether it is using the data encryption. If yes, you need to check the type of the data encryption.

WLAN Setting

Preset	<input type="text" value="Preset #1"/>	<input type="button" value="Change Setting"/>
Preset	bio_linksys	ESSID bio_linksys
Auth mode	Open System	Encryption WEP

- **Preset:** To activate the wireless network, you should select one of the 4 preset. Of course, you can not use the wired LAN upon using wireless LAN function.

BioStation WLAN Setting

Preset Name	<input type="text" value="bio_linksys"/>
ESSID	<input type="text" value="bio_linksys"/>
Wireless Network Key	
Network Authentication	<input type="text" value="Open System"/>
Encryption Strength	<input type="text" value="WEP"/>
Network Key	<input type="text" value="....."/>
Confirm Key	<input type="text" value="....."/>

- **Preset Name:** preset name is displayed on the BioStation using WLAN setting.
- **ESSID:** ESSID is the unique ID of the access point. To check the ESSID of your access point, refer to the manual of your access point or ask your network administrator.
- **Auth mode:** You can select the network authentication open system,

shared key and WPA-PSK. It must have same setting to authentication of access point. You can see this setting on security page in access point setup application.

- Encryption Strength: You can select the encryption strength between WEP and WPA-PSK. By selecting WEP or WPA-PSK, you can encrypt the communication data between access point and BioStation.
- If the BioStation is too far from the access point, or there is an obstacle between BioStation and access point, the network can be interrupted. Also, the wireless network may not be successful due to the unique characteristics of the access point. Thus, it is highly recommended to have another network method rather than wireless LAN.

- TCP/IP

- **Get IP address by DHCP : Use Dynamic IP address**
- **Set IP address manually : Use Static IP address**
- In BioStation settings, choose whether to get IP address automatically or set manually.
- In case that IP address is automatically assigned to DHCP in BioStation, check 'get IP address automatically'. In case of not using DHCP, check 'set IP address manually' and set IP address, gateway, subnet mask. Changing LAN setting like this is required to set IP address in order to connect Serial or USB linked BioStation by LAN or to change IP address of BioStation connected by LAN to another address.
- **Max Conn.** means the maximum number of host PCs. Server-Client application is available only when the system is networked through Ethernet. If the system operates as server-client, users can operate the BioAdmin Client program from multiple host PCs. However, if the system is not operated as BioAdmin Server-BioAdmin Client but connected just as normal Ethernet, there will be a limit to the maximum number of host PCs to operate BioAdmin at the same time. For example, if you select this menu as 4, you can operate the BioAdmin program on 4 host PCs at the same time.

- Server Setting

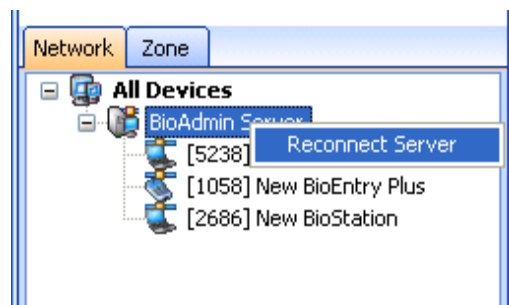
This menu shows that the BioStation is connected to the server.

You can connect the BioStation to the server by checking on Use option and entering the server IP and server port.

If you connect a BioStation to the server, existing Ethernet connection of the BioStation is disconnected and the BioStation is connected to the server. It may take a few minutes to reconnect to the server depending on the network condition.

If you check on the **Time sync with Server**, the time of BioStation will be automatically set as the time of the server.

If the network between a BioStation and BioAdmin Server is not stable, you can reconnect the BioStation to the server. Select the BioAdmin Server on the device tree window of Device Management menu and press the right button of your mouse. Press the **Reconnect Server** menu. You can also find this **Reconnect Server** menu on the System menu of Command Menu Bar.



- Serial RS-485

Use for RS-485 communication of BioStation. In RS-485 mode, the connected devices take a role as 'Host' and 'Slave'. Suprema's new total integrated system including BioStation, BioEntry Plus, and Secure I/O are consist of 1 host device, 1 slave device, and max. 4 Secure I/O. Host device has total 10 relay and 20 input. Please refer to the "Secure I/O Installation Guide" for further information.

- Mode : PC Connection, Host, Slave, None
- Baudrate
- Slave Device
- SIO default Setting

Emergency Operation Setting

Device: Secure I/O #0

Input

Port: Input #0

Switch Type: N/O

Duration(ms): 0

Output

Port: Output #0

High(ms): 0

Low(ms): 0

Count: 0

Save Cancel

- Here are some examples of RS-485 connection

Case #1 : BioStation at outside door and BioEntry Plus at inside

- Generally, inside installed device sends open-relay for secure purpose, so BioEntry Plus sets as 'Host' and BioStation sets as 'Slave' via RS-485 connection.
- 1. Go to 'Network Setting' of BioEntry Plus.
- 2. Select 'Host mode' in RS-485 setting.
- 3. Type ID number of BioStation as a slave.
- 4. Go to 'Network Setting' of BioStation.
- 5. RS-485 should be 'Slave' in RS-485 setting.

Case #2 : BioStation at outside door and Secure I/O at inside for high secure

- BioStation as a Host controls Input/output of Secure I/O. If verified successfully, BioStation open a door via Secure I/O.
- 1. Select BioStation as a Host and check SIO (Max. 4) to control.
- 2. Type assigned number from back side of Secure I/O. by controlling DIP switch.
- 3. Control door or siren via basic In/Out of Secure I/O.

- Serial RS232

Set baudrate of BioStation's RS232 ports. Default is 115,200 bps. As to serial, in case of any trouble in condition of cable, lowering baudrate can be a solution.

- USB Setting

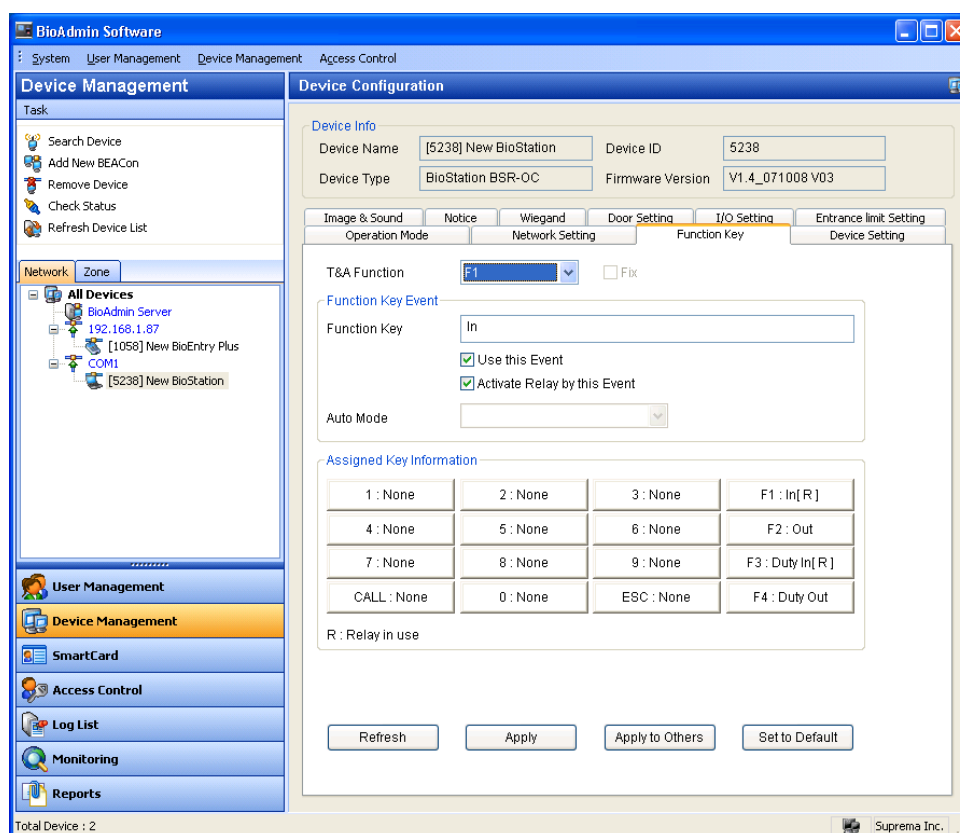
Select whether or not to allow connection with host PC via USB port of BioStation. As USB port is exposed to outside, in some cases, connection is not allowed for security reason.

5.5.4. Function key

Function key is to input T&A event before fingerprint input for T&A control such as in, out, in duty or out duty. In BioStation, usually, function keys from F1 to F4 are used and if necessary, it can be increased up to 16 keys. Pressing function key on BioStation first and then enter fingerprint to record applicable T&A even in a log. In the future T&A SOFTWARE, this log information can be used for various T&A and salary control data.

In respect of function key in BioAdmin software, reference needs to be made to all explanations on T&A event rule in both device management menu and report menu.

Function key setting in device management menu is to set T&A event message shown on BioStation display whereas T&A key setting in report menu is to set T&A event message applied when creating T&A report. In BioStation log, actual T&A event message is not recorded but the number of pressed T&A key is recorded. BioAdmin reads this value, refers to the table between previously defined function key and T&A event and generates suitable T&A report. Thus, function key set in this chapter doesn't show in an actual BioAdmin report or upon log check.



Set 16 keys in device and choose one out of 16 function keys to check function key event message displayed on BioStation LCD, use of this function key and relay use.

- Choose a function key to set.
- Enter event name in 'Function Key' field.
- Decide whether or not to check **use this event**.
- Decide whether or not to check **activate relay by this event**. Relay is usually linked to door lock control device and used to open/close a door.

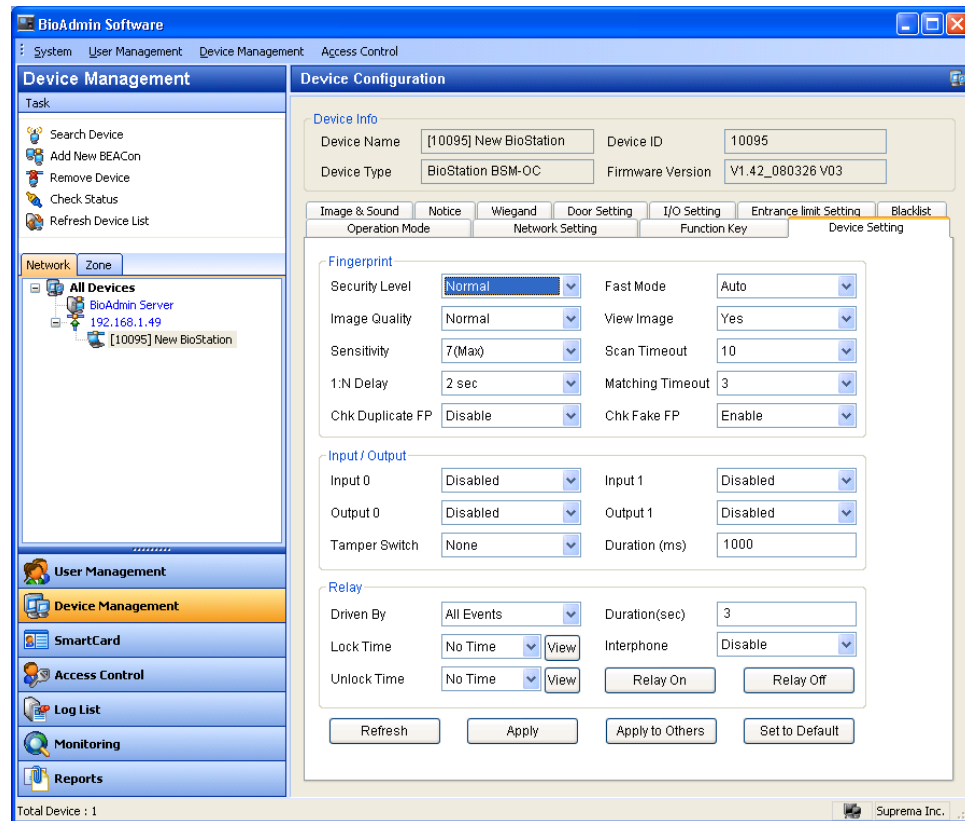
Note : In case of selecting T&A mode as 'Fixed' at 'Operation Mode' tab, you will see highlighted 'Fix' check box, which is useful for T&A management.

Note : In case of selecting T&A mode as "Auto" at 'Operation Mode' tab, 'Auto Mode Schedule' is highlighted.

Please refer to "6.1 Time Zone Setting" for definded Time Zone.

5.5.5. Device Setting

This window is to check and change various settings of BioStation



● Fingerprint

Fingerprint			
Security Level	Normal	Fast Mode	Auto
Image Quality	Normal	View Image	Yes
Sensitivity	7(Max)	Scan Timeout	10
1:N Delay	2 sec	Matching Timeout	3
Chk Duplicate FP	Disable	Chk Fake FP	Enable

- Security level** : Security level can be chosen among normal, secure, and most secure. Internally security level adjusts FAR(False Acceptance Ratio). As FAR and FRR(False Rejection Ratio) are in inverse proportion to each other, the higher security level is the more FRR increases, so does FRR. Default is normal.

- **Image quality** : Decide standards by which the quality of input fingerprint image is over certain level. You can choose from weak, normal, and strict. Default is normal.
 - **Sensitivity** : Sensitivity decides sensitivity of detecting a finger. In high sensitivity, finger input is accepted more easily but if sensitivity is lowered, input fingerprint image gets more stable as fingerprint is captured only when fingerprint covers more than a certain part of a finger. In case of optical model, sensitivity can be moderated by lowering setting of sensitivity against the rays of the sun. Default is 7 (Max)
 - **1:N Delay** : Interval Time to take 2nd verification (Default : 2sec)
 - **Chk Duplicate FP**(Check Duplicate Fingerprint) : Check whether it is duplicate fingerprint or not when a user enroll their fingerprint, which can protect and identify same fingerprint with two IDs.
 - **Fast mode** : In case more than hundreds fingerprints are saved in device, 1:N mode may take longer. If you set fast mode as fast or fastest, performance is somewhat low but 1:N recognition can take less time. Default is normal.
 - **View image** : User can choose either to yes or no to view or hide input fingerprint image on LCD display of BioStation. Default is Yes.
 - **Scan timeout** : User can designate the standby time when entering fingerprint. If a user doesn't enter fingerprint within this time, it is construed as input failure. Default is 10 sec.
 - **Matching Timeout** : After fingerprint enrollment, it can assign max. time in sec until verification result comes. If a time is over the assigned time, fingerprint search stops without seeing verification result. This is specially designed for users who are waiting for longer search time against lower templates.
 - **Chk Fake FP**(Check Fake Fingerprint) :Enable or disable fake fingerprint detection feature.
- Input / Output
 - BioStation provides 2 respectively programmed input and output which can be connected to external device. In input/output menu, set input/output port.

Input/Output

Input 0	Disabled ▼	Input 1	Disabled ▼
Output 0	Disabled ▼	Output 1	Tamper Switch ▼
Tamper Switch	None ▼	Duration(ms)	2000

- **Input0 & Input1** : Exit Switch, Wiegand(card), Wiegand(user), or Disabled.
- **Output0 & Output1** : Choose from duress, tamper switch, authentication success, authentication fail, wiegand(card), wiegand(user), and disabled. Signal output time of output port can be set in msec unit.
- **Tamper switch** : In case BioStation case is open, choose whether or not to set system lock mode for security reason.

● Relay

Relay

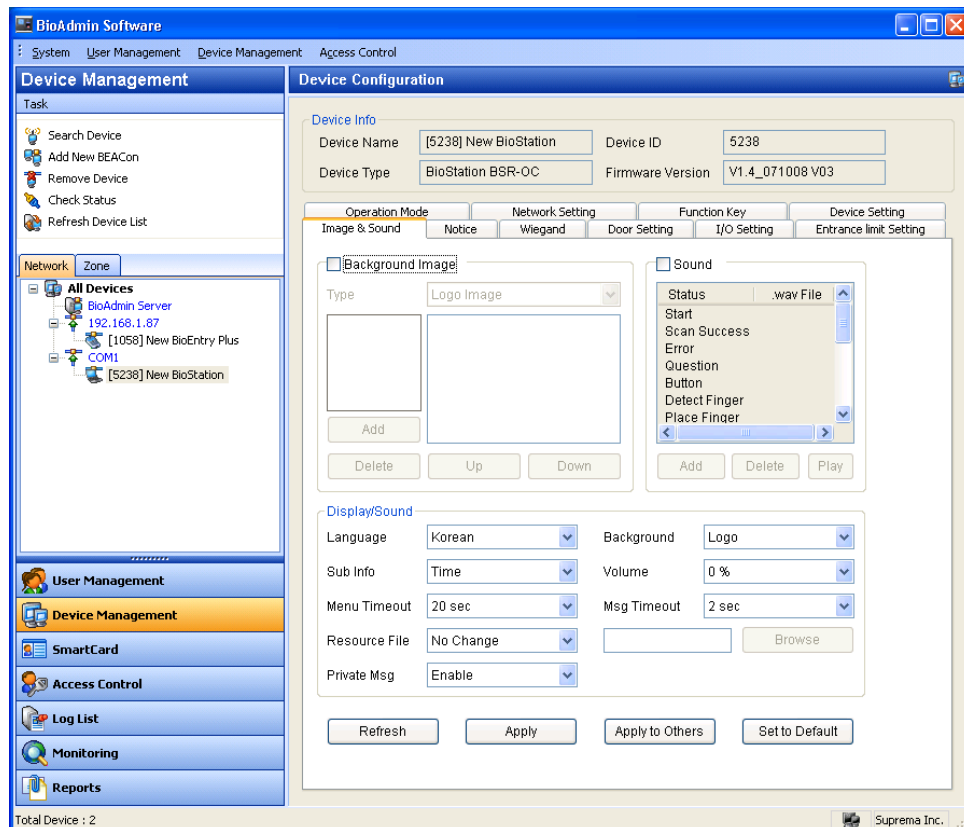
Driven By	All Events ▼	Duration(sec)	3
Lock Time	None ▼	View	Interphone
Unlock Time	None ▼	View	Disable ▼
		Relay On	Relay Off

- **Driven By** : Choose from all events, auth + selected events, auth, selected events, and disabled. In case of selected events, user can set door open time.
- **Lock/Unlock Time** :Door lock time and unlock time can be set separately by day / holiday zone, which should be set in advance in time zone setting on access control menu.
- **Duration** : relay running time as per set event. Once door is released, door can be locked again after set door open time.
- **Interphone**: Enable this option when you are using a interphone along with BioStation.
- **Relay On / Off** : Administrator can control the relay of the BioStation by using this Relay On/Off menu.

Note : overall system door open time is computed by adding door lock open time and device open time.

5.5.6. Image & Sound

Menu to set background, sound effects and other display/sound of BioStation. User can set desired background, notice and log image and also change sound effect fit for user's style.



- Background Image

In this menu, user can change background image of BioStation. BioStation background can be chosen from logo image, slideshow, and notice. Image file format which can be uploaded to background are varying, i.e. JPG, GIF, BMP and PNG but size is fixed as 320*240 pixels. In case the size of image file to upload is different, adjust image size using graphic tool.

In background, user can choose and upload one image file as background of logo image and notice. As for slideshow, maximum 16 image files can be uploaded and it shows images in turn at a set interval.

- Sound

In this menu, user can change sounds of device or check current sound effects. Sound effects of device consists of 6 sounds in total, i.e. start sound when

device is turned on, button sound when pressing a button, scan success sound when finger scan is successful, question sound when pressing a ESC button, error sound when finger scan failed, detect finger sound when a finger is placed on fingerprint sensor.

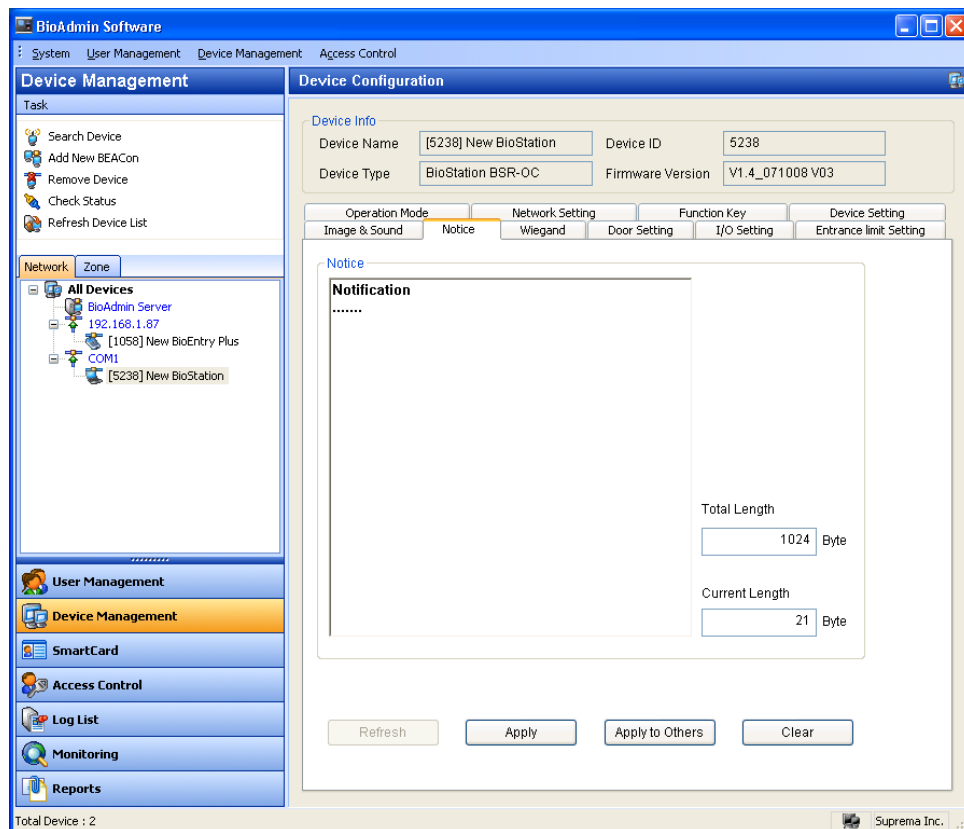
Note : the size of sound file can't exceed 512KB and sounds may not change depending on the format of the file.

- Display/Sound
 - **Language** : choose language used for menu and various messages on BioStation LCD display. Language can be chosen from Korean, English and Custom.
 - **Sub Info** : set items displayed at the lower part of BioStation background. Choose from notice, time, and none. In case of notice, contents are scrolled from right to left on display. Default is time
 - **Menu Timeout** : if no input is made in a certain menu for a set time, it returns to initial page. Choose from infinite, 10 sec, 20 sec, 30 sec. Default is 20 sec.
 - **Resource File** : choose from English, Korean, Custom, no change. Select language to change, click browse and choose applicable configuration file(*.rc) after changing configuration file, reset BioStation to apply and select applicable language on language select menu to view.
 - **Private Msg** : Select private information such as photo or message displayed in BioStation LCD window.
 - **Background** : Choose from logo, notice and slideshow as background of BioStation LCD display.
 - **Volume** : to adjust speaker volume of BioStation. Volume ranges from 0 to 100%. When using daily in normal situation, set a volume as 20-50%. Default is **20%**.
 - **Msg Timeout** : When a user matches his fingerprint, BioStation shows the success or fail message on its screen. Administrator can change the time during which those messages are shown on the BioStation. Default is set as 2 seconds.

5.5.7. Notice

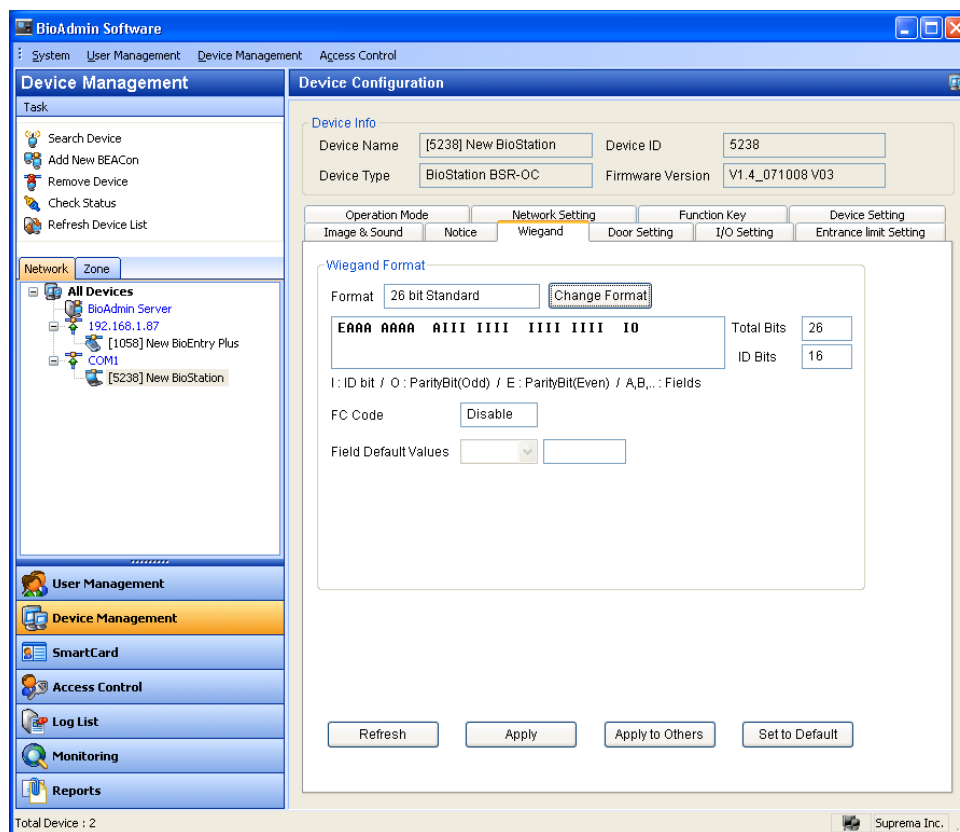
If there's company notice, administrator can show the notice on LCD of BioStation. Notice can be input up to maximum 1024 byte and a number of letters varies depending on language.

After transferring notice to device by pressing apply button, you can check and view notice on LCD of BioStation only if you selected notice as background in display/sound menu and apply.



5.5.8. Wiegand

The **Wiegand Setting** tab is used to manage the Wiegand input/output format of BioStation. By selecting the menu, the Wiegand setting page is updated on the main window.

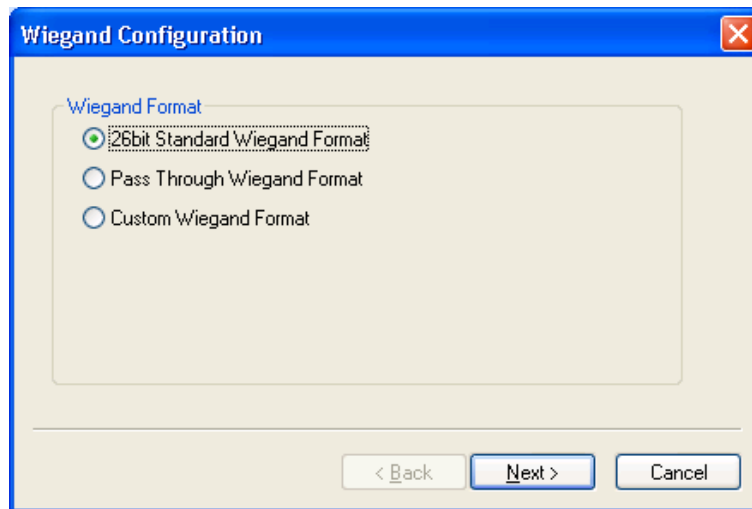


- Wiegand Format

New Wiegand format can be configured graphically using the Wiegand Configuration wizard. The Wiegand Configuration wizard will be shown by pressing the **Change format** button.

- Select format

You should select one of the three supported formats in the first page.



- 26 bit standard

The 26 bit standard format is most widely used and consists of 8 bit FC code and 16 bit ID. You cannot change the bit definition and the parity bits in 26 bit standard format.

- Pass Through format

Pass Through format is used when only the format of ID field is known. When the Wiegand input string is detected, BioEntry device extracts ID bits and starts verification with the ID. If the verification succeeds, the device outputs the Wiegand input string as unchanged. Parity check and advanced options are ignored in this format. By definition, Pass Through format is only useful when the operation mode is 1:1. If the mode is 1:N, the bits other than ID field are set to 0.

For example, assume that 32 bit Pass Through format is composed as follows:

XIIIIIIII IIIIIIX XXXIIIIII IIIIIIX (left most bit is 0th bit, BIT0)

I: Id field, X: Unknown field

You can configure this format in the following sequences.

- (1) Enter 32 in the **Total Bits** field.
- (2) Select ID bits according to the definitions.
- (3) Press **Next**. You cannot specify parity bits in Pass Through mode.
- Custom format

When users know all the information of a Wiegand format, Custom format can be defined. When a Wiegand input string is detected, BioEntry device checks the parity bits first. If all the parity bits are correct, the device extracts ID bits and starts verification with the ID. Users can also set alternative values of each field and enable advanced options such as Fail ID. If the verification succeeds, the device outputs a Wiegand string. The output string may be different from the input string according to the alternative values and advanced options.

For example, assume that 44 bit Custom format is composed as follows:

EAAAAAAAA IIIIIIII IIIIIIII BBBBBI IIIIIIII IIO

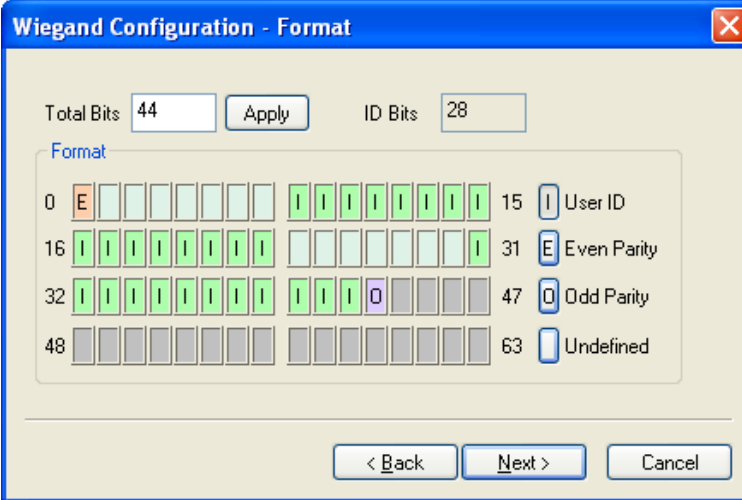
(left most bit is 0th bit, BIT0)

E: Even parity for BIT1 ~ BIT22

O: Odd parity for BIT23 ~ BIT42

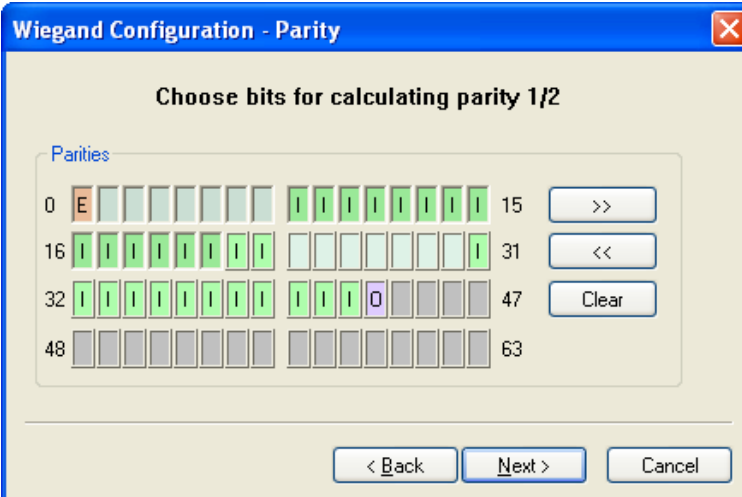
I: ID bits(Field1 and Field 3), A: Field 0, B: Field 2

You can configure this format in the following sequences.



