



# **USER's MANUAL**

Version 1.0

Microsoft Windows 98/2000/XP

Safe Valley Inc.

<http://www.safevalley.co.kr>

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## Specification

### <<Running Environment>>

- ◆ OS : Windows 98/2000/XP
- ◆ CPU : Pentium 133MHz or above
- ◆ HDD : More than 10MB free space
- ◆ RAM : 16MB
- ◆ Interface : USB port
- ◆ Internet Explorer 5.0 or later version
- ◆ Resolution : 513dpi
- ◆ Power : 5V/150mA

# **Chapter 1. About SONURO**

**1. Information security process of SONURO**

**2. Product Summary**

**3. Sales Point**

**4. Features**

## 1. Information security process of SONURO

- SONURO is a remarkable innovative PC security solution for users who need to protect their PC and information from other unauthorized users.

Enjoy the convenient and reliable security for your PC by using our SONURO of Safe Valley Inc.

- Information security has several ways of precautions such as Antivirus, Firewall, and encryption.

It is natural that users want to use their information safely. In addition, they don't want any unauthorized people to use or know about their information.

SONURO places great importance on a strict user authorization and security Information.

### **Secure Logon, Screen Saver, File Protection**

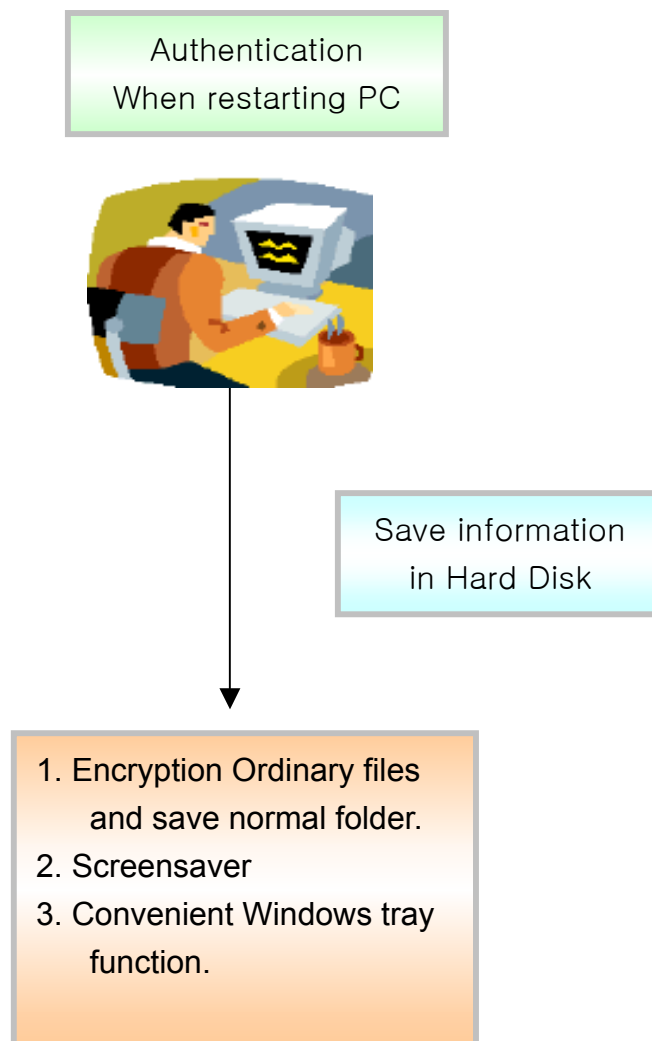
SONURO protects your system with secure logon, screen saver, file access control by an encryption/decryption using fingerprint authentication. It also provides you with various functions including selections of authentication methods (password only, fingerprint only, both password and fingerprint) and administration tools.

### **Fingerprint, a key of your own and your secure key is the most convenient**

You don't need to worry about forgetting passwords. You don't need to worry about the possibility of password disclosure. You don't need to care about complicated cryptographic algorithms.

SONURO protects your system safely with your own key-your fingerprint.

◆ Process



## 2. Product Summary

**SONURO is a Client PC security program based on encryption and Fingerprint recognition for protecting files, which is developed by Safe Valley Inc.**

- Security logon function linked with Windows logon
- Secure screensaver function working together with Windows screensaver
- Possible encryption and decryption function about files and folders by means of fingerprint identification
- Secure logon function through fingerprint identification
- File encryption/decryption by means of RC6, the advanced algorithm of secret key code



### 3. Sales Point

**Nobody can access the existence and content of information except for its administrator.**

- The saved files cannot be accessed unless user authorization is permitted when the computer restarts.
- Even though several people may use one computer, one's information and files cannot be opened to the others.
- In case you happen to lose your laptop computer, your saved files in the computer cannot be accessed without its right password or fingerprint.
- Even if someone attaches its hard disk separated from its original computer to another computer, he cannot open the stored encryption files.

## 4. Features

### ■ **Maximized stability and fast performance speed with forefront algorithms**

Encryption means to change a pattern of the digital files only for a person encrypting files. Password is a key that changes or recovers a pattern of the files with encryption algorithms. Therefore, an encryption algorithm is very important and it is necessary to use a trusty algorithm in encryption. Now, there are a few algorithms but SONURO supports such forefront algorithms as RC6. Besides, it uses the more advanced 128-bit en/decryption algorithms, but works at the higher speed than existing products using 64-bit algorithms and also shows fastest encryption/decryption speed among similar products.

### ■ **Familiar and Convenient user interface**

Naturally, SONURO linked with the most-commonly-used Windows Explorer in such a way that a user can run it within Windows Explorer by just one-clicking the right mouse button.

### ■ **Protecting important files from virus**

Virus is a program that disturbs from using the files by infecting them. Especially, Windows Office program files and document files, which include execution code, are very weak from virus attacks. But, if a file is encrypted, the virus program will consider it as a text file and it will not infect the file. Like this being stored in the computer, files are secured from being infected by virus.

### ■ **Prevention from ‘the random password generator’**

It takes 74 years to decrypt files encrypted with RC6 algorithm in a super computer. However, ‘the random password generator’ cracks a password easily.

SONURO helps to use a defensive method made by RSA Co., Ltd and recovers system with the beginning situation, which means you are able to prevent from being hacked.

- **Perfect encryption**

There are two ways to encrypt digital files – Encryption of the file header and Encryption of the entire file. The SONURO chooses to encrypt the entire file. Therefore, it can be excluded from hacking.

- **Perfect deletion**

Even when a file is deleted, actual data remains on the hard disk. If a file is deleted by using SONURO, a file is deleted physically without leaving any trace.

- **Security logon function linked with Windows logon**

- **Secure screensaver function working together with Windows screensaver**

- **Possible encryption and decryption function about files and folders by means of fingerprint identification**

- **Secure logon function through fingerprint identification**

- **File encryption/decryption by means of RC6, the advanced algorithm of secret key code.**

## ■ Applied Area

- ◆ Desktop security.
- ◆ Customer management.
- ◆ Secure e-commerce
- ◆ Financial Area (ATM, Personal Savings).

## ■ System Requirements

- ◆ OS : Microsoft Windows 98/2000/XP
- ◆ CPU : Pentium 133Mhz or above
- ◆ HDD : more than 10MB free space
- ◆ RAM: 16MB
- ◆ Interface : USB
- ◆ Internet Explorer 5.0 or later version

## **Chapter 2   Installation**

- 1.   Installation Summary**
- 2.   Connecting a Device**
- 3.   Installing the Device Driver**
- 4.   Installing The SONURO Software**

## 1. Installation Summary

1. Turn on your PC.
2. Connect the Fingerprint Device to your system.
3. When Windows finds a new hardware, you insert the installation CD into the drive.
4. Insert SONURO1.0 CD into a CD-ROM drive and follow the steps of USB and device driver installation.
5. Run "setup.exe" in order to install SONURO1.0 applications.
6. After the installation, restart the PC and log on to the PC by means of using the ID and password you specified during the installation.
7. Using Administration tool, you can change the authentication methods to use Password, Fingerprint or both if you want.

### **CAUTION**

- ◆ If Microsoft Internet Explorer 5.0 or later version is not installed in your system, please install IE 5.0 or later version.

### **◆ USB**

Your system main board should support USB and the USB must be set as Enable in the CMOS setup.

## 2. Connecting a Device

After turning on your PC, connect the Fingerprint Device to a USB port in your PC.

## 3. Installing the device driver

USB (Plug & Play Support)

Connect the device to a USB port and the system will automatically find it and a new window titled “Add New Hardware Wizard” will appear.

### **WARNING**

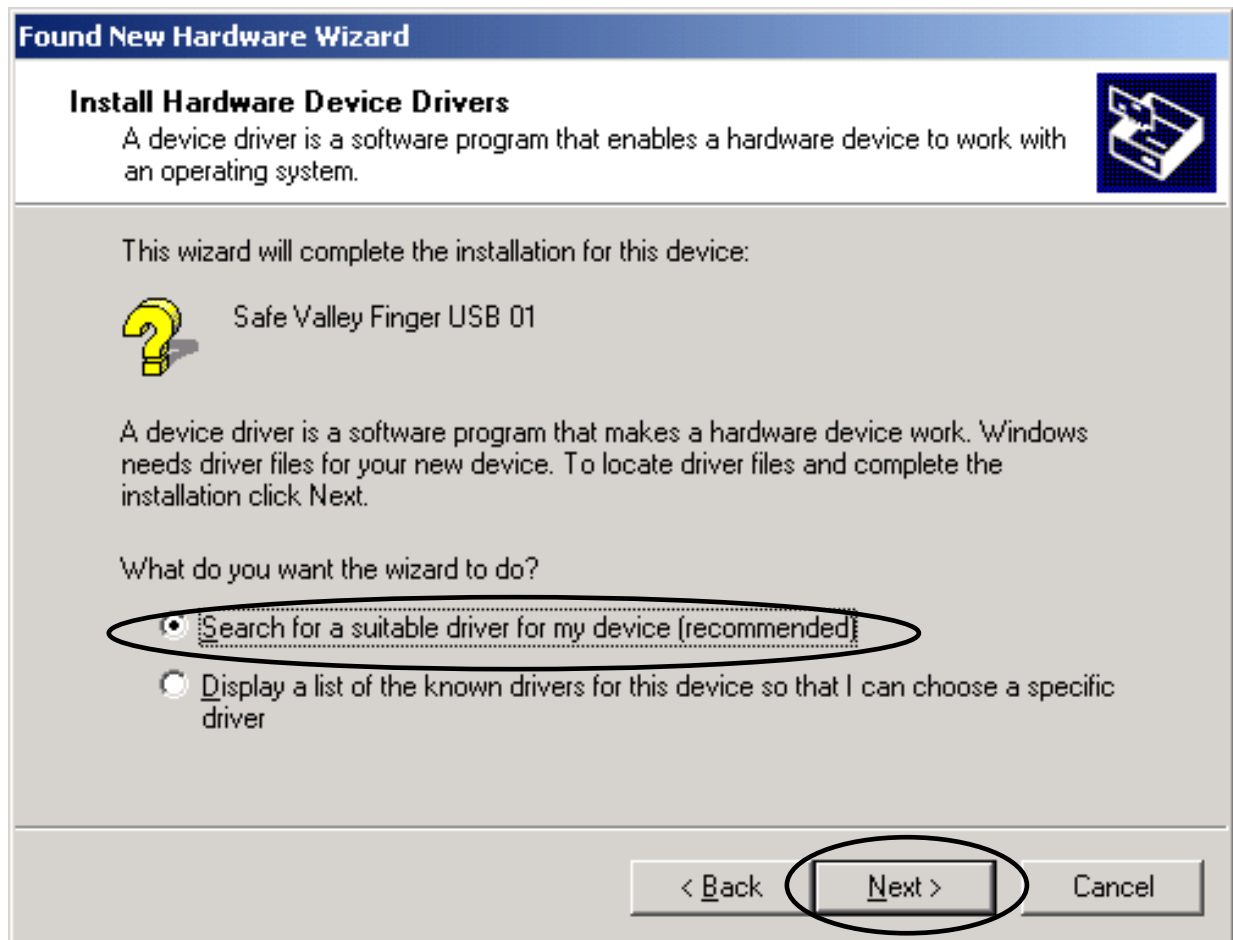
Your PC motherboard should support USB and the USB must be set as Enabled in the CMOS setup.

