R:Biometric 11



Help Manual



R:Biometric 11

Manual

by R:BASE Technologies, Inc.

Welcome to R:Biometric 11!

R:Biometric is an R:BASE software program for secure fingerprint biometric solutions. R:Biometric allows you to store secure individual user fingerprint information in your R:BASE database in order to provide secure data access to the same database or other information. You can store all 10 or just a few fingerprints for users. Detailed enrollment and matching settings are available to control the initial enrollment of users and how fingerprint matches are compared when users log in.

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1 Introduction

1.1 Introducing R:Biometric 11

R:Biometric is an R:BASE software program for secure fingerprint biometric solutions. R:Biometric allows applications to store secure individual user fingerprint information in your R:BASE database in order to provide secure data access to the same database or other information. All ten or just a few fingerprints can be stored for users.

An easy-to-use interface allows administrators to control many fields for user information and several scanners in a multi-scanner environment. Detailed enrollment and matching settings are available to control the initial enrollment of users and how fingerprint matches are compared when users log in.

The list of displayed users may be filtered to a specific name, birth date, and anniversary criteria. The filter also allows for fields to be combined for more specific results.

R:Biometric includes an R:BASE Plugin (.rbm) to integrate fingerprint security into R:BASE applications. Parameters are also available to enroll user's into the R:Biometric tables.

R:Biometric supports command line parameters to include within desktop shortcut properties, or use with the R:BASE LAUNCH command, automatically connect to a database.

R:Biometric Supported Applications:

- R:TimeTrack
- R:JobTrack
- Any application where you need to verify a user's identity based on their fingerprint

Note: This software does not store fingerprints, only the algorithm to uniquely identify fingerprints. R:Biometric does not support the ability to print or make fingerprints available in any way.

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Printed: July 2024 in Murrysville, PA

First Edition

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- Our support staff deals with advanced issues, therefore the person contacting RBTI for assistance should be the system administrator or have other R:BASE/SQL experience and be able to understand and implement the advice given.
- To have the database(s) being converted, safely backed-up before attempting conversion process. RBTI will NOT be held responsible for lost data or corruption as a result of advice given.

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For assistance on your APPLICATIONS, DESIGN, or ADVANCED CONVERSION issues, we offer Technical Support Plans of various types to meet your needs. Please visit the SUPPORT area of our website at www.rbase.com for details and pricing.

2. Fixes for Known Issues

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3. Enhancement Requests

RBTI will provide continued product enhancements for requested features for <u>1 YEAR</u> from the software purchase date. After 1 year, users are urged to acquire the necessary Software Assurance Plan to continue with product support and ongoing activations for reinstallations and license transfers.

4. Periodic Activations

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1.4 Complimentary Support

30 DAY LIMITED COMPLIMENTARY TECHNICAL SUPPORT

A. LICENSEE RESPONSIBILITIES.

- 1. To help us expedite the process and provide high quality assistance, the licensee must provide proof of purchase. Proof of purchase is defined as the following: registration number, purchase date, version and build number, and company or individual to which product is registered.
- 2. To have operating system, workstations, and local network installed and functional. R:BASE Technologies will NOT be responsible for resolving issues not pertaining to the software product.
- 3. Our support staff deals with advanced issues, therefore the person contacting R:BASE Technologies for assistance should be the system administrator or have other R:BASE/SQL experience and be able to understand and implement the advice given.
- 4. To have the database, application, and command files being reviewed, safely backed-up before attempting assistance. R:BASE Technologies will NOT be held responsible for lost data or corruption as a result of advice given.

B. R:BASE TECHNOLOGIES, INC. RESPONSIBILITIES.

- 1. To provide quality assistance in a timely manner to aid in the installation of the product and elementary conversion of database, application, and command files within 30 days of the date of purchase.
- 2. To provide a reasonable solution for any solvable issue. Not all issues may be solved, and therefore we will acknowledge the existence of known issues, or bugs, which we are presently aware of, that have no reasonable work-around.