The dialog box is titled "Wiegand Configuration - Format". It has a blue title bar with a close button. Inside, there are two input fields: "Total Bits" with the value "44" and "ID Bits" with the value "28". An "Apply" button is next to the "Total Bits" field. Below these fields is a section titled "Format" containing a grid of 64 bit slots, numbered 0 to 63 in increments of 16. Slots 0-15 are light blue, 16-31 are green, 32-47 are light green, and 48-63 are grey. Slot 0 contains an "E" (Even Parity). Slot 31 contains an "E" (Even Parity). Slot 47 contains an "O" (Odd Parity). To the right of the grid, there are four labels: "User ID" (slot 15), "Even Parity" (slot 31), "Odd Parity" (slot 47), and "Undefined" (slot 63). At the bottom are three buttons: "< Back", "Next >", and "Cancel".

- Enter 44 in the **Total Bits** field.
- Select **Even Parity**.
- Press the even parity bit. In this example, it is BIT0.
- Select Odd Parity and press the odd parity bit and User ID according to the definition.
- Press **Next**.

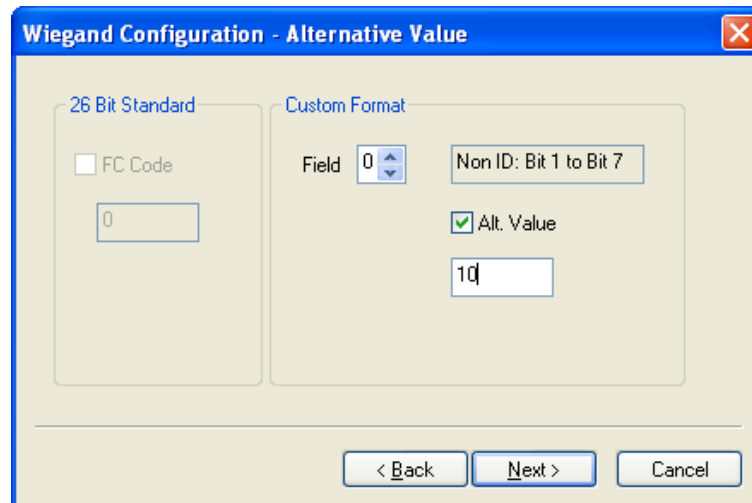


The dialog box is titled "Wiegand Configuration - Parity". It has a blue title bar with a close button. Inside, the title "Choose bits for calculating parity 1/2" is centered. Below it is a section titled "Parities" containing a grid of 64 bit slots, numbered 0 to 63 in increments of 16. Slots 0-15 are light blue, 16-31 are green, 32-47 are light green, and 48-63 are grey. Slot 0 contains an "E" (Even Parity). Slot 31 contains an "E" (Even Parity). Slot 47 contains an "O" (Odd Parity). To the right of the grid are three buttons: ">>", "<<", and "Clear". At the bottom are three buttons: "< Back", "Next >", and "Cancel".

- Press the bits which are used in calculating the first parity bit. In this example, they are BIT1 ~ BIT22
- Press >>.
- Press the bits which are used in calculating the second parity bit. In this example, they are BIT23~ BIT42.
- Press **Next**.

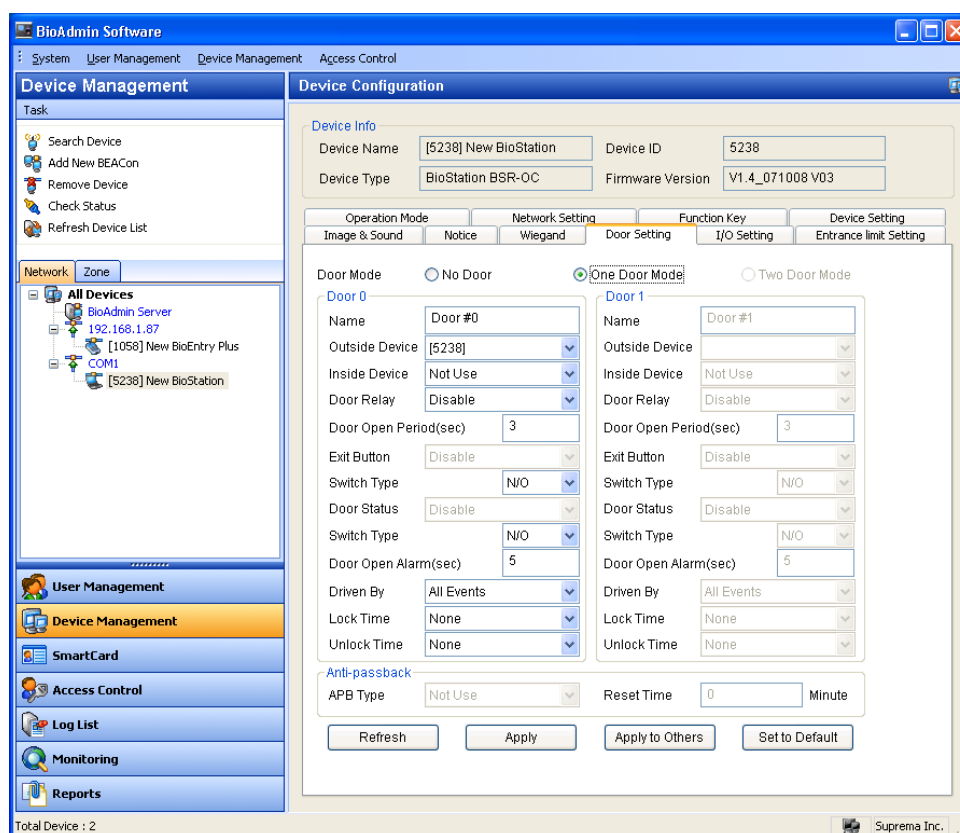
- Alternative values

In 26 bit standard you can specify alternative FC code. In Custom format, you can specify alternative values for non-ID field. If alternative values are set, the BioEntry™ device will replace corresponding fields with these values before sending outputs.



5.5.9. Door Setting

The details setting of door that is operated by each device may be set up. Two doors may be controlled by one device and Secure I/O door connected by RS485 may be also controlled.



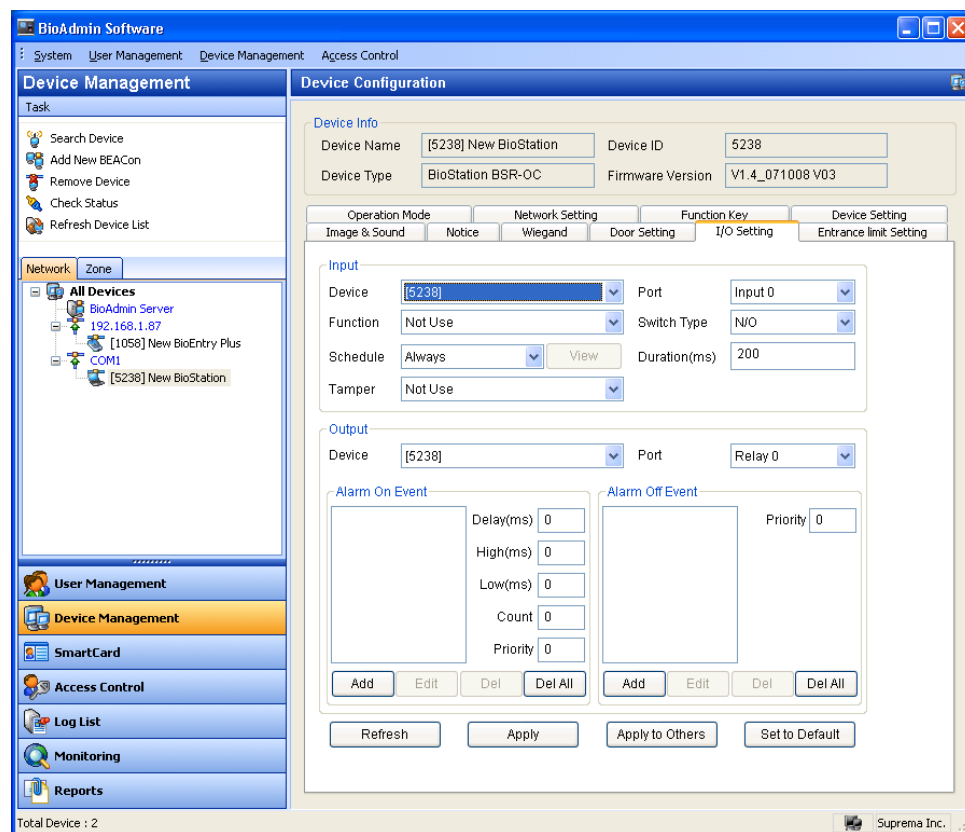
- **Outside / Inside Device** : Set two devices to control 1 door.
- **Door Open Relay** : Set the output terminal to control door among the connected devices.
- **Door Open Period (sec)** : Set the time when the selected output terminal operates in door open relay.
- **Exit Button** : Select a button input terminal used to open door.
- **Door Status** : Select an input terminal to connect a sensor used to check the status of door.
- **Switch Type** : N/O or N/C
- **Door Open Alarm (sec)** : Enter the time to determine whether door is open for a long time.
- **Driven By** : Select an event when door is open for a time longer than the set 'Door Open Alarm' setting.
- **Lock Time** : Set the time when a designated door is always closed, as an item inter-working with the entrance/exit time set in entrance control item.
- **Unlock Time** : Set the time when a designated door is always opened, as an

item inter-working with the entrance/exit time set in entrance control item.

- **Anti-passback** : Set whether to apply anti-passback between Outside and Inside device.
 - Soft : Make a record and allow entrance in case of not verifying APB.
 - Hard : Not allow record and entrance in case of not verifying APB.
 - Reset Time : Make clearing entrance limit time against APB limit.

5.5.10. I/O Setting

Make operation of each input and output setting possible through I/O setting.



- Input

Input

Device	[5238]	Port	Input 0
Function	Not Use	Switch Type	N/O
Schedule	Always	Duration(ms)	200
Tamper	Not Use		

View

- **Device Type** : Display the device to be set at present.
- **Function** : Select a function to be performed as an input. Default : Not use
- **Schedule** : Set the input to be operated only for the time set in access control (Always or No Time)
- **Tamper** : Set to designate the function of tamper.
- **Port** : Select one of input terminals set in the selected device.
- **Switch Type** : N/O or N/C
- **Duration(ms)** : Operate as long as the longer time is entered

● Output

Output

Device	[5238]	Port	Relay 0
--------	--------	------	---------

Alarm On Event

Delay(ms)	0
High(ms)	0
Low(ms)	0
Count	0
Priority	0

Add Edit Del Del All

Alarm Off Event

Priority	0
----------	---

Add Edit Del Del All

- **Device type** : Display the devices to be set at present.
- **Port** : Select an output terminal to be set in a selected device.
- **Alarm On Event** : It may set so that if a listed event occurs, the output is generated from the port of a selected device.

● How to add Event

Add Event

[5238] Relay 0

Event

Event: Auth Success

Device: [5238] Priority: 1

Signal Setting

Delay(ms): 0 Count: 1

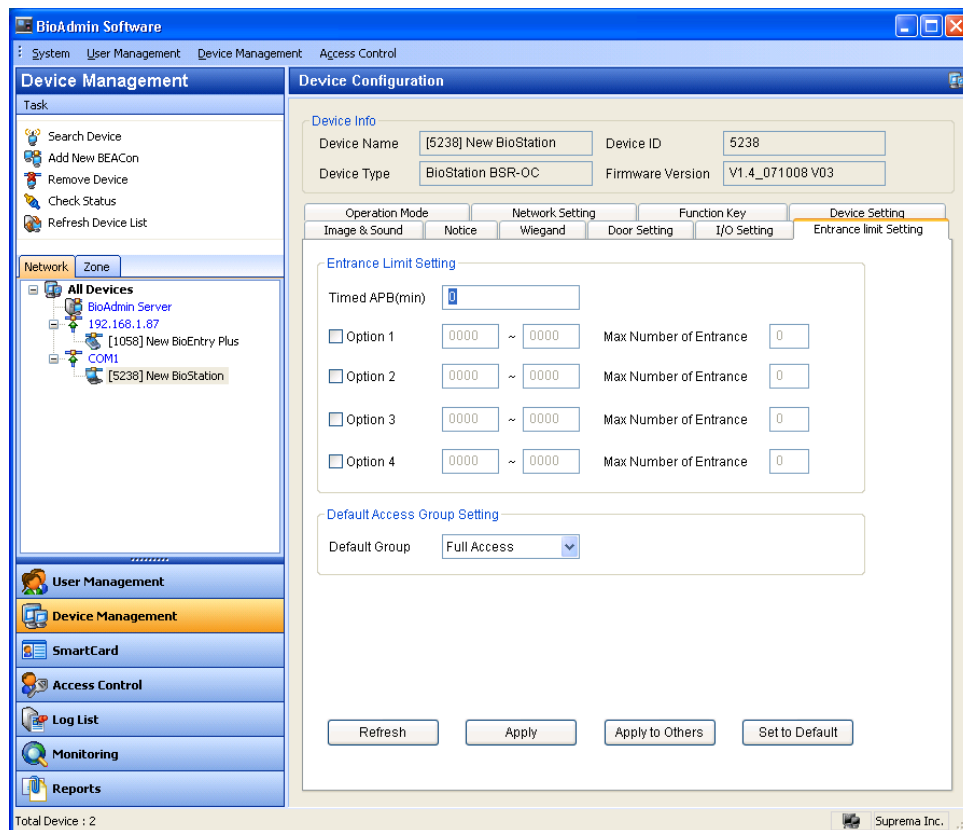
High(ms): 0 Low(ms): 0

OK Cancel

- **Event** : It is set so that if a selected event occurs, the output is generated to the port of the previously selected device.
- **Device** : Select a device to generate an event.
- **Priority** : By allowing priority to a function, it may prevent a priority event from being hidden or turned off, preceding over low priority function.
- **Signal Setting**
 - Delay: delay time before output is generated
 - Count: frequency to repeat off ~ on interval
 - High: time when output is generated
 - Low: time when output is not generated
- **Alarm Off Event**

If a listed event occurs, it may release an output of which priority is equal to or lower than the priority of the port of a selected device.

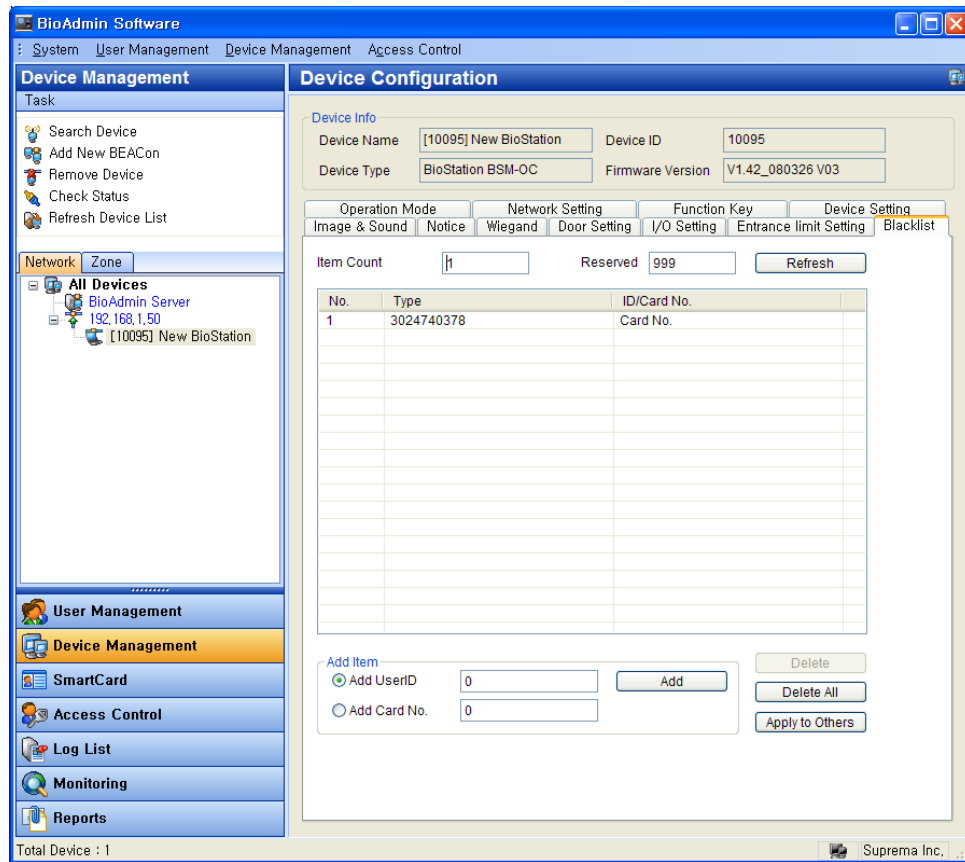
5.5.11. Entrance Limit Setting



- Entrance Limit Setting may be set to restrict repetitive verification or prevent repetitive entry for a specified time.
 - **Timed APB** : Limit verification if re-verification is not attempted for a specified time (minute).
 - **Options 1~4** : If entering start time ~ end time of each option and specifying the Max Number of Entrance for the time, it allows the only number of access for the specified time.
- Default Access Group Setting

In case of a user with no access group information, it may set a user to be grouped in an access group. The default is Full Access, which allow users who does not assign access group.

5.5.12. Black List



Manage the separate list to deny verification. If receiving verification request for Card S/N or User ID registered on the black list, the device denies verification and leaves failed log. The maximum number of black list is 1,000.

Item Count: The current registered number of list

Reserved: Available number of list to register

Refresh: Read a list from the device

- **Add Black List** :Check User ID or Card No, determine the item to block, type number, and click 'Add'. In case of already registered or adding more than 1,000, it cannot be registered.
- **Delete Black List** :Click the item to delete from a list and click 'Delete' button.
- **Delete All** :Delete all registered Black list.
- **Apply to Others** :Apply the current black list to other devices.

5.6. Manage Virtual Terminal

You can manage a virtual terminal with the same device management menus for BioStation, except the followings.

- **Time Setting** : You cannot set the time of BioStation with virtual terminal. Thus, you should set time directly to BioStation.
- **Lock all devices / Unlock all devices** : You cannot set lock/unlock of BioStation with virtual terminal. Thus, you should the lock/unlock directly to BioStation.
- **Firmware Upgrade** : Store a firmware file on a virtual terminal. Connect the virtual terminal to BioStation and upgrade the firmware using firmware upgrade menu on BioStation.

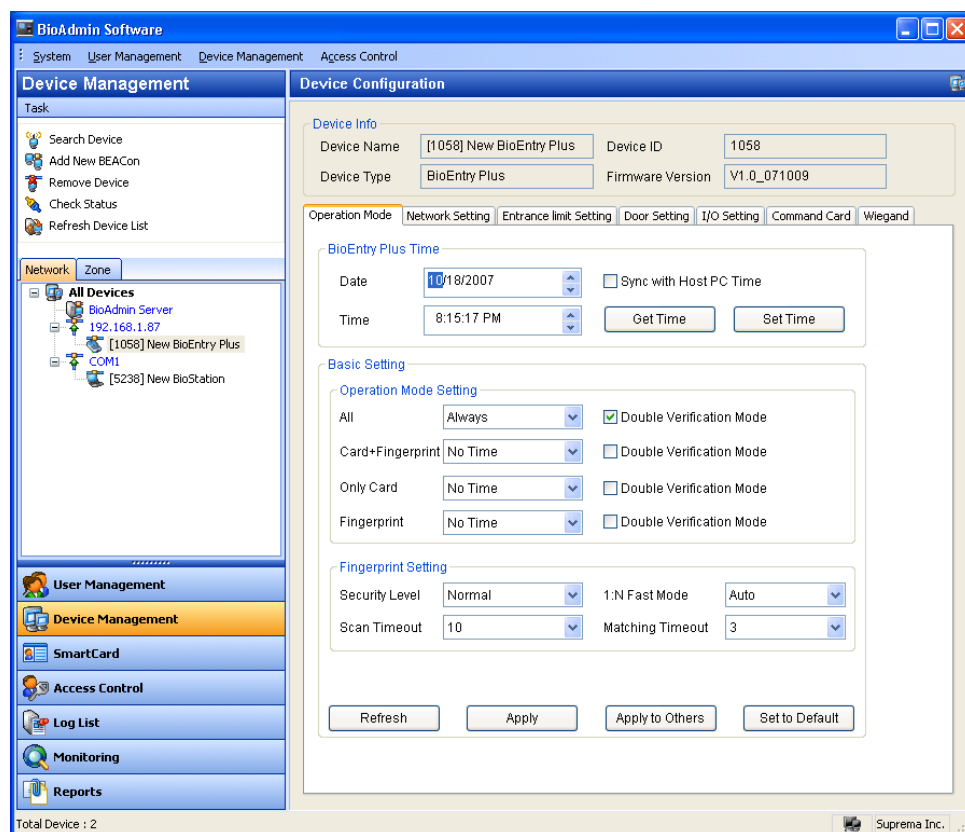
After connecting a virtual terminal to BioStation, you can use the following menus of BioStation. For the detailed operation, refer to the BioStation User Guide.

- **Synchronize** : Change the user data and device settings of BioStation as same as the stored data on virtual terminal .
- **Export Virtual Terminal** : Remove the stored data on virtual terminal and make a new virtual terminal with the current data of the BioStation.
- **Import Virtual Terminal** : Remove the stored data on BioStation and apply the data store on virtual terminal.
- **Firmware Upgrade** : Upgrade the BioStation firmware with the stored firmware file on virtual terminal.
- **Initialize** : Remove all virtual terminals on from USB memory.
- **Refresh** : Check the status of the USB memory and activate menus regarding USB memory.

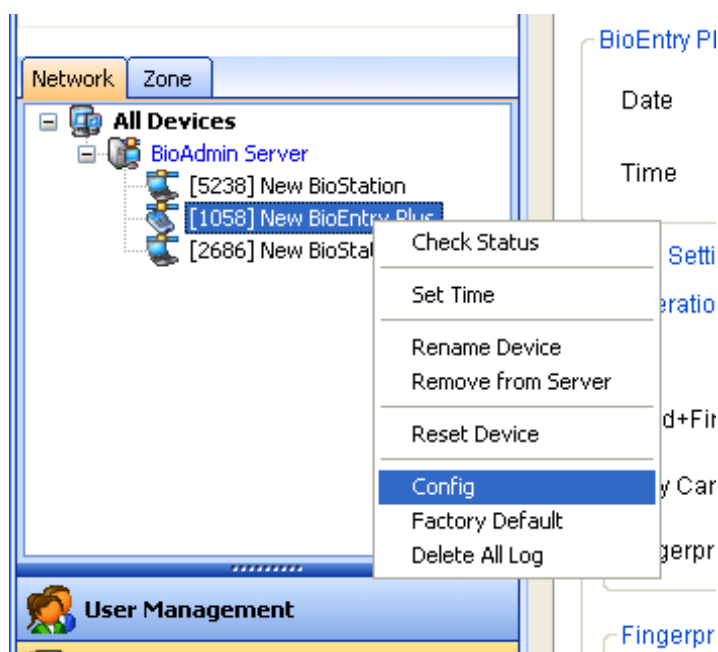
5.7. Manage BioEntry Plus device

5.7.1. Device information

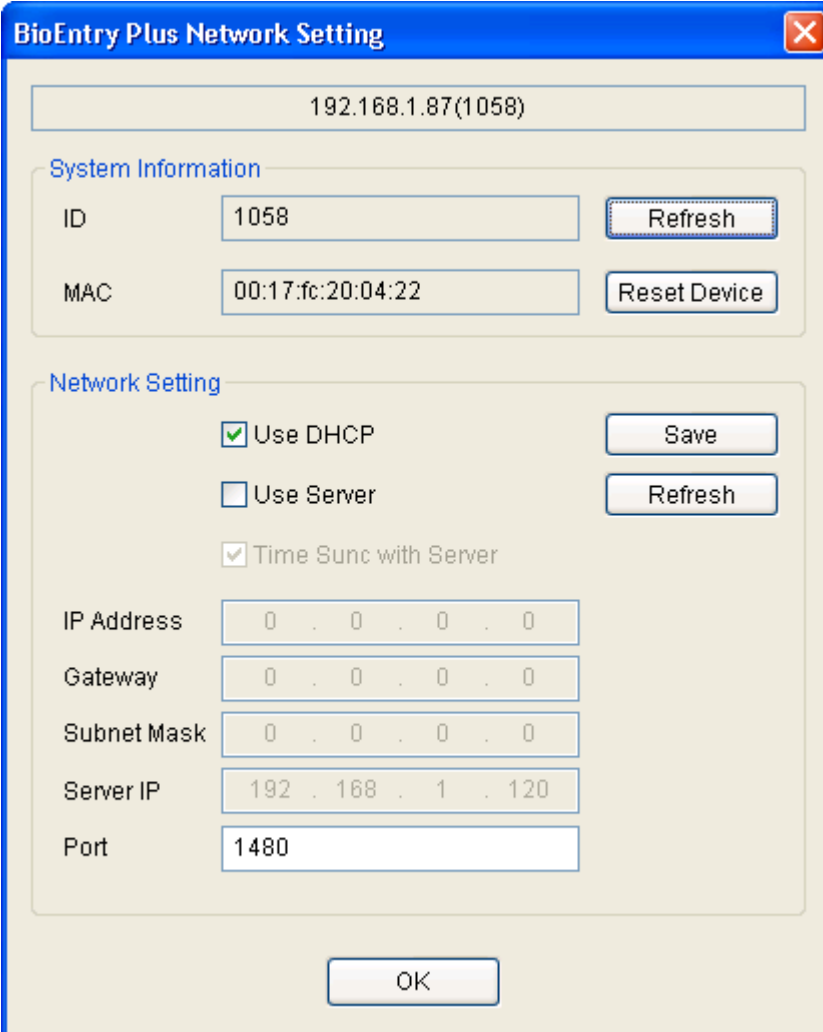
- It shows the device name, device type, device ID and firmware version of the selected BioEntry Plus. Device ID number and firmware version are necessary information to check the product for our technical support after the installation.



5.7.2. Detect Device via UDP



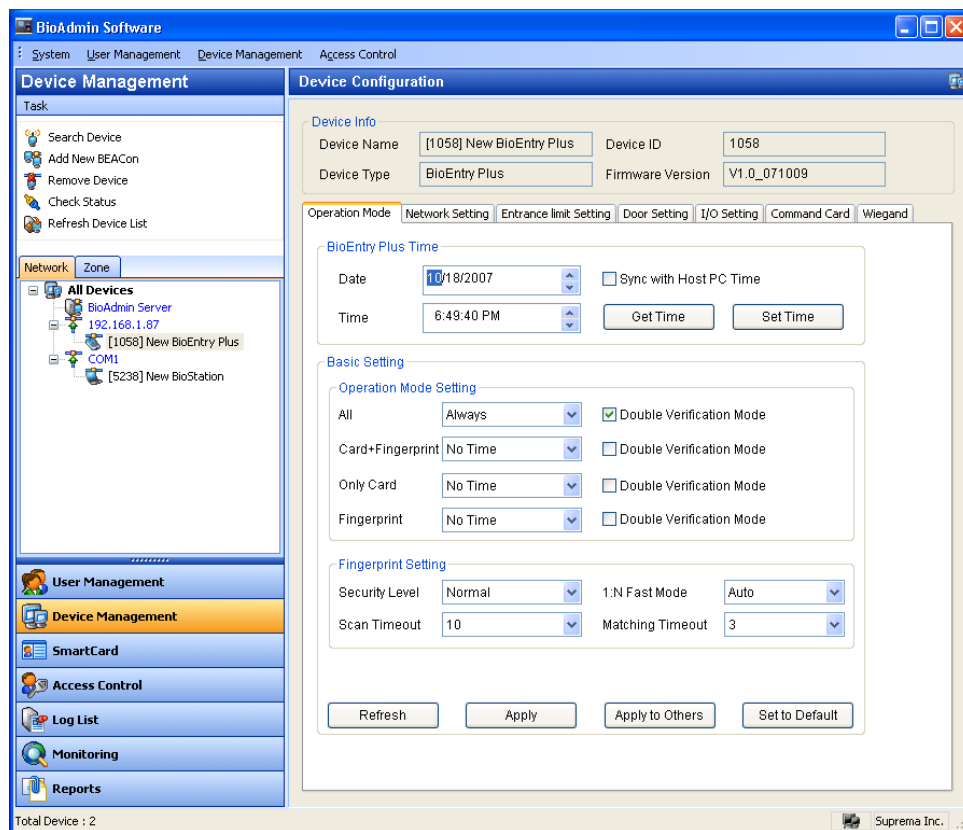
- 'Config' menu may be selected by clicking right mouse button on BioEntry Plus icon or a name.



The image shows a 'BioEntry Plus Network Setting' dialog box. At the top, there is a text field displaying '192.168.1.87(1058)'. Below this, the 'System Information' section contains two rows: 'ID' with a text field '1058' and a 'Refresh' button, and 'MAC' with a text field '00:17:fc:20:04:22' and a 'Reset Device' button. The 'Network Setting' section follows, featuring three checkboxes: 'Use DHCP' (checked), 'Use Server' (unchecked), and 'Time Sync with Server' (checked). To the right of these are 'Save' and 'Refresh' buttons. Below the checkboxes are five text fields for 'IP Address', 'Gateway', 'Subnet Mask', 'Server IP', and 'Port'. The 'IP Address', 'Gateway', and 'Subnet Mask' fields are set to '0 . 0 . 0 . 0'. The 'Server IP' field is set to '192 . 168 . 1 . 120'. The 'Port' field is set to '1480'. An 'OK' button is located at the bottom center of the dialog.

- System Information : Show the ID and MAC address assigned to BioEntry Plus at present; if clicking Refresh button, it reads the information again.
- Network Setting
 - Use DHCP
 - Check it if the BioEntry Plus is to be automatically assigned with IP
 - Use Server
 - Check it if BioEntry Plus is connected to BioAdmin Server and operates.
 - Check it to synchronize temporary with server
 - Port
 - Use the same value with the BioEntry Plus port and the server port.

5.7.3. Operation Mode



- BioEntry Plus Time

BioEntry Plus Time

Date: ☐ Sync with Host PC Time

Time:

- Date & Time : Read from BioEntry Plus device.
- “Get Time” button makes BioAdmin read from BioEntry Plus.

- There are two methods to read a date & time shown as below.
 - Manual Type : Just type date & time manually and pressing 'Set Time' button makes them transfer to BioEntry Plus device.
 - 'Synchronize with Host PC Time' : Check it and press 'Set Time' button to transfer to BioEntry Plus device.

● Operation Mode Setting

Operation Mode Setting

All	Always	<input checked="" type="checkbox"/> Double Verification Mode
Card+Fingerprint	No Time	<input type="checkbox"/> Double Verification Mode
Only Card	No Time	<input type="checkbox"/> Double Verification Mode
Fingerprint	No Time	<input type="checkbox"/> Double Verification Mode

- BioEntry Plus has 4 operation mode setting options from No.1 to No. 4. each option may be assigned for its time.
- Double Verification Mode: Door is operated as long as different user verifications should be executed within 15 seconds.

Note : Double Verification mode is specially designed for two user's verification for secure access control.