1. Press **Next>**.

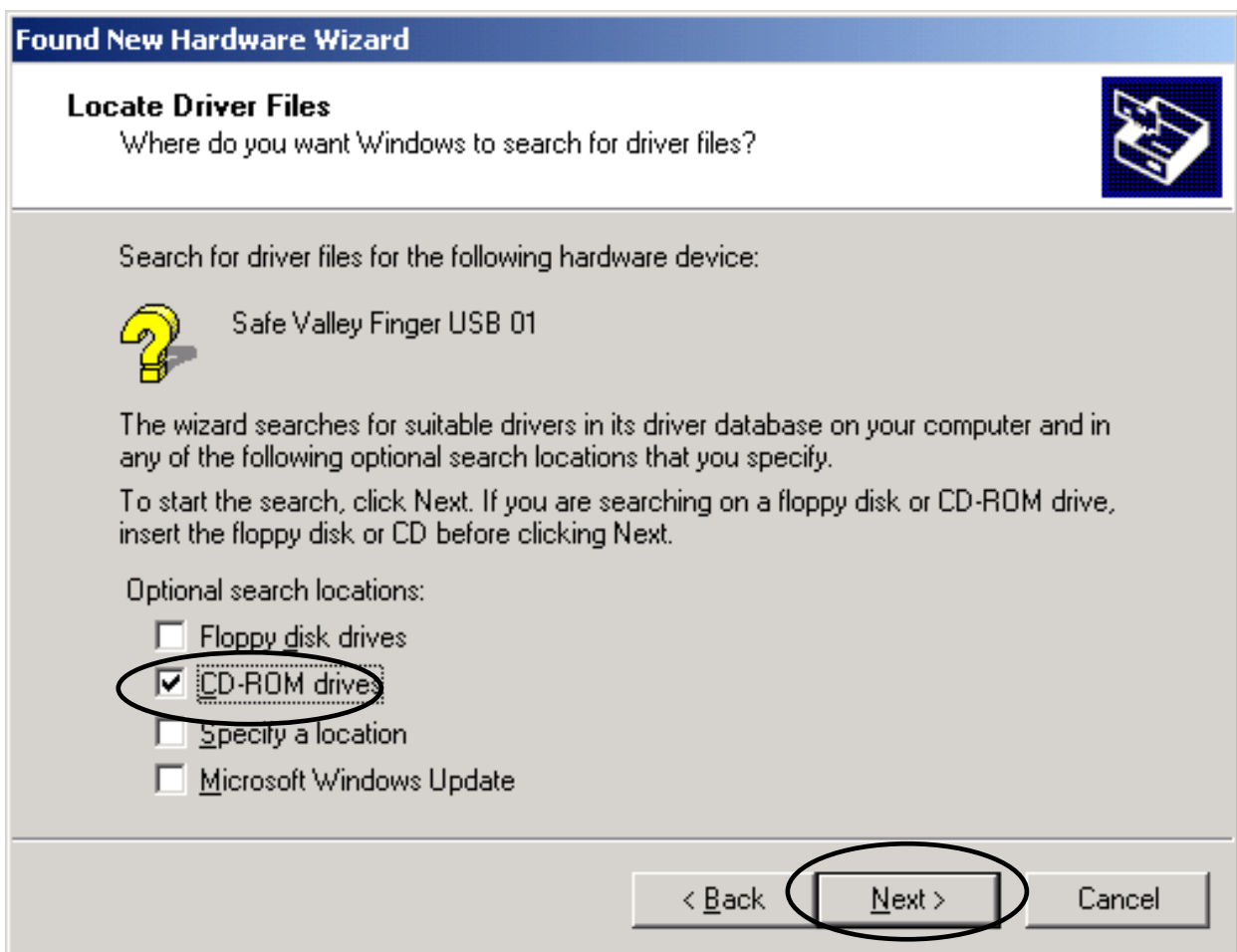




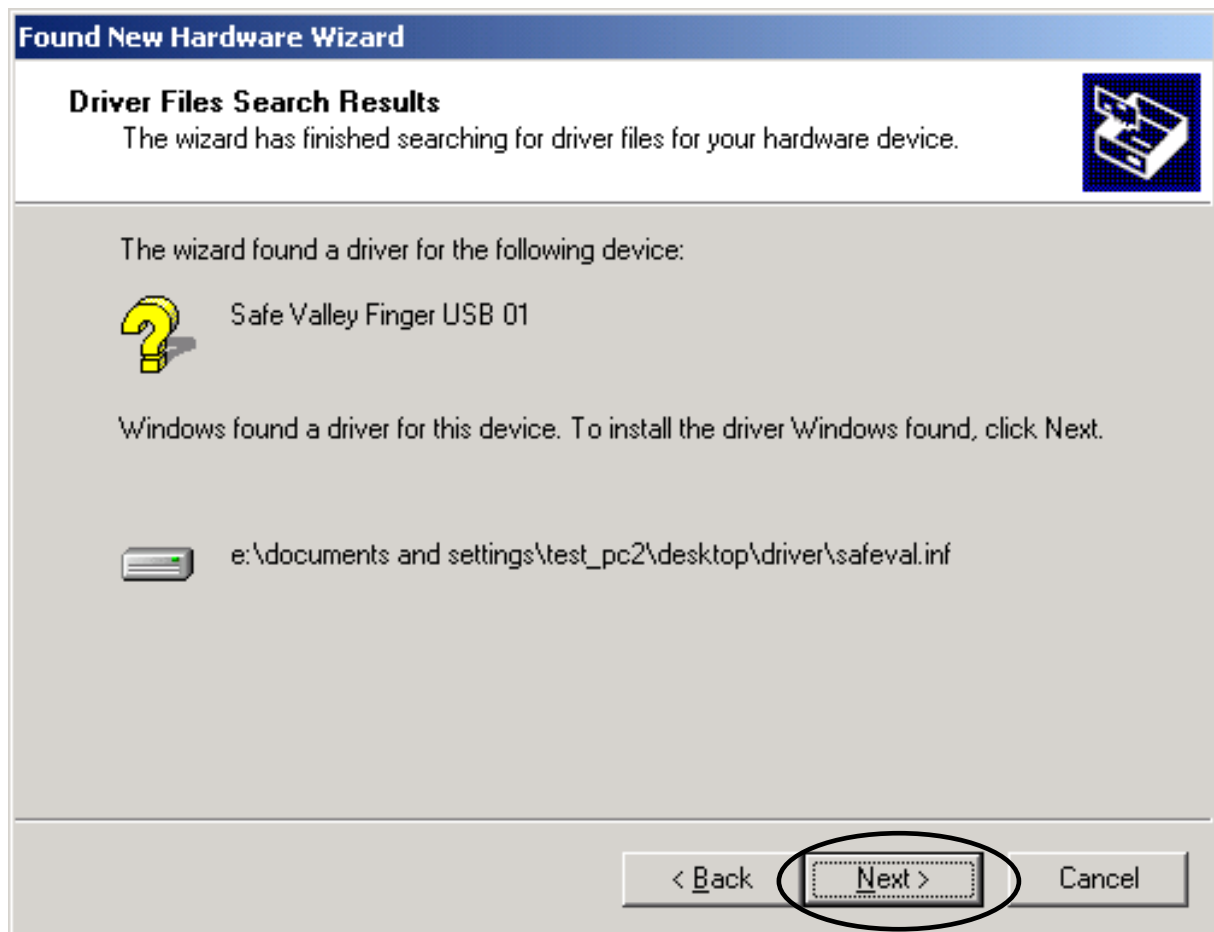
2. Select **Search for a suitable driver for my device** and **Next>**.



3. Insert the CD into a CD-ROM drive, check CD-ROM drives in the new window and press **Next>**.



4. If a new window appears, press **Next>** to start the driver installation.



5. When the driver is successfully installed and a new window appears, press **Finish**.

**NOTE**

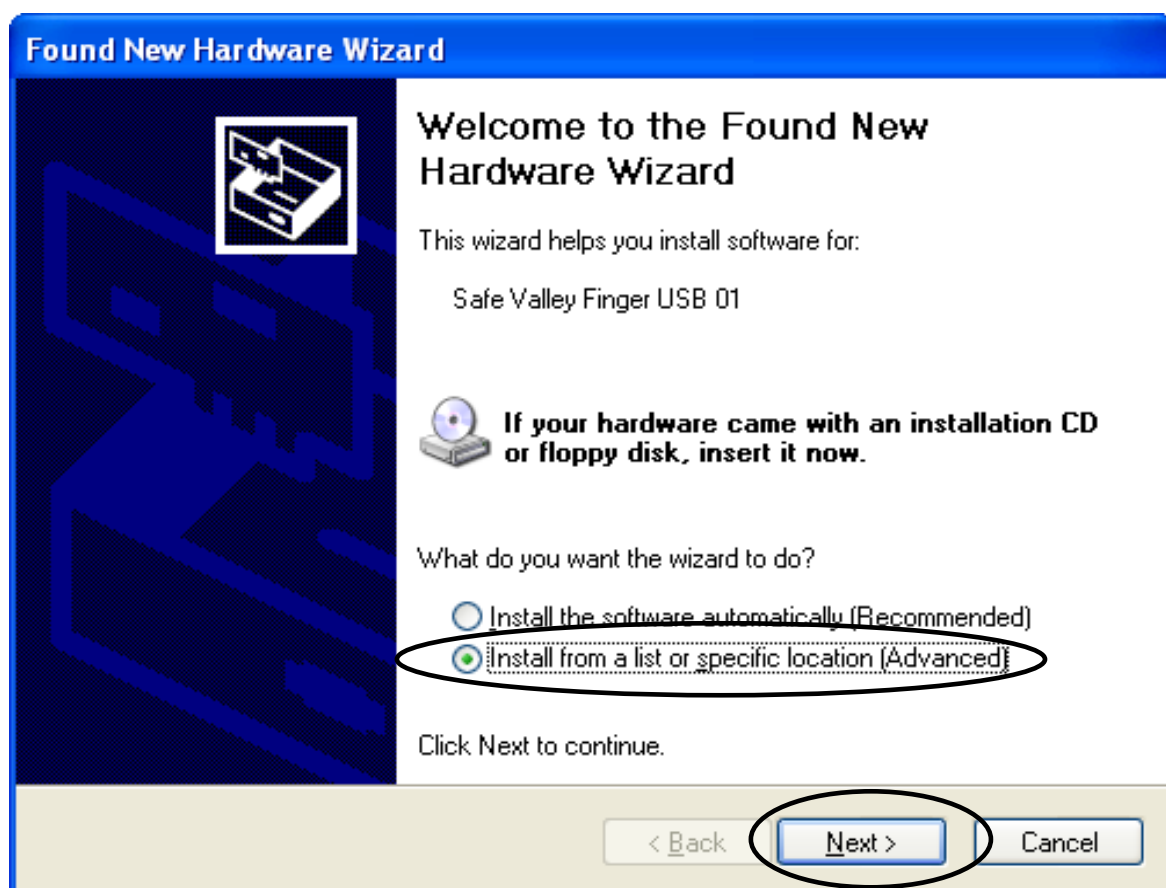
1. For Fingerprint Device to properly work, the above process will be repeated for installing the device driver.
2. You may need Windows installation CD during the installation.

## [Windows XP]

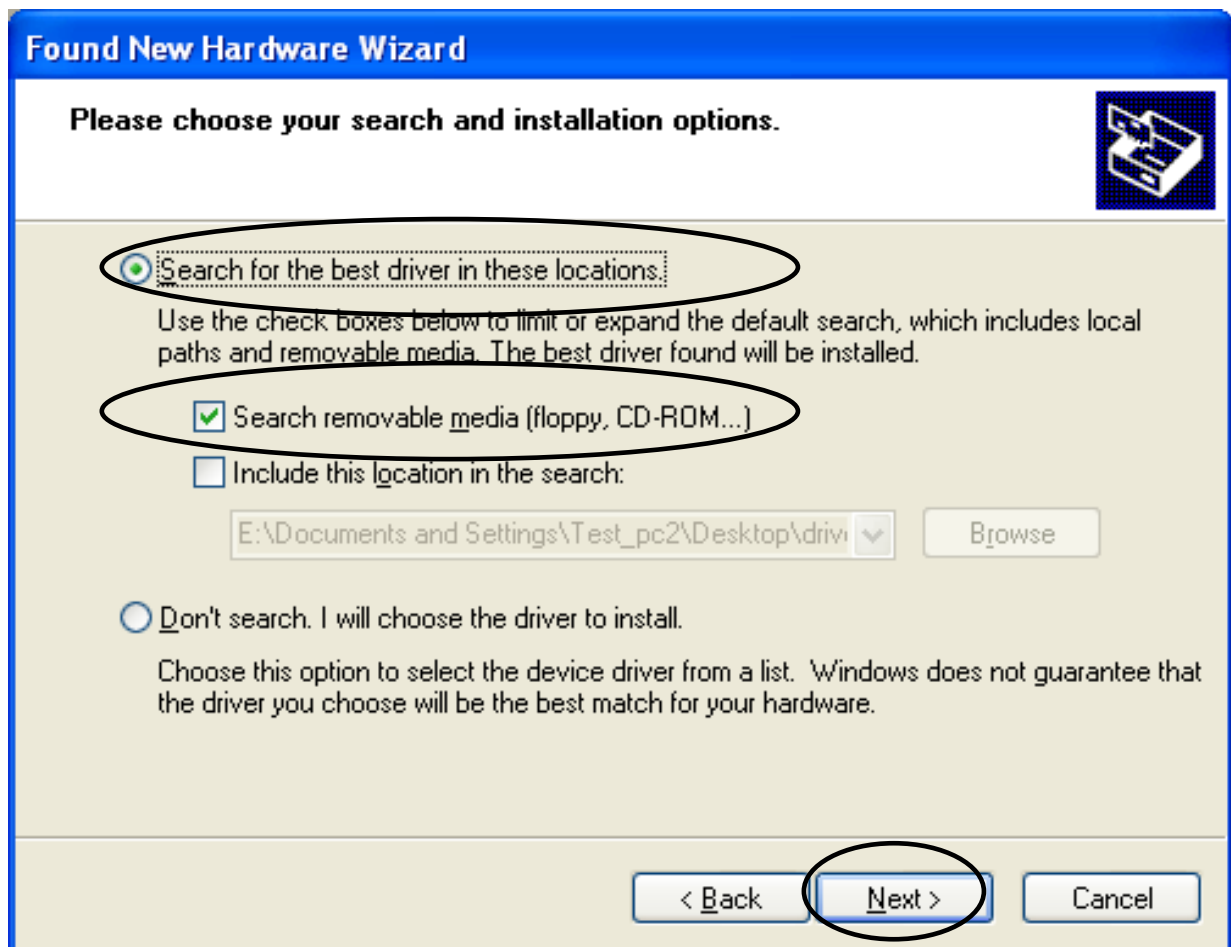
### (USB installation)

Connect USB in your PC and appear the **Found New Hardware Wizard**.

1. Press **Next>**.

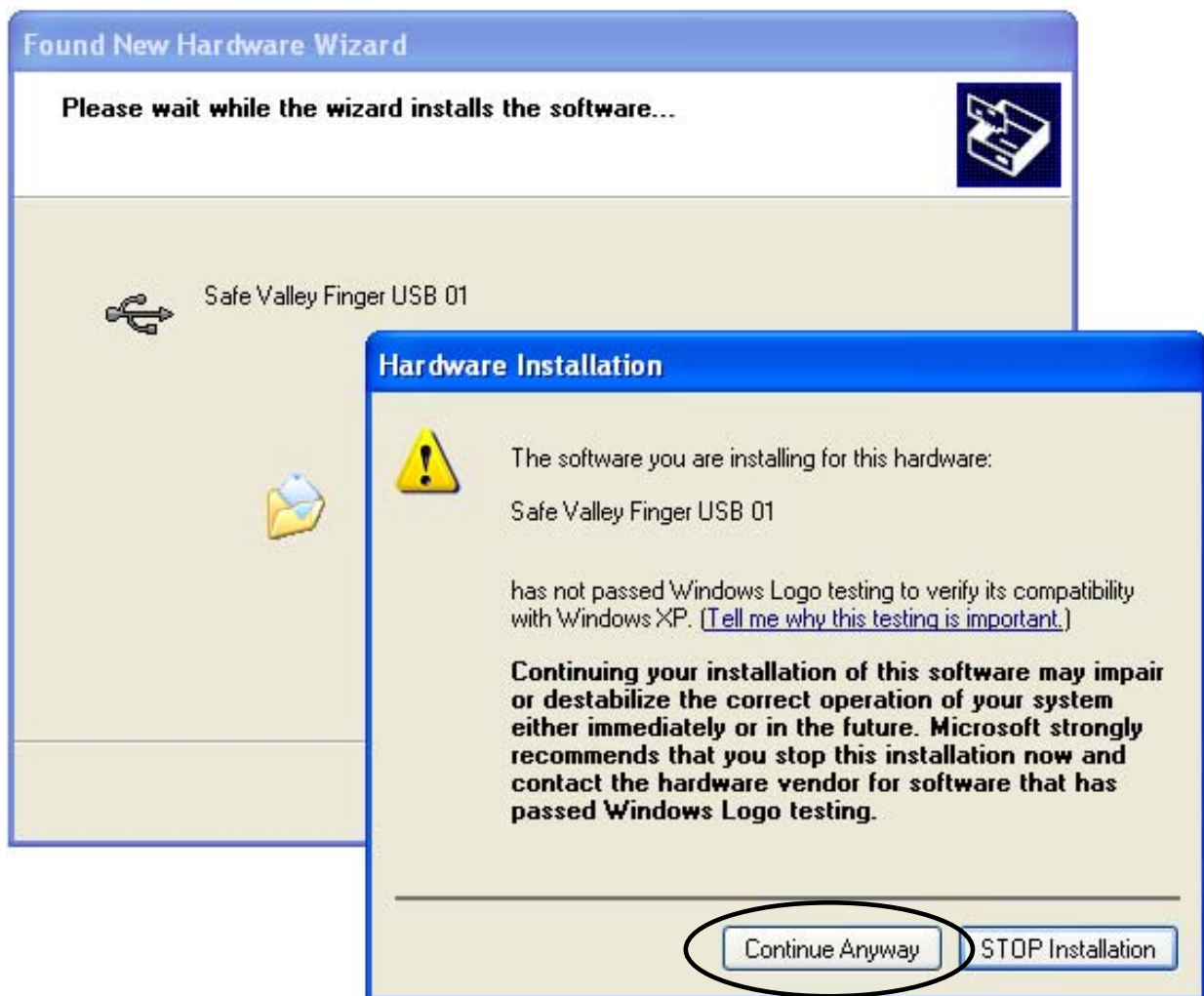


2. Select **Search for the best driver in these locations**, **Search removable media (floppy, CD-ROM...)**, and **Next>**.