R:BASE Technologies reserves the right to limit the amount of support time allotted to a maximum of 2 HOURS during the 30-Day Complimentary Technical Support period. We also reserve the right to limit the quantity of calls from a particular licensee to 30 MINUTES in a single day. Issues are dealt with on a case-by-case basis, and are handled at the discretion of the support agent assigned to the case. Complimentary Support is limited to INSTALLATION and ELEMENTARY CONVERSION related issues ONLY. Our support hours are Monday through Friday, from 10:00 AM to 6:00 PM (EST).

For application, design, or advanced conversion assistance, R:BASE Technologies offers Technical Support Plans of various types to meet your needs. Please visit the Support page at https://www.rbase.com/support for details and pricing.

2 Installation

2.1 System Requirements

The following system specifications are recommended for the optimal use of R:BASE and R:BASE-related software.

Workstation Hardware

- 2-Core 2GHz+ CPU
- 2 GB of available RAM (4 GB recommended)
- 2 GB of available hard disk space
- 1024x768 or higher resolution video adapter and display
- Standard mouse or compatible pointing device
- · Standard keyboard

Server Hardware

- 2-Core 2GHz+ CPU
- 6 GB of available RAM (8 GB recommended)

Operating System

- Microsoft Windows 11 (Professional)
- Microsoft Windows 10 (Professional)
- Microsoft Windows Server 2022
- Microsoft Windows Server 2019
- Microsoft Windows Server 2016
- Microsoft Windows Server 2012, 2012 R2

Network

- Ethernet infrastructure (Gigabyte recommended)
- Internet connection recommended, but not required, for license activation, software updates, and support
- Anti-virus programs should exclude the R:BASE program, and any add-on product, executable and database files

2.2 Things You Will Need

License Key

Before launching the installer, it is recommended that you have your 32-character License Key readily available. The License Key is provided in a document, with the email message, when the software was originally purchased. If you have lost or misplaced your License Key, please contact our Support Staff by email at support@rbase.com.

• Internet Access

The computer where the software will be launched should have access to the Internet for activation. The Internet access is used to visit the R:BASE Technologies Web site to provide your required Activation Key.

In instances where the software will be installed on a computer that is not connected to the Internet, you must then contact R:BASE Technologies to provide information displayed on the computer screen. Please contact our Product Activation Staff by email at activationkey@rbase.com. The Registration Number must be provided. The Registration Number is displayed on the invoice/order slip, and within the email, when the software was originally purchased.

2.3 Software Installation

The installation of R:Biometric is fully automated, and does not require user intervention for the initial configuration.

Run the installer ".exe", provided by download, while physically sitting at the workstation to begin the installation process, and read the installer screens for licensing and other information as the program installs.

Installation Directory

C:\RBTI\RBiometric11

Files Installed

Activation (folder) Drivers (folder) FPSmm (folder) FPScannerManCom.dll NCore.dll NDeviceManager.dll Neurotec.Biometrics.Extractors.dll Neurotec.Biometrics.Gui.dll Neurotec.Biometrics.Matchers.dll Neurotec.Biometrics.Templates.dll Neurotec.DeviceManager.dll Neurotec.dll Neurotec.Gui.dll Neurotec.Images.dll Neurotec.Licensing.dll NeurotecJavaNative.dll NExtractors.dll NImages.dll NLicenses.cfg NLicensing.dll NMatchers.dll NTemplates.dll License.rtf RBiometric11.chm RBiometric11.exe RBiometric11.pdf RBiometric11.rbm ReadMe.txt

Requirements:

Plugin Installation

The R:Biometric 11 Plugin file (RBiometric11.rbm) must be placed in the R:BASE 11 program directory (default: C:\RBTI\RBG11) or the runtime/compiled application directory.