● Fingerprint Setting

Fingerprint Setting

Security Level	Normal	1:N Fast Mode	Auto
Scan Timeout	10	Matching Timeout	3

- Security Level : Normal, Secure, More Secure
Control FAR (False Acceptance Rate) internally. The more FAR, the less FRR (False Rejection Rate), so default is normal level.
- 1:N Fast Mode : Auto, Normal, Fast, Faster

In case more than hundreds fingerprints are saved in device, 1:N mode may take longer. If you set fast mode as fast or fastest, performance is somewhat low but 1:N recognition can take less time. Default is normal.

- **Scan Timeout : 1~20 sec**

User can designate the standby time when entering fingerprint. If a user doesn't enter fingerprint within this time, it is construed as input failure. Default is 10 sec.

- **Matching Timeout : 0~10 sec**

After fingerprint enrollment, it can assign max. time in sec until verification result comes. If a time is over the assigned time, fingerprint search stops without seeing verification result. This is specially designed for users who are waiting for longer search time against lower templates.

- **Template Option Information**

Template Option Informations

ISO Format

- **ISO Format**

Display BioEntry Plus uses ISO 19474-2 Template Format Data. In case of 'On', it cannot use Suprema format template.

- **Check Fake Finger**

Examine fake fingerprint of the enrolled fingerprint when trying verification. Since it is designed to deny against fake fingerprint and it might deny normal fingerprint, you may feel lower verification rate.

- **Mifare Setting**

In case of BioEntry Plus Mifare model, Mifare Setting option will be appeared.

Mifare Setting

☐ Disable Mifare Card

☐ Use Template On Card

[View Card Layout](#)

- **Disable Mifare Card**

Disable Mifare card, and not to accept card input.

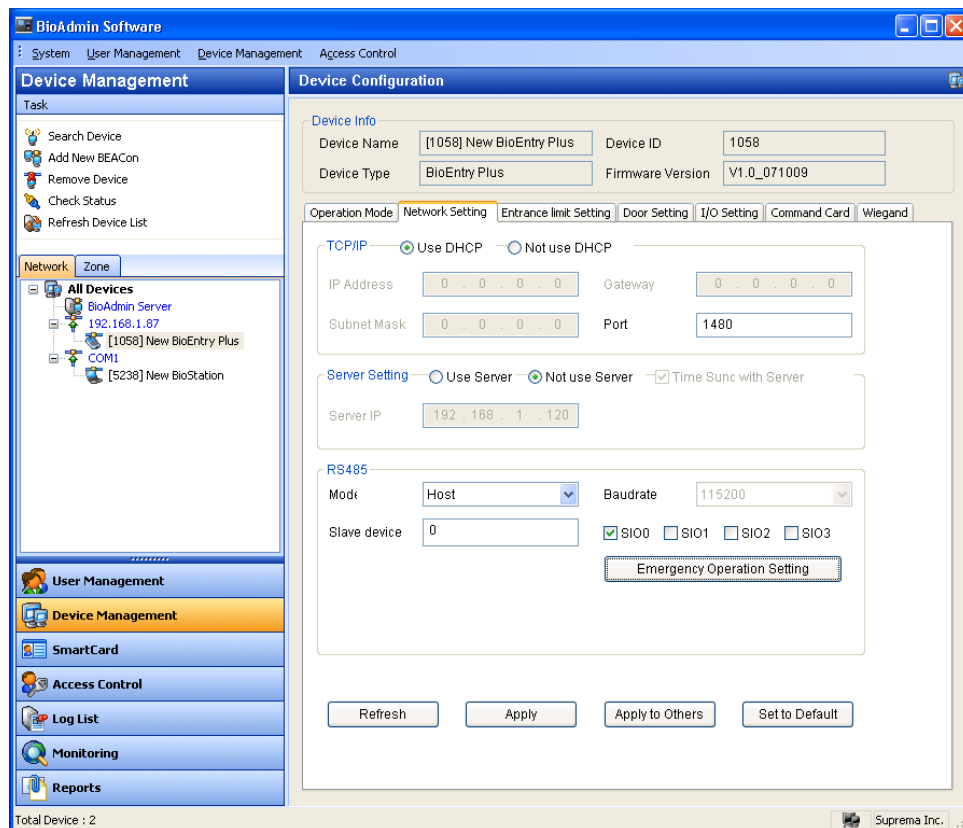
- **Use Template On Card**

Configure whether it uses template on card or Card ID such as RF-card type by storing template information on the Mifare card.

- **View Card Layout**

Verify Mifare Layout information of BioEntry Plus, which can be referred at “6. Smartcard / Mifare card”.

5.7.4. Network Setting



- TCP/IP

- It selects whether to receive IP address automatically from the settings of BioEntry Plus or be manually set. If the IP address is set as DHCP to BioEntry Plus or if directly setting 'Use DHCP', select 'Not use DHCP'.
- Set the IP address, gateway, subnet mask, and port as proper values.
- Port (default: 1471) is operated as a server port if it uses server.

- Server Setting

- It shows whether the BioEntry Plus is connected to server
- If connecting BioEntry Plus that is connected to general TCP/IP, not a server, to server, check 'Use' and set the server IP address and the server port.

- As such, if connected to a server, the BioEntry Plus is connected to it and disconnected from the TCP/IP immediately. It may take a time until it is reconnected to the server again.
- If the communication status of BioEntry Plus connected to the server is not good, click the right mouse button on BioAdmin Server and try to reconnect to server.
- RS485
Use for RS-485 communication of BioStation. In RS-485 mode, the connected devices take a role as 'Host' and 'Slave'. Suprema's new total integrated system including BioStation, BioEntry Plus, and Secure I/O is consist of 1 host device, 1 slave device, and max. 4 Secure I/O. Host device has total 10 relay and 20 input. Please refer to the "Secure I/O Installation Guide" and "4.5.3 Network Setting" of BioStation in this manual for further information.
 - Mode : PC Connection, Host, Slave, None
 - Baudrate
 - Slave Device
 - SIO default Setting

Emergency Operation Setting

Device: Secure I/O #0

Input

Port: Input #0

Switch Type: N/O

Duration(ms): 0

Output

Port: Output #0

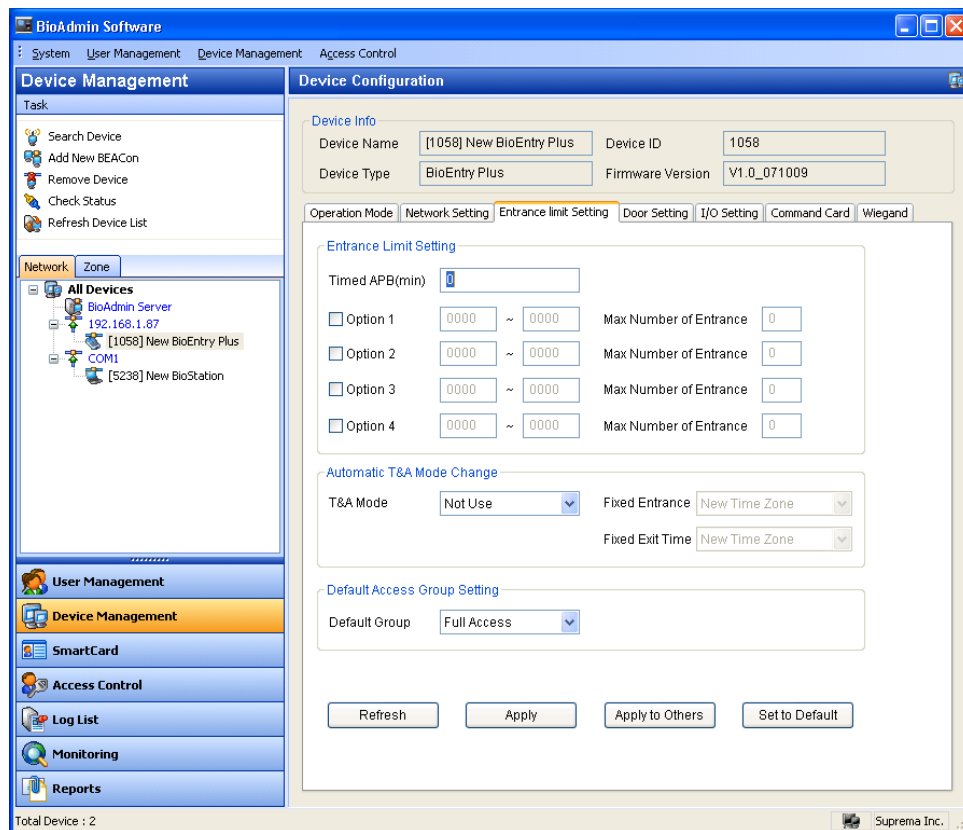
High(ms): 0

Low(ms): 0

Count: 0

Save Cancel

5.7.5. Entrance Limit Setting



- Entrance Limit Setting

- Timed APB : Limit verification if re-verification is not attempted for a specified time (minute).
- Options 1~4 : If entering start time ~ end time of each option and specifying the max. access allowance number for the time, it allows the only number of access for the specified time.

- Automatic T&A Mode Change

- Set in which attendance mode BioEntry Plus is used.
- T&A mode : Not use, Fixed in, Fixed out, Auto
 - Auto Mode: if authentication is approved for a specified time, its attendance mode is automatically converted to Entrance or Exit.
 - Fixed in / Fixed out mode: Set the attendance mode to either entry or exit among entrance or exit.

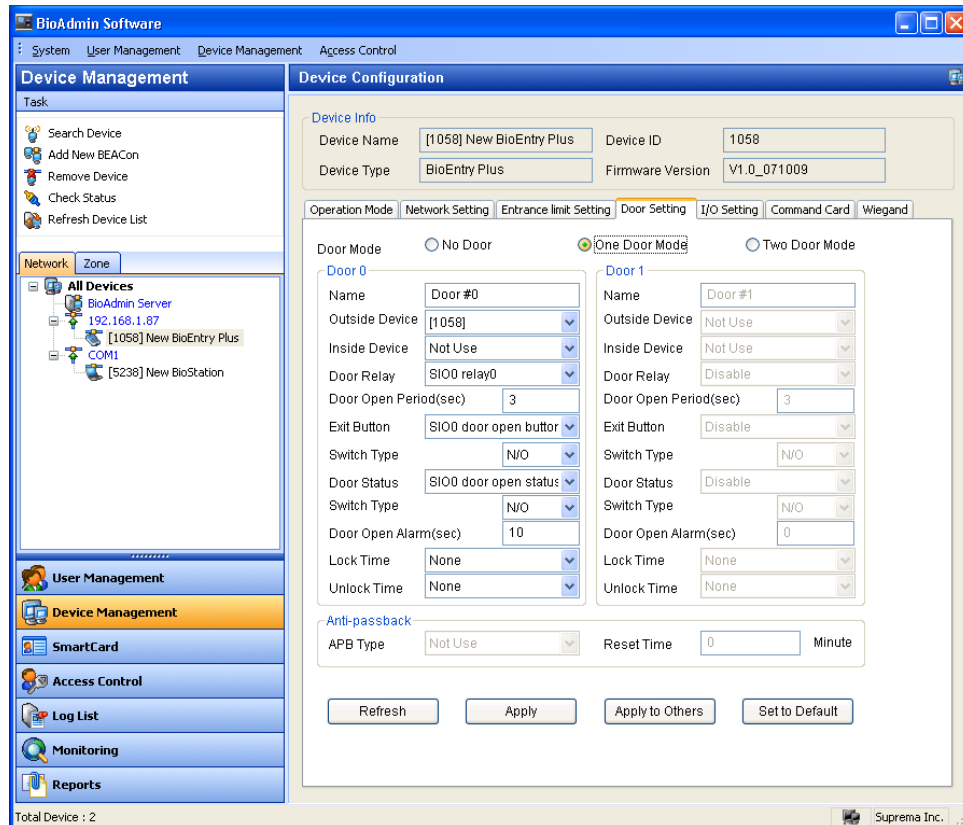
- Default Access Group Setting

In case of a user with no access group information, it may set a user to be

grouped in an access group.

5.7.6. Door Setting

- The detail setting of door that is operated by each device may be set up.

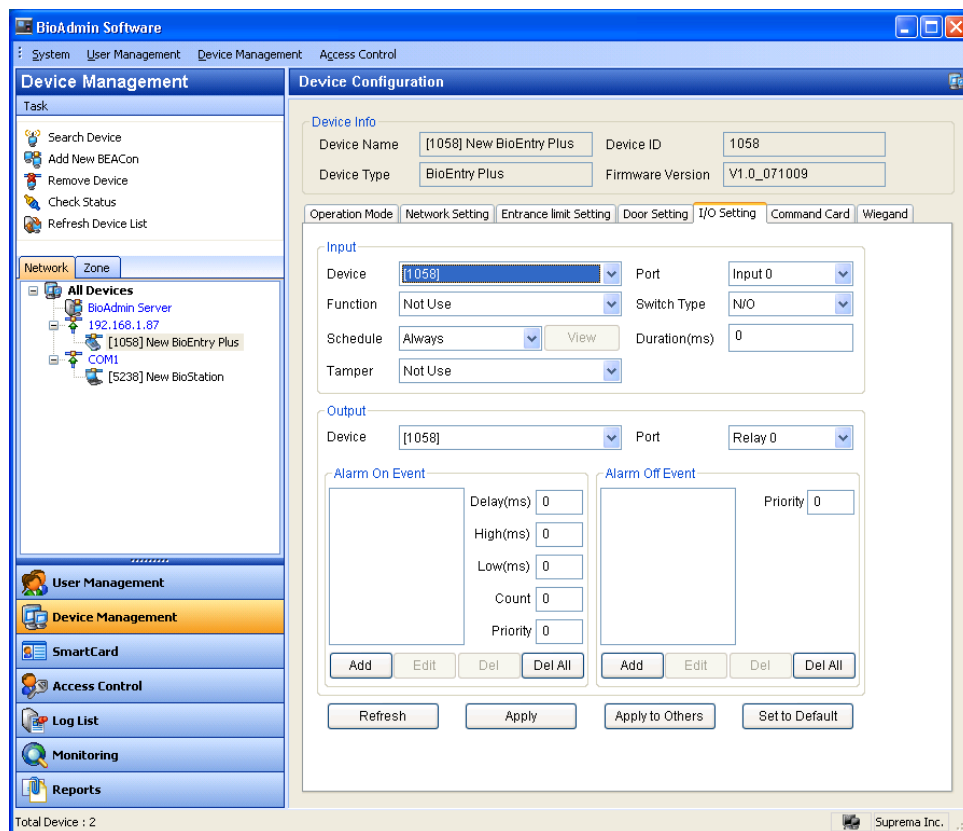


- Outside / Inside Device : Set two devices to control 1 door.
- Door Relay : Set the output terminal to control door among the connected devices.
- Door Open Period (sec) : Set the time when the selected output terminal operates in door open relay.
- Exit Button : Select a button input terminal used to open entrance door, which is Input 0 for use (N/O : Normal Open , N/C : Normal Close).
- Door Status : Select an input terminal to connect a sensor used to check the status of entrance door (N/O or N/C), which is Input 1 for use.
- Door Open Alarm (sec) : Enter the time to determine whether entrance door is open for a long time.

- Driven By : Select an event when an entrance door is open for a time longer than the set 'Long Time Door Open' setting.
- Lock Time : Set the time when a designated entrance door is always closed, as an item inter-working with the entrance/exit time set in entrance control item.
- Unlock Time : Set the time when a designated entrance door is always opened, as an item inter-working with the entrance/exit time set in entrance control item.
- Anti-passback : Set whether to apply anti-passback between Outside and Inside device.
 - Soft : Make a record and allow entrance in case of not verifying APB.
 - Hard : Not allow record and entrance in case of not verifying APB.
 - Reset Time : Make clearing entrance limit time against APB limit.

5.7.7. I/O Setting

- Window to set I/O terminals as use's discretion, besides door.



- Input

Input

Device	[1058]	Port	Input 0
Function	Not Use	Switch Type	N/O
Schedule	Always	Duration(ms)	0
Tamper	Not Use		

View

- **Device Type** : Display the device to be set at present.
- **Function** : Select a function to be performed as an input.
- **Schedule** : Set the input to be operated only for the time set in access control
- **Tamper** : Set to designate the function of tamper.
- **Port** : Select an input terminal set in the selected device.
- **Switch Type** : N/O or N/C
- **Duration(ms)** : Operate as long as the longer time is entered

● Output

Output

Device	[1058]	Port	Relay 0
--------	--------	------	---------

Alarm On Event

Delay(ms)	0
High(ms)	0
Low(ms)	0
Count	0
Priority	0

Add Edit Del Del All

Alarm Off Event

Priority	0
----------	---

Add Edit Del Del All

- **Device** : Display the devices to be set at present.
- **Port** : Select an output terminal to be set in a selected device.
- **Alarm On Event** : It may set so that if a listed event occurs, the output is generated from the port of a selected device.

● How to add Event

Add Event

[1058] Relay 0

Event

Event: Auth Success

Device: [1058] Priority: 1

Signal Setting

Delay(ms): 0 Count: 1

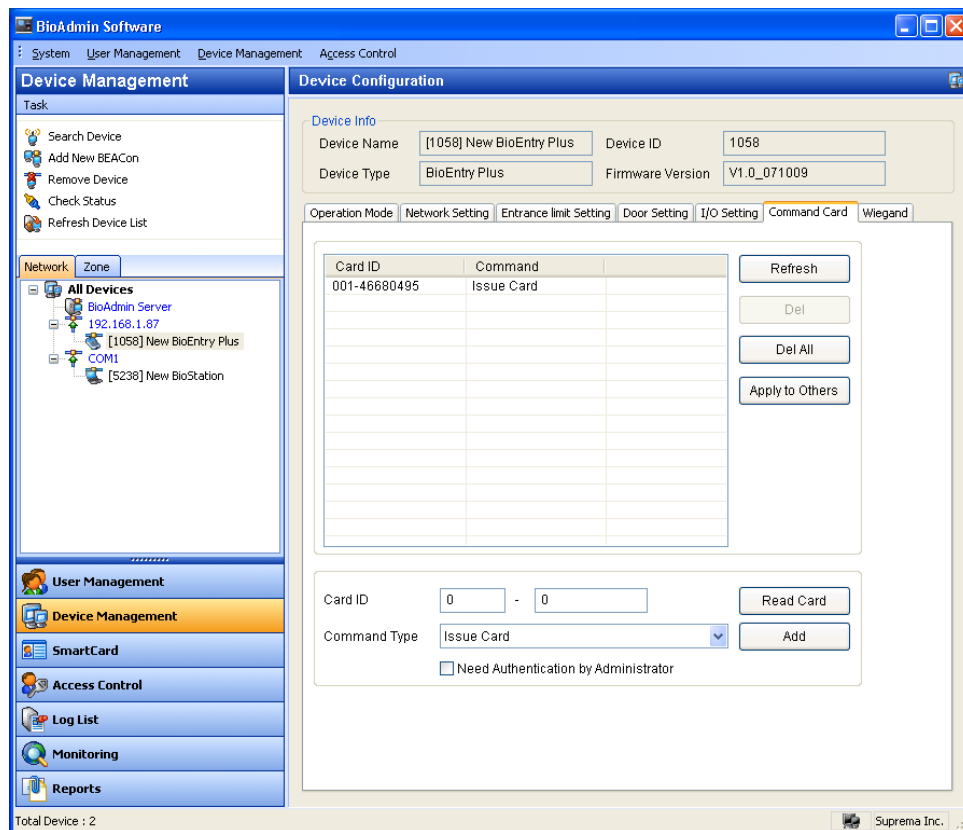
High(ms): 0 Low(ms): 0

OK Cancel

- **Event** : It is set so that if a selected event occurs, the output is generated to the port of the previously selected device.
- **Device** : Select a device to generate an event.
- **Priority** : By allowing priority to a function, it may prevent a priority event from being hidden or turned off, preceding over low priority function.
- **Signal Setting**
 - Delay: delay time before output is generated
 - Count: frequency to repeat off ~ on interval
 - High: time when output is generated
 - Low: Time when output is not generated
- **Alarm Off Event**

If a listed event occurs, it may release an output of which priority is equal to or lower than the priority of the port of a selected device.

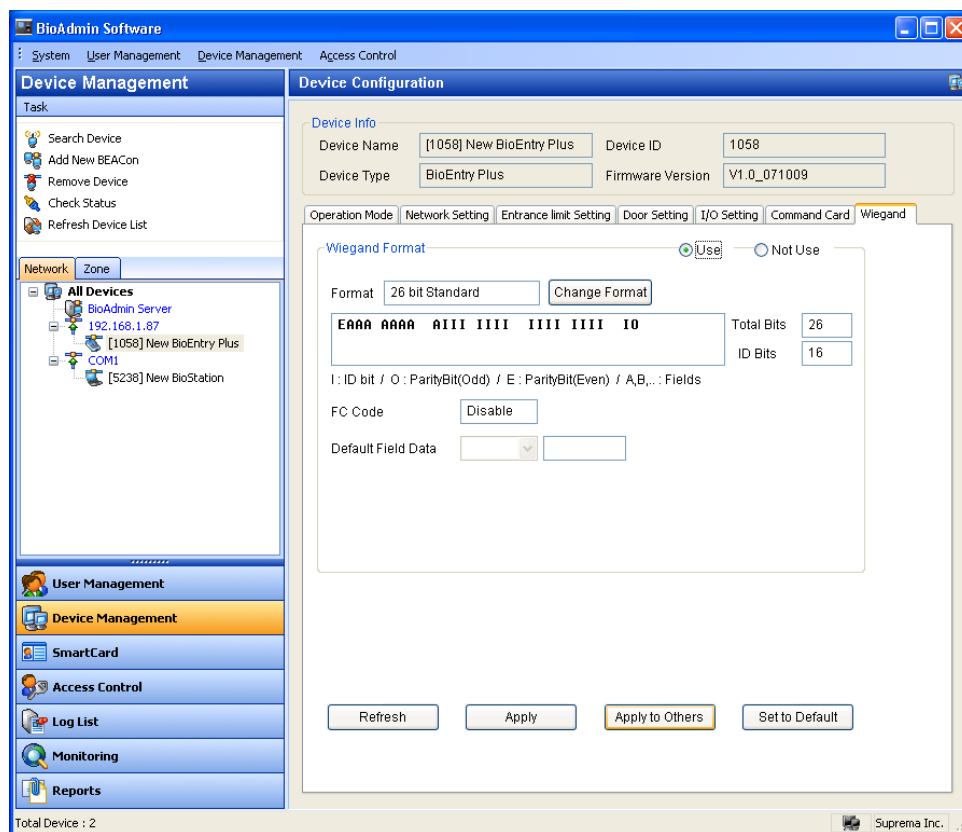
5.7.8. Command Card



- Command Card has outstanding feature provided by BioEntry Plus, which easily add or delete new user, or delete all user using BioEntry Plus device.
- Card List: Display the list of command card registered to the currently selected BioEntry Plus.
- Card ID : Display the card number read from a card or input the ID of RF card to register
- Read Card : Read the ID of RF card to register and display card ID item.
- Command type : Select a function to give the RF card to input
- Need Authentication by Administrator : As it requires a user for admin authentication, it may prevent misuse or abuse.

5.7.9. Wiegand

- Wiegand tab is used to manage the Wiegand I/O format. If selecting the menu, Wiegand setting page is updated on the window.



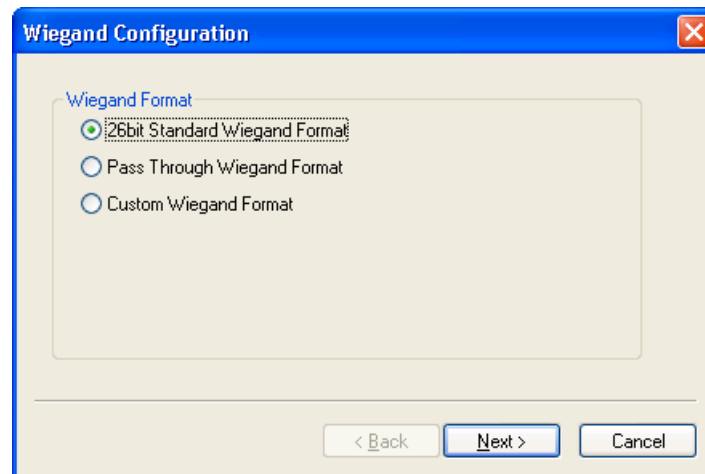
- Wiegand format

It is possible to set new Wiegand format by using Wiegand setting wizard. Pressing Format change shows the Wiegand Setting wizard.

Select one of three formats supported in the first page.

- 26 bit standard Wiegand format

26 bit standard format is the most widely used and consist of 8 bits FC code and 16 bits ID. In 26 bits standards formation, bit definition and parity bit may not be changed.



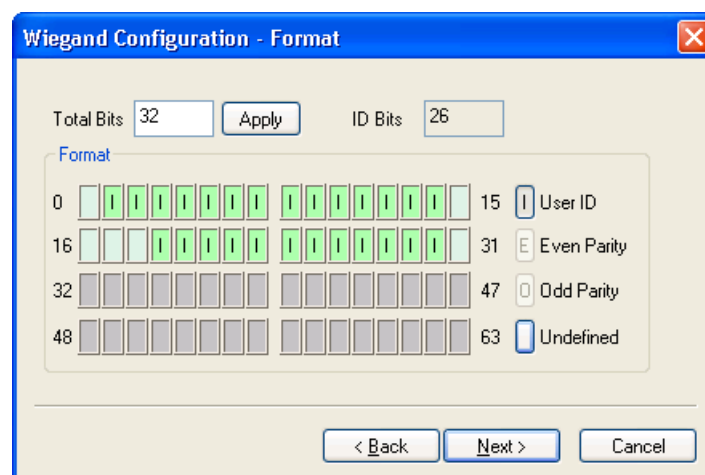
- Pass Through Wiegand Format

Pass Through Format is used as long as ID field format is known. If Wiegand input string is detected, the device finds ID bits and starts the authentication with the ID. If authentication is successful, the device outputs the Wiegand input string with no change. Parity check and advanced options are disregarded in the format. According to the definition, Pass Through format is available only when the use mode is 1:1. In case of use mode is 1:N, bit order except ID field should be set to 0. Assuming that 32 bit Pass Through format is as follows.:

XIIIIIIIIIIIIIIIIIIII XXXIIIIIIIIIIIIIIIIIIII X

(the very left bit is 0th bit, BIT0) I: Id field, X: Unknown field

The format can be set as the following sequence.



- Input 32 into Total Bits field.
- Select a ID bit according to the definition.
- Press Next button. In pass through mode, parity bit may not be specified.
- **User-defined Wiegand format**
If a user has the overall information for Wiegand format, the user may set the customized format. If Wiegand input string is detected, the device checks the parity bit first of ally. If every parity bit is correct, the device extracts ID bit and starts the authentication with the ID. A user may set each field with other values and set advanced option such as Fail ID. If authentication is successful, the output strings may differ from input string, depending on replaced values and advanced options.

Assuming that 44 bit customized format is structured as follows:

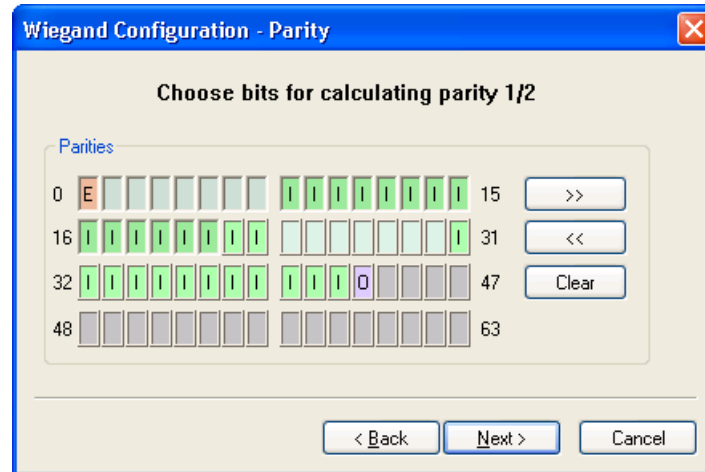
EAAAAAAAA IIIIIIII IIIIIIII BBBBBI IIIIIIII IIO

- (the very left bit is 0th bit, BIT0)
- E: Even parity for BIT1 ~ BIT22
- O: Odd parity for BIT23 ~ BIT42
- I: ID bits(Field1 and Field 3), A: Field 0, B: Field 2

The format may be set as the following sequence.

The dialog box 'Wiegand Configuration - Format' shows the configuration for a 44-bit Wiegand format. The 'Total Bits' field is set to 44, and the 'ID Bits' field is set to 28. The 'Format' section displays a bit sequence from 0 to 63. The sequence is: 0: E, 1-22: I, 23-42: O, 43: I, 44: I, 45: I, 46: I, 47: I, 48: I, 49: I, 50: I, 51: I, 52: I, 53: I, 54: I, 55: I, 56: I, 57: I, 58: I, 59: I, 60: I, 61: I, 62: I, 63: I. The 'User ID' field is set to 15, 'Even Parity' is set to 31, 'Odd Parity' is set to 47, and 'Undefined' is set to 63. The 'Apply' button is visible next to the 'Total Bits' field. The 'Next >' button is highlighted.

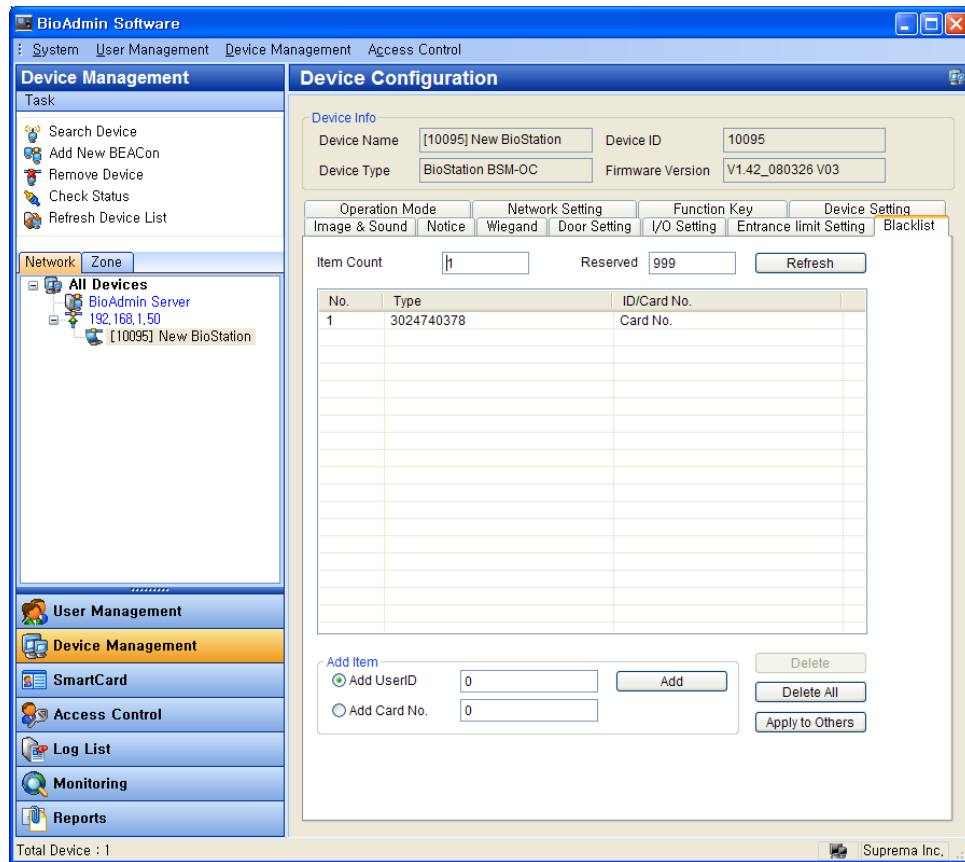
- Enter 44 into Total Bits field.
- Select Even Parity.
- Press 'even parity bit'. In the example, it means BIT0.
- According to the definition, repeat (2) and (3) for Odd Parity and User ID.
- Press Next button.