3. Select **Continue Anyway**.

(Take no account of this message because the Microsoft has not developed DDK).



4. Press **Finish**>..

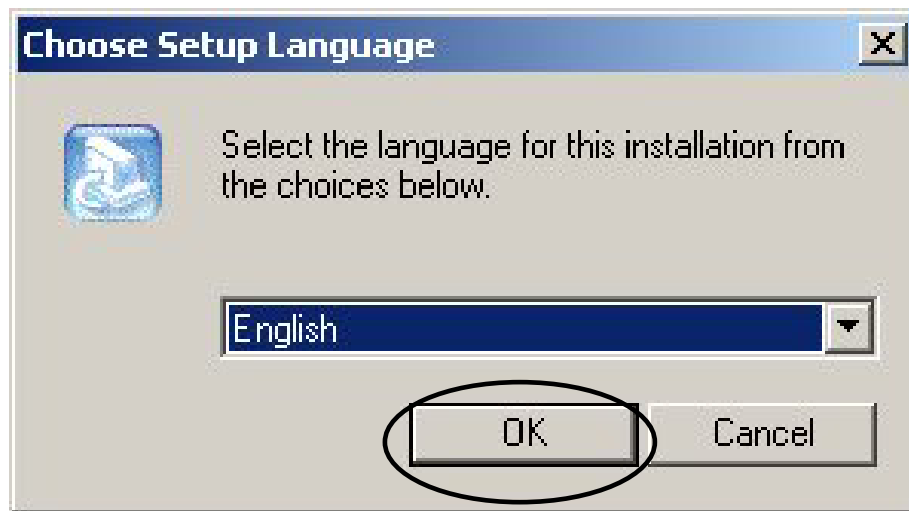
**NOTE**

1. For Fingerprint Device to properly work, above process will be repeated for installing the device driver.
2. You may need Windows installation CD during the installation.



## 4. Installing The SONURO Software

1. Insert SONURO1.0 CD into a CD-ROM. After the language selection, press **OK**.



2. The SONURO installation program will run automatically.



3. A new window for entering an ID and password to be used in authentication will appear. Enter the ID and password of an administrator.

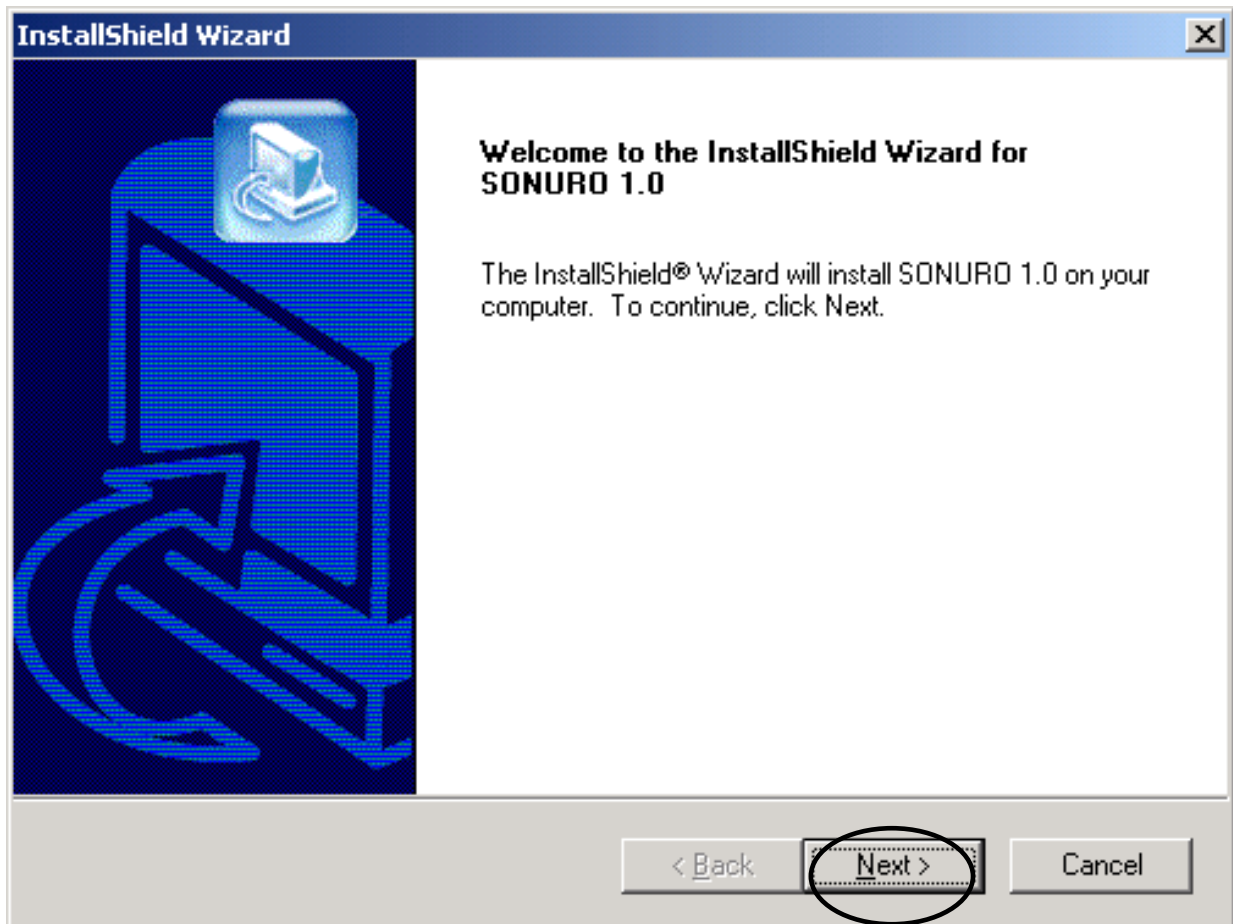


The image shows a graphical user interface for the SONURO application. The top section has a blue background with a fingerprint pattern and the text "SONURO" in a stylized font, followed by "Real Security With Your Fingerprint". Below this, there are two input fields: "User ID" with the text "administrator" and "Password" with "\*\*\*\*\*". To the right of these fields is a large white square, likely a placeholder for a fingerprint. Below the input fields, the text "Enter the password and press 'Enter'." is displayed.

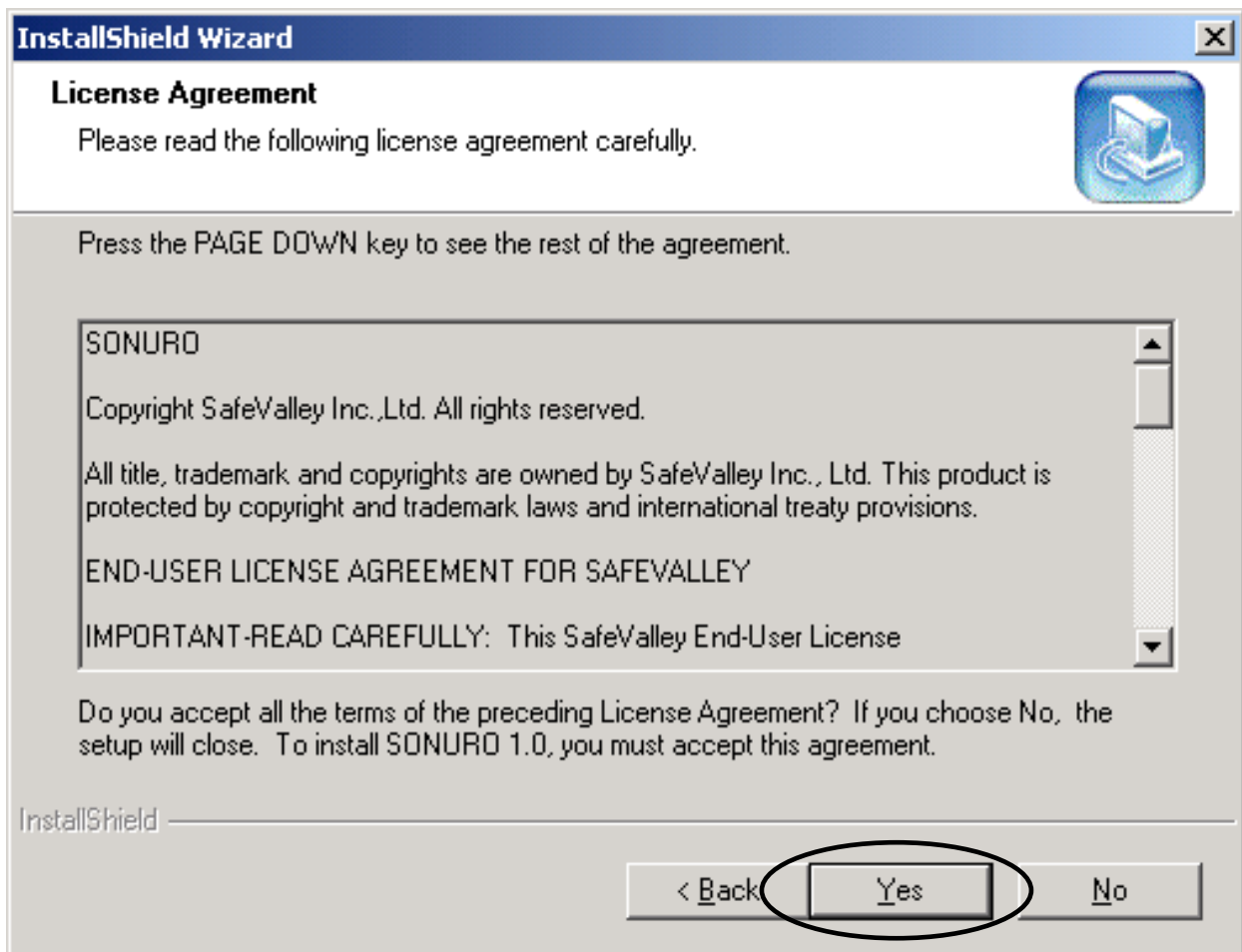
**WARNING**

Those authorized, as an administrator of Windows 2000 will be able to install SONURO1.0. For more powerful security, the others are not permitted to install SONURO on Windows 2000. Therefore, you will need to log-on as an administrator to install SONURO1.0.

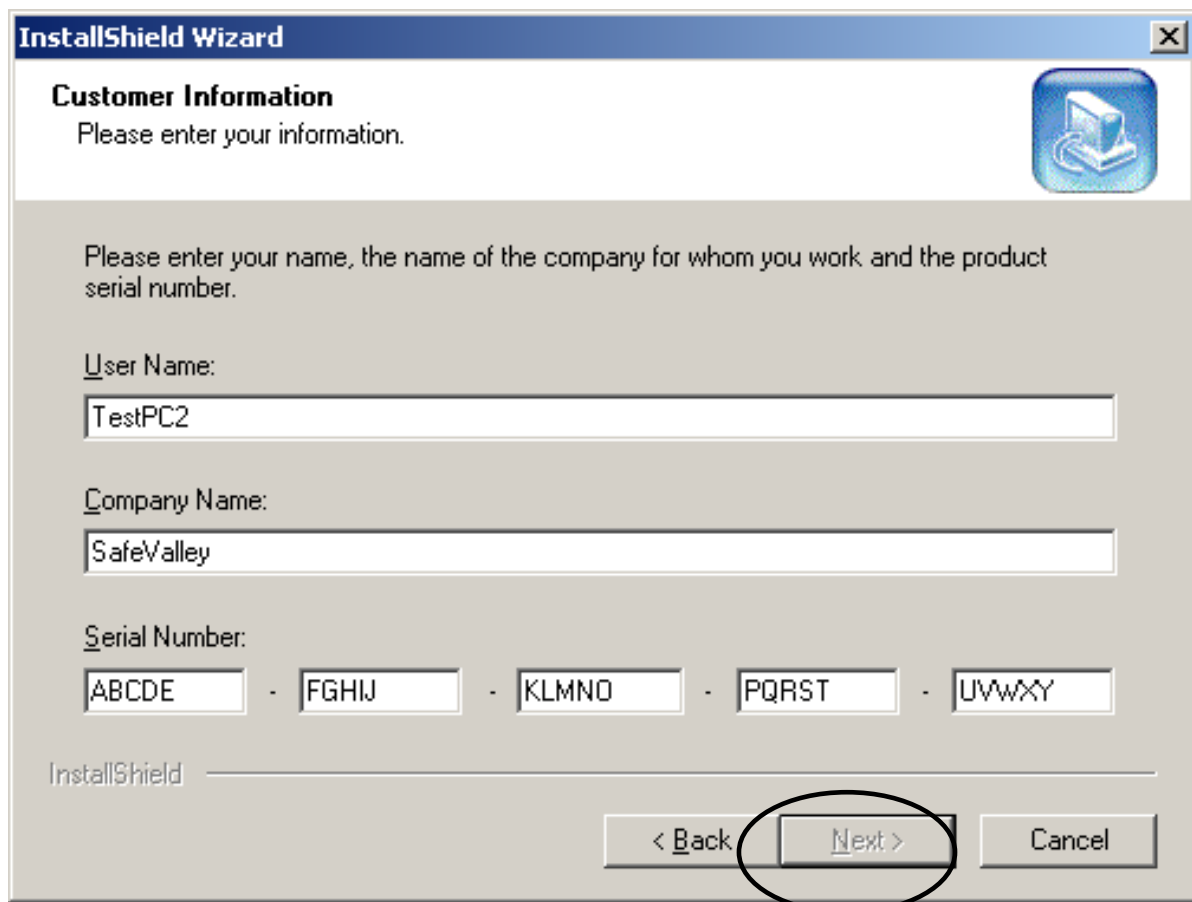
4. In the new window, press **Next>**.



5. Read the 'License Agreement' and if you agree, press **Yes**.



6. In the new window, write user name and company name, write the serial number of the product, and press **Next>**.



The image shows a screenshot of the 'InstallShield Wizard' window. The title bar reads 'InstallShield Wizard'. The main heading is 'Customer Information' with a sub-instruction 'Please enter your information.' and a computer icon. Below this, a larger instruction says 'Please enter your name, the name of the company for whom you work and the product serial number.' The form contains three input sections: 'User Name:' with a text box containing 'TestPC2'; 'Company Name:' with a text box containing 'SafeValley'; and 'Serial Number:' with five separate text boxes containing 'ABCDE', 'FGHIJ', 'KLMNO', 'PQRST', and 'UVWXY'. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is circled in black.

**InstallShield Wizard**

**Customer Information**  
Please enter your information.

Please enter your name, the name of the company for whom you work and the product serial number.