VeriFinger Installation Files

The VeriFinger program DLLs (18 in total) and configuration file, NLicenses.cfg, must be copied from the R:Biometric program directory (default: C:\RBTI\RBiometric11) into the R:BASE 11 program directory (default: C:\RBTI\RBG11) or the runtime/compiled application directory. The FPSmm folder must also be copied into the R:BASE 11 program directory or the runtime/compiled application directory. The folder and files are assigned a blue font above.

Engine DLL

If the computer where R:Biometric is installed does not have R:BASE installed, the R:BASE Engine DLL (RBENGINE11.DLL) must be copied from another computer to the System directory.

2.4 Plugin Activation

R:BASE Plugins can be used to enhance, or extend R:BASE operations. Current R:BASE Plugins use the .RBM file extension.

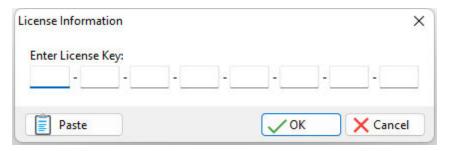
To begin using any plugin product, the plugin must be registered for use.

The license type for R:BASE and R:BASE plugin products must match. The license keys supplied with Single Seat and 5 Seat plugin products will only be accepted within Single Seat and 5 Seat versions of R:BASE, and are not accepted within R:Compiler for R:BASE or Runtime for R:BASE programs. The same license structure is also in place for Runtime License Keys for plugin products, where the key will not be accepted within Single Seat and 5 Seat Licenses R:BASE.

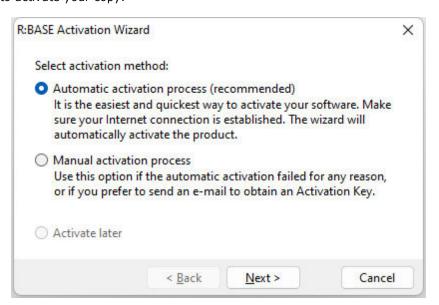
2.4.1 R:BASE

To begin using a plugin product, you must register the software within R:BASE by selecting "Help" > "Product Activation" from the main Menu Bar. In this window, select the "Add New" button where you can enter or copy and paste the License Key you received with your product.

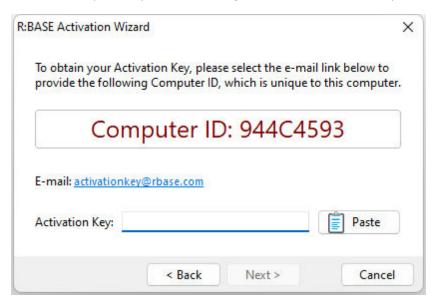
Only "Per Seat" License Keys are valid for this entry screen. All "Runtime" License Keys must be registered within R:Compiler for R:BASE or within Runtime for R:BASE separately.



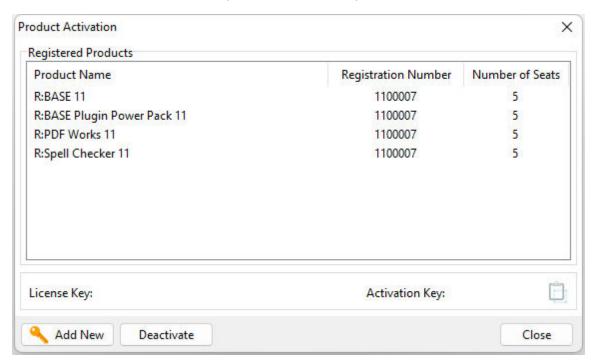
After entering the License Key, you will see a dialog to prompt for your activation method. The software can be activated automatically over the Internet, or manually by retrieving an Activation Key from R:BASE Technologies by email or over the phone. If you select "Later", you will be reminded each time R:BASE starts to activate your copy.



When activating the software manually, you select the e-mail link to launch your email client and send a pre-formatted message to R:BASE Technologies that will contain your License Key and the displayed Computer ID. You will need to provide your R:BASE Registration Number and Computer ID.