- Press the buttons used to calculate the first parity bit. In the example, they are BIT1 ~ BIT22.
 - Press >> button.
 - Press the buttons used to calculate the second parity bit. In the example, they are BIT23~ BIT42.
 - Press Next button.
- Replaced value

In 26 bit standard, it is possible to specify another FC code. In customized format, it is possible to specify the replaced value in non-ID field. If the replaced value is set, the device change the fields with the replaced values.

5.7.10. Black List



Manage the separate list to deny verification. If receiving verification request for Card S/N or User ID registered on the black list, the device denies verification and leaves failed log. The maximum number of black list is 1,000.

Item Count: The current registered number of list

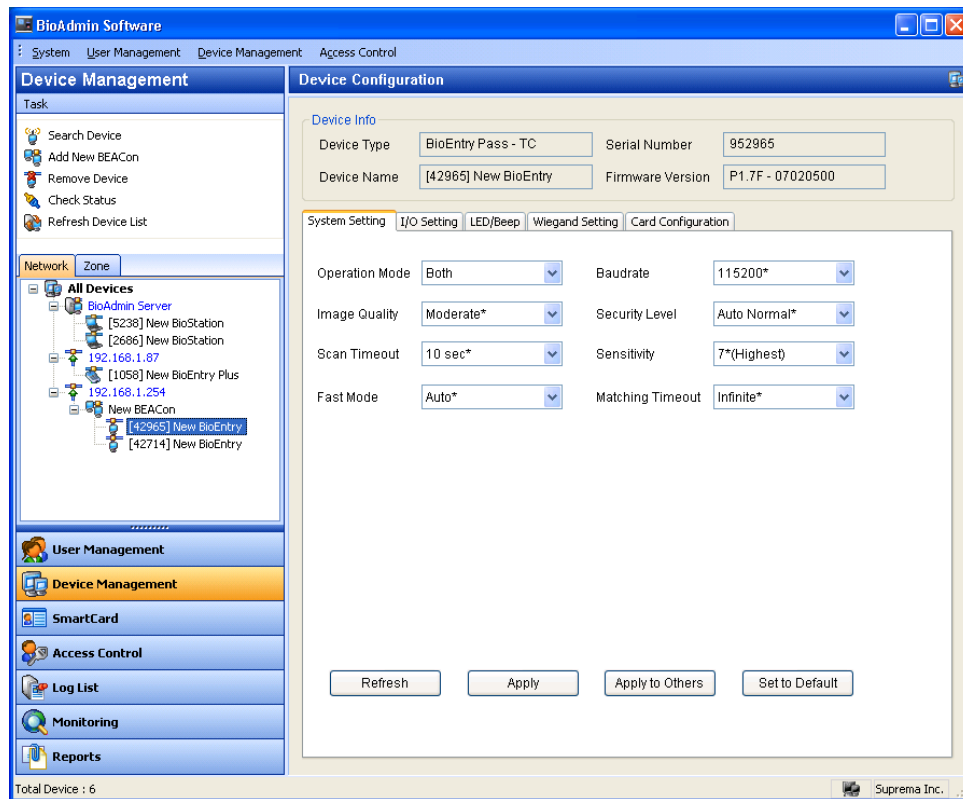
Reserved: Available number of list to register

Refresh: Read a list from the device

- **Add Black List** : Check User ID or Card No, determine the item to block, type number, and click 'Add'. In case of already registered or adding more than 1,000, it cannot be registered.
- **Delete Black List** : Click the item to delete from a list and click 'Delete' button.
- **Delete All** : Delete all registered Black list.
- **Apply to Others** : Apply the current black list to other devices.

5.8. Manage BioEntry device

By selecting a BioEntry on the Device tree, the Device Configuration window for the selected BioEntry is updated on the main window.



Device Configuration window is divided into 2 sectors:

- Device information

Device information shows the model name, serial number, device name, and firmware version of the selected BioEntry.

- Configuration Set up window

The configuration set up window shows the current configurations of selected BioEntry. Also, this window shows the configurations to be changed. The configuration set up menus are divided by separate tabs, such as System setting, I/O setting, LED/BEEP setting, Wiegand setting, and Card Layout.

5.8.1. Device information

Administrator can check device name, device type, device ID and FW version of

BioEntry. Device ID number and FW version are necessary information to check a product for technical support after installation.

5.8.2. System Setting

User can set up the parameters of BioEntry on the **System tab**. When this tab is selected, the system setting page is updated on the main window.

System Setting	
Operation Mode	Both
Image Quality	Moderate*
Scan Timeout	10 sec*
Fast Mode	5(Fastest)
Baudrate	115200*
Security Level	Auto Normal*
Sensitivity	7*(Highest)
Matching Timeout	Infinite*

Buttons: Refresh, Apply, Apply to Others, Set to Default

- Operation Mode
 - 1:1 verification : if 1:1 mode is selected in BioEntry Smart, present user smart card first and finger scan starts. In case of BioEntry Pass, finger scan is processed by Wiegand input from external device such as ID card or user fingerprint.
 - 1:N identification : in 1:N mode, finger scan (authentication) is done with user's fingerprint only. As device sensor is always on input standby mode, 1:N scan starts right away once a finger is placed on.
 - Both : Both 1:1 verification and 1:N identification are supported.

- Baud rate : Baud rate is the number of times per second that the carrier signal value changes state. If you have some problems to communicate with BioEntry or with BioStation, changing baud rate to lower value can be a solution.
- Image Quality : When a fingerprint is scanned, the module will check if the quality of the image is adequate for further processing. The image quality parameter specifies the strictness of this quality check.
- Security Level : Security level specifies FAR(False Acceptance Ratio). If it is set to 1/100,000, it means that the probability of accepting false fingerprints is 1/100,000. Since FAR and FRR(False Rejection Ratio) is in inverse proportion to each other, FRR will increase with higher security levels. Default value is **Auto Normal**.
- Scan Timeout : Scan Timeout specifies the timeout period for user input. If a user does not make his/her finger scanned, place smartcard, or input Wiegand during this period, error will be returned.
- Sensitivity : Sensitivity specifies sensor sensitivity to detect a finger. On high sensitivity, the module will accept the finger input more easily. In other hand, by decreasing the sensitivity, the input fingerprint image will be more stabilized. In case of optical models, sensitivity to sunlight is also alleviated by decreasing sensitivity parameter. Default value is **7**.
- Fast Mode : When more than hundreds of templates are stored in BioEntry, the matching time for 1:N identification can be very long. Fast Mode parameter can be used to shorten the 1:N matching time with little degradation of authentication performance. The security level – FAR – is not affected by this parameter, but the FRR can be a bit higher than in normal mode. In typical cases, Fast Mode 1 is as 2 ~ 3 times faster than Normal mode. And Fast Mode 5 is 6 ~ 7 times faster than Normal mode. Default value is **0**.
- Matching Timeout : Timeout period for 1:N matching. If identification process is not finished during this period, error will be returned.

● Factory defaults of parameters

BioEntry Factory defaults list of parameters for BioEntry Pass is as follows :

	Factory defaults	Selectable values
Operation mode	1:1 verification (BioEntry Smart)	1:1 verification 1:N identification

	1:N verification (BioEntry Pass)	Both
Security level	Auto Normal	1/1,000 3/10,000 1/10,000 3/100,000 1/100,000 3/1,000,000 1/1,000,000 3/10,000,000 1/10,000,000 3/100,000,000 1/100,000,000 Auto Normal Auto Secure Auto More Secure
Image quality	Moderate	Weak Moderate Stronger Strongest
Sensitivity	7	0(lowest) to 7(highest)
Scan timeout	10 sec	1 to 20 sec or Infinite
Matching timeout	Infinite	1 to 20 sec or Infinite
Fast mode	0(Normal)	0(Normal) to 5(Fastest)

5.8.3. I/O Setting

BioEntry provides 2 programmable inputs and 2 programmable outputs which can be used to interface with external devices. **I/O Setting** menu refreshes the main window to manage the I/O settings. By factory default, no functions are defined for each programmable I/O's.

The screenshot shows the 'I/O Setting' window in the BioAdmin software. It contains four sections for configuring inputs and outputs.
Input 0: Function is 'No Action', Min duration is 100 ms.
Input 1: Function is 'No Action', Min duration is 100 ms.
Output 0: 'Enroll Success' is in the 'Disabled Event' list. The 'Enabled Event' list is empty. Timing fields (Delay, High, Low, Count) are all set to 0.
Output 1: 'Enroll Success', 'Enroll Fail', 'Delete Success', 'Delete Fail', and 'Identify Not Granted' are in the 'Disabled' list. 'Verify Success', 'Verify Fail', 'Identify Success', 'Identify Fail', and 'Verify Duress' are in the 'Enabled Event' list. Timing fields are set to Delay: 0, High: 100, Low: 0, and Count: 1.
 At the bottom are buttons for 'Refresh', 'Apply', 'Apply to Others', and 'Set to Default'.

- Configuration of input port

To define the configuration of input port, function and minimum duration should be specified. Function means what to do when the input port is activated and minimum duration means the required duration of pulse to activate the input port.

- Description of Input functions

Function	Description
No Action	Disable input port
Enroll by Scan	initiate enrollment using finger scan
Identify by Scan	initiate identification using finger scan
Delete by Scan	delete user by identifying input finger
Delete All	delete all user data
Enroll by Wiegand ID	enroll by scan with user ID received at Wiegand input port
Verify by Wiegand ID	initiate verification using finger scan with user ID

	received at Wiegand input port
Delete by Wiegand ID	delete user with user ID received at Wiegand input port
Controller Reject	input for reject signal from controller
Controller Accept	input for accept signal from controller
Software Reset	initiate software reset

- Program sample for input port
 - If administrator wants to connect the wiegand input of the user ID to the input button to initialize enrollment, the following procedure is required.
 - Suppose to use input port 0, user should press a button for at least 500 ms to activate a function.
 - First, choose applicable device on device list window.
 - Choose a function of input port 0 with Enroll by Wiegand ID.
 - Input 500 as minimum input time of input port 0.
 - Press apply button to transfer new settings to applicable device.

● Configuration of output port

In configuring output port, multiple functions can be programmed to produce different output pattern on each event. Event means when to activate the output port and output pattern defines how to activate the output port, respectively. Programming procedure is as follows:

- Enable required event by selecting event from disabled event.
- Program output pattern by editing delay, high, low, and count values.

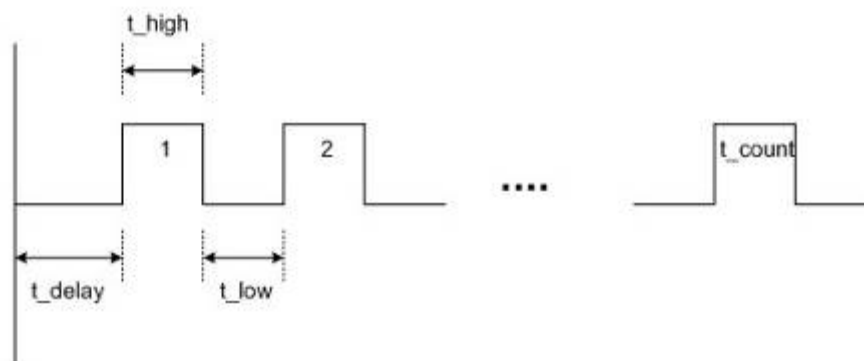
● Output events

Event	Description (when to activate the output port)
Enroll Success	When a user is successfully enrolled on the device
Enroll Fail	When enrollment fails
Identify Success	When identification is successfully done
Identify Fail	When the device fails to find out the matched user
Verify Success	When verification is successfully done
Verify Fail	When the user is not verified
Delete Success	When deletion of user succeeds
Identify Not Granted	Identification is successfully done, but entrance denied

Verify Not Granted	Verification is successfully done, but entrance denied
Delete Fail	When deletion of user fails
Verify Duress	When duress finger is verified
Identify Duress	When identified finger is a duress finger
Temper Switch On	When temper switch on the device is enabled implying device is opened.
Command Card Success	When command card operation successfully completed
Command Card Fail	When command card operation is failed
Controller Reject	When input port on which Controller Reject function is assigned, is activated
Controller Accept	When input port on which Controller Accept function is assigned, is activated
Detect Input 0	When input port 0 is activated regardless of assigned function
Detect Input 1	When input port 1 is activated regardless of assigned function

- Describing output pattern

On each enabled event, output pattern can be flexibly described by programming using 4 parameters whose meanings are depicted as



Parameter	Meaning	Allowed value
Delay	initial delay before generating output pulses in msec	0 ~ 65535

High duration	duration of pulse in high state in msec	0 ~ 65534 65535 : continuously active until new output event occurs
Low duration	interval between consecutive pulses where the output signal remains low	0 ~ 65535
Count	Number of pulses	0 : infinitely repeated until new output event occurs 1 ~ 255

▪ Programming example of output pattern

Assume that a user want to assign an alarm signal at output port 0 generating following patterns:

- On identification success or verification success for duress finger, the device sends blinking output during 5 seconds.
- When temper switch is on, the device sends steady output during 10 seconds.
- Programming procedure is as follows:
 - First, select a target device on the network window.
 - Disable currently selected events on output 0 by moving enabled ones to the disabled sector.
 - Program the required events by enabling each event followed by editing output pattern parameters as follows:

Event to be enabled	Output pattern parameters
Verify Duress	Delay : 0 High : 500 Low : 500 Count : 5
Identify Duress	Delay : 0 High : 500 Low : 500 Count : 5
Temper Switch On	Delay : 0 High : 10000

	Low : 0
	Count : 1

- Press the Apply button to transmit the new configuration to the target device.

5.8.4. LED/Beep sound Setting

There are two LED's and one beep on BioEntry device to provide processing status and result to users. The colors of two LED's are mixed to generate 3 colors, green, red, and amber. By selecting the LED/Beep Setting tab, the LED/Beep configuration page is updated on the main window.

The screenshot shows the 'LED/Beep' configuration window. It is divided into three main sections: Green LED, Red LED, and Beep. Each section has a 'Disabled Event' list on the left and an 'Enabled Event' list on the right, with arrows for moving items between them. To the right of each list are input fields for Delay(ms), High(ms), Low(ms), and Count.

Section	Event	Delay(ms)	High(ms)	Low(ms)	Count
Green LED	Enroll Fail	0	500	500	0
	Verify Fail				
	Identify Fail				
	Delete Fail				
	Turner Switch On				
Red LED	Enroll Success	0	1	0	1
	Verify Success				
	Identify Success				
	Delete Success				
	Verify Duress				
Beep	Enroll Wait Finger	0	10	0	1
	Enroll Processing				
	Verify Wait Finger				
	Verify Processing				
	Identify Wait Finger				

Buttons at the bottom: Refresh, Apply, Apply to Others, Set to Default.

- Configuration of LED/Beep

Programming steps for LED and Beep is similar to output port configuration. Additional events are selectable, listed as

Event	Description (when to activate the output port)
Enroll Wait Finger	When the device is waiting for a finger scan to enroll
Enroll Processing	When the device is in enrollment process
Identify Wait Finger	When the device is waiting for a finger scan to identify
Identify Processing	When the device is in identification process
Verify Wait Finger	When the device is waiting for a finger scan to verify
Verify Processing	When the device is in verification process
Delete Wait Finger	When the device is waiting for a finger scan to delete

- Description of default LED/Beep configuration

By factory default, various output patterns are defined for LED and beep to show current status and processing result. The description of default LED/Beep configuration is listed as follows:

Events	LED	Beep
Enroll Wait Finger	Slow blinking amber	None
Verify Wait Finger	Fast blinking amber	None
Identify Wait Finger	Slow blinking amber	None
Delete Wait Finger	Fast blinking amber	None
Enroll Processing Identify Processing Verify Processing	Steady amber	None
Enroll Success Verify Success Identify Success Delete Success Command Card Success Verify Duress Identify Duress	Steady green	One beep sound
Enroll Fail Verify Fail Identify Fail Delete Fail Command Card Fail	Steady red	Three short beep sounds
Waiting Smart Card Input	Fast blinking red (fixed)	None

5.8.5. Wiegand Setting

The **Wiegand Setting** tab is used to manage the Wiegand input/output format of BioEntry. By selecting the menu, the Wiegand setting page is updated on the main window.

The screenshot shows the 'Wiegand Setting' tab selected in a software window. The interface includes several sections for configuring Wiegand and ABA Track II settings.

Wiegand Format Section:

- Format:** A dropdown menu set to '26 bit Standard'. Buttons for 'Change format', 'Load from File', and 'Save to File' are to its right.
- Visual Representation:** A box showing the bit pattern: EAAA AAAA AIII IIII IIII IIII IO.
- Total Bits:** A dropdown menu set to '26'.
- ID Bits:** A dropdown menu set to '16'.
- Legend:** I : ID bit / O : ParityBit(Odd) / E : ParityBit(Even) / A,B,... : Fields
- Fail ID:** A button labeled 'Disable'.
- FC Code:** A button labeled 'Disable'.
- Inverse Parity on Fail:** A button labeled 'Disable'.
- Field Default Values:** Two input fields with a dropdown arrow between them.

Pulse Section:

- Pulse Width:** An input field with '50' and '(usec)'.
- Pulse Interval:** An input field with '2000' and '(usec)'.

ABA Track II Section:

- ABA Track II Format:** A button labeled 'Disable'.

Bottom Buttons: 'Refresh', 'Apply', 'Apply to Others', and 'Set to Default'.

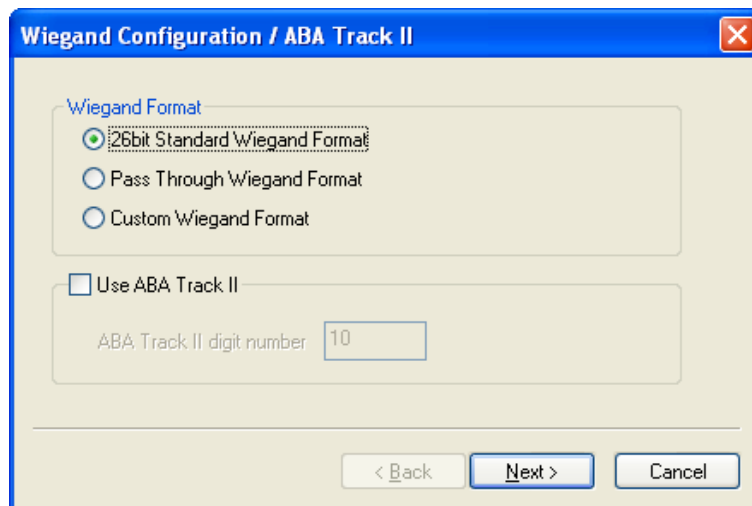
- **Wiegand Format**

New Wiegand format can be configured graphically using the Wiegand Configuration wizard. The Wiegand Configuration wizard will be shown by pressing the **Change format** button.

- **Select format**

You should select one of the three supported formats in the first page. If BioEntry device is connected to the controller by ABA Track II output, not by Wiegand interface, you should check **Use ABA Track II**. In that case, the output signal will be in ABA Track II format. You can also specify the number of

characters for ABA Track II output.



- 26 bit standard

The 26 bit standard format is most widely used and consists of 8 bit FC code and 16 bit ID. You cannot change the bit definition and the parity bits in 26 bit standard format.

- Pass Through format

Pass Through format is used when only the format of ID field is known. When the Wiegand input string is detected, BioEntry device extracts ID bits and starts verification with the ID. If the verification succeeds, the device outputs the Wiegand input string as unchanged. Parity check and advanced options are ignored in this format. By definition, Pass Through format is only useful when the operation mode is 1:1. If the mode is 1:N, the bits other than ID field are set to 0.

For example, assume that 32 bit Pass Through format is composed as follows:

XIIIIIIII IIIIIIX XXXIIIIII IIIIIIX (left most bit is 0th bit, BIT0)

I: Id field, X: Unknown field

You can configure this format in the following sequences.

Wiegand Configuration - Format

Total Bits: ID Bits:

Format

0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15	<input type="checkbox"/> User ID
16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	31	<input type="checkbox"/> Even Parity
32	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	47	<input type="checkbox"/> Odd Parity
48	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	63	<input type="checkbox"/> Undefined

< Back Next > Cancel

- (1) Enter 32 in the **Total Bits** field.
- (2) Select ID bits according to the definitions.
- (3) Press **Next**. You cannot specify parity bits in Pass Through mode.
- **Custom format**

When users know all the information of a Wiegand format, Custom format can be defined. When a Wiegand input string is detected, BioEntry device checks the parity bits first. If all the parity bits are correct, the device extracts ID bits and starts verification with the ID. Users can also set alternative values of each field and enable advanced options such as Fail ID. If the verification succeeds, the device outputs a Wiegand string. The output string may be different from the input string according to the alternative values and advanced options.

For example, assume that 44 bit Custom format is composed as follows:

EAAAAAAAA IIIIIIII IIIIIIII BBBBBI IIIIIIII IIO

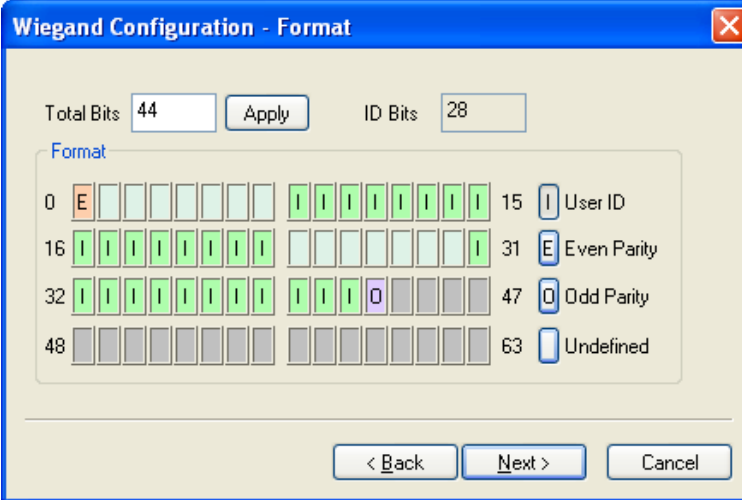
(left most bit is 0th bit, BIT0)

E: Even parity for BIT1 ~ BIT22

O: Odd parity for BIT23 ~ BIT42

I: ID bits(Field1 and Field 3), A: Field 0, B: Field 2

You can configure this format in the following sequences.



Wiegand Configuration - Format

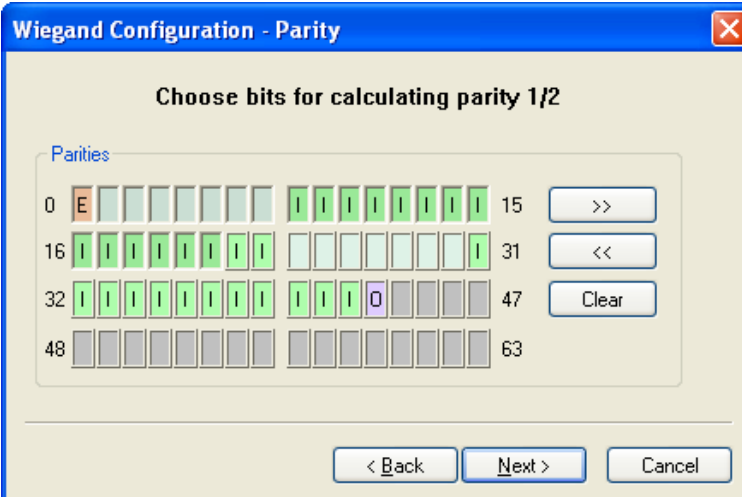
Total Bits: ID Bits:

Format

0	E																		15	I	User ID
16																			31	E	Even Parity
32																			47	O	Odd Parity
48																			63		Undefined

< Back Next > Cancel

- Enter 44 in the **Total Bits** field.
- Select **Even Parity**.
- Press the even parity bit. In this example, it is BIT0.
- Select Odd Parity and press the odd parity bit and User ID according to the definition.
- Press **Next**.



Wiegand Configuration - Parity

Choose bits for calculating parity 1/2

Parities

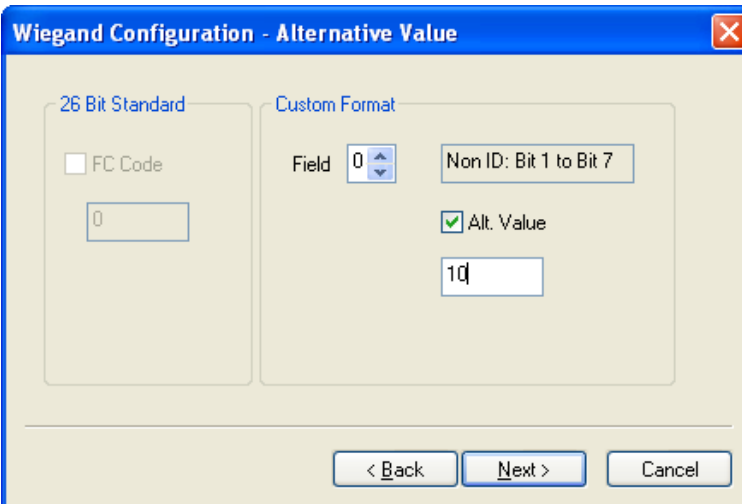
0	E																		15	>>
16																			31	<<
32																			47	Clear
48																			63	

< Back Next > Cancel

- Press the bits which are used in calculating the first parity bit. In this example, they are BIT1 ~ BIT22
- Press >>.
- Press the bits which are used in calculating the second parity bit. In this example, they are BIT23~ BIT42.
- Press **Next**.

- Alternative values

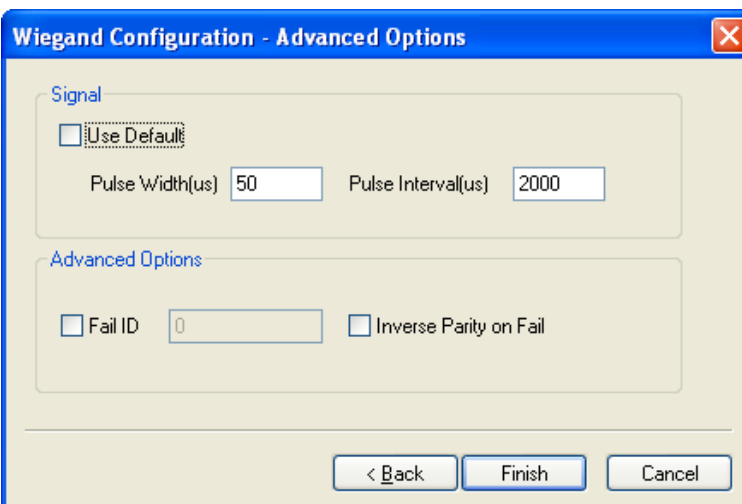
In 26 bit standard you can specify alternative FC code. In Custom format, you can specify alternative values for non-ID field. If alternative values are set, the BioEntry™ device will replace corresponding fields with these values before sending outputs.



The dialog box is titled "Wiegand Configuration - Alternative Value". It has two main sections: "26 Bit Standard" and "Custom Format". In the "26 Bit Standard" section, there is a checkbox labeled "FC Code" which is unchecked, and a text box below it containing the value "0". In the "Custom Format" section, there is a "Field" dropdown menu set to "0", a text box labeled "Non ID: Bit 1 to Bit 7" containing "10", a checked checkbox labeled "Alt. Value", and a text box below it containing "10". At the bottom of the dialog are three buttons: "< Back", "Next >", and "Cancel".

- Advanced options

You can specify the characteristics of Wiegand signal and the advanced options in the last page of the wizard. Advanced options are not available for Pass Through format.



The dialog box is titled "Wiegand Configuration - Advanced Options". It has two main sections: "Signal" and "Advanced Options". In the "Signal" section, there is a checkbox labeled "Use Default" which is checked, and two text boxes: "Pulse Width(us)" containing "50" and "Pulse Interval(us)" containing "2000". In the "Advanced Options" section, there is a checkbox labeled "Fail ID" which is unchecked, a text box next to it containing "0", and another checkbox labeled "Inverse Parity on Fail" which is unchecked. At the bottom of the dialog are three buttons: "< Back", "Finish", and "Cancel".

- Use Default: Uses default values for Wiegand signals.

- **Pulse Width** : The width of pulse. The default is 50 us.
- **Pulse Interval** : The interval of pulse. The default is 2000us.
- **Fail ID** : Normally the module outputs Wiegand signals only if matching succeeds. If this option is checked, the module outputs the fail ID when matching fails.
- **Inverse Parity on Fail** : If this option is checked, the module outputs Wiegand signals with inverted parities when matching fails.

5.8.6. Smart Card setting

Card Configuration is the process of defining custom sectors on user's smart card to store user information including user ID and templates. By selecting **Card Configuration** menu, smart card layout page is updated on the main window.

Note : *It is recommended that only advanced users attempt to change the layout since improper changes may render the smart card unusable. Read this chapter carefully for changing the layout from the default configuration.*

System Setting I/O Setting LED/Beep Wiegand Setting Card Configuration

Smart Card Layout

Template Size 350 (22 blocks) Select CIS Index Select Template Reset Layout

Block Color Key

- CIS Index Block
- Template 1 Data
- Template 2 Data
- Unavailable
- Unused

Refresh Apply Apply to Others Set to Default

- Editing layout

- Template size : Template size is configurable from 254 to 382. By factory default, template size is specified as 350 bytes storing two templates on the card.
- CIS index block : Header information is stored on the CIS index block which is depicted by red color.
- Template data block : Blocks for template 1 data and template 2 data. Number of blocks for each template data is determined by template size. Template 1 data is depicted by yellow and template 2 data is depicted by green, respectively.
- Unused block : Blank block which is not defined by layout.
- Unavailable block : Block that is prohibited from use.

- Editing procedure

To configure customer's layout, following procedures are required.

- Initialize all the blocks to unused ones by pressing the Reset Layout button.
- Select the required template size.
- Press the Select CIS Index button and click an unused block to select a CIS index block.
- Press the Select Template button and click an unused block to indicate the start block of template data. Then, the blocks of template 1 data are set automatically from the selected start block.
- Press the Select Template button again and click an unused block to indicate the start block of template 2 data.
- The Apply button transmits smart card layout to selected devices.