User Name:  
TestPC2

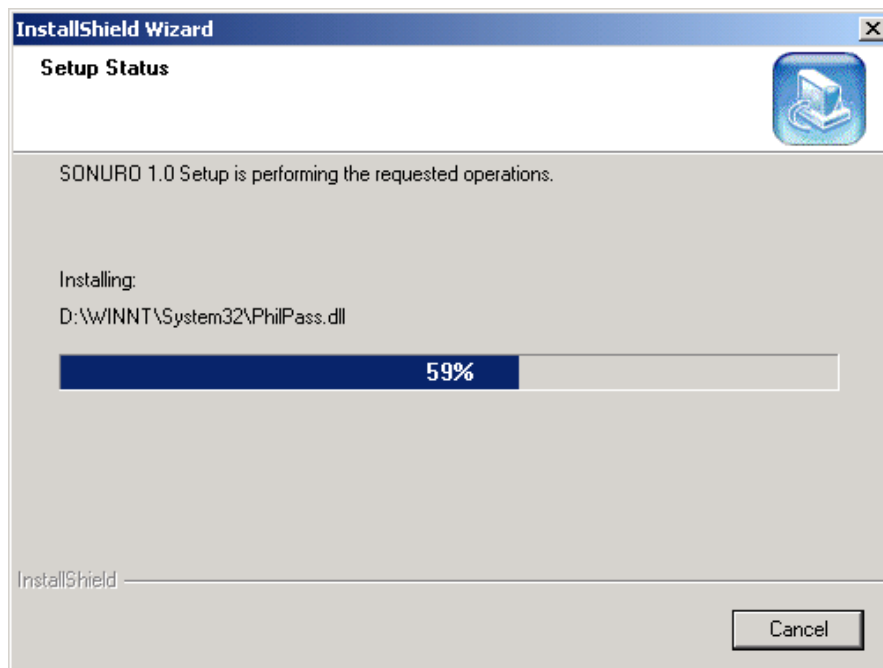
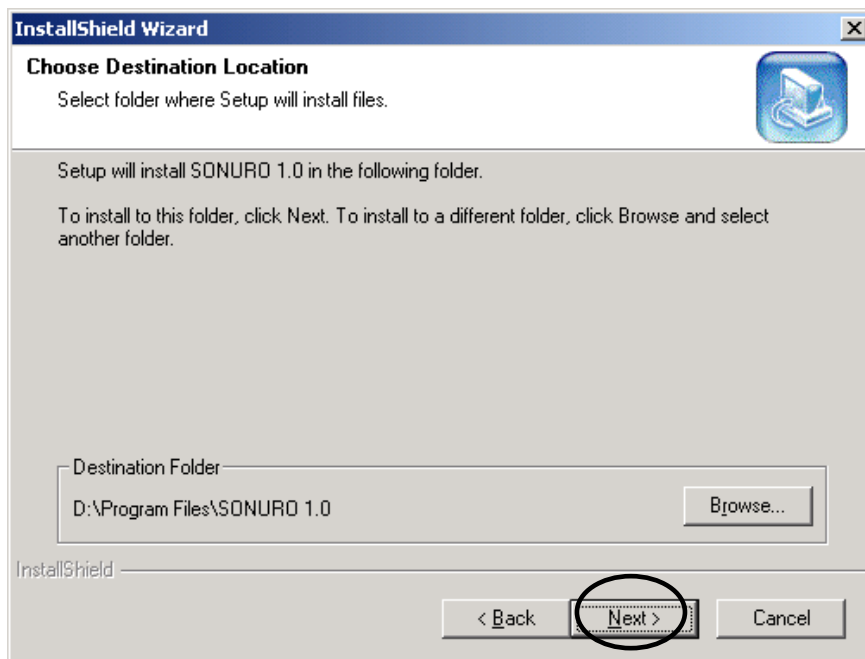
Company Name:  
SafeValley

Serial Number:  
ABCDE - FGHIJ - KLMNO - PQRST - UVWXY

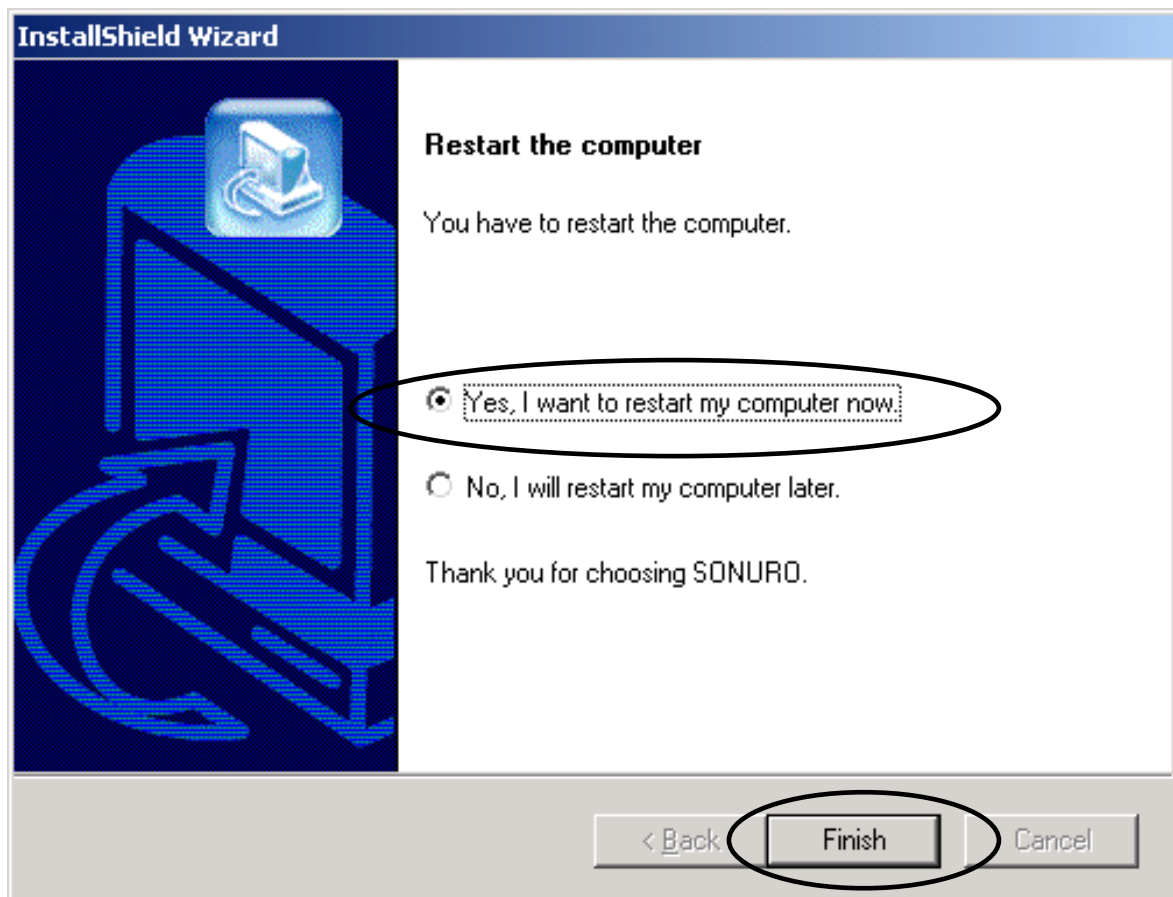
InstallShield

< Back **Next >** Cancel

7. The software will be installed onto the path “C: \Program files\SONURO 1.0” by default. You can change the path by using **Browse**. We recommend you to use the default setting. Press **Next>** to continue the installation.



8. When the installation is successfully completed, you will be informed of that, and press **Finish**. Restart your PC after installation.





9. You will find the icon for SONURO Enrollment in the System Tray and Desktop. If you can find it, you can be sure that the installation has been successfully completed.



## ◆ NOTE

When you reboot the system, a window for user authentication will appear as in the following figure. Please consult Chapter 5 for details on the Secure Log-on.



The image shows a user authentication window for SONURO. The window has a blue header with the SONURO logo and the text "Real Security With Your Fingerprint". Below the header, there are three input fields: "Domain Server(D)" with a dropdown menu showing "TESTPC1", "User ID(U)" with a text box containing "Admin", and "Password(P)" with an empty text box. To the right of these fields is a large white rectangular area, likely for a fingerprint scanner. Below the input fields, there is a prompt: "Enter the password and press 'Enter'."

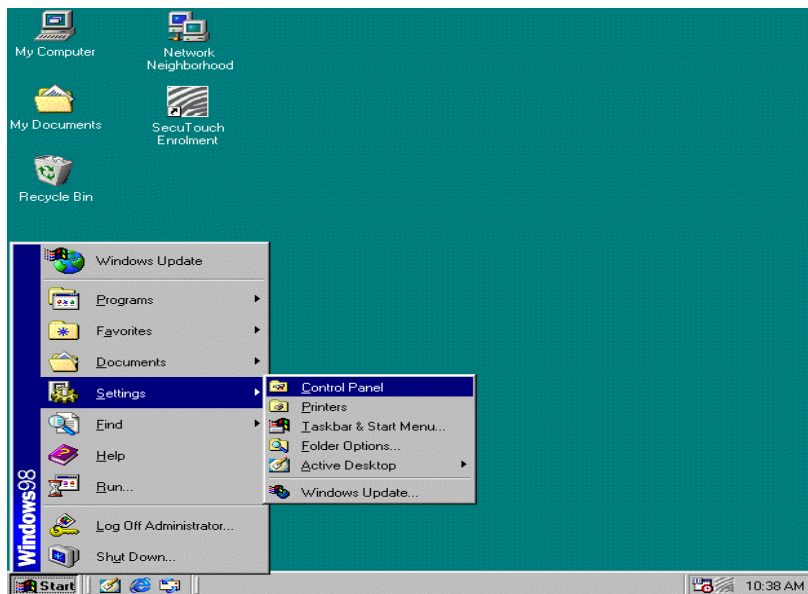
## **Chapter 3 Removal**

- 1. Uninstalling the SONURO Software**
- 2. Removing the Device Driver**

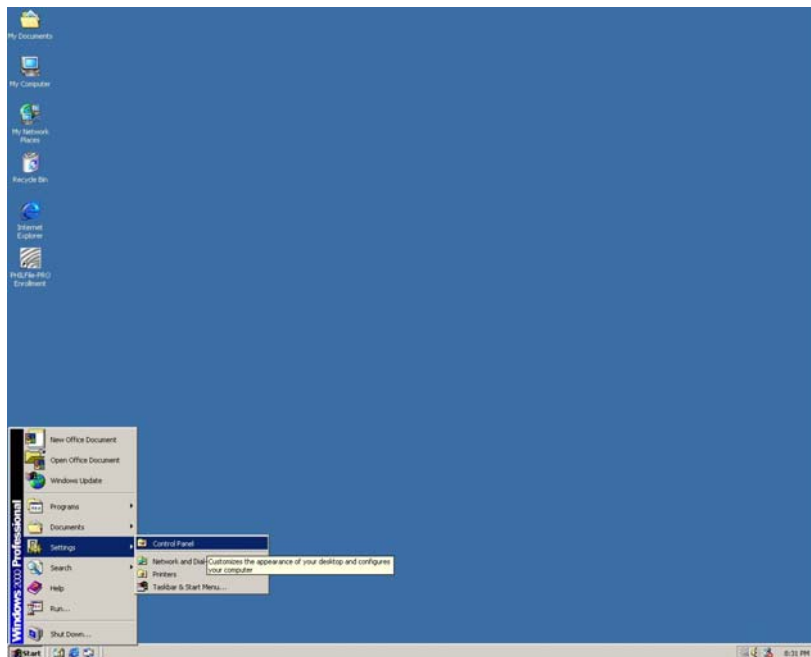
## 1. Uninstalling the SONURO Software

1. Only those authorized as administrators of the Windows are permitted to uninstall SONURO. Select Start->Settings->Control Panel.