At any time, you can review your product information by starting R:BASE, and from the Menu Bar clicking on "Help" > "Product Activation". Your R:BASE Registration Number is displayed on the window. You can also enter additional License Keys for R:BASE add-on products.



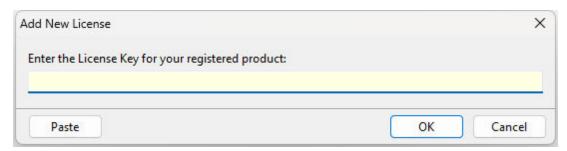
Please be advised that if you are activating multiple workstations, it is highly recommended that you keep records of the computer name, Computer ID and Activation Key for future reference. Access to this information will prove convenient in the event of a hardware failure or license transfer when uninstalling R:BASE.

Please see: Uninstall/Reinstall

2.4.2 R:Compiler for R:BASE

Runtime License Key

Runtime license keys for an R:BASE Plugin must be stored within the compiled executable. A specific Runtime License Key would be provided after your purchase of the Runtime software product. Adding a Runtime License to your project can be done by selecting the "Add License" button, and pasting the appropriate Runtime License Key into the displayed dialog window.



After a Runtime License is added as a resource, it will be assigned a "Resource ID". This ID consists of the word "License" and an incrementing value for the number of licenses added to the executable.

Plugin File (.RBM)

R:BASE Plugin files can be added and stored within the compiled executable or included within the R:BASE application directory. The Runtime license key pertaining to the R:BASE Plugin must be stored in the compiled executable.

Adding a Plugin to the list of resources can be performed by selecting the "Add Plugin" button on the Tool Bar. You will be prompted to locate the appropriate Plugin file with the .RBM file extension. After a Plugin file is added as a resource, it will be assigned a "Resource ID". This ID consists of the Plugin file name.

2.4.3 Runtime for R:BASE

After R:BASE Plugins are acquired for Runtime for R:BASE applications, the Plugin file must be included in the Runtime application folder, to be loaded when the Runtime application launches.

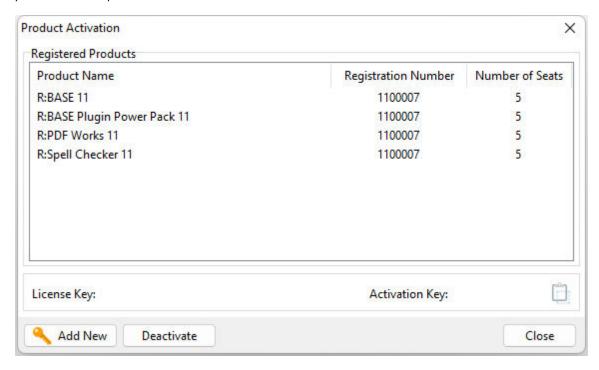
To load the Plugin, the License Key must be included into the Runtime for R:BASE session by adding the following PROPERTY command within the application startup file:

PROPERTY ADD_LICENSE ####-###-###-###-###-###-###-### ' '

3 Uninstall

If a computer is no longer using R:Biometric, through license transfer or hardware failure, the Activation Key that was used on that computer must be submitted to R:BASE Technologies so we can then remove the Activation Key from our log. We will disable the Key, which will then free up that used activation. Once a key is reported to us as no longer in use and deactivated, it can no longer be used on that computer.

Product deactivation can be performed automatically from within R:BASE. To review your product information select "Help" > "Product Activation" from the Menu Bar. Here, the License Key and Activation Key for a selected product is available for review.



If the License Key for your product is not readily available for the license transfer, select the "Copy License Key" button to send your License Key to the clipboard.

To deactivate a listed product, select it and press the "Deactivate" button. The below confirmation dialog will appear. After selecting "Yes", the product will be removed from the list.



Then, open the list of Services installed on the computer and Stop the "Neurotechnology" Service.

After stopping the Service, R:Biometric can be successfully uninstalled.

4 Single Computer Fingerprint Scanner Installation

The following instructions must be followed in order to correctly set up your R:Biometric software and hardware for an individual workstation where the scanner and USB dongle will be located on the same computer.