- Factory default layout

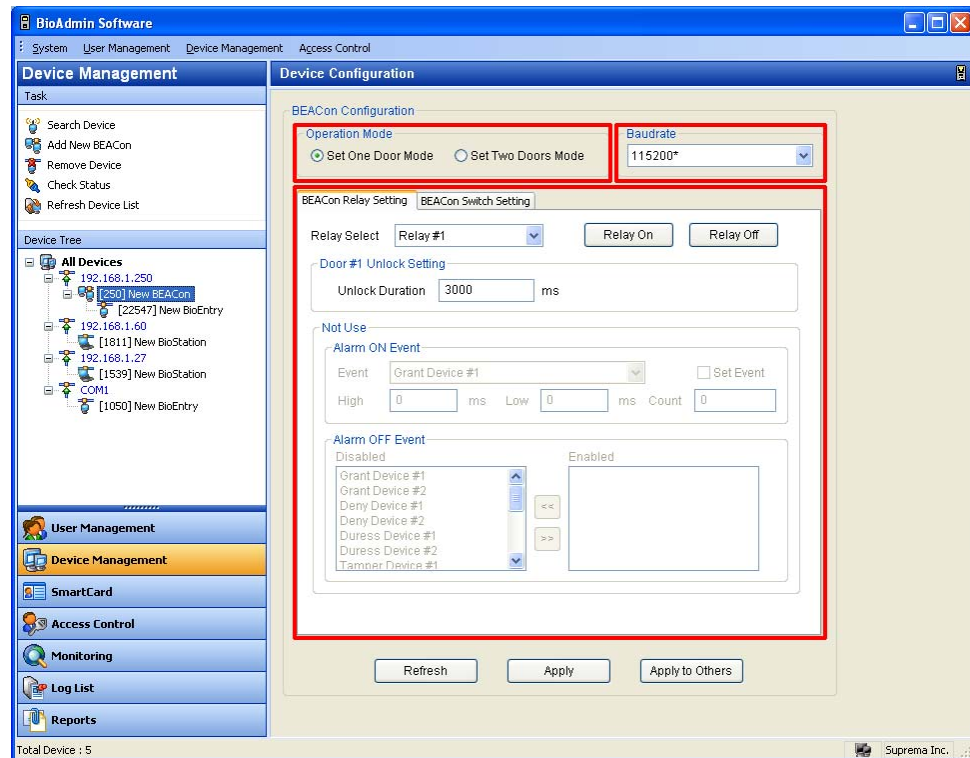
Factory default smart card layout is as follows :

0	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
1	5	9	13	17	21	25	29	33	37	41	45	49	53	57	61
2	6	10	14	18	22	26	30	34	38	42	46	50	54	58	62
3	7	11	15	19	23	27	31	35	39	43	47	51	55	59	63

■ CIS Index
■ Template 1 Data
■ Template 2 Data
■ Unused
■ Unavailable

5.9. BEACon Configuration

By selecting a BEACon on the Device tree, the Device Configuration window for the selected BEACon is updated on the main window.



The Device Configuration window is divided into 3 sectors:

- Operation Mode

BEACon can control up to two doors. The Operation Mode window shows whether the selected BEACon is configured as one door mode or two door mode.

- Baud Rate

The Baud rate window shows the transfer speed of the selected BEACon.

- Configuration Set up window

The Configuration set up window shows the current configurations of the selected BEACon. Also, this window shows the configurations to be changed. The configuration set up menu is divided by separate tabs, such as BEACon Relay Setting and BEACon Switch Setting. For the detailed operation of BEACon, refer to BEACon operation manual.

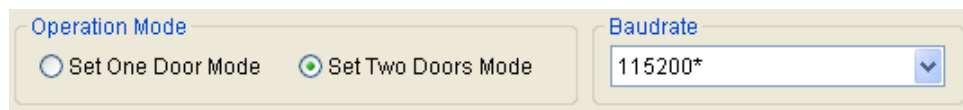
5.9.1. Operation Mode

BEACon can control up to two doors. The Operation Mode window shows whether the selected BEACon™ is configured as one door mode or two door mode.

5.9.2. Signaling speed (Baud rate)

The Baud rate window shows the transfer speed of the selected BEACon.

- Baud rate: On this menu, you can select the transfer speed of BEACon. If you change the Baud rate on this menu, communication speed between BEACon and host PC will be changed.
- Once you change the Baud rate of BEACon, you also need to accord the Baud rate of BioEntry and BioStation with the changed Baud rate of BEACon.



5.9.3. BEACon Relay Setting

On this menu, you can change the relay setting of BEACon. The relay setting can be differently configured depending on the operation mode of BEACon.

- On 1 door mode, relay #1 is automatically set up as door release. Therefore, you can set up relay #2, #3, and #4 as alarm.
- On 2 door mode, relay #1 and #2 are automatically set up as door release. Therefore, you can set up relay #3 and #4 as alarm.

Detailed Operations are as follows.

- Select a relay to set up the configuration. Once you select a relay, applicable items for the selected relay will be activated on the relay setting window.
- You can also open/close the relays by pressing the **Relay On / Relay Off** buttons.

- **Unlock Setting**

Enter the unlock duration time. Once the door is unlocked, it can be locked again after this unlock duration time.

- **Alarm On Event:**

Select alarm on events on the drag down menu by checking on the **Set Event** check box. Enter **High**, **Low**, and **Count** to set up the alarm frequency. If any of the alarm on events is triggered, the alarm will be activated at your designated frequency.

Alarm ON Event

Event	Grant Device #1	<input type="checkbox"/> Set Event
High	0 ms	Low 0 ms Count 0

- **Alarm Off Event:**

Select alarm off events. You can enable the alarm off events simply by double clicking the events on the disabled event list. If any of the alarm off events is triggered, the alarm will be deactivated, regardless of remaining duration or pulse counts.

Alarm OFF Event

Disabled		Enabled
Grant Device #1	<input type="button" value="←"/> <input type="button" value="→"/>	
Grant Device #2		
Deny Device #1		
Deny Device #2		
Duress Device #1		
Duress Device #2		
Tanner Device #1		

5.9.4. Switch Setting

On this menu, you can change the switch setting of BEACon. The switch setting can be differently configured depending on the operation mode of BEACon.

- On 1 door mode, switch#1 is automatically set up as the door sensor and #3 as RTE (request to exit). Therefore, you can set up switch#2, #4, #5, and #6 as other various functions on the Normal Switch Setting menu.
- On 2 door mode, switch#1 and #2 are automatically set up for the door sensor. Also, switch#3 and #4 are automatically set up for RTE. Therefore, you can set up switch#5 and #6 for other various functions on the Normal Switch Setting menu.

BEACon Relay Setting BEACon Switch Setting

Switch Select Switch #1 Switch Type N/C

Door #1 Status Setting

Lock Delay 2000 ms

Held Open Delay 10000 ms

Not Use

Input Delay 0 ms

Not Use

Function

Input Delay 0 ms

- Select a switch to set up the configuration. Once you select a switch, applicable items for the selected switch will be activated on the switch setting window.

Switch Select Switch #1 Switch Type N/C

- Door Status Setting

By selecting a door sensor switch, you can set up the lock delay and held open delay of the connected BEACon. If the door is closed, the door strike will be locked after your designated lock delay time. If the door is opened for more than your designated Held Open Delay time, the held open door event will be triggered.

Door #1 Status Setting

Lock Delay 2000 ms

Held Open Delay 10000 ms

- Door RTE Setting

By selecting RTE switch, you can set up the input delay. If the RTE switch is activated for more than your designated input delay time, the door will be opened.


Door #1 RTE Setting

Input Delay ms

- Normal Switch Setting

For the remaining switches, you can set up other various functions, such as RTE, tamper, clear alarm switch. If the switch is activated for more than your designated input delay time, the selected function will be triggered.

Normal Switch Setting

Function 
Input Delay ms

5.9.5. Refresh / Apply / Transfer (apply to another device)

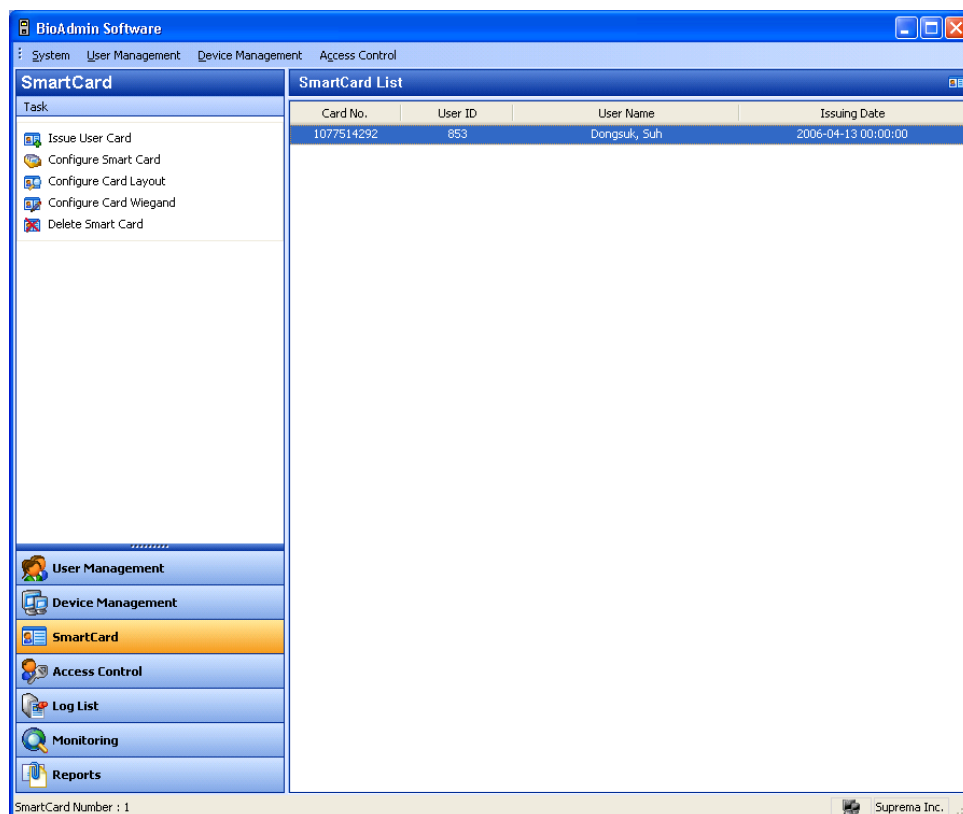
- Refresh : You can restore the original configuration by pressing the **Refresh** button before pressing Apply button.
- Apply : After changing the configuration, you need to press the **Apply** button to save.
- Transfer : You can transmit the changed configurations to other devices by pressing the **Transfer** button.

6. Smartcard / Mifare card

The Smart Card menu is used to see the list of smartcards issued on the BioAdmin Software. All of user's smart cards will be automatically shown on the Smartcard list of this menu.

The Smartcard menu covers the following operations:

- Issue User Card
- Configure Smartcard
- Configure Card Layout
- Configure Card Wiegand
- Delete Smartcard



6.1. Configuration of Smartcard page

By selecting **Smart Card** menu, Smart Card management page is updated on the main window.

The Smartcard page is divided into 2 sectors:

- Smartcard List

The Smart card database is under central management on host PC. The Smartcard list includes the detailed list of smart cards issued on BioAdmin software.

- Task box

Task box includes buttons to control the basic operations of the Smartcard page.

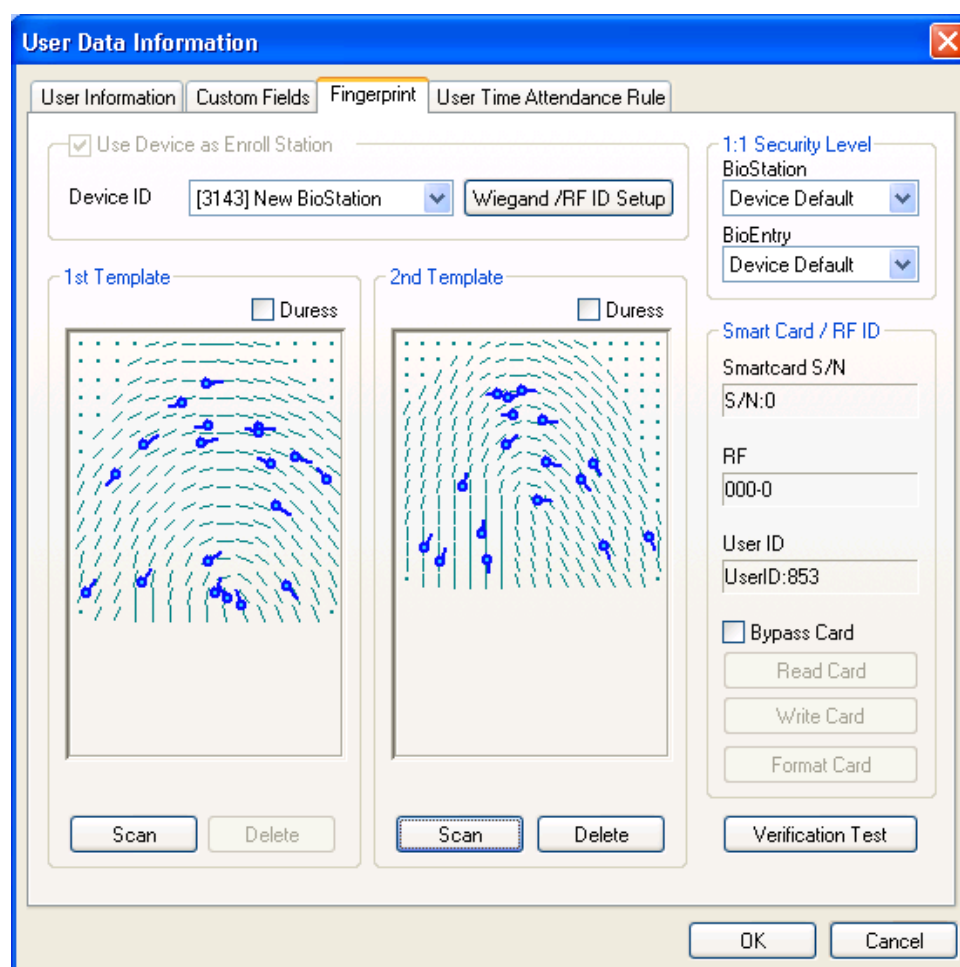
6.2. Smartcard List

The Smartcard list includes the following information of the Smartcards.

- Card Number
- User ID
- User Name
- Issuing Date
- Expiry Date

6.3. Card issue

The **Issue User Card** menu enables a pop-up window to issue a user's smart card. For the detailed operation, refer to the issuing procedure on the User Management menu.



6.4. Configure Smartcard

The **Manage Smartcard** menu enables a pop-up window to read the smart card information and format smart card. On this window, you can check the smartcard information such as Serial No, Wiegand string(if applicable), User ID, Security Level, User Name, Access Group, and Template Data.

If you do not have a USB smart card Device/Writer, you can also read the smart card information directly through BioEntry by check on **Use BioEntry as Enroll Station**.



The image shows a 'Smartcard Info' dialog box with a blue title bar and a close button. It contains several sections: a checkbox for 'Use BioEntry as Enroll Station' which is checked; a 'BioEntry ID' dropdown menu showing '[1050] New BioEntry' and a 'Read Card' button; a 'Smart Card Info' section with fields for 'Serial No.' (40399034), 'Wiegand String' (00000000 000006at), 'UserID' (853), 'Security Level' (BioEntry Default), 'User Name' (Dongsuk, Suh), and an 'Access Group' dropdown; and two fingerprint template sections labeled '1st Template' and '2nd Template'. Each template section shows a fingerprint image with blue dots and lines, and a 'Duress' dropdown menu set to 'No'. At the bottom are 'Format Card' and 'Close' buttons.

Smartcard Info

☒ Use BioEntry as Enroll Station

BioEntry ID: [1050] New BioEntry Read Card

Smart Card Info

Serial No. 40399034 Wiegand String 00000000 000006at

UserID 853 Security Level BioEntry Default

User Name Dongsuk, Suh

Access Group

1st Template

Duress No

2nd Template

Duress No

Format Card Close

6.4.1. Read issued smart card

On this Manage Smartcard window, information stored on the smart card can be retrieved similarly to the reading process described in Chapter 3. User Management.

6.4.2. Smart card format

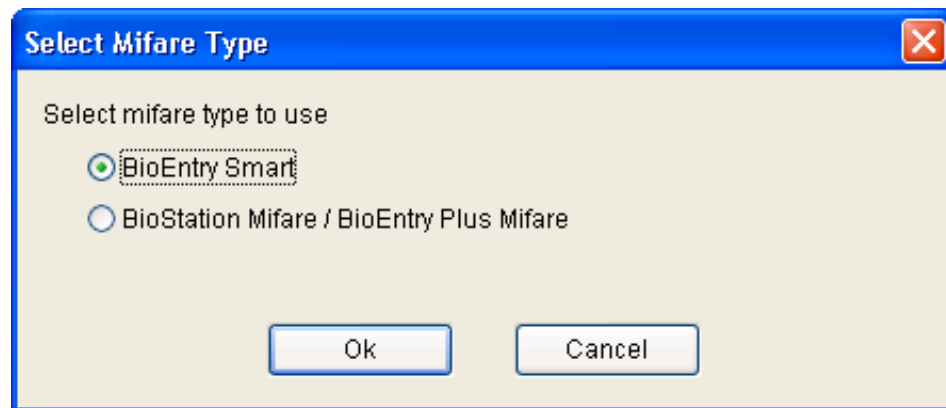
On this Manage Smartcard window, the formatting can be processed similarly to the formatting process described in Chapter 3. User Management.

6.5. Edit Card Layout

Smartcard layout is the process of defining custom sectors on user's smart card to store user information including templates. By selecting the **Configure Smartcard**

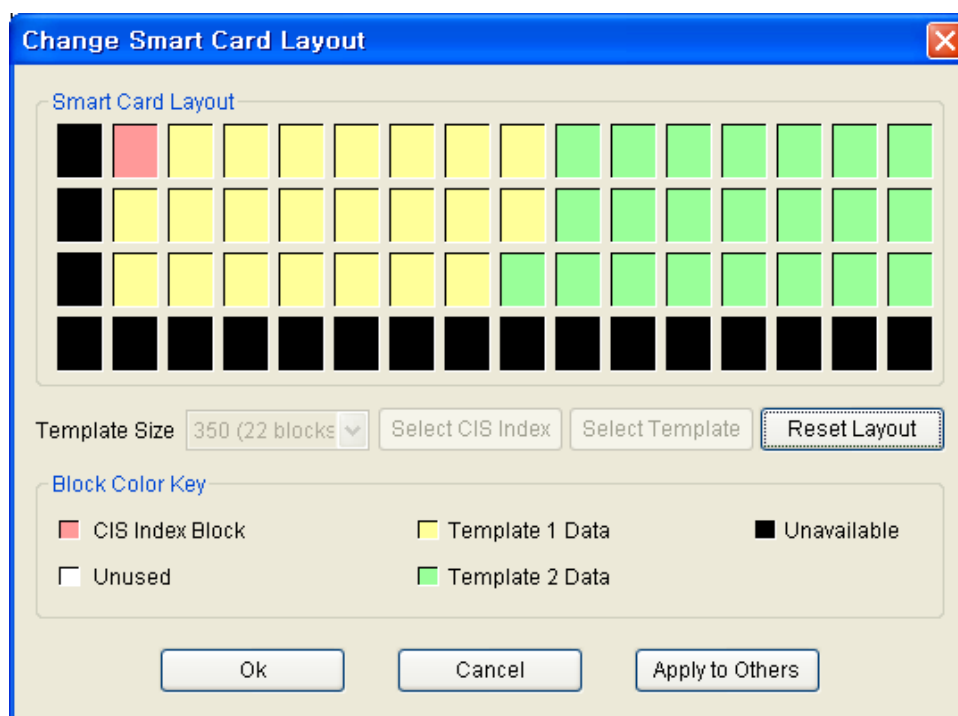
Layout button, the smartcard layout page is updated on the main window. It is recommended that only advanced users attempt to change the layout since improper changes may render the smart card unusable. Read this chapter carefully for changing the layout from the default configuration.

6.5.1. Select Device Type for Smart card / Mifare card



Select the type to edit layout, which is not related with 'Mifare Card Type" (System - > Preference), but just select a type.

6.5.2. Configuration of smartcard layout edit page (BioEntry Smart Only)



The Configure Smartcard layout page is divided into 3 sectors :

- Smart Card Layout

It shows the smartcard layout of the Smartcard Device/Writer device connected to the host PC.

- Smart Card Layout

It shows the name of currently selected device and the layout of the current device. If a group or all devices are selected, the contents are not available.

- New configuration

This sector is used for editing new layout to be applied to the devices and the user's smart card.

- Controls for managing layout

Fill with Current Configuration Value button updates the contents of the new configuration using the retrieved layout from currently selected device. **Transfer** button transmits new layout to the selected BioEntry™ device, selected group, or all BioEntry™ devices. Several control buttons for editing layout also exist.

6.5.3. Size of Fingerprint data (Template)

Template size is configurable from 254 to 382. By factory default, template size is

specified as 350 bytes storing two templates on the card.

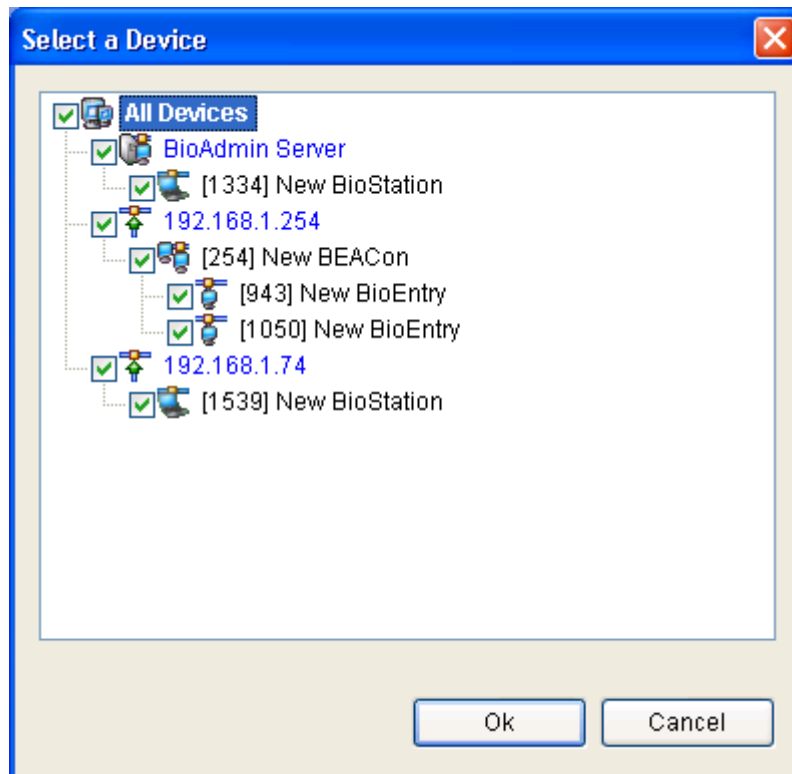
6.5.4. Block

- CIS index block : The header information is stored on the CIS index block which is depicted by red color.
- Template data block : Blocks for template 1 data and template 2 data. The number of blocks for each template data is determined by template size. Template 1 data is depicted by yellow and template 2 data is depicted by green, respectively.
- Unused block : Blank block which is not defined by layout.
- Unavailable block : Block that is prohibited from use.

6.5.5. Editing process

To configure customer's layout, the following procedure is required.

- Initialize all the blocks to unused ones by pressing the **Reset Layout** button.
- Select the required template size.
- Press the **Select CIS Index** button and click an unused block to select a CIS index block.
- Press the **Select Template** button and click an unused block to indicate the start block of template data. Then, the blocks of template 1 data are set automatically from the selected start block.
- Press the **Select Template** button again and click an unused block to indicate the start block of template 2 data.
- Press the **Transfer** button to transfer the new smart card layout to selected devices.



- The smart card layout window is activated only for BioEntry™ Smart model. If the selected device is BioEntry™ Pass, this menu will not be activated.
- Press the **OK** button to save the new smartcard layout to the PC USB smartcard device/writer.
- The saved layout is also applied in issuing a new smartcard using PC USB smartcard device/writer.

6.5.6. Factory default (initial setting) layout

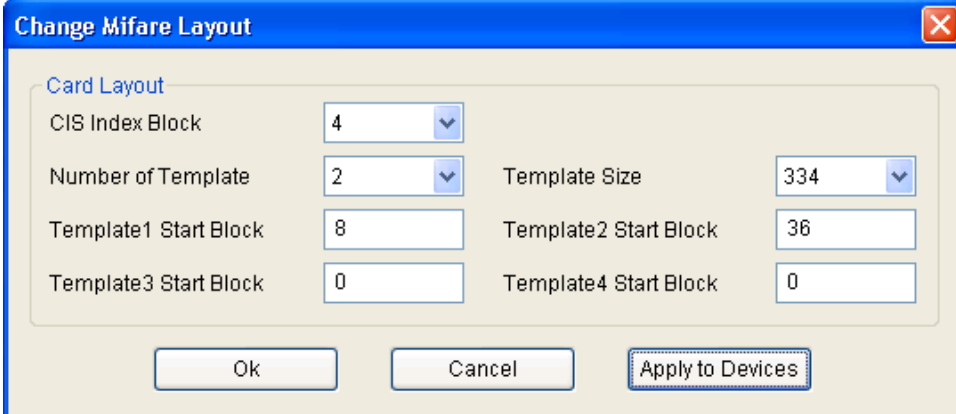
Factory default smart card layout is as follows :

0	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
1	5	9	13	17	21	25	29	33	37	41	45	49	53	57	61
2	6	10	14	18	22	26	30	34	38	42	46	50	54	58	62
3	7	11	15	19	23	27	31	35	39	43	47	51	55	59	63

 CIS Index	 Template 1 Data	 Unavailable
 Unused	 Template 2 Data	

6.5.7. Configuration of Mifare card layout edit page (BioStation / BioEntry Plus)

It is designed to be typed numerical value (not block) to support 4K card.



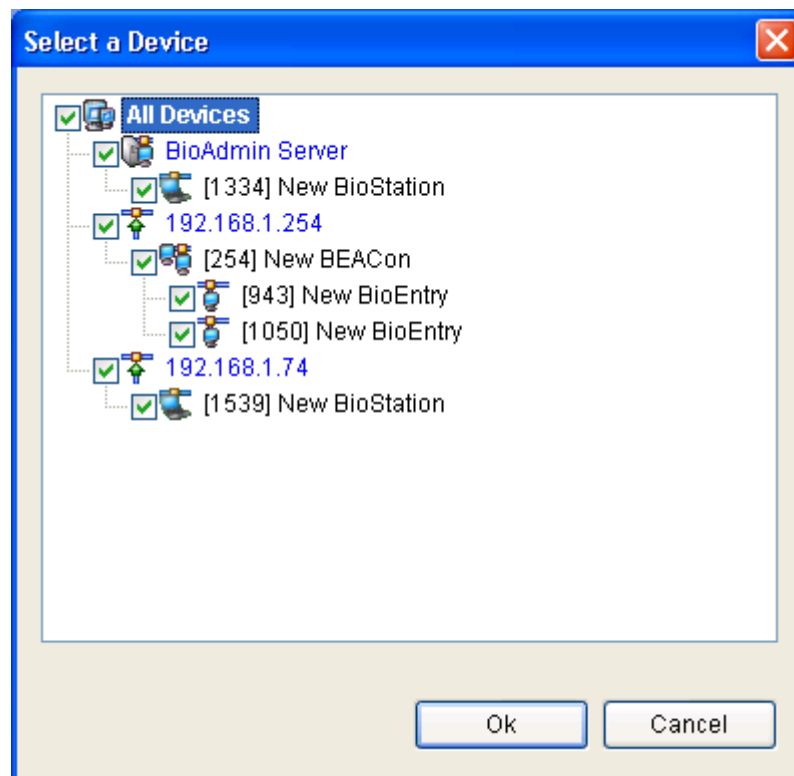
Change Mifare Layout			
Card Layout			
CIS Index Block	4		
Number of Template	2	Template Size	334
Template1 Start Block	8	Template2 Start Block	36
Template3 Start Block	0	Template4 Start Block	0
Ok Cancel Apply to Devices			

- CIS Index Block
- Number of Template
- Template Size
- Template1 ~ 4 Start Block
- In case of using Mifare card as CIS Only Mode, it does not use above layout though it is configured card layout.

6.5.8. Editing process

To configure customer's layout, the following procedure is required.

- Select the CIS Index block.
- Select the required template size.
- Select the number of templates.
- Press the Apply to Devices button to transfer the current Mifare card layout to selected devices.



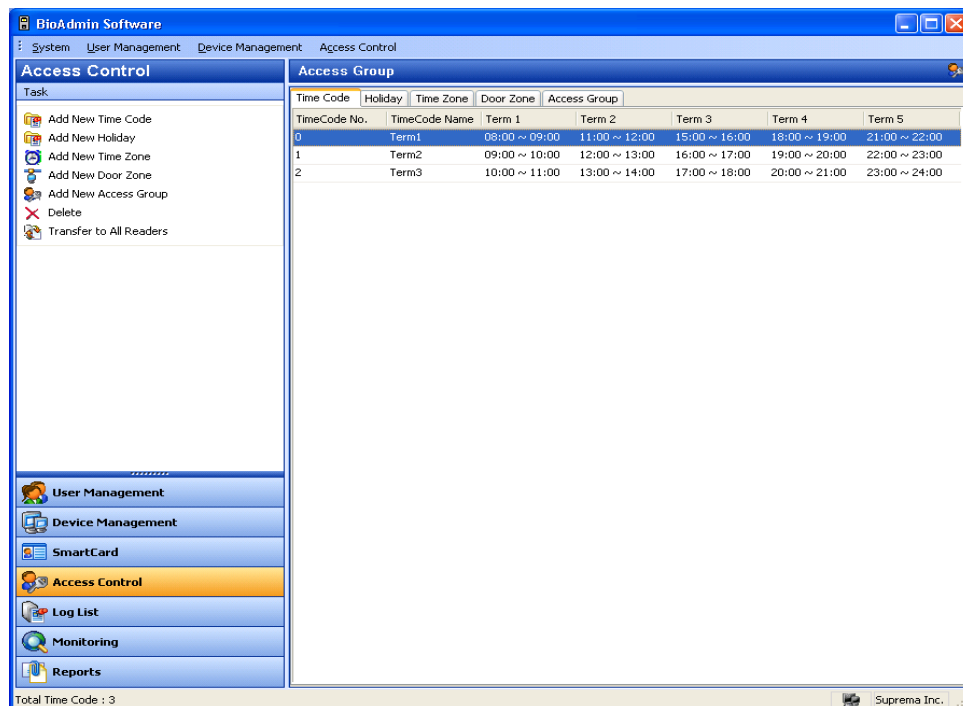
- The Mifare card layout window is activated only for BioStation™ Mifare or BioEntry Plus™ Mifare model.
- Press the OK button to save the new Mifare card layout to the PC USB smartcard device/writer.
- The saved layout is also applied in issuing a new smartcard using PC USB smartcard device/writer.

7. Access Control

In the menu, time span and access group may be designated. Time span and access group are used to limit user's authority to allow their access according to the rules.

Although up to BioAdmin 4.1 version, the access control may be used as it is, new access control function may be also used easily. However, to use the new access control function, the existing setting is disabled; if a user is to use the new access control function with the previous items, it is possible to select which function is to be used. If the selection is changed, BioAdmin Client should be resumed; if using the existing one, a user does not need resuming.

- If a user is not included in any access group, it is allowed to enter every entry door. However, if a user is set to any basic access group, the user should follow the basic entry group setting.
- If a user is contained in a group but the does not have the information about the access, the user may access the door with no restriction. However, if using a new access group function, the device must have the group information.



7.1. Time Code setting

You can set up Time Zone by combining several Time Codes. Therefore, before setting up the time zone, you need to set up the time code first. Maximum 5 time sections can be selected for each time code.

Detailed operations are as follows.

- Press the **Add New Time Code** button.

Term	Start Time (HH:MM)	End Time (HH:MM)	Action
Term 1	10 : 30	11 : 50	Type directly
Term 2	13 : 40	13 : 50	Clear Table
Term 3	16 : 30	19 : 00	
Term 4	00 : 00	00 : 00	
Term 5	00 : 00	00 : 00	

Time bar (0 to 24 hours):

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

OK Cancel

- Input the name of time span.
- Input the time in a box and set the time code.
- Time span may be easily set by dragging the time bar displayed on the bottom. Time code is also set by dragging it to the bottom of Window.
- If directly entering time, click 'Direct Input' button.
- In case directly inputting the time, each space is changed to be entered.
- If completing the entries, press 'Apply' to save them.
- If directly entering and dragging the timer bar on the bottom, the set values are changed into the contents in the selected time bar. In addition, please note that all other times shorter than 10 minutes, it is changed to 0 or 10 minutes.
- Click **OK** button to add time span to the list of time span.