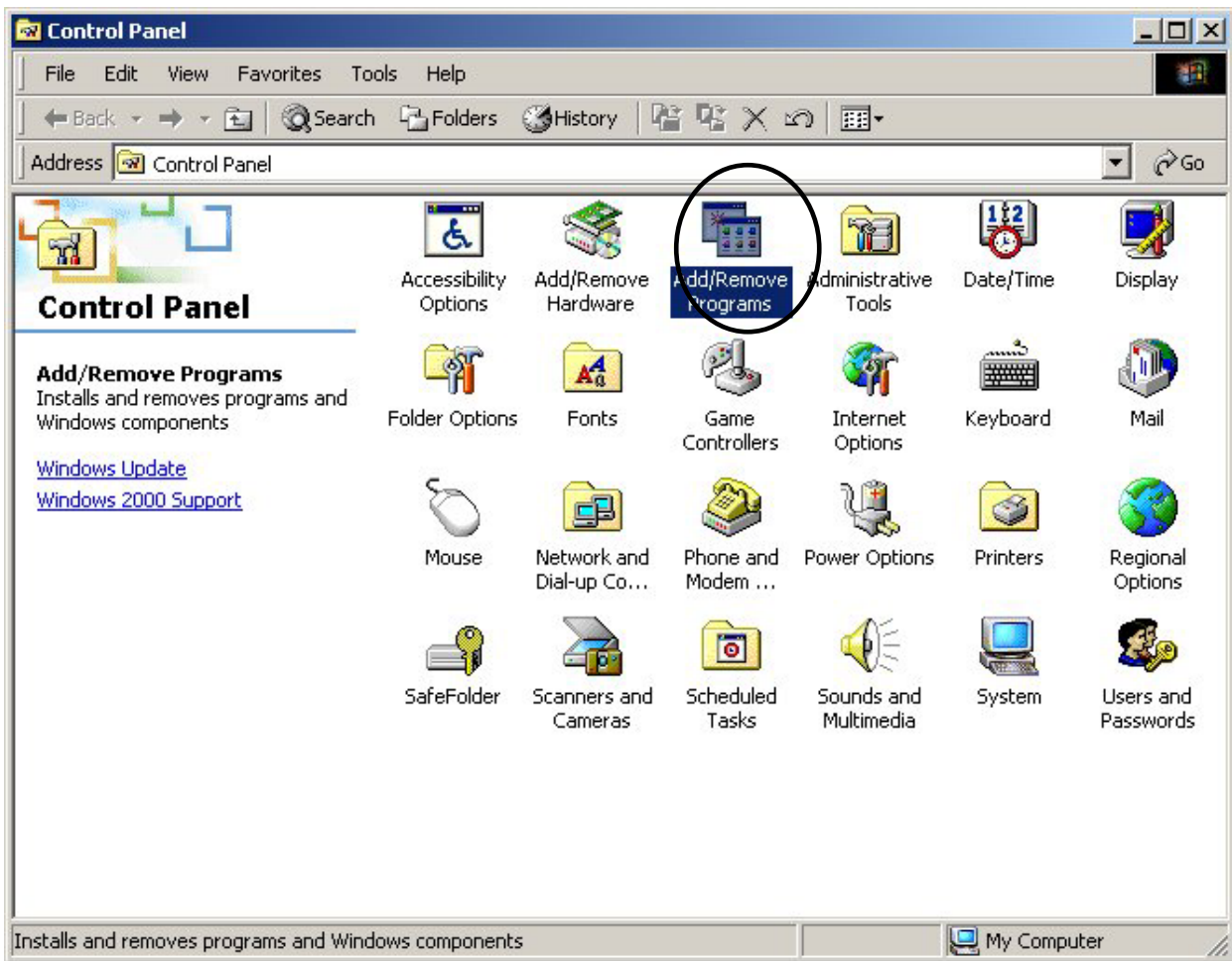
### <Windows 98 User>



### <Windows 2000, User>

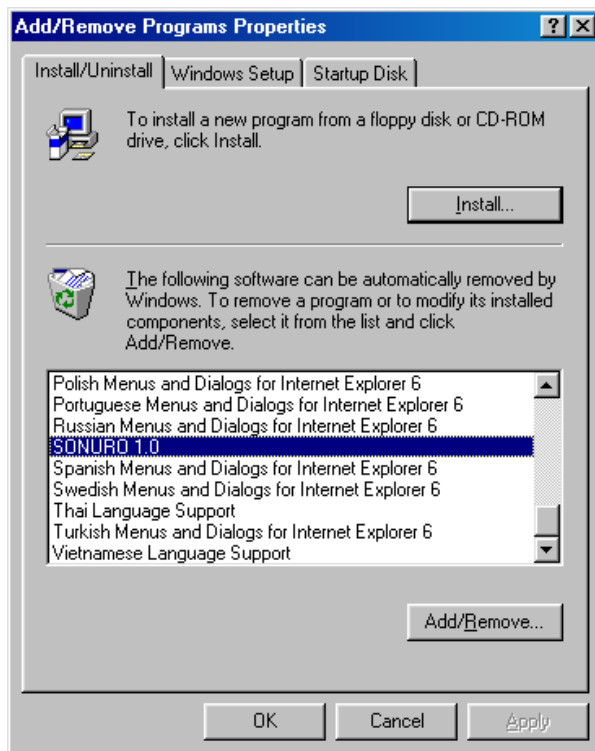


2. In the Control Panel, double-click on **Add/Remove Programs**.

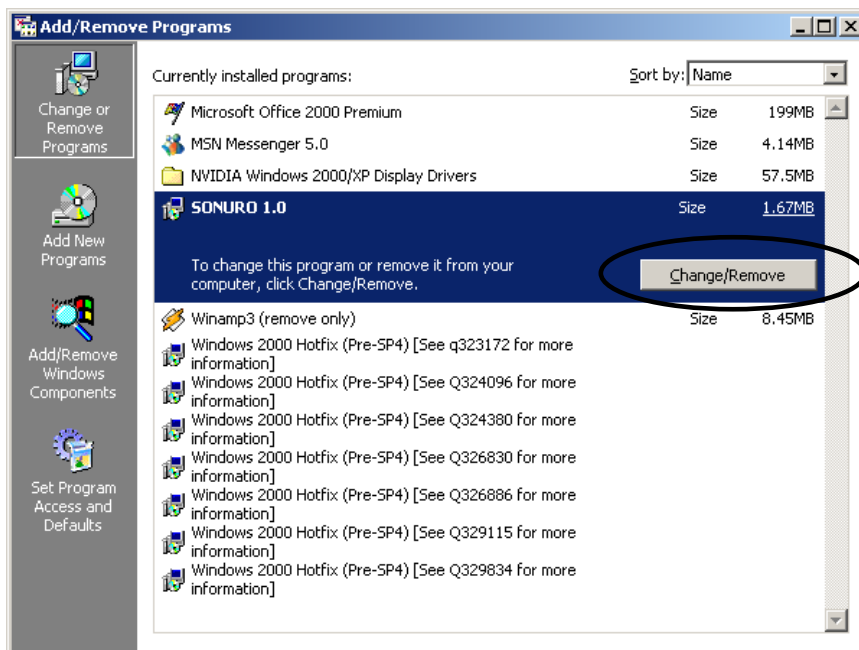


3. Select SONURO and press **Change/Remove**.

<Windows 98 User>



<Windows 2000, XP User>



4. Input the password or/and fingerprint required according to the user authentication

method. ('Password', 'Fingerprint', or 'Fingerprint & Password') For details on user authentication, please consult Chapter 4.



The image shows the SONURO login interface. At the top, there is a banner with the SONURO logo and the text "Real Security With Your Fingerprint". Below the banner, there are two input fields: "User ID" and "Password". The "User ID" field contains the text "Admin". The "Password" field is empty. To the right of these fields is a large, empty rectangular box, likely for a fingerprint scan. Below the input fields, there is a prompt: "Enter the password and press 'Enter'."

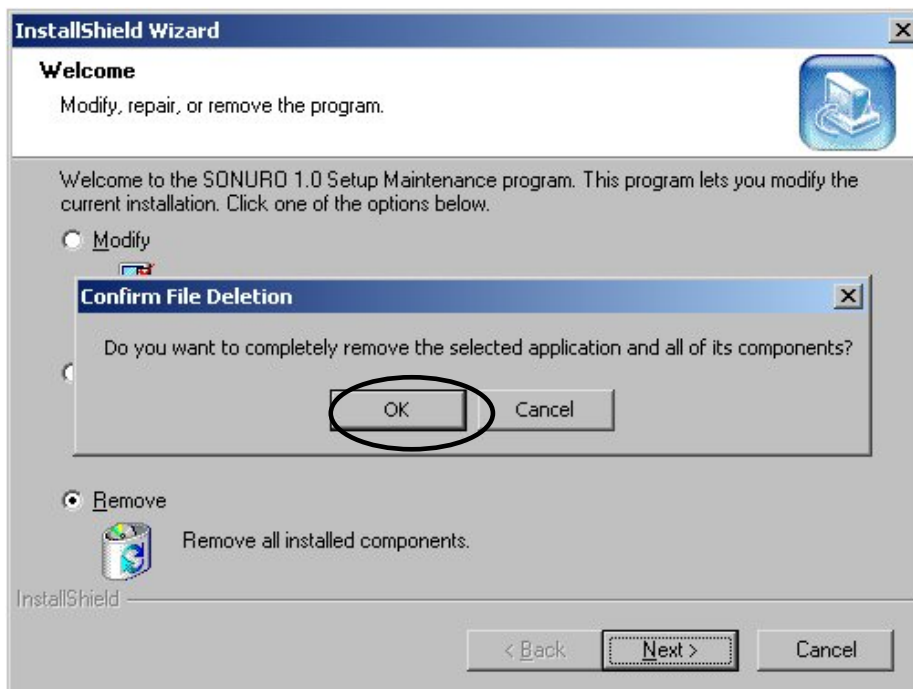
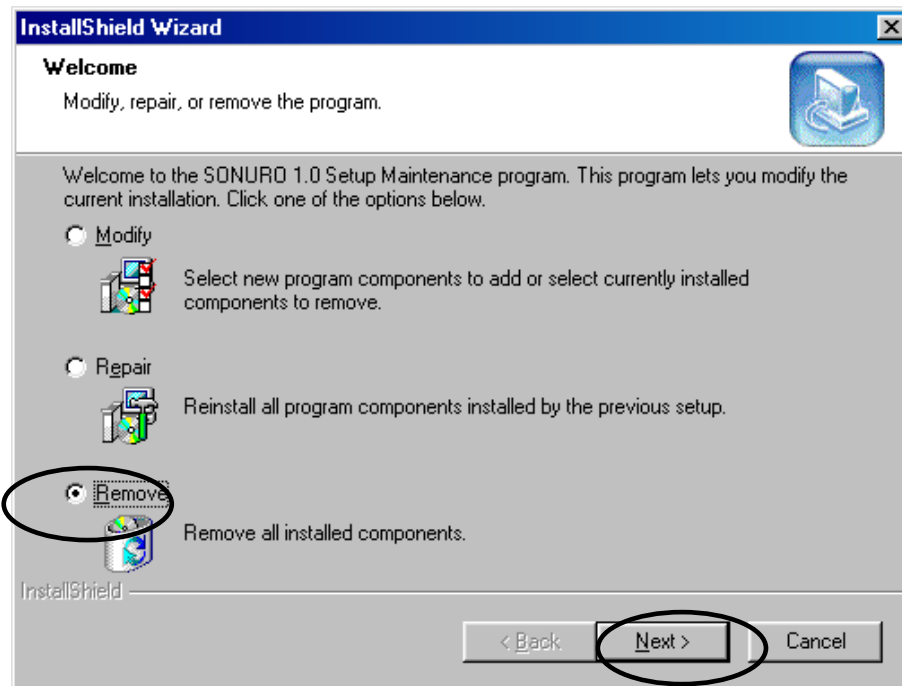


This image is identical to the one above, showing the SONURO login interface. The "User ID" field contains "Admin" and the "Password" field is empty. The prompt "Enter the password and press 'Enter'." is present. The large rectangular box on the right is for a fingerprint scan.

5. Select **Remove** and press **Next>**. A dialogue box for the last confirmation (of



deletion of the files) will appear. Press **OK** if you want to delete them all.



6. When the deletion process is completed, you will be informed. Press **Finish** in the

new window and restart the system

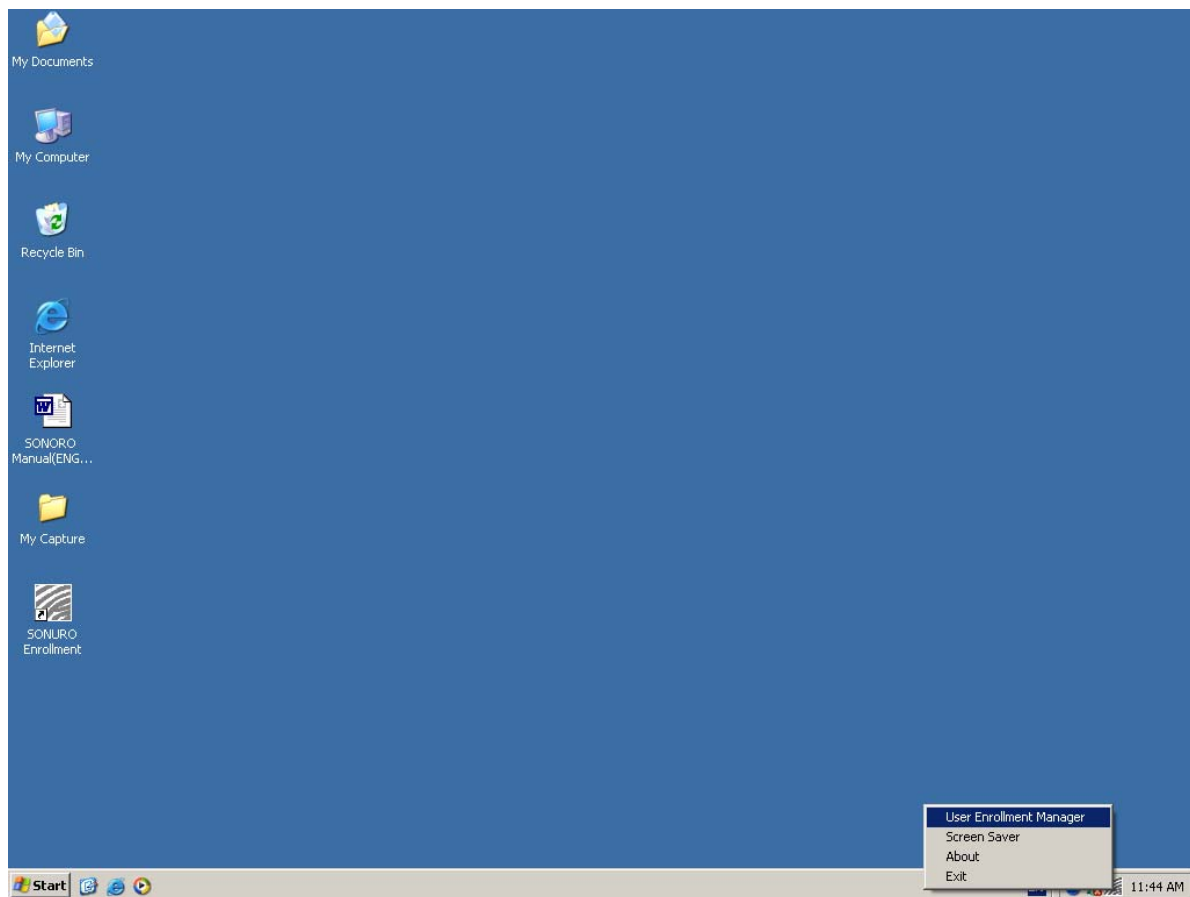


# **Chapter 4 User Management**

- 1. Administration Program**
- 2. Authentication Methods**
- 3. User Registration**
- 4. User Deletion**

## 1. Administration Program

1. Double-click on the icon for SONURO Enrollment in the Desktop or run **Administrator Program** of the SONURO menu in the System Tray.



2. Input the password for user authentication. Only those authorized as an administrator of Windows can have access to this administration tool. Enter the password and a new window for user management will appear.

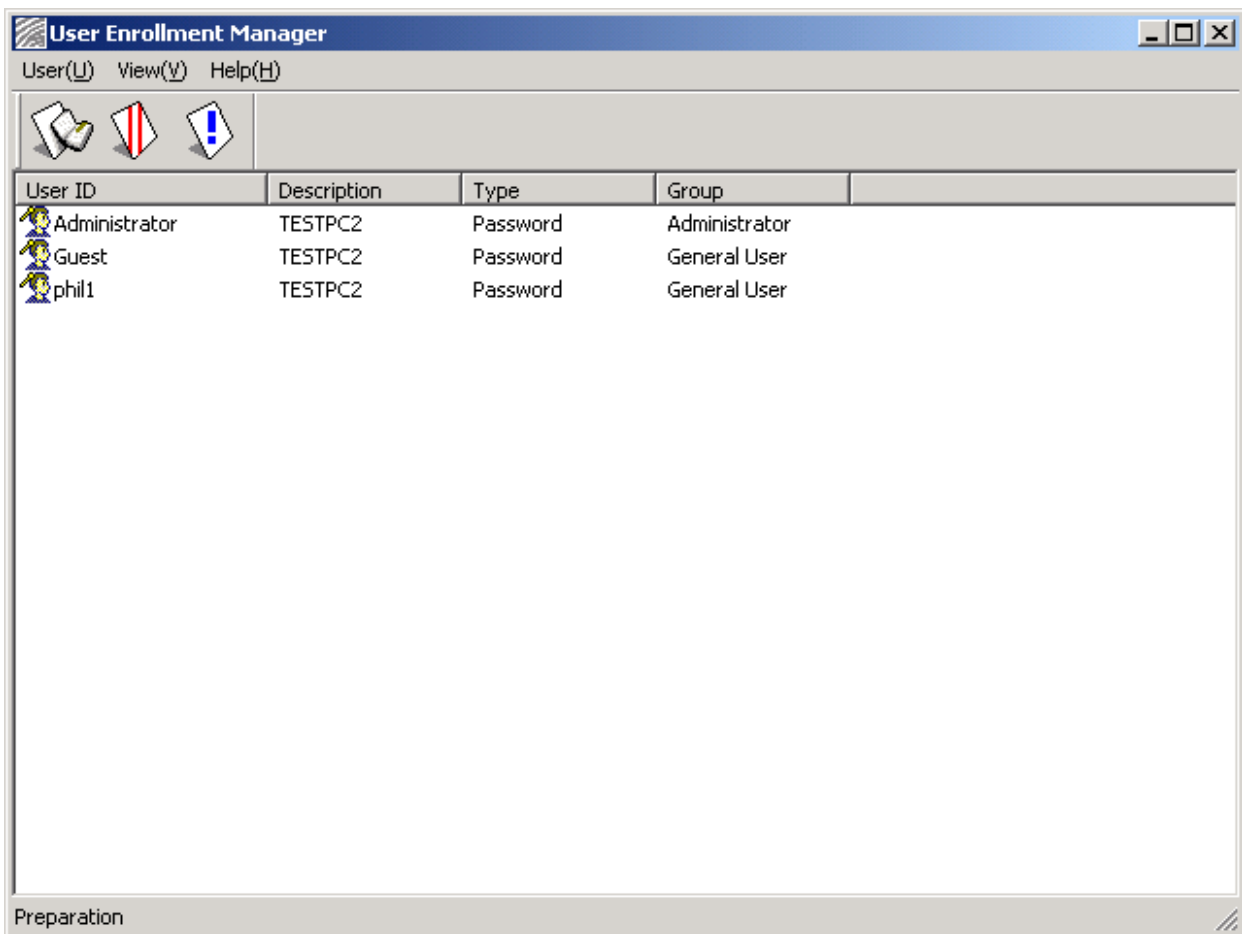


The image shows the SONURO login interface. At the top, there is a banner with the SONURO logo and the text "Real Security With Your Fingerprint". Below the banner, there are three input fields: "Domain Server(D)" with a dropdown menu showing "TESTPC1", "User ID(U)" with the text "Admin", and "Password(P)" which is currently empty. To the right of these fields is a large empty rectangular box. Below the input fields, there is a prompt: "Enter the password and press 'Enter'".