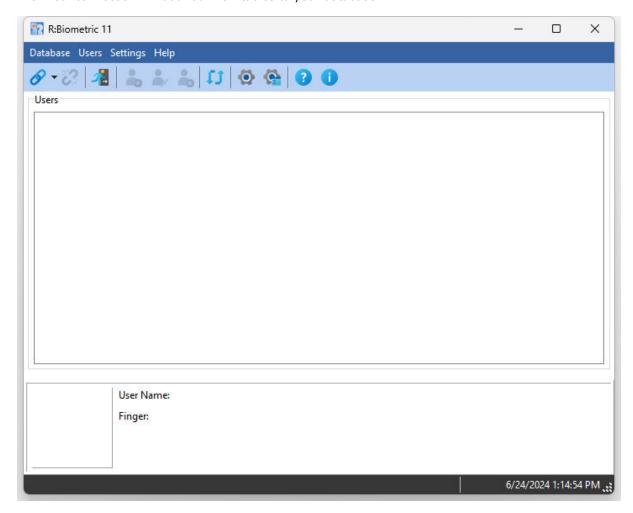
- 1. Make sure to log onto the computer as the Administrator when installing R:Biometric. Otherwise, you will not be able to install the software properly.
- 2. Insert the USB dongle into a USB port.
- Insert the fingerprint scanner into a USB port. Based upon the operating system, drivers may be installed automatically.
- 4. <u>Install R:Biometric</u>. During the installation, the VeriFinger license activation process will be completed, and the dongle will be set up for use. R:Biometric will install to the following default directory: C:\RBTI\RBiometric11
- 5. If a fingerprint scanner driver was not found, drivers are available within the following folder: C: \RBTI\RBiometric11\Drivers
- 6. Next, the R:Biometric 11 Plugin file, RBiometric11.rbm, must copied from the R:Biometric program directory (default: C:\RBTI\RBiometric11) into the R:BASE program directory (default: C:\RBTI\RBG11) or the runtime/compiled application directory.
- 7. The VeriFinger program DLLs (18) and configuration file, NLicenses.cfg, must be copied from the R:Biometric program directory (default: C:\RBTI\RBiometric11) into the R:BASE program directory (default: C:\RBTI\RBG11) or the runtime/compiled application directory. The "FPSmm" folder must also be copied into the R:BASE program directory or the runtime/compiled application directory. The folder and files are assigned a blue font upon the software installation page.
- 8. If the computer where R:Biometric 11 is installed does not have R:BASE 11 installed, the R:BASE Engine DLL (RBENGINE11.DLL) must be copied from the SYSTEM directory of another computer into the SYSTEM directory where R:Biometric 11 is installed.
- 9. Next, the VeriFinger license activation process must be verified/completed. Navigate to the folder "C:\RBTI\RBiometric11\Activation" and launch the "ActivationWizard.exe" executable file.
- 10. With R:Biometric installed, the Activation service should already be running. The ID for the USB dongle, which was inserted in Step 2, should be displayed within the Products column of the grid. The "Configure" button may be used to verify the dongle activation if the dongle ID is not displayed.
- 11. When complete, close the Activation Wizard window.
- 12. On the desktop, R:Biometric 11 can now be launched. The sample database can be connected to, where users and fingerprints may be added to perform fingerprint test scans. After a user is added, a fingerprint will appear in the bottom left corner when a finger is placed on the fingerprint scanner.

Important: Before connecting to a database, review the Initial Launch of R:Biometric details.

5 Initial Launch of R:Biometric

When R:Biometric is first launched, the "Users" options will be disabled. This and other information will be stored in your R:BASE database.

Important: Before you connect to your R:BASE database, make sure that no other users are connected! The initial connection will add four new tables to your database.



Select the "Connect Database..." button to browse and connect to your R:BASE database. At this point, the new tables have been added to your database. If you launch the Database Explorer in R:BASE, you will see the following tables listed:



Using the R:Biometric interface, users can be added to the database.