7.2. Holiday setting

To include holidays on the Time Zone, you need to set up holidays in advance.

Detailed operations are as follows.

- Press the **Add New Holiday** button.
- Press the **Edit Code list in Holiday Setting** window.

Holiday Setting

Name:

☐ 10/19/2007(4)

Del

Del All

Friday, October 19, 2007

Add

☐ Yealy Repeat 4 Days Long

OK Cancel

- Enter the name of Holiday Group.
- Enter the date to be grouped as a holiday group and click **Add** button.
- At the moment, it is also possible to designate period or repeat, depending on the date option.
- Enter the number of days to enter. However, the max. number of items may not be larger than 32. In the case, holiday group should be additionally created.

- After completing the addition of holiday, click **OK** button.
- The generated Holiday list can be used for Time & Attendance Report.

T&A Rule Group

Name: New T&A rule group(2)

Daily Rule

Sunday: New Attendance Code

Monday: New Attendance Code

Tuesday: New Attendance Code

Wednesday: New Attendance Code

Thursday: New Attendance Code

Friday: New Attendance Code

Saturday: New Attendance Code

Holiday Setting

Holiday Schedule: New Attendance Code

Holiday Group1: New Holiday List

Holiday Group2: Not Use

Monthly Schedule: New monthly schedule

☐ Set as default

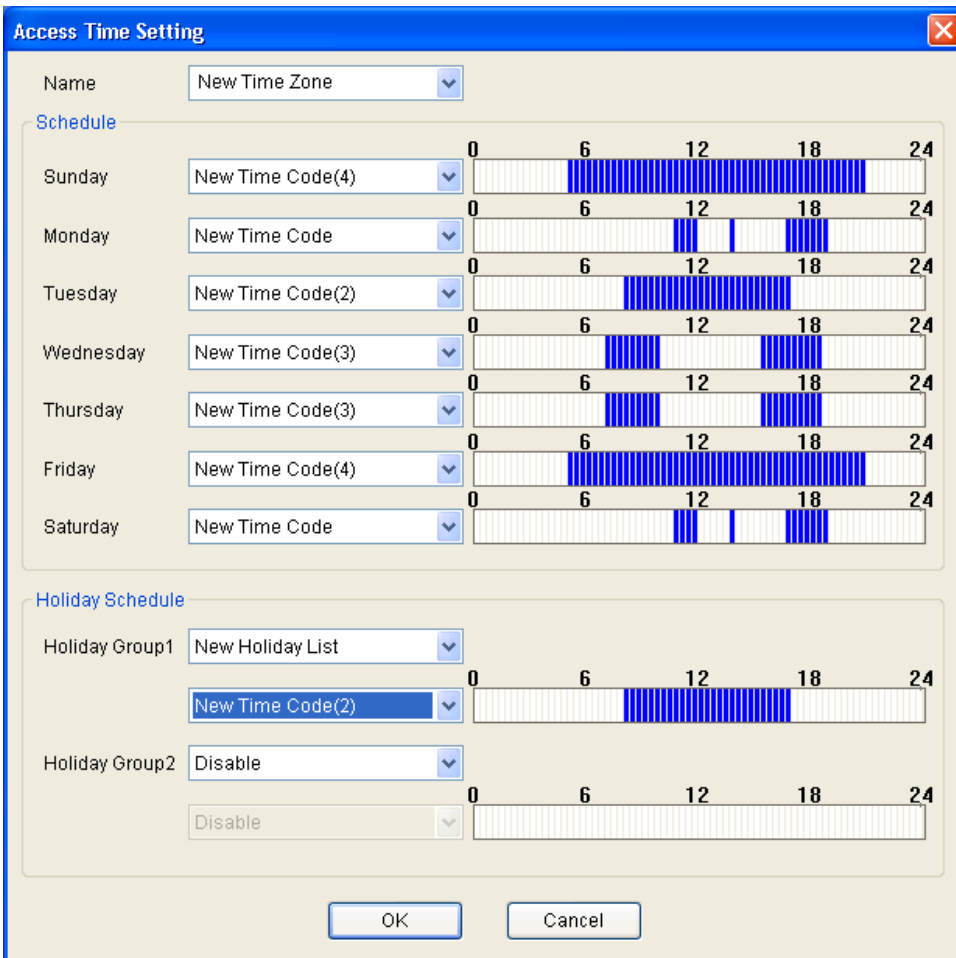
Save Close

7.3. Time zone setting

You can set up a Time Zone by combining time codes and a holiday group. One time code is selected for each day from Monday to Sunday.

Detailed operations are as follows.

- Press **Access time setting** button.
- Enter the name of access time.



The **Access Time Setting** dialog box is used to configure access schedules. It features a title bar with a close button (X). The main area is divided into two sections: **Schedule** and **Holiday Schedule**.

Schedule Section:

- Name:** A dropdown menu currently showing "New Time Zone".
- Schedule:** A table with 7 rows (Sunday to Saturday) and 5 columns (0, 6, 12, 18, 24). Each row has a dropdown menu for selecting a time code (e.g., "New Time Code(4)" for Sunday) and a corresponding bar chart showing the access time span. The bars are blue, indicating access is allowed during the specified hours.

Holiday Schedule Section:

- Holiday Group1:** A dropdown menu showing "New Holiday List". Below it is a dropdown menu for "New Time Code(2)" and a bar chart showing the access time span.
- Holiday Group2:** A dropdown menu showing "Disable". Below it is a dropdown menu for "Disable" and a bar chart showing the access time span.

At the bottom of the dialog are **OK** and **Cancel** buttons.

- Select time span per day of the week from Monday to Sunday.
- Select holiday group.
- Select the time span to apply for holiday group.
- Holiday group may be set in two ways.
- To add the set access time to list of access time, click **OK** button.
-

7.4. Door Zone setting

From BioAdmin v4.2, new type of Access Control is used.

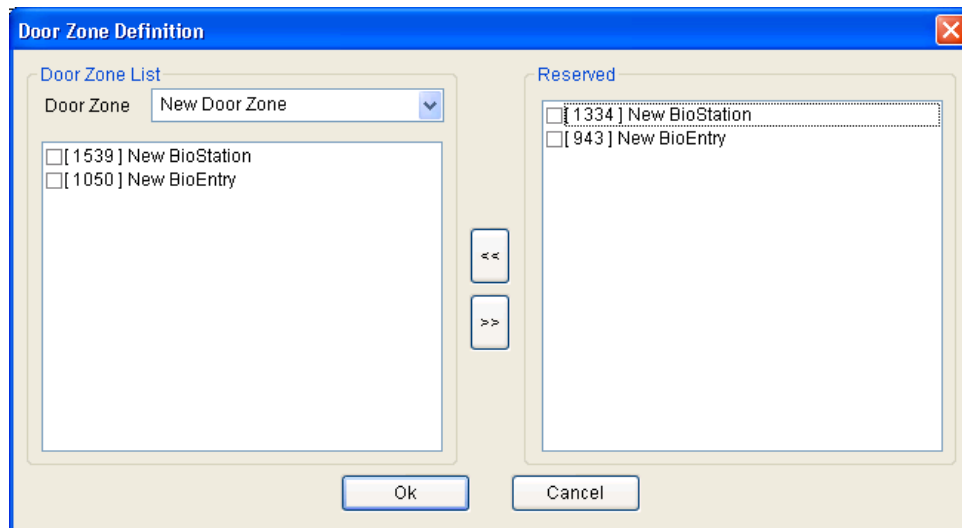
- v4.1 below : Please use previous format
- New User : Please use v4.2 only format

If previous user having BioAdmin v4.1 below, it is possible to convert to v4.2 only format, but won't back to previous format any more.

Please pay attention to your decision, which will be asked warning message whether it will convert to new Access Control format or not.

You can set up a door zone combining multiple BioEntry™ devices.

- Enter the name of the door zone.
- Check on the target BioEntry™ devices and click the << button.



- Press the **OK** button to add the door zone on the door zone list.

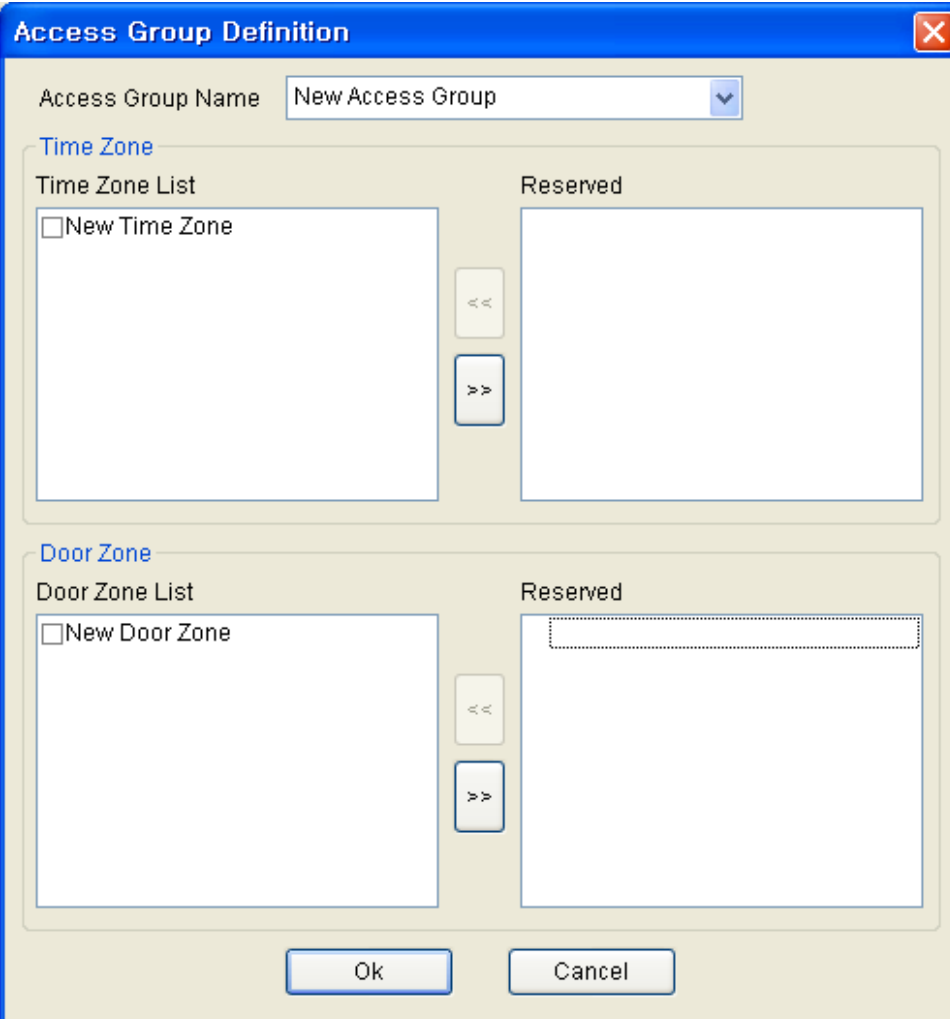
7.5. Access Group setting

As you seen in “6.4 Door Zone Setting”, there are previous and new method for access group setting.

[Previous Method]

By combining time zone and door zone, you can designate an access group. With this access group, you can restrict the user's right to access.

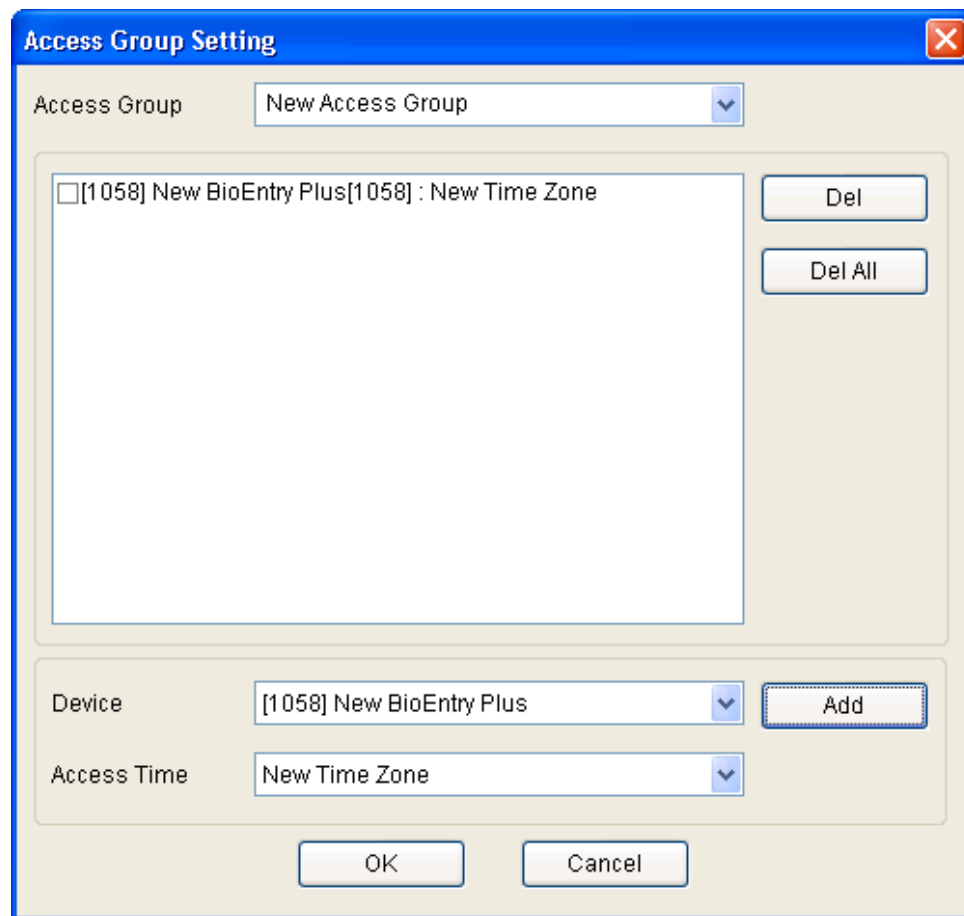
- Press the **Add New Access Group** button.
- Enter the name of access group.
- Check on the time zone and door zone and press the << button.



The dialog box is titled "Access Group Definition" and has a standard Windows-style title bar with a close button. It contains the following elements:

- Access Group Name:** A text box containing "New Access Group" with a dropdown arrow on the right.
- Time Zone Section:**
 - Time Zone List:** A large rectangular area containing a checkbox labeled "New Time Zone".
 - Reserved:** A large rectangular area for reserved time zones.
 - Buttons:** Between the two areas are two small buttons with up/down arrows and a larger button with a double arrow.
- Door Zone Section:**
 - Door Zone List:** A large rectangular area containing a checkbox labeled "New Door Zone".
 - Reserved:** A large rectangular area for reserved door zones, with a dashed rectangular box at the top.
 - Buttons:** Between the two areas are two small buttons with up/down arrows and a larger button with a double arrow.
- Bottom Buttons:** "Ok" and "Cancel" buttons.

- Press the **OK** button to add the selected access group to the access group list. You can apply this access group to users on the 4. User Management menu.
- New Method

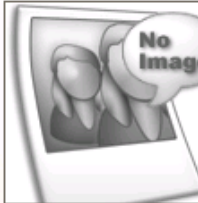


- To start with BioAdmin v4.2 only, please follow the direction.
- Select a device and add or delete 'Time Zone' of device.
- For special user in specific time, select device and change 'Default Access Group' to Full Access.
- Go to 'Add New Time Zone' and make access time for a special user.

User Data Information

User Information Custom Fields Fingerprint User Time Attendance Rule

Basic Personal Information

 User ID: 853

Name: Dongsuk, Suh

Company: Suprema

Department: R&D

Title: Manager

Details

Phone: 012-345-6789

Mobile: 098-765-4321

E-Mail: dsuck@anymail

Gender: Male

Date of Birth: 6/14/1970

Start Date: 1/ 1/1970

Expiry Date: 12/30/2030 0 h

Access Group

Status: ☒ Active

Group 1: Full Access

Group 2: None

Group 3: Full Access

Group 4: None

Entrance Limitation (BioStation)

Daily Limit: 0 (0:00~23:59)

Timed APB: 0 Minute

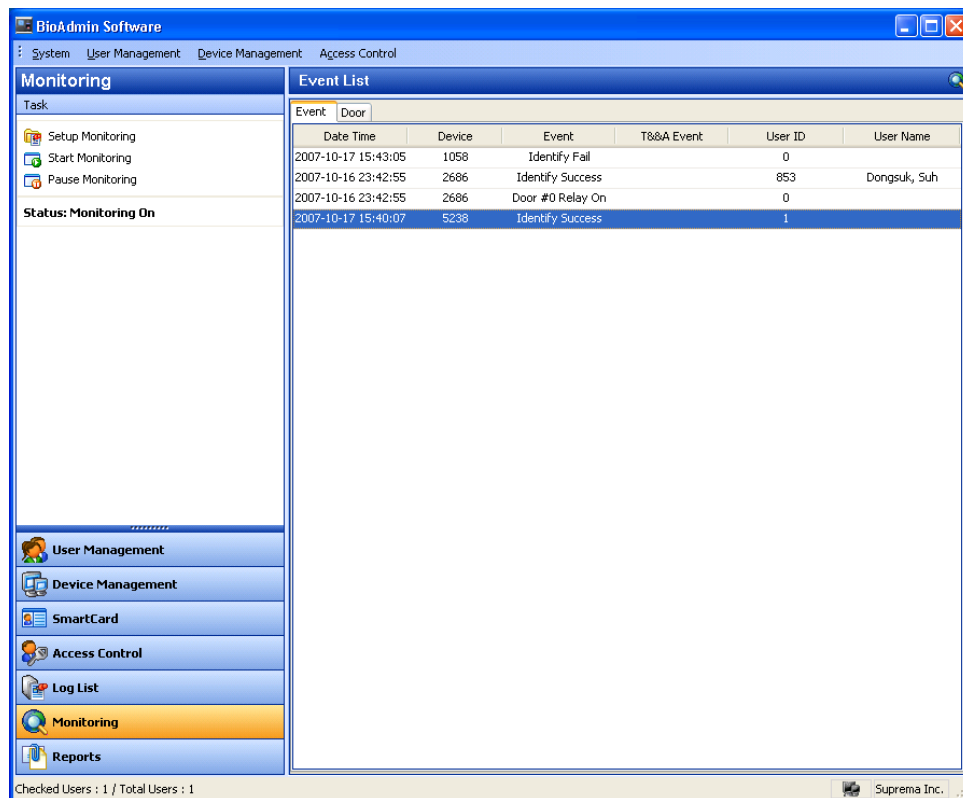
Other Information

Password:

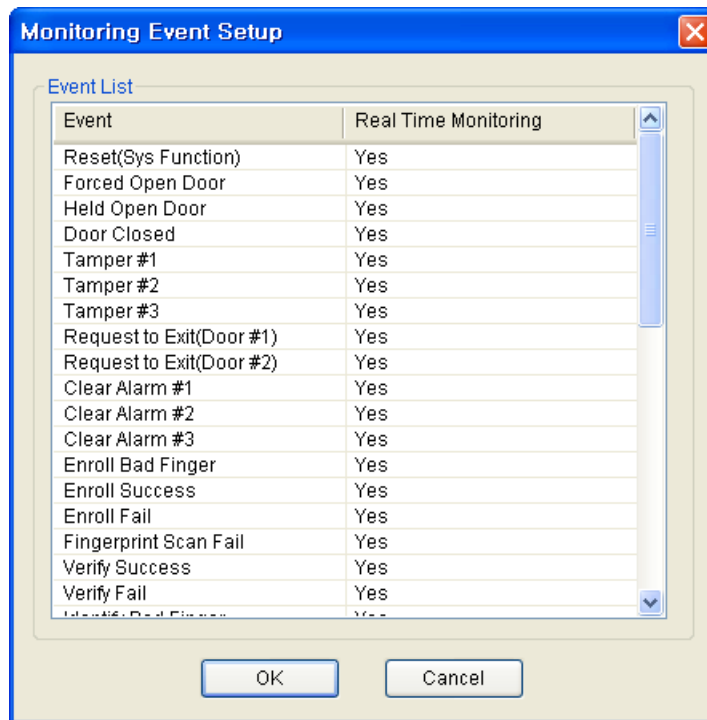
BST Admin Level: Normal User

8. Monitoring

BioAdmin supports real time monitoring functions. By selecting the **Monitoring** menu, you can check the log events of networked BioEntry and BioStation on time.



8.1. Setup Monitoring



On this menu, you can select the events to be shown on the monitoring window simply by double clicking on the Yes/No field of each event.

- If you double click the Yes field, it will be changed to No, and the event will not be listed on the monitoring window.
- If you double click the No field, it will be changed to Yes and the event will be listed on the monitoring window.

8.2. Start Monitoring

- By pressing the **Start Monitoring** button, you can start the real time monitoring of the log events from all networked BioEntry and BioStation.
- If you select another menu during monitoring mode, monitoring will be stopped.
- Event List on the monitoring window shows up to 5000 events. If the number of events is more than 5000, the oldest event will be automatically deleted from the list. Even though the oldest event is deleted from the monitoring list, it still remains on the log data of BioEntry and BioStation.

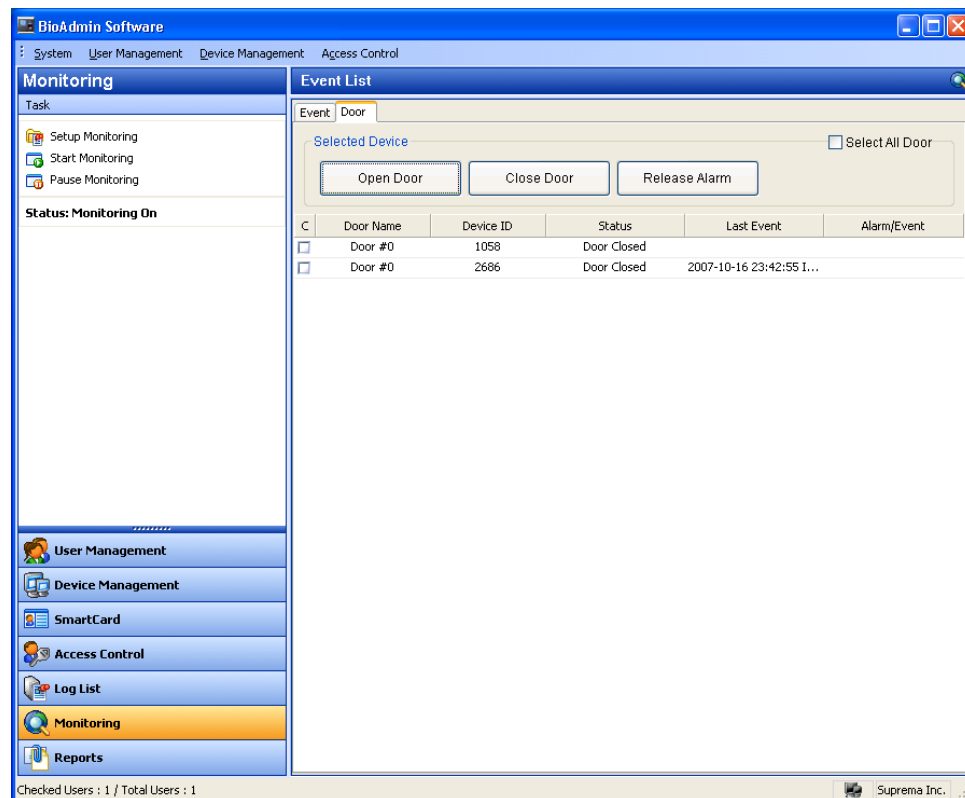
Monitoring is automatically started when the menu **Monitoring** is selected from another menu. So, the **Start Monitoring** is needed only to restart

monitoring after pausing monitoring.

8.3. Pause Monitoring

By pressing the **Pause Monitoring** menu, you can stop monitoring.

8.4. Event List for Door



It supports the status of access door. Selecting real time monitoring and selecting 'Access door' shows the monitoring screen of access door.

8.4.1. Door Open/Close

- If checking the checkbox of access door to open from the access door list and click 'Door Open', you may open or close the door.
- However, in the case, it analyze it only with input information, unlike the determination whether it is closed, so it may differ from the actual status.

8.4.2. Alarm Release

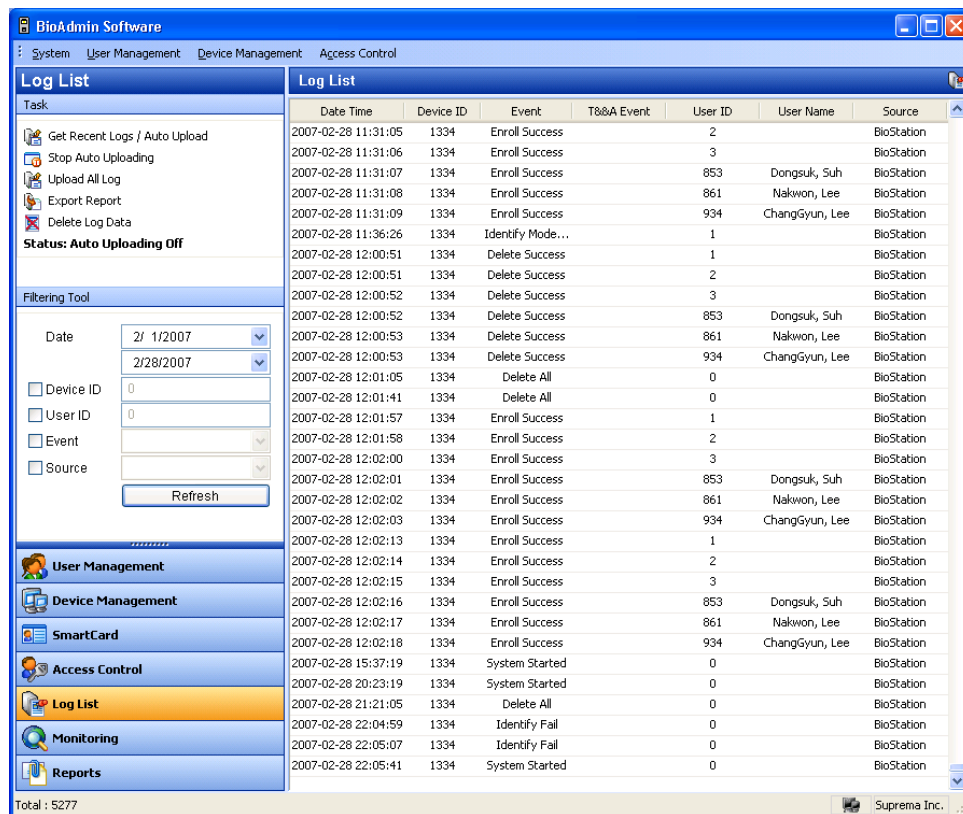
- If there is an event to generate an alarm to open door or forcibly open door, the alarm status may be canceled by clicking 'alarm release.'
- However, alarm release may require the operation of admin.

9. Log List

The Reports menu covers the following operations:

- Management of log database stored on host PC
- Upload new log events from BioEntry and BioStation into the log database

By selecting the Log List, the log list page is updated on the main window.



9.1. Configuration of Log check page

The Reports page is composed of 2 components:

- Log List

Log database is stored on host PC enabling to preserve old log data. Log list shows stored log events describing Date, Time, Device ID, Event, User ID, User Name, and Source.

- Filtering Tool

You can filter log records by Date, Device, User ID, Name, Event, and Source.

For example, if a device is selected, log events of the selected device will be

shown.

- Task box

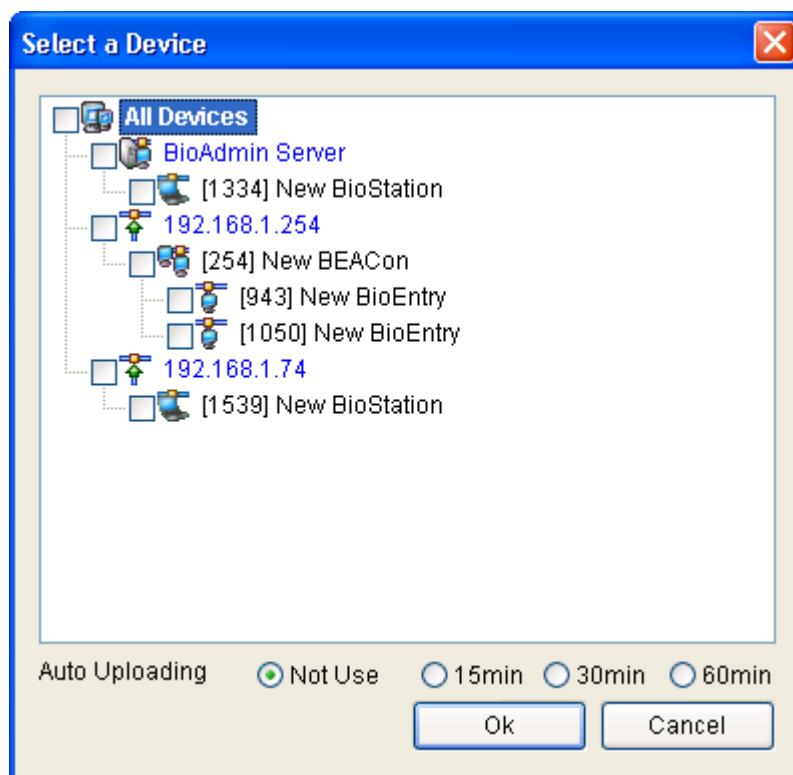
Task box includes buttons to control basic operations of the Log List page.

9.2. Manage Log database

9.2.1. Get recent logs

In case of pressing **get recent logs/ auto upload** button, window for select device pops up and as to selected device here, log information newly generated after log information in BioAdmin is uploaded.

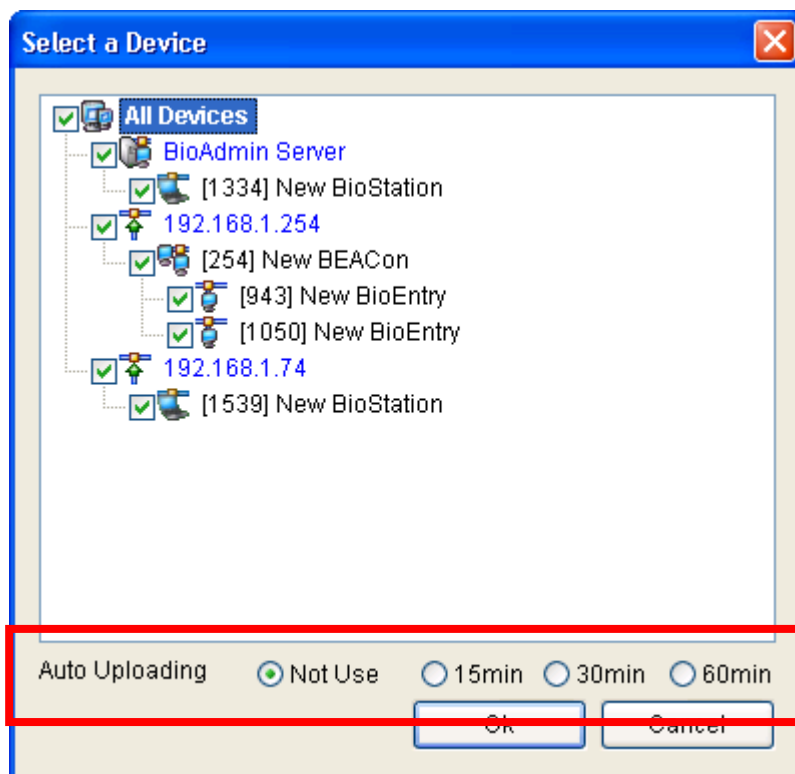
For the BioStation connected to BioAdmin Server, you do not need to get logs from them, because logs will be automatically saved on BioAdmin Server on real time.