This image shows the same SONURO login interface as the previous one, but with the password field filled with asterisks (\*\*\*\*\*). The other elements, including the banner, labels, and prompt, remain the same.

3. A window for registering, deleting, and changing the fingerprint information of the user will appear.

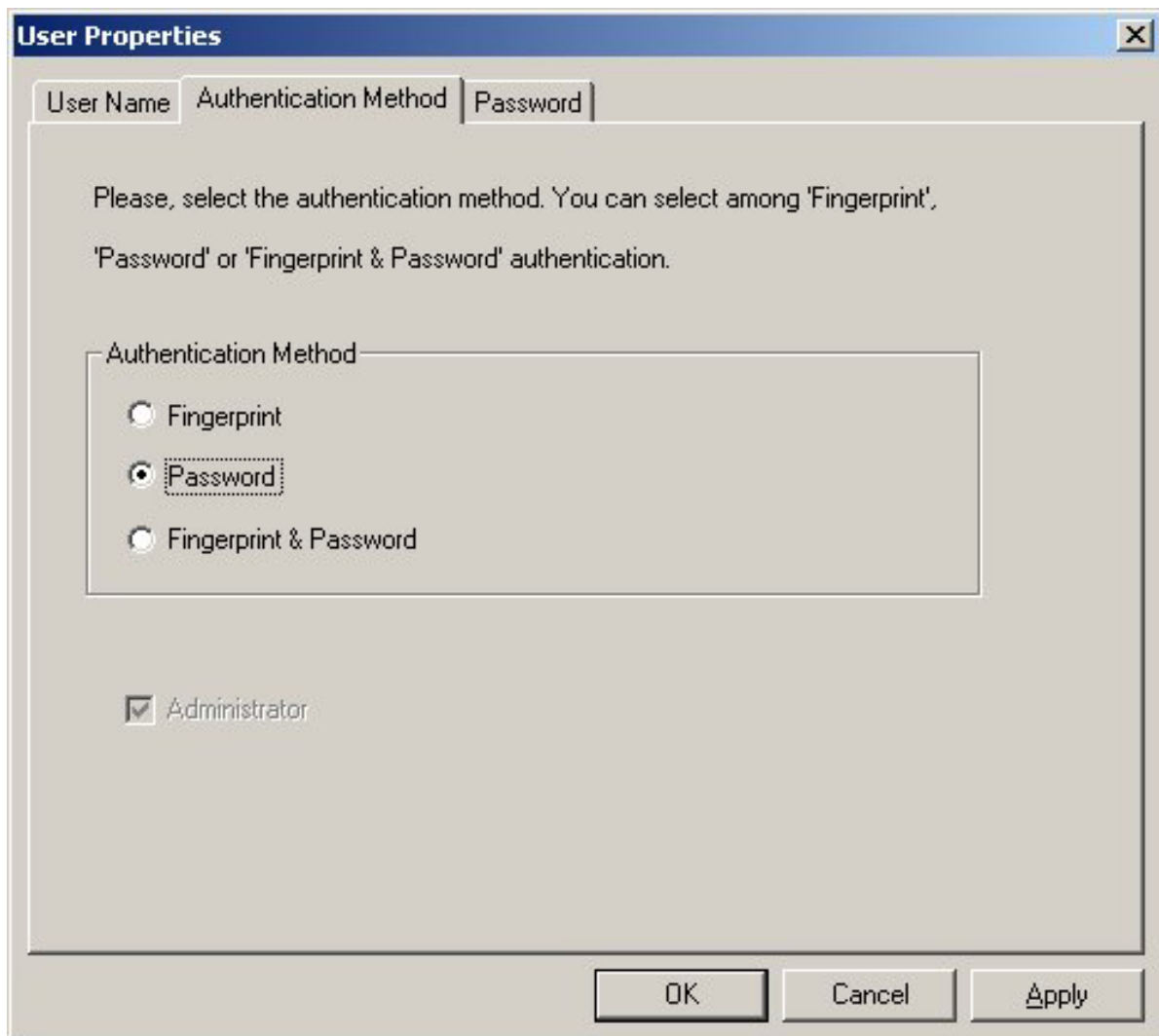
**NOTE**

In case of damaged fingerprint device or ruined fingerprint, it is best to register another password administrator.

For windows 2000, add the administrator in the control panel- user Accounts in order to add the password administrator for windows user.

## 2. Authentication Methods

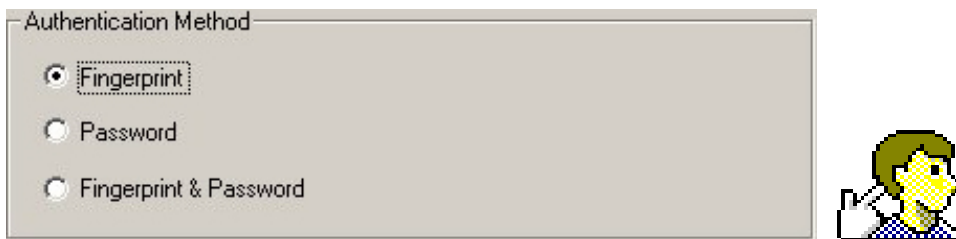
After registering a user, the administrator can change the authentication methods. There are three different authentication methods that are available: Fingerprint, Password, Fingerprint + Password. Here we take an example of an administrator registered with the ID “administrator” to give you an exposition.



The image shows a Windows-style dialog box titled "User Properties". It has three tabs: "User Name", "Authentication Method", and "Password". The "Authentication Method" tab is selected. Inside the dialog, there is a text box with the instruction: "Please, select the authentication method. You can select among 'Fingerprint', 'Password' or 'Fingerprint & Password' authentication." Below this, there is a group box labeled "Authentication Method" containing three radio button options: "Fingerprint", "Password" (which is selected and has a dotted border), and "Fingerprint & Password". At the bottom left, there is a checked checkbox labeled "Administrator". At the bottom right, there are three buttons: "OK", "Cancel", and "Apply".

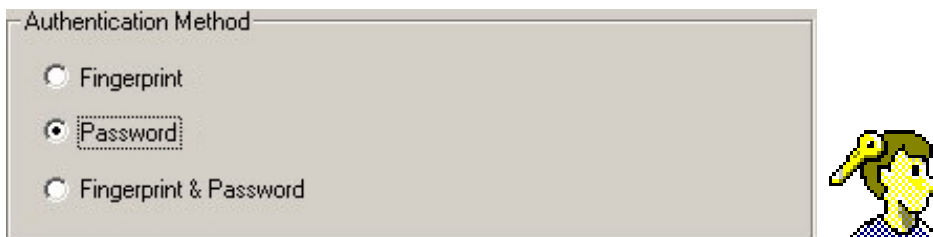
### ① Using Fingerprint

For a users registered to use Fingerprint, an icon with a finger-shape will appear. He/She will use fingerprint in SONURO related applications.



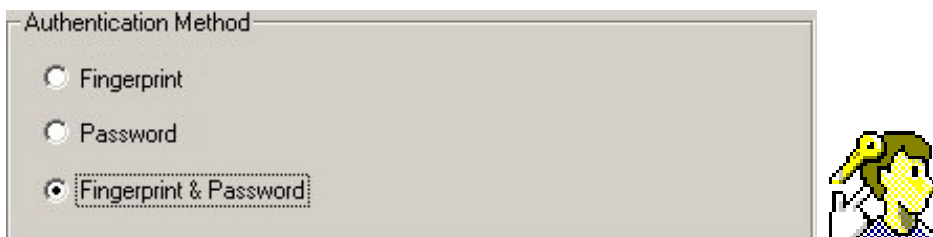
### ② Using Password

For a user registered to use Password, an icon with the key-shape will appear. He/She will use password in SONURO related applications.



### ③ Using Fingerprint + Password

For a user registered to use Fingerprint + Password, an icon with both finger and key will appear. He/She will use both fingerprint and password in SONURO related applications.

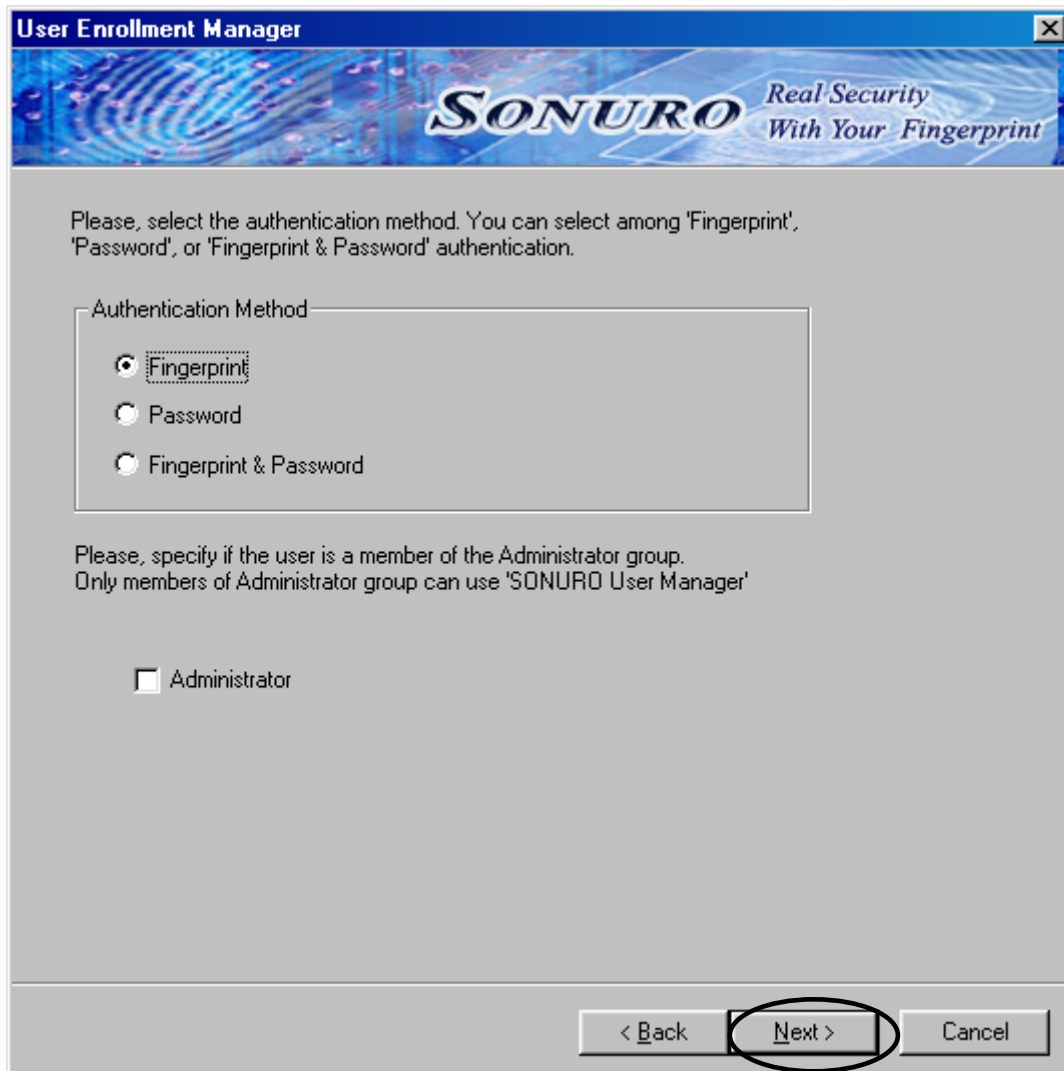




## 2.1 Using Fingerprint

<Windows 98 User>

1. Select Fingerprint among the authentication methods and press **Next>**.



The image shows a Windows 98-style dialog box titled "User Enrollment Manager". The title bar is blue with a close button (X) in the top right corner. Below the title bar is a decorative banner with a blue background and white text that reads "SONURO Real Security With Your Fingerprint". The main area of the dialog box is light gray. It contains the following text and controls:

Please, select the authentication method. You can select among 'Fingerprint', 'Password', or 'Fingerprint & Password' authentication.