6 User Interface

The R:Biometric executable is primarily used for adding and editing users that will log in with their fingerprints and for altering the settings available for the particular fingerprint scanner installed. In order to use the R:Biometric plugin with R:BASE, users must be added to the R:BASE database.

6.1 Menu Bar

Database

- Connect... allows you to connect to a database
- Disconnect disconnects from the database
- Connection History provides a history of previously connected databases
- Exit exits R:Biometric

Users

- Add New User... opens a dialog window to add a new user
- Edit Existing User... opens a dialog window to edit a selected user
- Delete User deletes the selected user
- Refresh refreshes the user list

Settings

- Enrollment Settings displays the Enrollment Settings
- Matching Settings displays the Matching Settings
- Fingerprint scanners shows the scanner list, and allows you to switch fingerprint scanners

Help

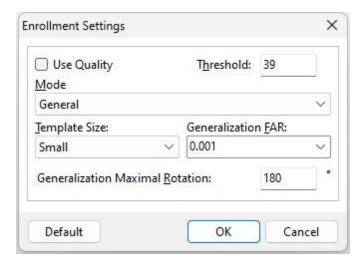
- Help displays the R:Biometric in-line help documentation
- About displays current information about your product such as version

6.2 Tool Bar

Button	Description
8	connects to a database
S	disconnects from the database
4	exits R:Biometric
•	opens a dialog window to add a new user
•	opens a dialog window to edit a selected user
2	deletes the selected user
tı	refreshes the user list
O	displays the Enrollment Settings
G	displays the <u>Matching Settings</u>
•	displays the R:Biometric in-line help documentation
•	displays current information about your product such as version

6.3 Enrollment Settings

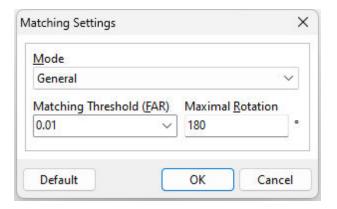
These settings are used when recording fingerprint information for users.



Setting	Description
Use quality	If checked, fingerprint quality check is performed during enrollment. If fingerprint's quality threshold is less than specified value, fingerprint template will not be created.
Threshold	Controls how strict rules are applied when determining the quality of a fingerprint for extraction.
Mode	Used to select fingerprint features extraction mode optimized for particular scanner.
Template size	Specifies the size of fingerprint image templates. Can be a Large or Small template. It is recommended to use the large template size.
Generalization FAR	Specifies the generalization false rejection rate.
Generalization Maximal Rotation	Specifies the maximal fingerprint's rotation value.

6.4 Matching Settings

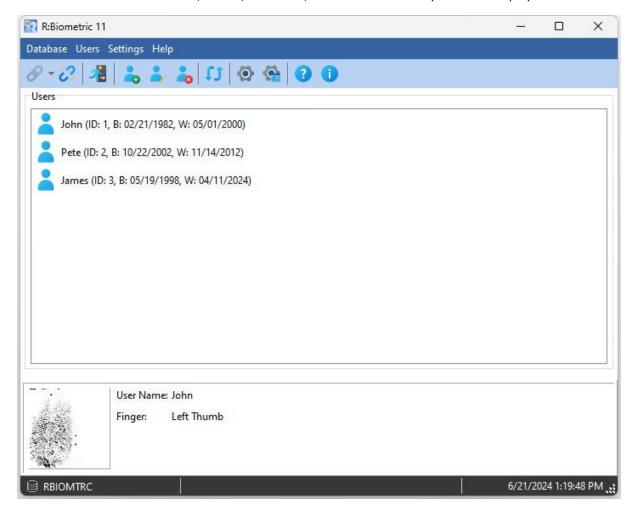
These settings are used when matching fingerprint information for users logging in against users stored within the database.