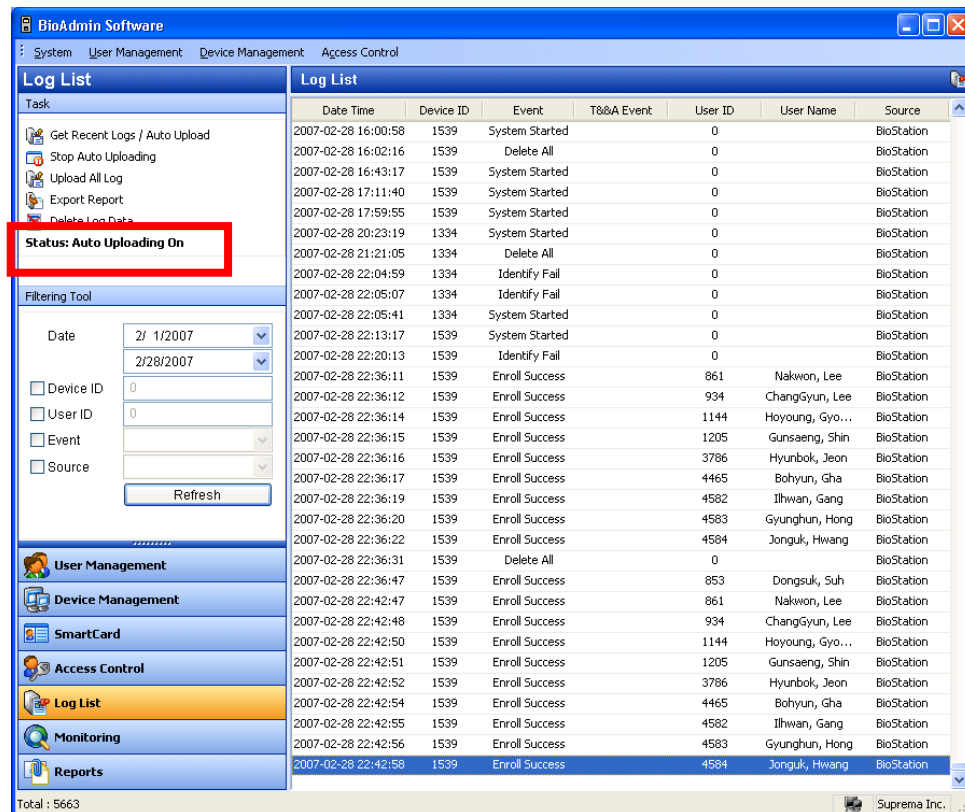
9.2.2. Auto uploading setting

In case of pressing **get recent logs/ auto upload** button, log information generated in BioEntry and BioStation for set period can be uploaded automatically to BioAdmin. Administrator can execute auto uploading by choosing 15 min / 30

min / 60 min according to applied environment.



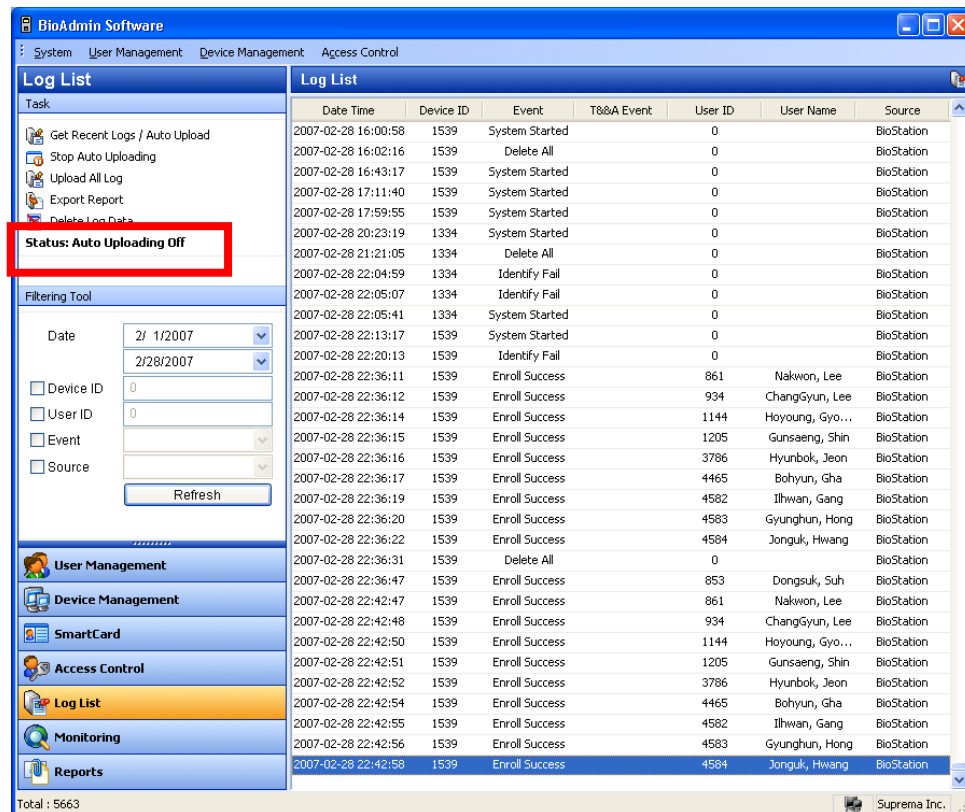
Once auto uploading is applied, **status : auto uploading on** is indicated on task box.



9.2.3. Release auto uploading

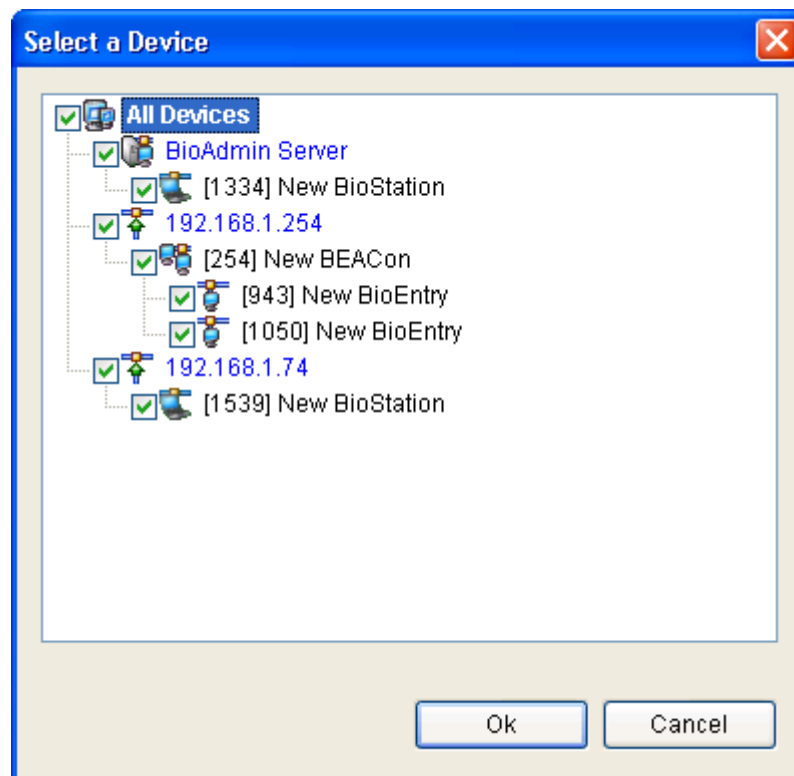
In case of pressing **stop auto uploading** button, user can release set auto uploading. Also, in case of disabled mode when setting time transfer, user can release time transfer.

Once auto uploading is released, **status : auto uploading off** is indicated on task box



9.2.4. Upload all logs

In case of pressing **upload all logs** button, select device window appears and all logs of device selected here are uploaded. In case partial log information remains in BioAdmin, existing log information is kept as it is and new log information is uploaded.

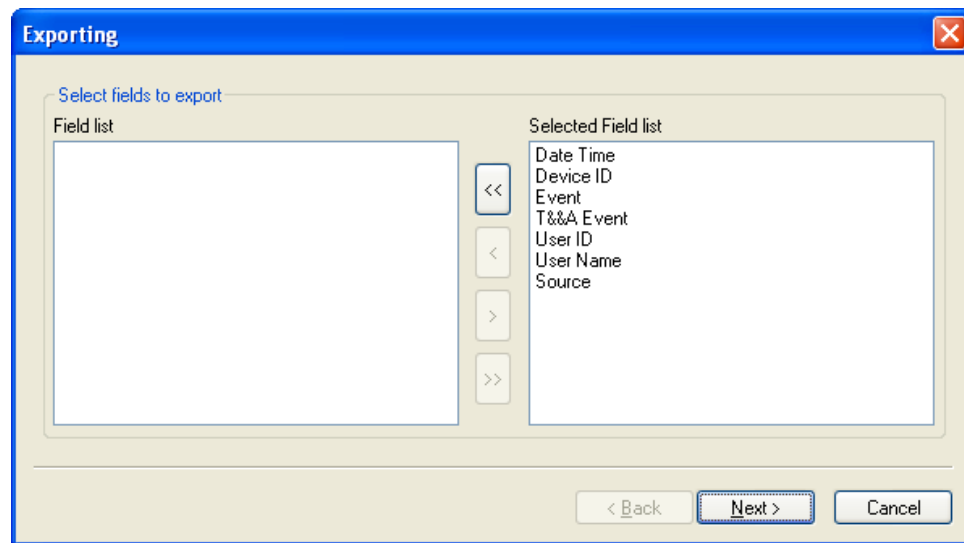


9.2.5. Export Report

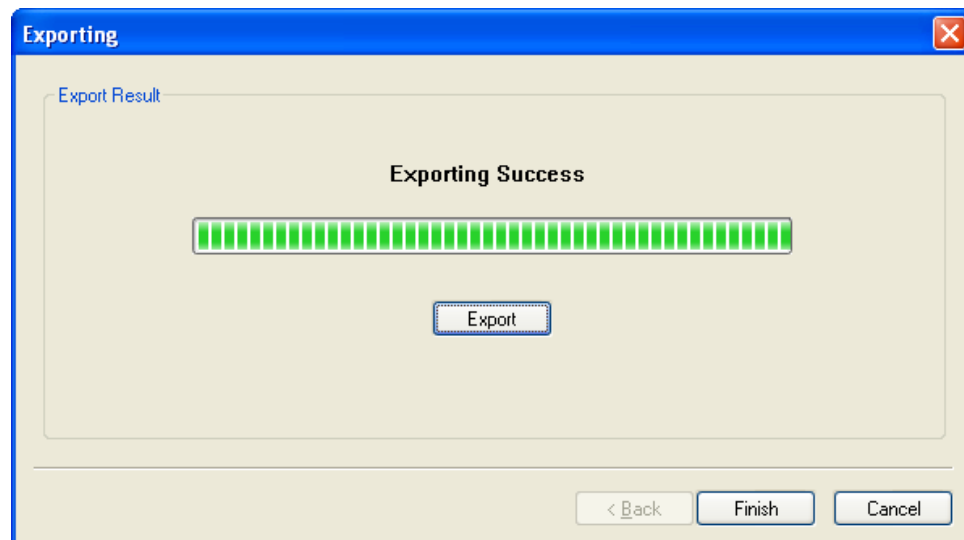
Log data can be exported to CSV file format using the **Export Report** button.

Detailed operations are as follows:

- Press the **Export Report** button.
- Select fields to export by simply moving the target field from Field List to Selected Field List.



- After selecting the fields, press the **Next** button.
- Select a file to export
- After selecting the file, press the **Next** button.
- Press the **Export** button.



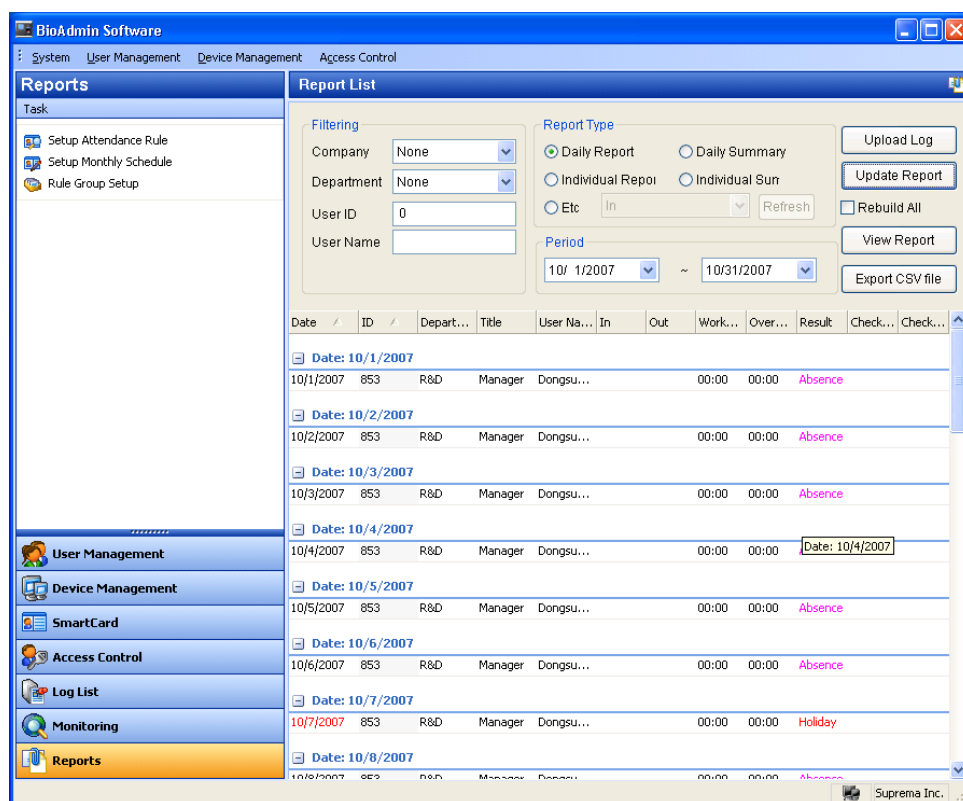
9.2.6. Delete Log information

The **Delete Log Data** button eliminates selected log data from log database on host PC. Log data on BioEntry and BioStation are not removed by this command, but automatically removed only when the device requires space for additional log data.

10. Reports

Report menu includes the followings operations.

- Set up attendance rule
- Upload log from device and create T&A event report.
- Export a created report to file
- Print created report



10.1. Configuration of reports page

Report list page consists of 2 elements:

- Report list page

Report list shows menus setting filtering, report type, period and basic information required for creating a report.

- Task box

Task box has buttons to set T&A rule.

- Enter attendance code.

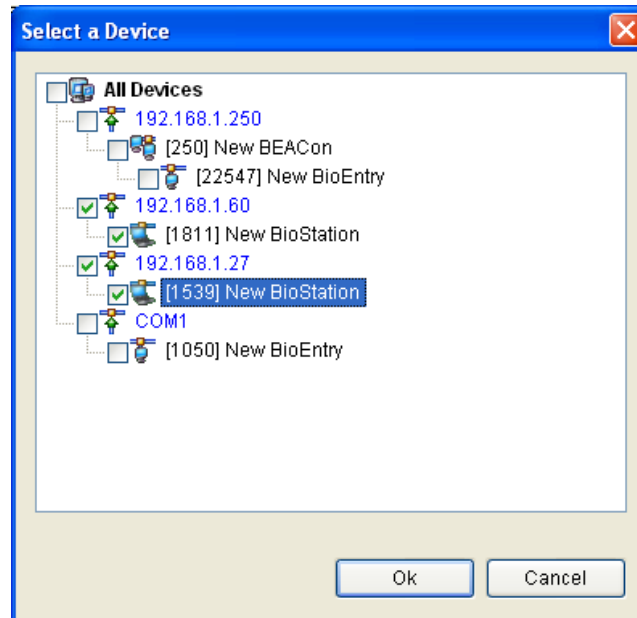
10.2.1. Device setup

Select device setup menu on time attendance rule page and set In/Out input device as below.

The screenshot shows a Windows-style dialog box titled "Time/Attendance Code Definition". It has a close button (X) in the top right corner. Inside the dialog, there is a tabbed interface with "Device Setup" and "Time Setup" tabs. The "Device Setup" tab is active. At the top, there is a label "Attendance Code" and a text box containing "New Attendance Code". Below this, the "Reader Setup" section contains three radio button options: "First Check-In / Last Check-Out" (which is selected), "Separate Check-In/Check-Out Devices", and "Using Function Keys (BioStation)". Below the radio buttons is a "Select Device" section with two radio button options: "Use All Devices to collect attendance data" (selected) and "Use Selected Device to collect attendance data". Under "Use Selected Device", there are two empty text boxes. To the right of the first text box is a button labeled "Select Device". To the right of the second text box is a button labeled "Select Check-Out Device". Below these text boxes is a checkbox labeled "Calculate work time from in-time to out-time only", which is currently unchecked. At the bottom of the dialog are two buttons: "Save" and "Cancel".

- In case of choosing **first check-in/last check-out**, user applies first authorized time as check-in and last authorized time as check-out.
- In case of choosing **separate check-in/check-out devices**, check-in/check-out devices can be designated separately using select device menu. In that case, limited to check in device, first time is applied as check-in and limited to check-out device, last time is applied as check-out. In case user inputs check-in or check-out for unselected device, log information is indicated as check-in or check-out but when creating a report, check-in or check-out is not applied.
- **Using function keys (BioStation)** – In case of choosing **using function keys (BioStation)**, limited to the cases when T&A key set in BioStation, it is applied to a report as check-in or check-out. This menu is applied only to BioStation. Therefore, BioEntry can't be used as T&A device in this case.

User can choose a device for T&A use thru select device menu.



- In case of choosing **use all devices to collect attendance data**, all devices connected to network are used for T&A device. However, in case of choosing **using function keys (BioStation)**, BioEntry can't be used for T&A device.
- In case of choosing **use selected device to collect attendance data**, only selected device can be used for T&A device.

10.2.2. Time setup

Select time setup menu on time attendance code definition page and set time attendance time as follows.

Time/Attendance Code Definition

Attendance Code:

Time Setup

From: 06 : 00 Start of a new day

Minimum Work Hours: 0 hour(s)

Check-In Time: 08 : 00

Check-Out Time: 17 : 00

Overtime Limit from: 18 : 00 to: 00 : 00

Minimum Overtime: 2 hour(s)

Nonworking Time: 00 : 00 to 00 : 00
00 : 00 to 00 : 00
00 : 00 to 00 : 00

Save Cancel

Detailed setting process is as follows

- Set standard time of work start in **from — start of a new day**
- Set minimum work hrs of applicable day in **minimum work hrs**. In case work hrs is less than set minimum work hrs, absence is applied to report. In case of setting minimum work hrs as 0, this function may not be used.
- Enter **check-in time**.
- Enter **check-out time**.
- Enter **maximum overtime hours**. In case one works overtime more than set maximum OT hrs, such hrs are not included in report as OT.
- Enter **minimum overtime hours**. In case of working overtime less than set minimum overtime hours, such hours are not applied as overtime in report.
- Set up **Nonworking Time** to exclude certain period of time from work time. This time will not be included in the working hour on report. You can select up to three Nonworking Time and see the Nonworking Time by using the drop down menu.

Note : Drop down menu on Nonworking Time is not to select a certain

Nonworking Time among the three Nonworking Times, but to just show the time setting of the Nonworking Time. Thus, once you set up two or three Nonworking Times on this menu, all of those Nonworking Times will be excluded from the working hour on report.

10.2.3. BioStation function key setting

Select BioStation function key setting menu and set log information and report display as below.

T&A Event Setup

BioStation Function Key Config

1 : None	2 : None	3 : None	F1 : In
4 : None	5 : None	6 : None	F2 : Out
7 : None	8 : None	9 : None	F3 : None
CALL : None	0 : None	ESC : None	F4 : None

Function Key: F2 ☒ Use this key for T&A

T&A Event: Out

Event Type: Out ▼

☐ Calculate as normal check-in/check-out event

☐ Add work time after this event

After changing this setting, please update report again with 'Rebuild All' option.

OK Cancel

Detailed setting process is as follows:

- Select applicable key.
- In case of using selected key as T&A key, check on **Use this key for T&A**.
- Input **T&A event** for selected function key. Upon Monitoring and log check, input in T&A event for applicable key is displayed.
- Select Even Type among Check-In, Check-Out, In, Out. Selected events are used as basis of T&A result and computation of work hours.
- If you do not want to apply Late-In or Early-Out to a specific key, check on

Calculate as normal check-in/check-out event.

Changes will apply only when report is updated after changing BioStation function key setting.

10.3. Setup Monthly Schedule

By setting monthly schedule, you can select working day and holiday, which are used as a basis of T/A report. On holiday, late-in, early-out, absence are not applied. Work hours on holiday will be added to the holiday work time.

- Press **Setup Monthly Schedule** button.

Monthly Schedule Setting

Name: New monthly schedule

Monthly Schedule

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
First Week	Holiday	Working Day	Working Day	Holiday	Holiday	Working Day	Holiday
Second Week	Holiday	Working Day	Working Day	Holiday	Holiday	Working Day	Holiday
Third Week	Holiday	Working Day	Working Day	Holiday	Holiday	Working Day	Holiday
Fourth Week	Holiday	Working Day	Working Day	Holiday	Holiday	Working Day	Holiday
Fifth Week	Holiday	Working Day	Working Day	Holiday	Holiday	Working Day	Holiday
Sixth Week	Holiday	Working Day	Working Day	Holiday	Holiday	Working Day	Holiday

Legend

- Working Day
- Holiday

After changing this setting, please update report again.

Save **Cancel**

- Select Working Day and Holiday and press **Save** button.
- To apply new monthly schedule to T/A report, check on the '**Rebuild All**' of the Report List window and press Update Report button.

10.4. Group Configuration for T&A Control

T&A Rule Group

Name: New T&A rule group(2)

Daily Rule

Day	Attendance Code
Sunday	New Attendance Code
Monday	New Attendance Code
Tuesday	New Attendance Code
Wednesday	New Attendance Code
Thursday	New Attendance Code
Friday	New Attendance Code
Saturday	New Attendance Code

Holiday Setting

Holiday Schedule	New Attendance Code
Holiday Group1	All holiday
Holiday Group2	Not Use

Monthly Schedule: New monthly schedule

☐ Set as default

Save Close

10.4.1. Use as default

By checking on **set as default**, apply selected T&A rule as basic rule. In case T&A rule is not set for certain users, basic rule applies to such users.

10.5. How to prepare report

Report List

Filtering

Company: None
Department: None
User ID: 0
User Name:

Report Type

☒ Daily Report ☐ Daily Summary
☐ Individual Report ☐ Individual Sun
☐ Etc In Refresh

Period

10/ 1/2007 ~ 10/31/2007

Upload Log
Update Report
Rebuild All
View Report
Export CSV file

- Press **upload log** and import the latest log information. This process is to create a report based on the latest event logs, so even after completing upload log, log is not displayed on report list.
- Select company, dept. and user on setting (filtering) menu to creating a report.
- Choose either daily report or individual report on type menu.
- Choose start date and finish date of report on period menu.
- Press **update report** button.

Reports

Task

- Setup Attendance Rule
- Setup Monthly Schedule
- Rule Group Setup

Report List

Filtering

Company: None
Department: None
User ID: 0
User Name:

Report Type

☒ Daily Report ☐ Daily Summary
☐ Individual Report ☐ Individual Summary
☐ Etc In Refresh

Period

10/1/2007 ~ 10/31/2007

Upload Log
Update Report
Rebuild All
View Report
Export CSV file

Date	ID	Depart...	Title	User Na...	In	Out	Work...	Over...	Result	Check...	Check...
Date: 10/1/2007											
10/1/2007	853	R&D	Manager	Dongsu...			00:00	00:00	Absence		
Date: 10/2/2007											
10/2/2007	853	R&D	Manager	Dongsu...			00:00	00:00	Absence		
Date: 10/3/2007											
10/3/2007	853	R&D	Manager	Dongsu...			00:00	00:00	Absence		
Date: 10/4/2007											
10/4/2007	853	R&D	Manager	Dongsu...			00:00	00:00	Date: 10/4/2007		
Date: 10/5/2007											
10/5/2007	853	R&D	Manager	Dongsu...			00:00	00:00	Absence		
Date: 10/6/2007											
10/6/2007	853	R&D	Manager	Dongsu...			00:00	00:00	Absence		
Date: 10/7/2007											
10/7/2007	853	R&D	Manager	Dongsu...			00:00	00:00	Holiday		
Date: 10/8/2007											
10/8/2007	853	R&D	Manager	Dongsu...			00:00	00:00	Absence		

Suprema Inc.



- Press **view report** button.

Individual Report 7/1/2006-8/31/2006

ID : 853 User Name : Dongsuk, Suh

Date	Department	Title	In	Out	Work Time	Over Time	Result	Check-In	Check-Out
7/1/2006	R&D	Manager			00:00	00:00	A		
7/10/2006	R&D	Manager			00:00	00:00	A		
7/11/2006	R&D	Manager			00:00	00:00	A		
7/12/2006	R&D	Manager			00:00	00:00	A		
7/13/2006	R&D	Manager			00:00	00:00	A		
7/14/2006	R&D	Manager			00:00	00:00	A		
7/15/2006	R&D	Manager			00:00	00:00	A		
7/16/2006	R&D	Manager			00:00	00:00	Holiday		
7/17/2006	R&D	Manager			00:00	00:00	A		
7/18/2006	R&D	Manager			00:00	00:00	A		
7/19/2006	R&D	Manager			00:00	00:00	A		
7/20/2006	R&D	Manager			00:00	00:00	Holiday		
7/21/2006	R&D	Manager			00:00	00:00	A		
7/22/2006	R&D	Manager			00:00	00:00	Holiday		
7/23/2006	R&D	Manager			00:00	00:00	Holiday		
7/24/2006	R&D	Manager			00:00	00:00	A		
7/25/2006	R&D	Manager			00:00	00:00	A		
7/26/2006	R&D	Manager			00:00	00:00	A		
7/27/2006	R&D	Manager			00:00	00:00	A		
7/28/2006	R&D	Manager			00:00	00:00	A		
7/29/2006	R&D	Manager			00:00	00:00	A		
7/30/2006	R&D	Manager			00:00	00:00	A		
7/31/2006	R&D	Manager			00:00	00:00	Holiday		
7/4/2006	R&D	Manager			00:00	00:00	A		
7/5/2006	R&D	Manager			00:00	00:00	A		
7/6/2006	R&D	Manager			00:00	00:00	A		
7/7/2006	R&D	Manager			00:00	00:00	A		
7/8/2006	R&D	Manager			00:00	00:00	Holiday		
7/9/2006	R&D	Manager			00:00	00:00	Holiday		

Wednesday, September 27, 2006 11:47:20AM Page 1 of 2

- Press  to save a file in varying formats.
- Press  to print out the report.

10.6. Edit Data

If necessary, administrator can add or correct user's T/A data.

- If you double click a specific T/A data on daily report or individual report, Edit Data window will be initiated.

Edit Data

Event Date: 2/1/2006 Name: Dongsuk, Suh

User ID: 853 Result:

Event date	Event time	Event	Device
2/1/2006	7:16:44 AM	In	[5221] New BioSt...
2/1/2006	6:57:10 PM	Out	[5221] New BioSt...

Event Property

Date: This Day Time: 7:16:44 AM

Event: In Device: [5221] New BioStatic

Add Event Edit Event Delete Event

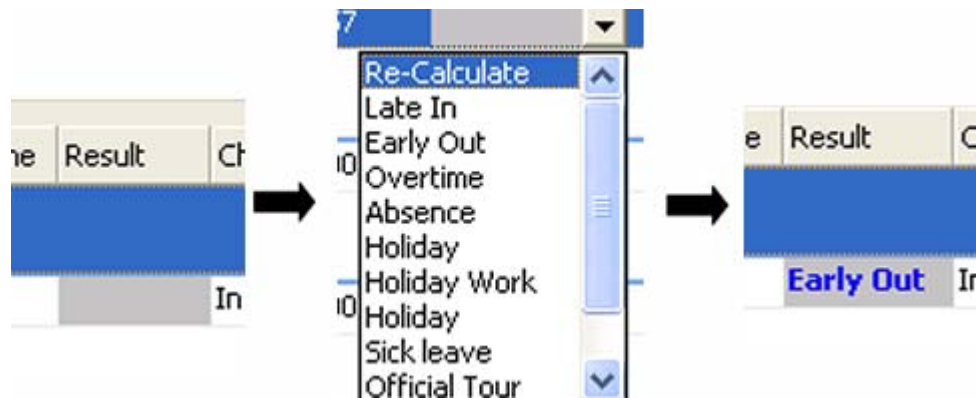
When you change events, you must refresh result list without checking 'Rebuild All'.
If you refresh list with 'Rebuild All', all of result data will roll back in selected period.

Accept Close

- Enter desired event values on the **Event Property** box and press **Add Event** or **Edit Event** button.
- Press **Accept** button to apply the corrected data to T/A report.
- The changed events are displayed as "Result" field in grey color.

Date	ID	User Name	In	Out	WorkTime	OverTime	Result	Check-In	Check-Out
Date: 2/1/2006									
2/1/2006	853	Dongsuk, Suh	7:16:44 AM	6:57:10 PM	11:40	00:57		In	Out
Date: 2/2/2006									
2/2/2006	853	Dongsuk, Suh	8:17:31 AM	5:07:06 PM	08:49	00:00	Late In	In	Out

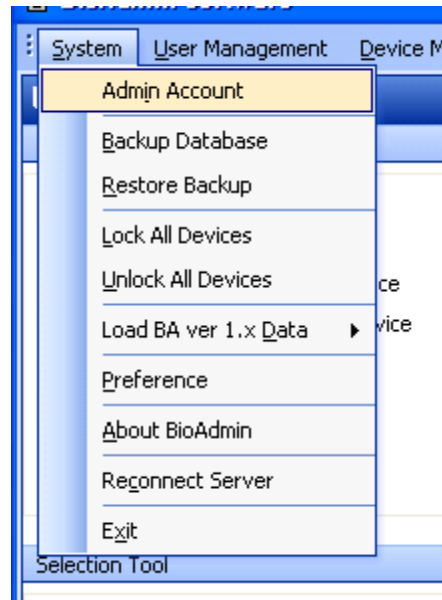
- The result can be modified at the report. By clicking “Result” of the report, the list to select displaying result will be shown as above figure, which is appeared on bold strokes and verified the changes easily.



Note : After correcting report data, you should press **Update Report** button without checking on 'Rebuild All'. If you check on 'Rebuild All', T/A data will return to the original data before such correction.

11. Menu bar functions

11.1. System



11.1.1. Manage admin account

Add administrator to log in the BioAdmin or change password / user level of an existing administrator.

11.1.2. Data backup

Make manual backup file as well as auto backup file on the option menu. Backup file is saved as date-serial number format at the server installed a path.

11.1.3. Data recovery

After BioAdmin software modified to server/client type, data recovery is possible to copy backup file to server installed PC.