Authentication Method

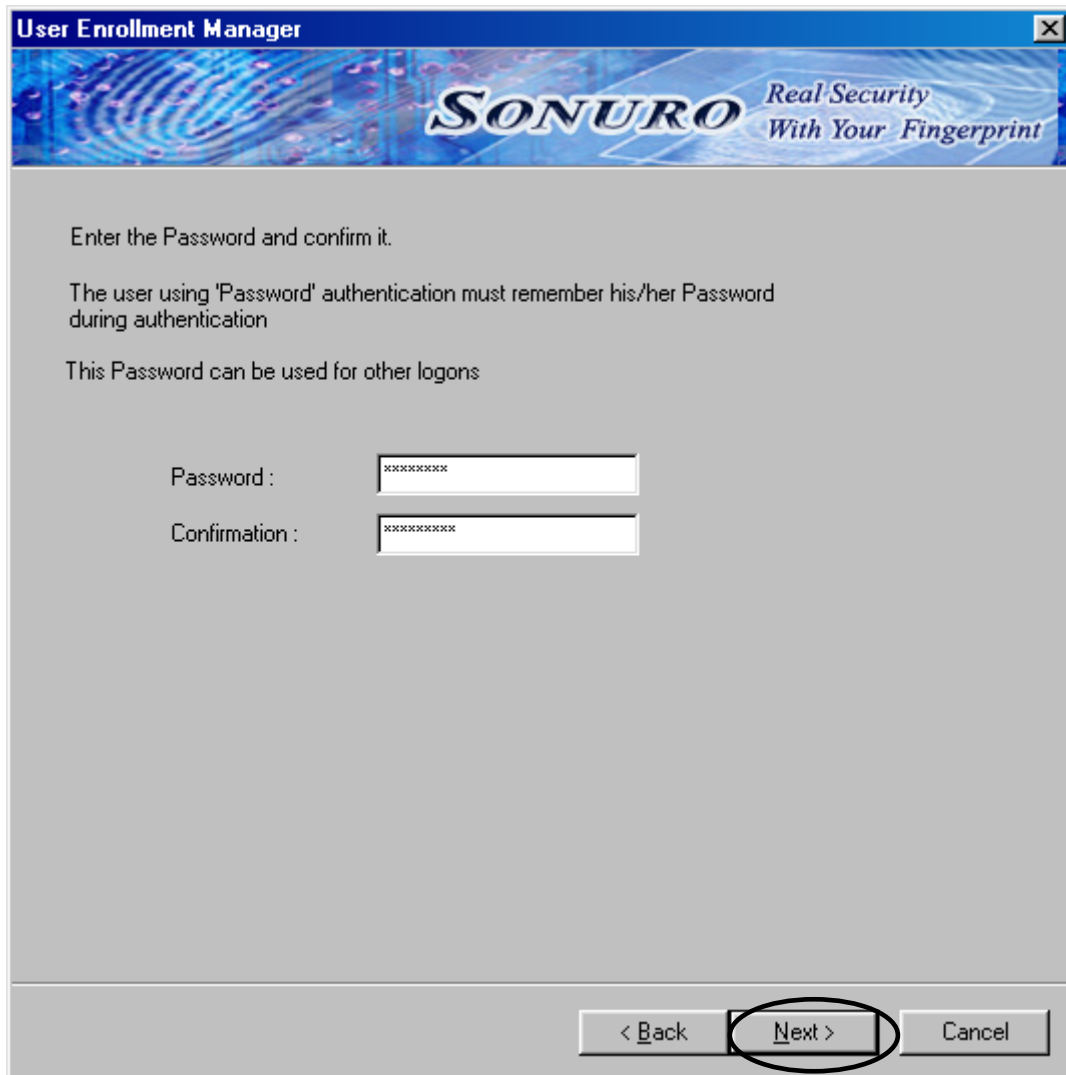
- ☒ Fingerprint
- ☐ Password
- ☐ Fingerprint & Password

Please, specify if the user is a member of the Administrator group.  
Only members of Administrator group can use 'SONURO User Manager'

☐ Administrator

At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel". The "Next >" button is circled with a black oval.

2. A window for Password input appears. Even users selecting 'Fingerprint' as the authentication method are required to enter a new password. However, they will use fingerprint only for authentication. After entering a password, press **Next>**.



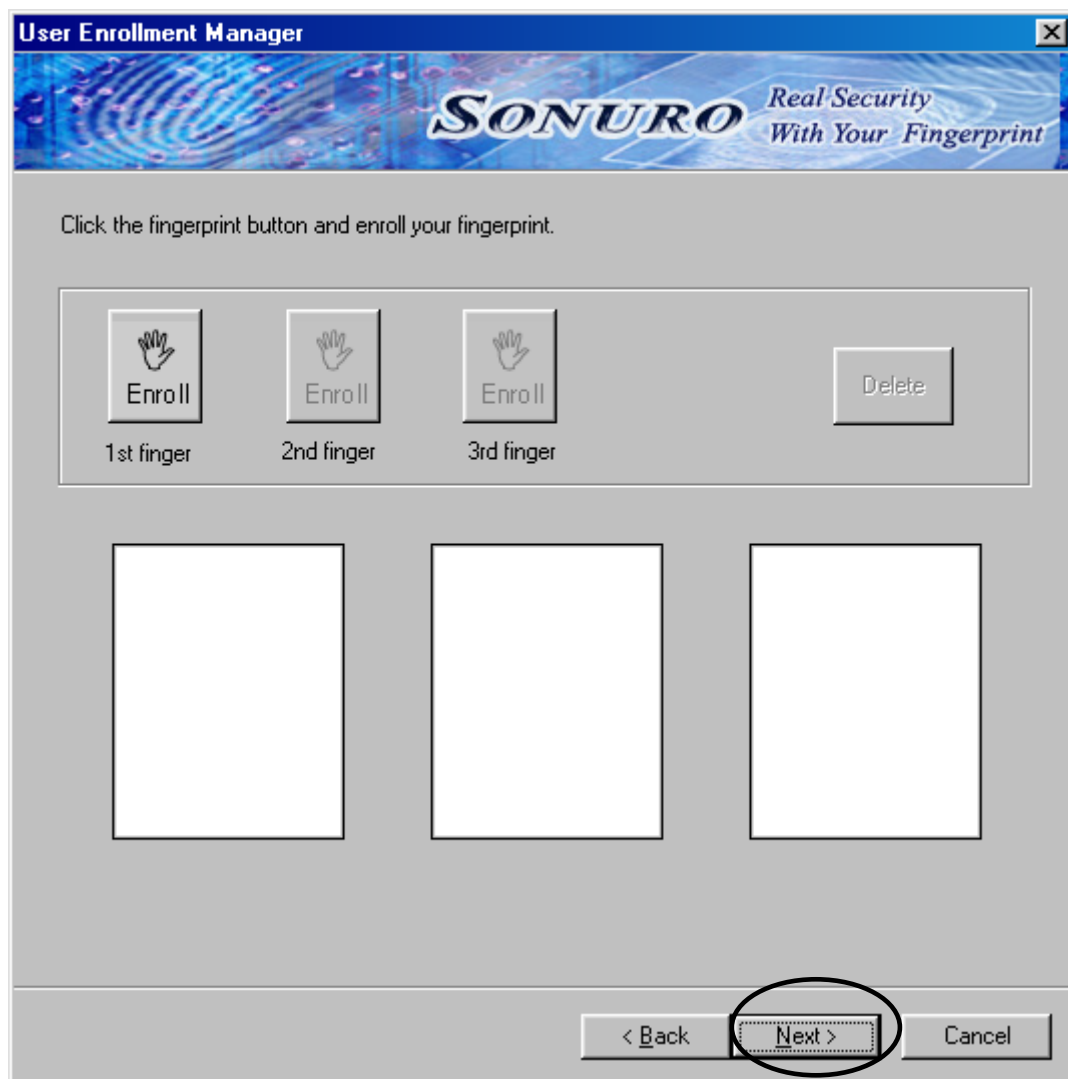
The image shows a screenshot of the 'User Enrollment Manager' window. The title bar reads 'User Enrollment Manager'. The header area features the SONURO logo and the text 'Real Security With Your Fingerprint'. The main content area contains the following text: 'Enter the Password and confirm it.', 'The user using 'Password' authentication must remember his/her Password during authentication', and 'This Password can be used for other logons'. Below this text are two input fields: 'Password : ' followed by a text box containing 'xxxxxxx', and 'Confirmation : ' followed by a text box containing 'xxxxxxx'. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is circled with a black oval.

**CAUTION**

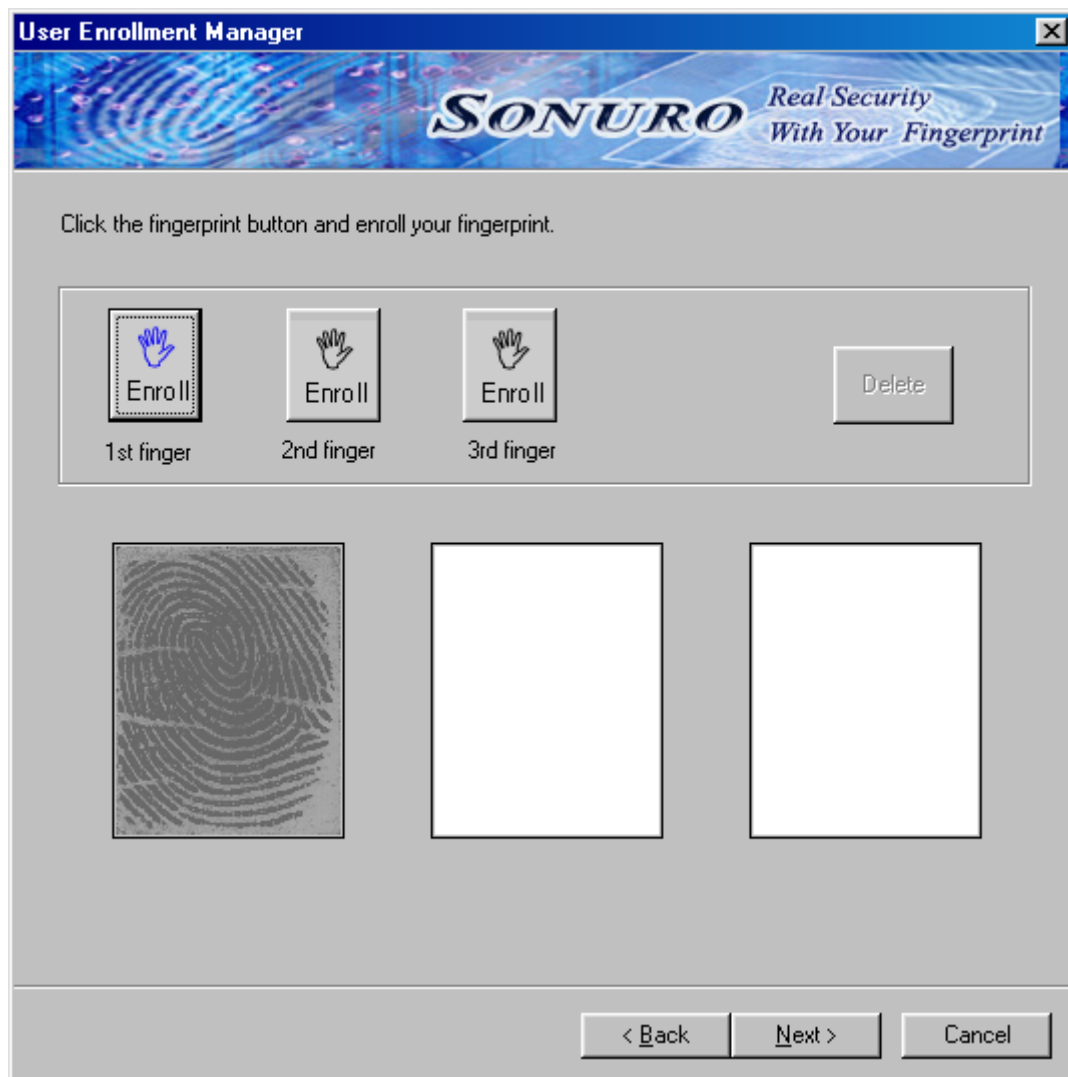
If you don't change the password when removing SONURO, it will be used as the password for Windows logon. Be sure to remember the password.

3. A window for fingerprint registration will appear. Press the button '**1st finger**' and it will get activated.

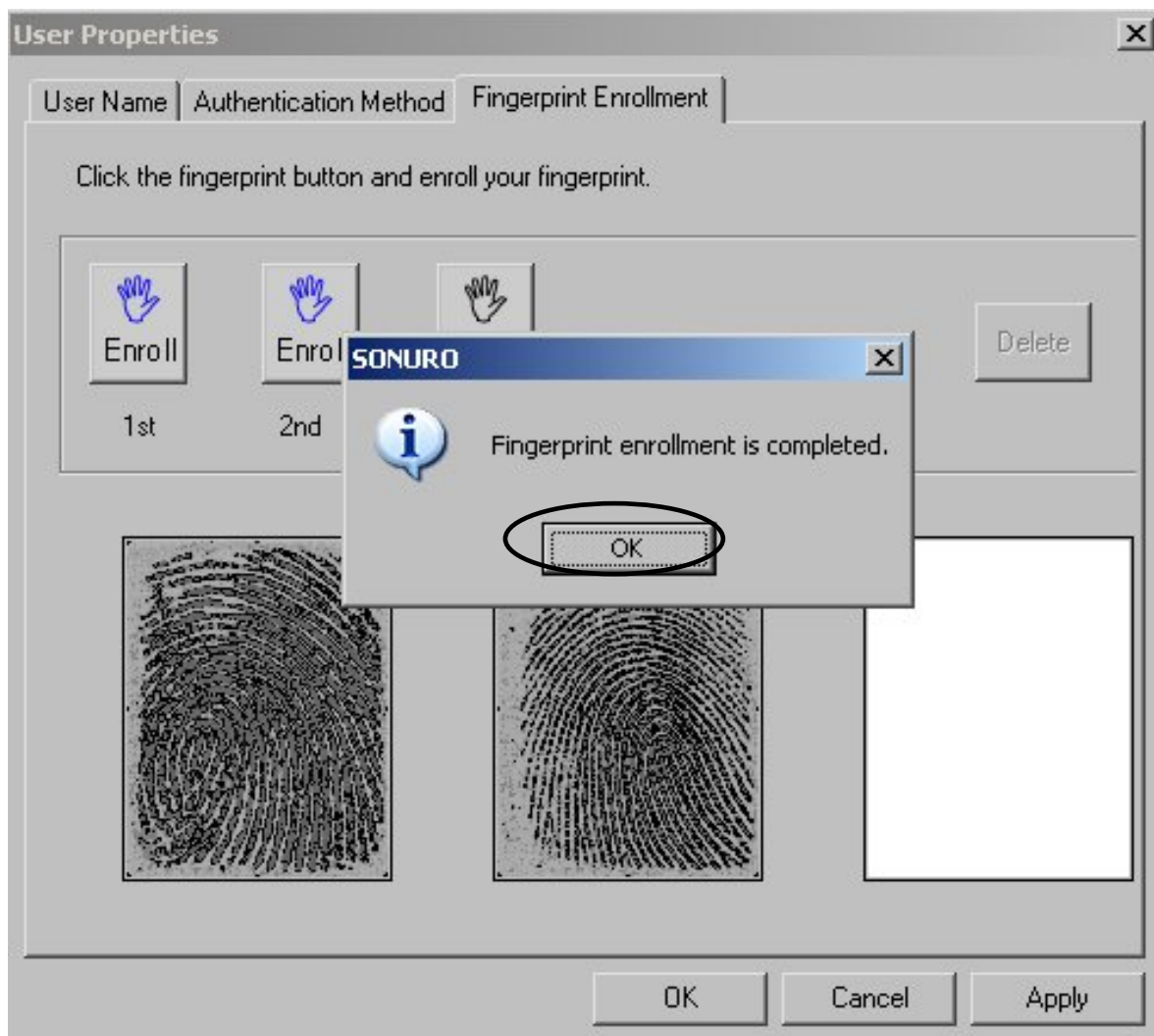
**You must enroll 3 times for each fingerprint.**