Setting	Description	
Mode	Used to perform matching optimized for a particular	
	fingerprints scanner	
	Specifies the threshold that separates identical and different fingerprints. Matching threshold is linked to false acceptance rate (FAR, different fingerprints erroneously accepted as of the same) of matching algorithm. The higher is threshold, the lower is FAR and higher FRR (false rejection rate, same fingerprints erroneously accepted as different) and vice a versa.	
Maximal Rotation	Specifies the maximal fingerprint's rotation value.	

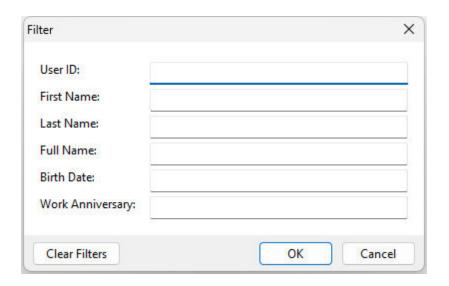
6.5 Users

The Users' options include the ability to add new users, edit existing users, delete a user, and refresh the user list. Next to the user name, the ID, birth date, and work anniversary date are displayed.



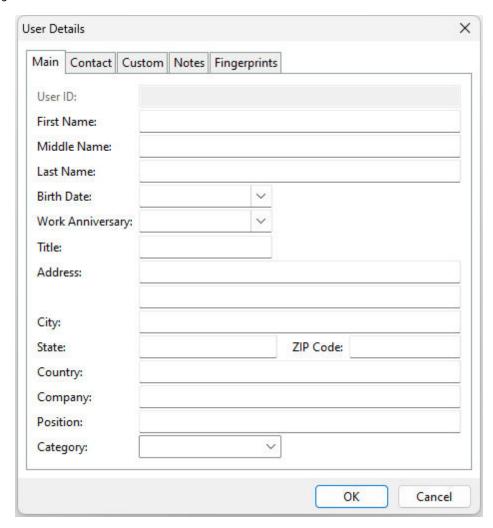
Filter Users

The list of displayed users may be filtered to a specific name, birth date, and anniversary criteria. The filter also allows for fields to be combined for more specific results. Press [Ctrl+F] to filter the users list. To clear the filter, press [Ctrl+F] again, and select the "Clear Filters" button.



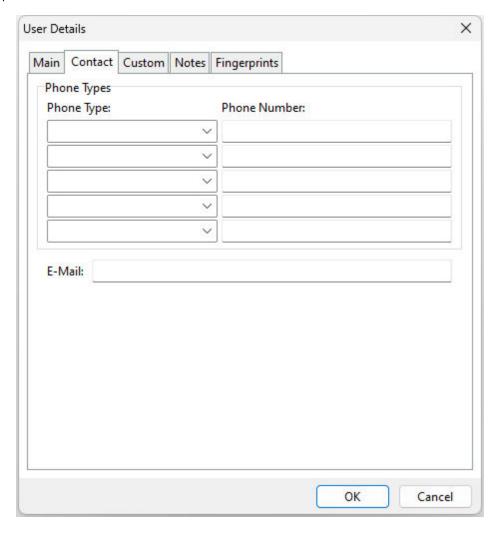
6.5.1 Main

Specifies general information for a user.



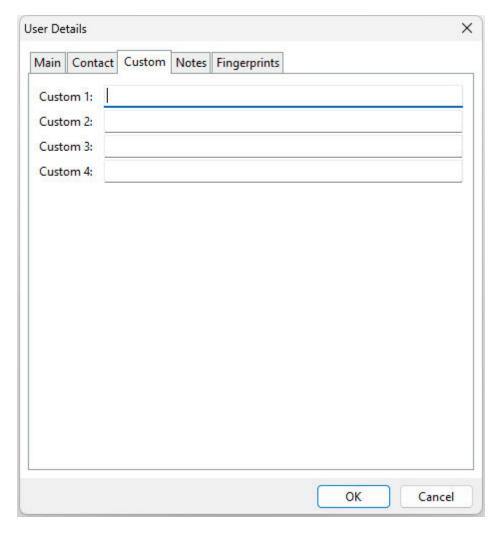
6.5.2 Contact

Specifies phone and email contact information for a user.