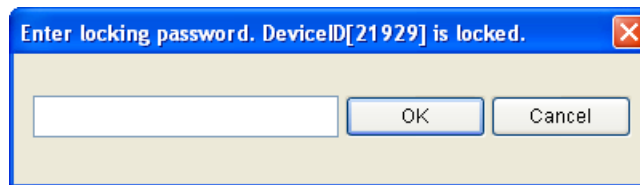
To recover a data, previously created backup file should be existed. By coping the file in the created folder as data-serial number type at the server installed path, all data can be restored as original backup status. All administrator & user information, rules, and log history are restored at the corresponding point, but data after restoration will be disappeared.

11.1.4. Lock all devices

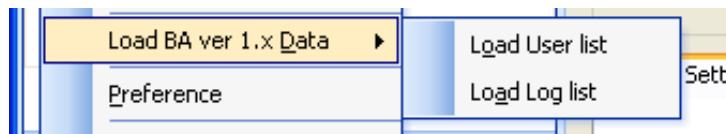
Lock/unlock linked all BioEntry and BioStation while using BioAdmin software. If administrator clicks lock all devices menu, all linked BioEntry and BioStation are locked and once locked, they don't react to any external packet except unlock command. In case of BioStation connected to the server, lock device does not support.

11.1.5. Unlock all devices

By clicking 'unlock all devices' menu, user can unlock all locked BioEntry and BioStation. If lock password has been set, user needs to enter password to unlock.



11.1.6. Load BioAdmin 1.X data



- Click **Load BioAdmin 1.X** data menu to import previous user data and log data generated while using BioAdmin software version 1.

Note : This menu can be used at a time of first execution of BioAdmin software version 3.0 only. It is because data is created anew after deleting existing data when importing previous data running this menu.

11.1.7. Preferences

Preferences menu supports the following functions.

- Device Time Setting
- Automatic Locking
- Backup Options
- Security Option
- Template Format Option
- Mifare Card Type
- Access Control Option

Preference

Device Time Setting

☐ Synchronize with current PC time at startup

Automatic Locking

☐ Lock all BioEntry readers when exit BioAdmin Change Lock Password

Backup Options

Default Backup Directory

C:\Program Files\BioAdmin\ Browse

Automatic Backup Option

☐ Use Automatic Backup

C:\Program Files\BioAdmin\ Browse

Backup database when exit Bioadmin(☒ on everyday / ☐ on every month)

Security Option

☐ Use Fingerprint Template Encryption Change Encryption Key

Template Format Option

☒ Use ISO Format Template

Mifare Card Type

☒ BioEntry Smart ☐ BioStation Mifare / BioEntry Plus Mifare

Access Control Option

☒ Use New Access Group for BioAdmin V4.2 (BioEntry Pass/Smart not support)

OK Cancel

- Device Time Setting

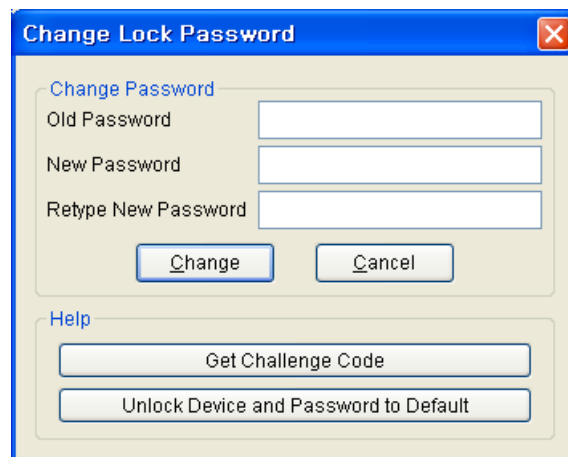
By checking **synchronize with current PC time at startup** on preference window, administrator can set time of linked all devices by host PC time.

- Automatic Locking

BioEntry and BioStation can be locked by password to enhance the security. If the locked BioEntry or BioStation is found on the network, BioAdmin software requests to enter password to unlock BioEntry and BioStation. Locking mechanism is enabled by the **Lock all BioEntry devices on exit** check box in

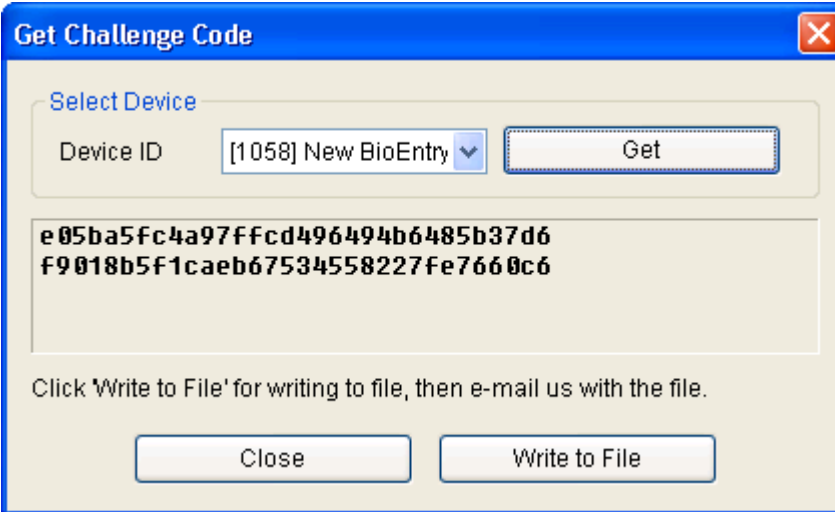
this window or the **Lock All Devices** menu below the System menu in Command menu bar. If it is enabled, BioAdmin software locks the devices at termination of the program. The **Change Lock Password** button initiates the password management window.

- Lock password of BioEntry and BioStation can be changed by pressing change button and entering old and new password.



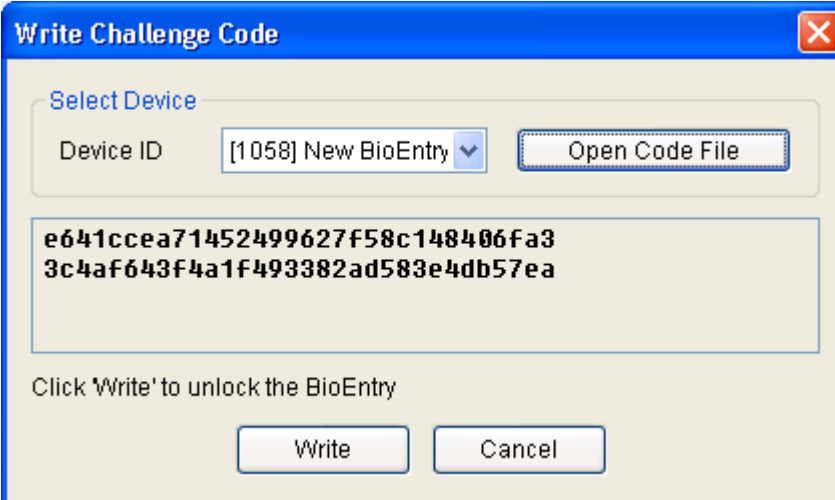
Note : As BioAdmin software doesn't save lock password, administrator should remember the password when using lock mechanism.

- Resolving the locked devices. If the devices are locked but cannot be unlocked in case of forgetting password, the following procedures are required. Obtain a challenge code file using the **Get Challenge Code** button and send the file to technical support team (support@supremainc.com)



The 'Get Challenge Code' dialog box has a blue title bar with a close button. It contains a 'Select Device' section with a 'Device ID' dropdown menu showing '[1058] New BioEntry' and a 'Get' button. Below this is a text area displaying a hexadecimal challenge code: `e05ba5fc4a97ffcd496494b6485b37d6f9018b5f1caeb67534558227fe7660c6`. At the bottom, there is a text instruction: 'Click 'Write to File' for writing to file, then e-mail us with the file.' and two buttons: 'Close' and 'Write to File'.

- The support team will send you the unlock code file corresponding to the challenge code. Use **Unlock a BioEntry and Password** to the **Default** button to resolve the device. Then, the device is unlocked and password is changed to default (null).



The 'Write Challenge Code' dialog box has a blue title bar with a close button. It contains a 'Select Device' section with a 'Device ID' dropdown menu showing '[1058] New BioEntry' and an 'Open Code File' button. Below this is a text area displaying a hexadecimal challenge code: `e641ccea71452499627f58c148406fa33c4af643f4a1f493382ad583e4db57ea`. At the bottom, there is a text instruction: 'Click 'Write' to unlock the BioEntry' and two buttons: 'Write' and 'Cancel'.

- Backup Options

- Default backup directory: Default backup directory for database can be specified on the preference page. Related backup files will be stored on the specified directories. In case of BioAdmin Software v4.0 above, this option cannot create a backup path, but backup file at the server installed path.
- Automatic Backup Option: By checking on the Use Automatic Backup check box, you can automatically save the backup database whenever you

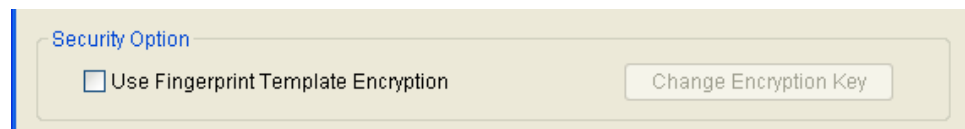
close the BioAdmin software. In case of BioAdmin Software v4.0 above, the backup file is created at the server installed path, which is similar to manual backup.

- You can select the period of the automatic backup between everyday and every month. This automatic backup replaces the old database with the new database at the termination of BioAdmin software.

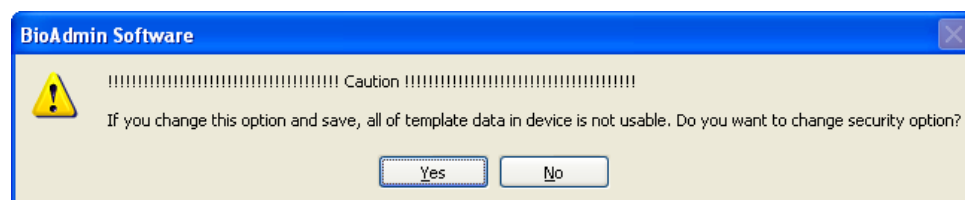
Note : automatic backup option saves data on the basis of closing BioAdmin software. Thus, in case of not running BioAdmin or not closing BioAdmin after running, data is not saved.

- Security Option

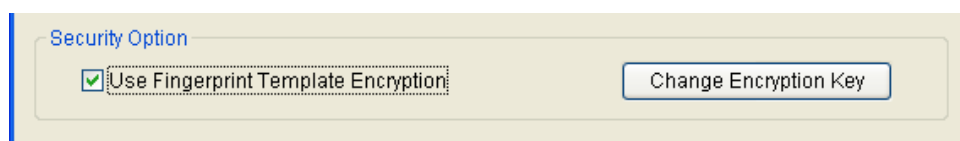
- Security option is used to encrypting fingerprint template data which is used between host PC and BioStation. By encrypting the template data, you can enhance the security level of the system.
- Security option should be used only when there is no fingerprint data on the BioStation. Otherwise, BioAdmin will remove all fingerprint templates on the BioStation.



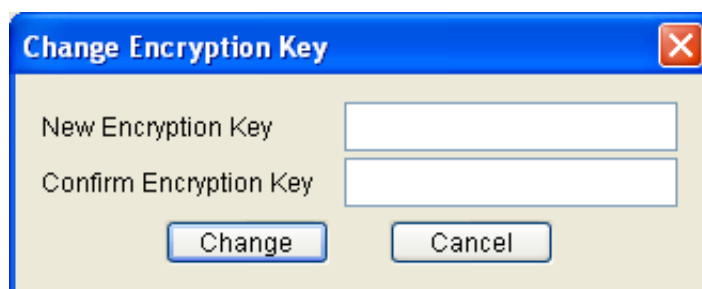
- Check on the Use Fingerprint Template Encryption.
- If you select the encryption option, a warning message will appear. If you want to continue the encryption, press Yes button.



- Press Change Encryption Key button.



- Enter Encryption Key.



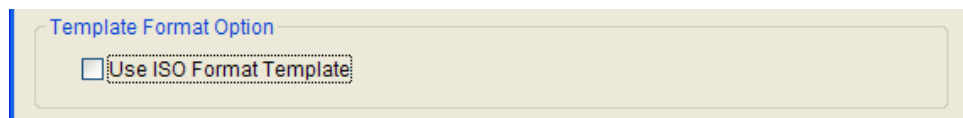
- Press Change button in Change Encryption Key window.
- Press OK button in Preference window.
- If you press Cancel button in Preference window or if the data encryption is interrupted by a network error, system will return to its earlier status before encryption.
- Whenever you change the encryption key, you need to apply the new encryption key for each of the connected BioStation. Also, you need to do so whenever you add a new BioStation to the network. Because encryption process will remove the existing user's templates on BioStation, you need to transfer the user's templates to the BioStation after finishing the encryption.
- When you use the encryption function, It is highly recommended to change the encryption key.
- Encryption key should be less than 31 digits.
- If the encryption is interrupted by a network error or by power failure, restart the BioAdmin program. Then, BioAdmin will automatically transfer the encryption setting to the remaining BioStation devices.
- You should be very careful in using the encryption function. If you are set different encryption key among BioStation devices, you may not be able to use the user's template compatibly among those devices.
- If the encryption key on host PC is different from that of BioStation, or if only either of host PC and BioStation is using the encryption option, following warning message will appear whenever such device is found on the

network. If you press **No**, such BioStation devices will be disconnected from the network.



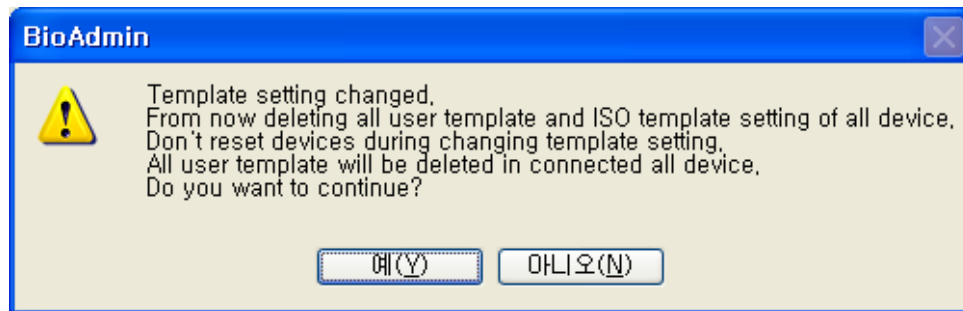
- Template Format Option

- Template format is a option to use both Suprema format template data and ISO 19794-2 standard format.
- Template format option should be used only when there is no fingerprint data on the devices. Otherwise, BioAdmin will remove all fingerprint templates on the devices and BioAdmin user DB template data.



- Check on the Use ISO Format Template.
- If you select the ISO format template option, a warning message will appear. If you want to continue the encryption, press Yes button.





- After two caution messages, BioAdmin deletes all template data on the user DB.
- After deleting user data connected all devices, it changes ISO template option.
- The device, which does not support ISO Format Template Data, cannot be used after turning on this option. In case of firmware upgrade, please upgrade it before turning on this option.

● Mifare Card Type



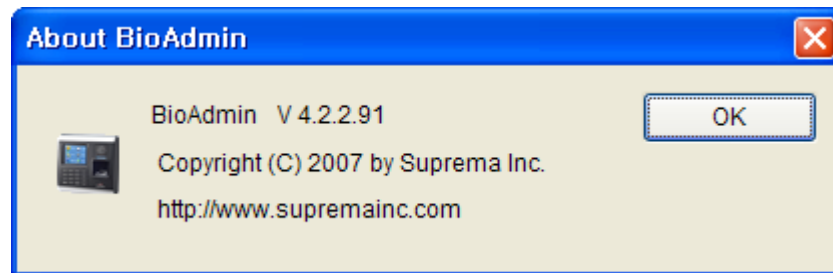
- BioAdmin 4.2.2 supports BioStation Mifare and BioEntry Plus Mifare.
- Since Card Format Data used for BioStation Mifare and BioEntry Plus Mifare does not compatible with Smart Card Layout of BioEntry Smart, you have to select correct Data Format before using BioAdmin.
- In case of BioEntry Smart, the function of read/write of Smart Card is available regardless of this option. However, in case of Dual USB Card Writer, the Card Format to read/write is configured according to the option.

● Access Control Option

- This option is for Access Control feature to apply to BioStation™ Version 1.4 and BioEntry Plus™. In case of the first time use, you have to create new Access Group and also user should be configured as new Access Group.
- Once configured this option, it cannot be default as disable option.

- Please refer to the “7. Access Control” for more in detail.

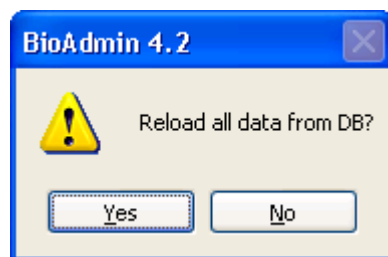
11.1.8. BioAdmin information



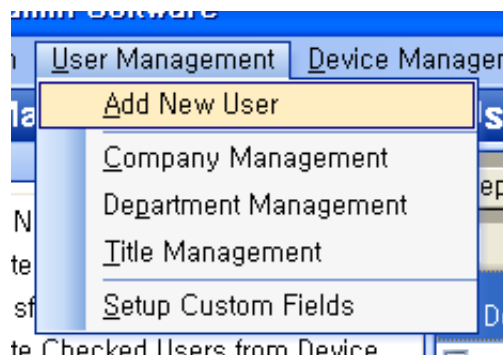
About BioAdmin on menu bar represents information on BioAdmin in use.

11.1.9. Reconnect Server

In case of bad communication, user can reconnect server to communicate again.



11.2. User Management

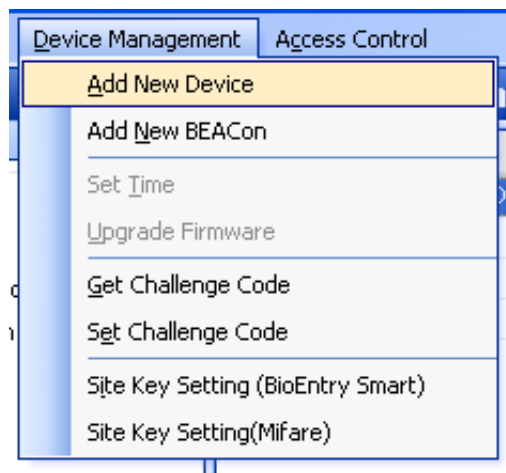


User management menu on menu bar supports following functions.

- Add New User
- Company Management
- Department Management
- Title Management
- Setup Custom Fields

For detailed setting, refer to 'chapter 5, user management'

11.3. Device Management

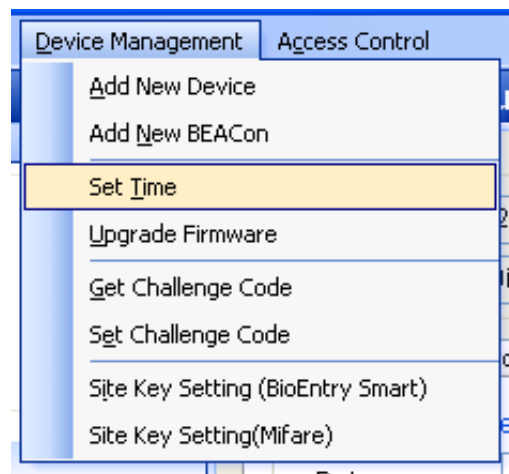


Device management menu on menu bar supports following functions.

- Add New Devices
- Add New BEACon
- Set Time
- Upgrade Firmware
- Get Challenge Code
- Set Challenge Code
- Site Key Setting

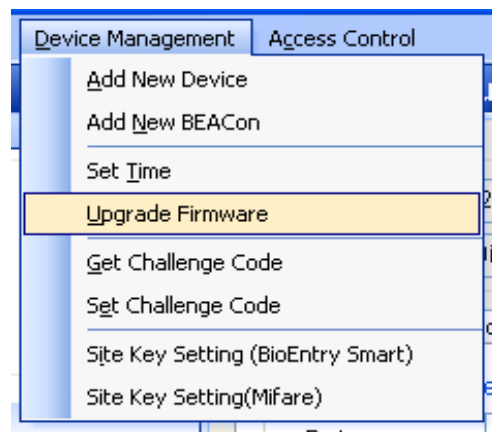
For detailed setting as to add new device, add new controller, import factory password code, factory password (password initialization), refer to 'chapter 6, device management'.

11.3.1. Time setting

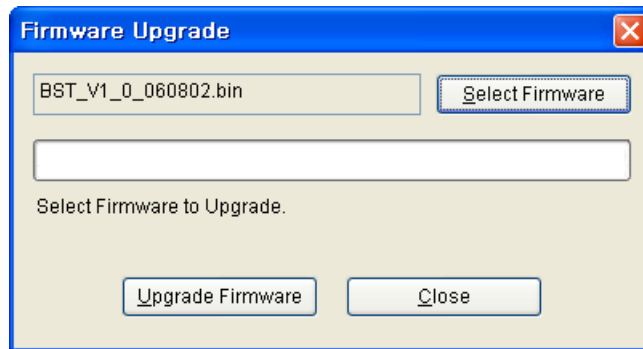


- You can synchronize the time of all of the networked BioEntry™ to the time of host PC. If you already checked on the **Synchronize current PC time at startup check box**, which is on Options → Preference → Device Time Setting, you do not need to synchronize the time on this menu.

11.3.2. FW upgrade



- By selecting the Firmware Upgrade menu, a pop-up window for firmware upgrade appears:

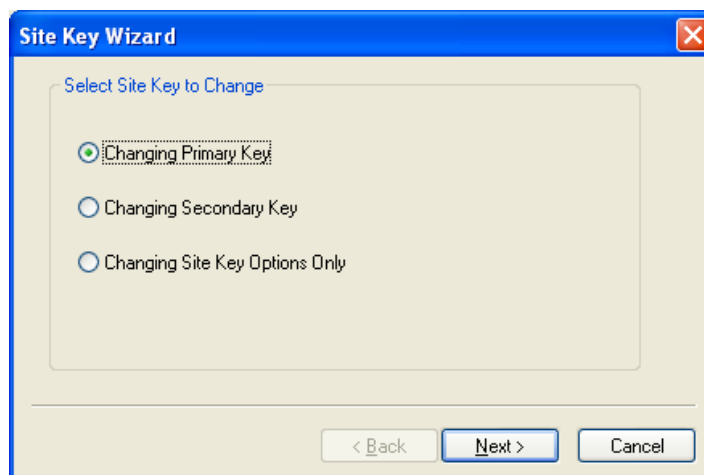


- Select a firmware file by clicking the **Search Firmware** button.
- Execute upgrade by clicking the **Upgrade Firmware** button.
- If BioEntry or BioStation is turned off or reset in the process of upgrading, restoration might be impossible.
- Firmware upgrade is processed for one device. Selection of a group or all devices is not allowed.

For detailed setting, refer to chapter 5 'user management'.

Note : Once firmware upgrade is complete, BioEntry and BioStation are rebooted automatically and connected to network. It is recommended not to do any other operation for about 5-10 sec after BioEntry or BioStation are rebooted due to upgrade.

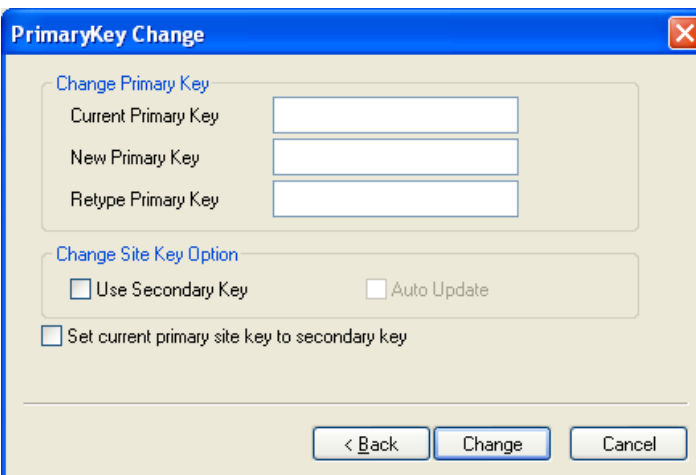
11.3.3. Site Key Setting (BioEntry Smart)



To prevent unauthorized access, Smartcards are encrypted with a 48 bit site key. For a BioEntry device to decrypt a Smartcard, the site key stored in the device should match with that of the card. Users can store as many as two site keys in the BioEntry device and select two advanced options. If the **Use Secondary Key** option is selected, the device will try both the primary and secondary keys when decrypting a Smartcard. If it is not selected, the device will try only the primary key. The **Auto Update** option is useful when changing the keys of Smartcards. With this option on, the device will re-encrypt a Smartcard with the primary key when it is encrypted with the secondary key.

Note : *Site keys should be handled with utmost caution. If it is revealed, the whole system is not secure any more.*

- Primary Key

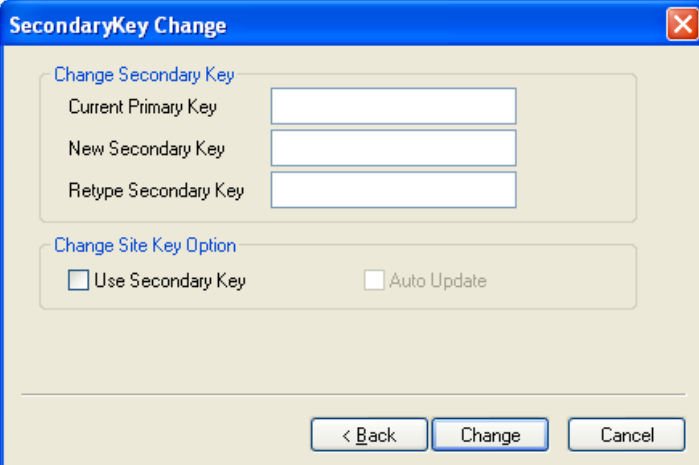


To change the primary key, you should enter the current and new primary keys. Besides the **Auto Update** option, you can also select the following options.

- **Set current primary site key to secondary key** : Replaces the secondary key with the current primary key before changing the primary key.

- Secondary Key

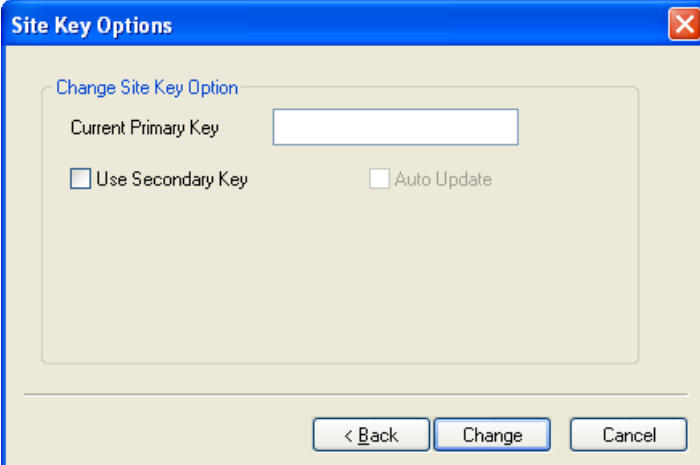
To change the secondary key, you should enter the current primary key and the new secondary key.



The 'SecondaryKey Change' dialog box has a blue title bar with a close button. It contains two sections: 'Change Secondary Key' and 'Change Site Key Option'. The first section has three text input fields for 'Current Primary Key', 'New Secondary Key', and 'Retype Secondary Key'. The second section has two checkboxes, 'Use Secondary Key' and 'Auto Update'. At the bottom are three buttons: '< Back', 'Change', and 'Cancel'.

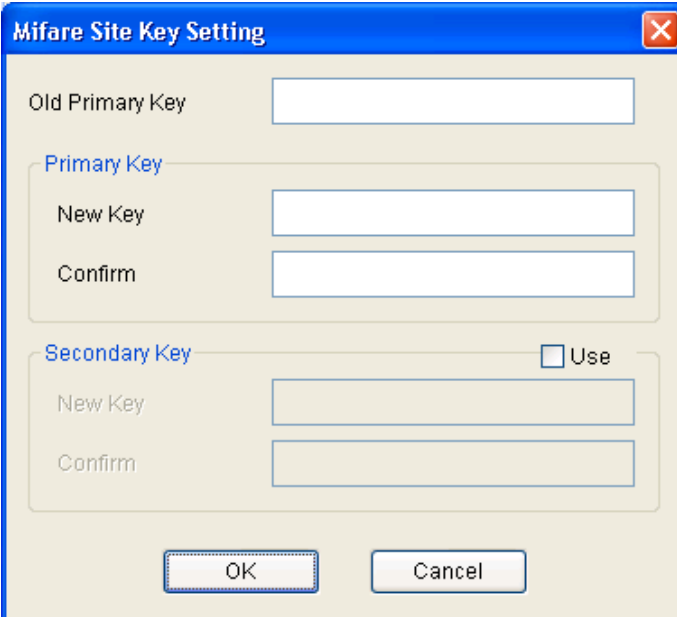
- Key Options

You can also change the key options only. In this case, you only have to enter the current primary key with the options.



The 'Site Key Options' dialog box has a blue title bar with a close button. It contains a section titled 'Change Site Key Option' with a text input field for 'Current Primary Key' and two checkboxes, 'Use Secondary Key' and 'Auto Update'. At the bottom are three buttons: '< Back', 'Change', and 'Cancel'.

11.3.4. Site Key Setting (Mifare)

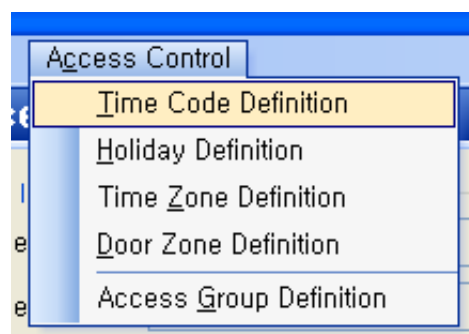


The image shows a Windows-style dialog box titled "Mifare Site Key Setting". It has a blue title bar with a close button (X) in the top right corner. The dialog is divided into several sections. At the top, there is a label "Old Primary Key" followed by a text input field. Below this is a section titled "Primary Key" in blue text, which contains two text input fields labeled "New Key" and "Confirm". Underneath the "Primary Key" section is another section titled "Secondary Key" in blue text. To the right of this section is a checkbox labeled "Use". Below the "Secondary Key" section are two text input fields labeled "New Key" and "Confirm". At the bottom of the dialog are two buttons: "OK" and "Cancel".

To prevent unauthorized access, Smartcards are encrypted with a 48 bit site key. For a BioStation™ / BioEntry™ Plus device to decrypt a Smartcard, the site key stored in the device should match with that of the card. Users can store as many as two site keys in the BioStation™ / BioEntry™ Plus device and select two advanced options. If the **Use Secondary Key** option is selected, the device will try both the primary and secondary keys when decrypting a Smartcard. If it is not selected, the device will try only the primary key.

Note : *Site keys should be handled with utmost caution. If it is revealed, the whole system is not secure any more.*

11.4. Access Control



Access control menu on menu bar supports following functions.

- Time Code Definition
- Holiday Setting
- Time Zone Setting
- Door Zone Setting
- Access Group Setting

For detailed setting, refer to chapter 7. Access Control.

Contact Information

Suprema Inc.

16F Parkview Office Tower, Jeongja-dong, Bundang, Seongnam, Gyeonggi, Korea

Tel : +82-31-783-4502

Fax : +82-31-783-4503

Website : <http://www.supremainc.com>

Sales inquiry : sales@supremainc.com

Technical inquiry : support@supremainc.com