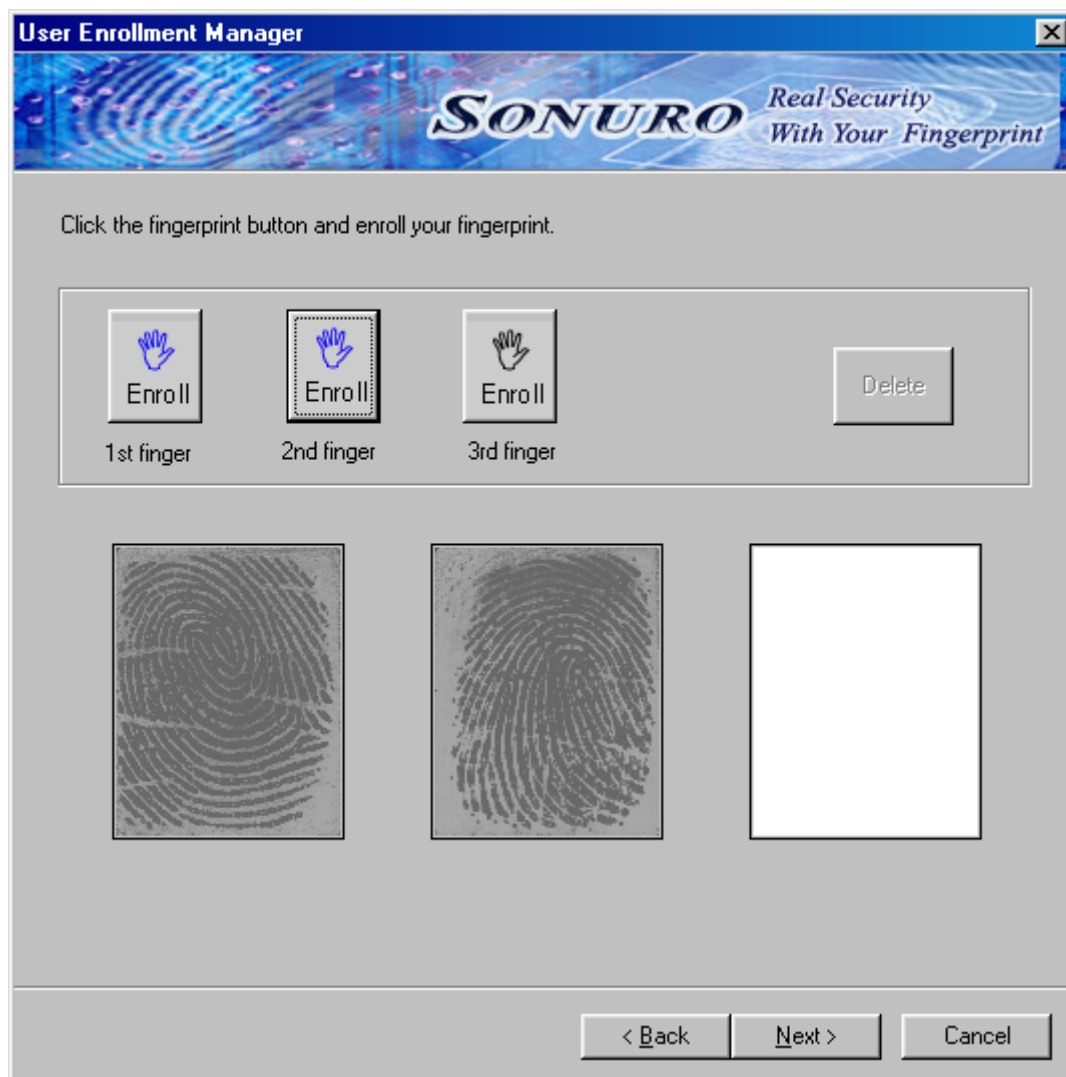
4. Press the button 'Enroll' and you will be asked to place a finger on the sensor. Place the fingerprint to be registered.



5. When the fingerprint is successfully registered, you will be informed of that. In the confirmation dialogue box, press **OK** to finish the registration.



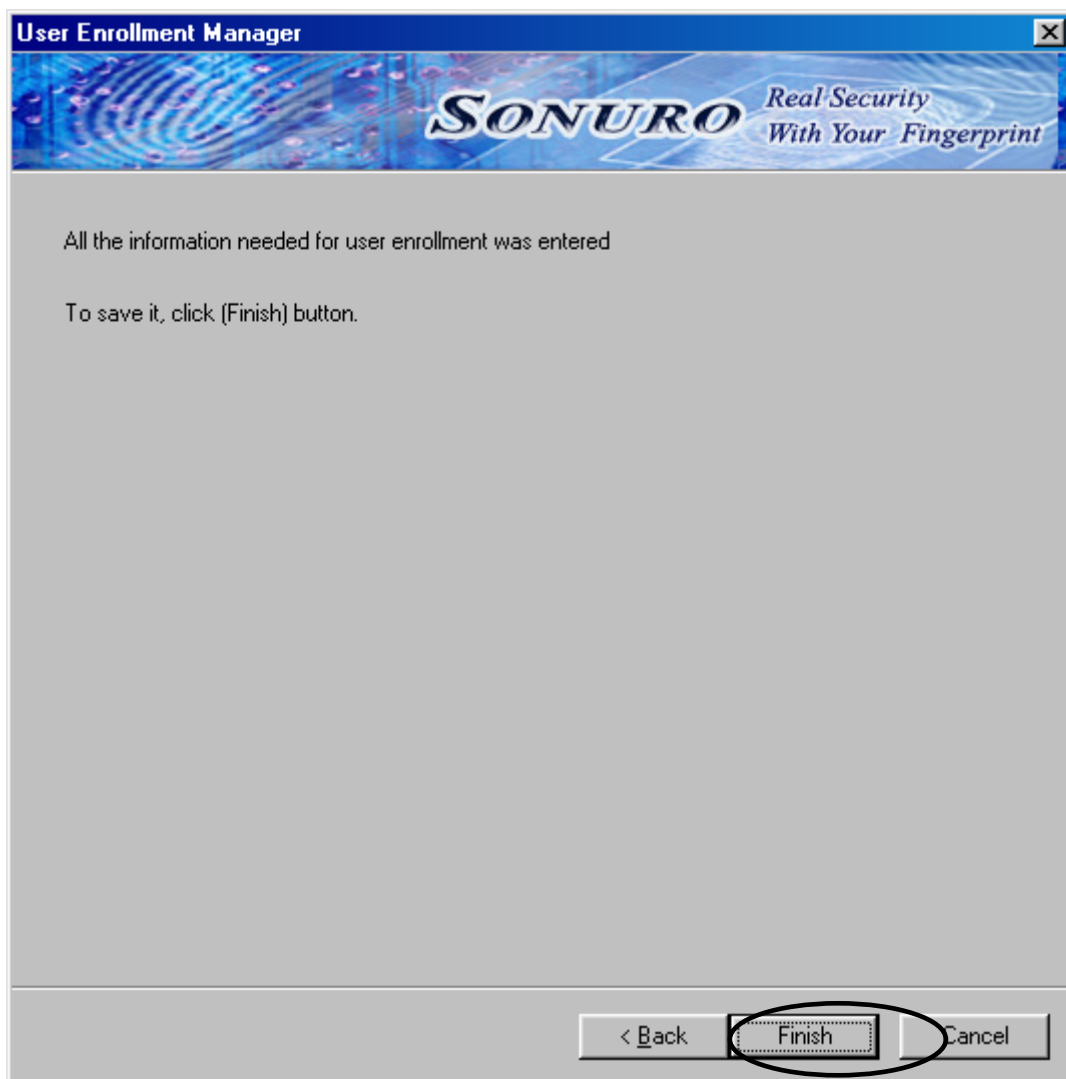
6. When the registration is completed, the icon on the button that you have input will be in blue color. In this case you can be sure that the registration has been successful.



7. You can register the fingerprints up to three in case your fingerprints are impaired. After registering all the fingerprints, press **Next>**.

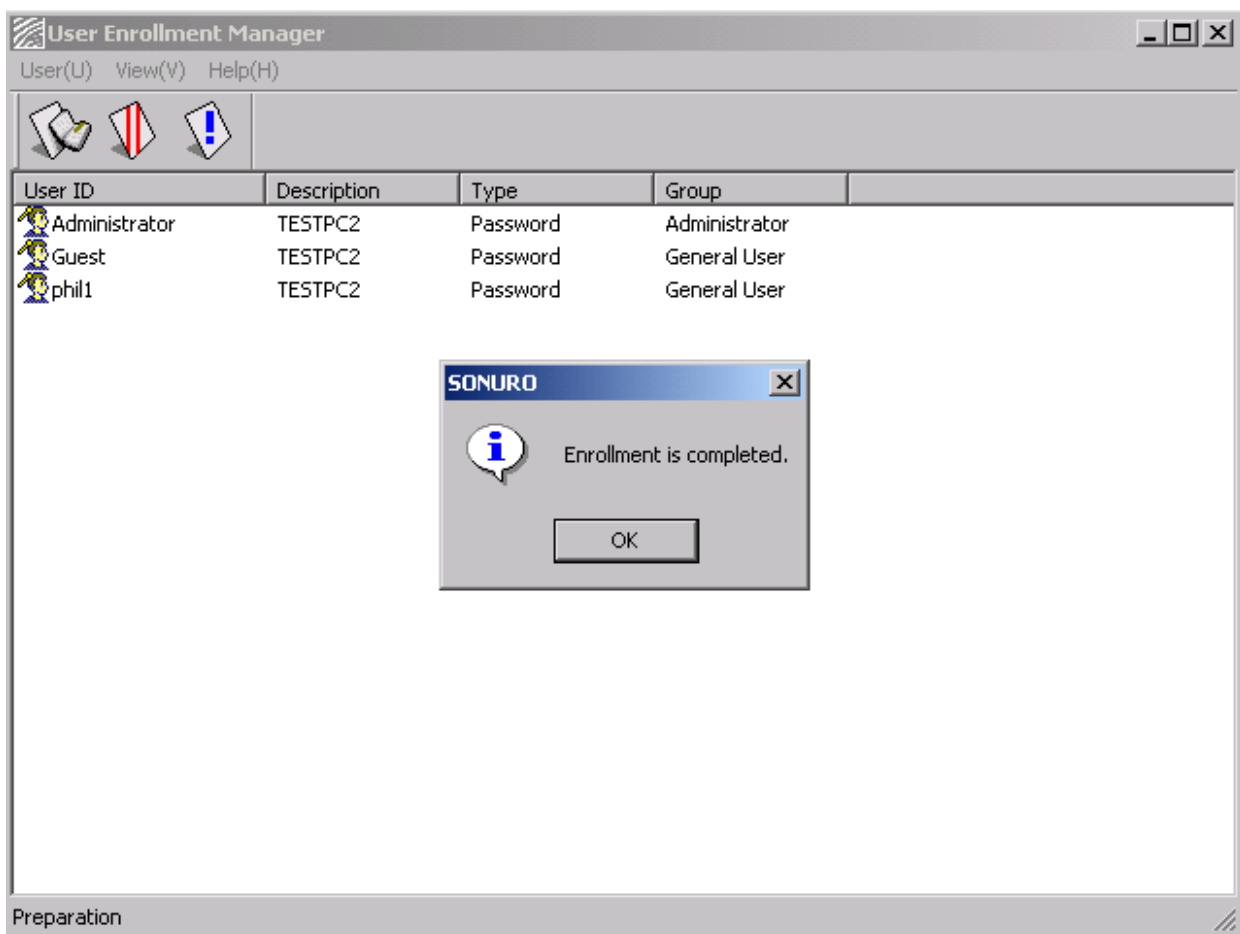


8. A message box will appear to let you know that the registration is completed. Press **Finish** and the whole registration process will be completed.



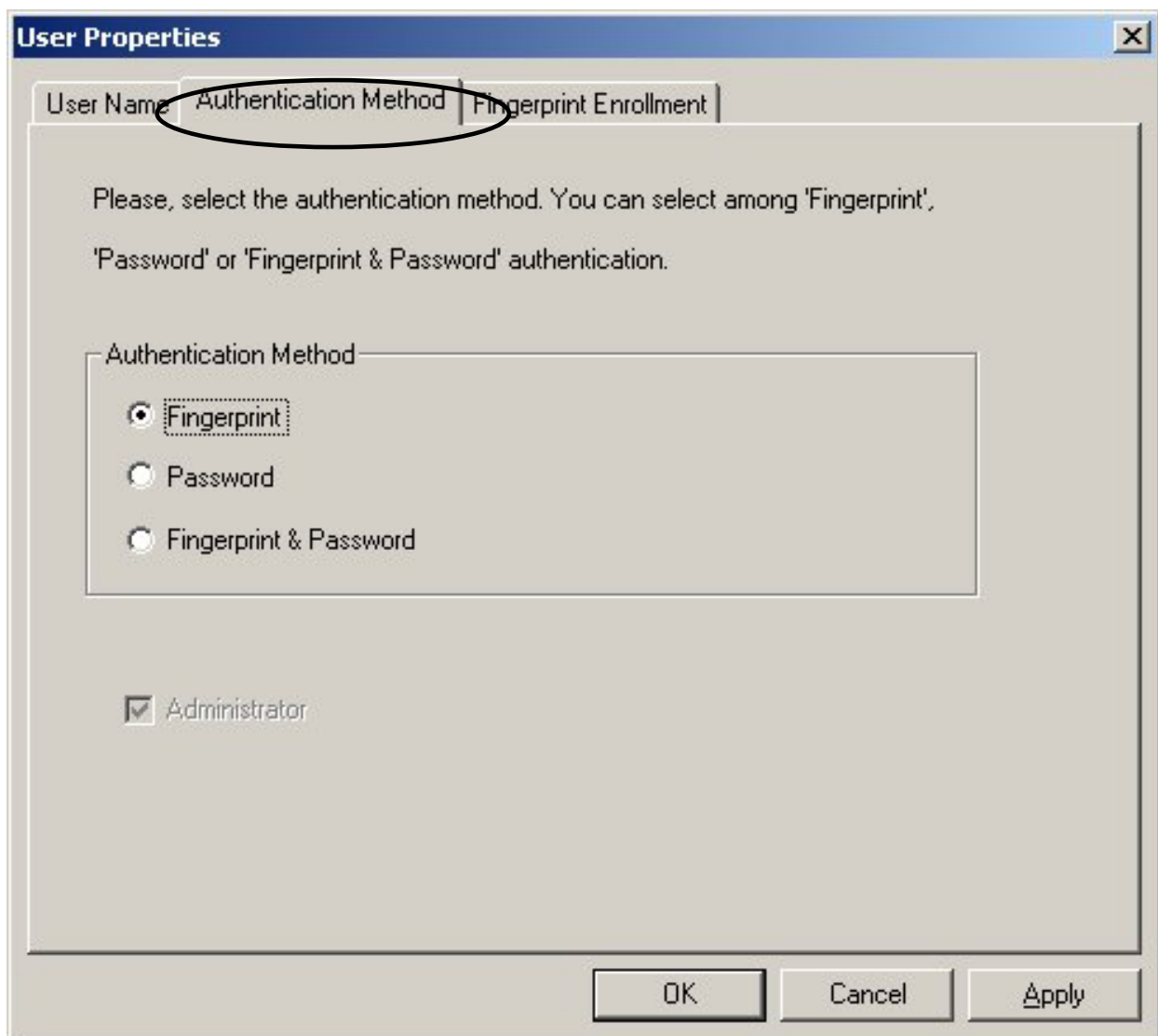


9. You can check that the new user has been registered successfully from the icon with a finger in the User Manager.



### <Windows 2000 User>

1. Double-click on “phil1” in the window **User Manager** and select “Finger-print” among the authentication methods. Then the tab Fingerprint Enrollment will be activated.



2. Select the tab "Fingerprint Enrollment". In the new window, input the old password for user authentication.