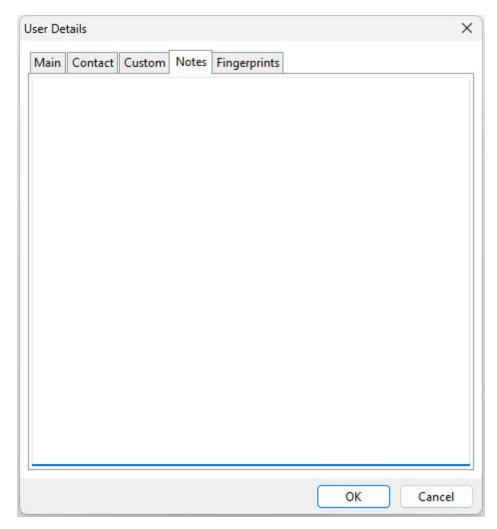
6.5.3 Custom

Specifies custom contact fields for a user.



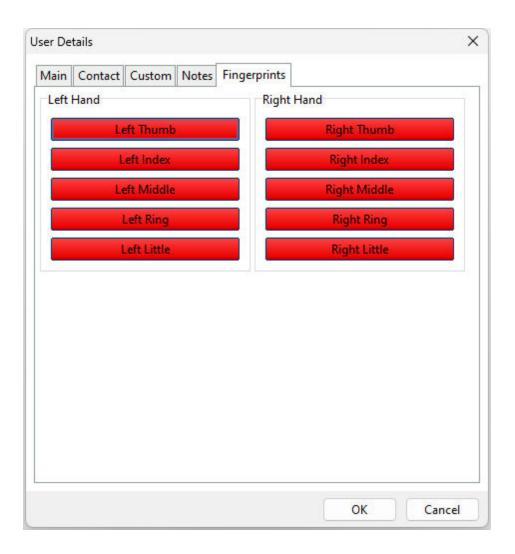
6.5.4 Notes

Specifies notes for a user.



6.5.5 Fingerprints

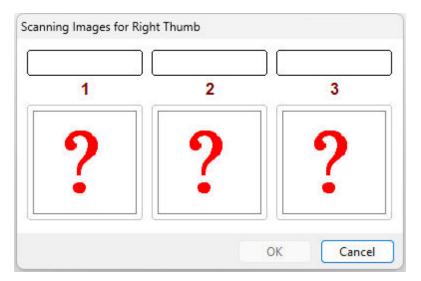
Specifies fingerprint information for a user. The finger specific buttons will remain red until a print has been recorded for the finger. Click on any of the buttons to record a fingerprint. There will be three recording needed for each finger. Once a print has been recorded, the button will turn green.



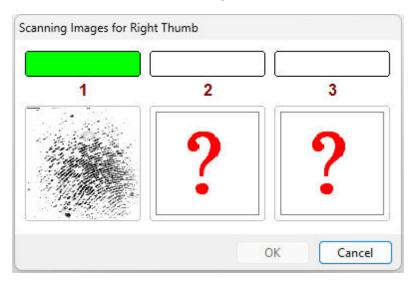


6.5.5.1 Add a Fingerprint

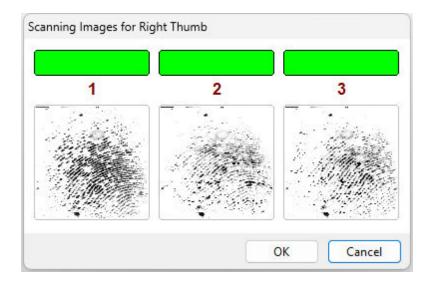
To add a fingerprint for a finger, select the appropriate button for the finger you want to scan. The following prompt will be displayed. The values one through three represent three attempts that must be made for each finger.



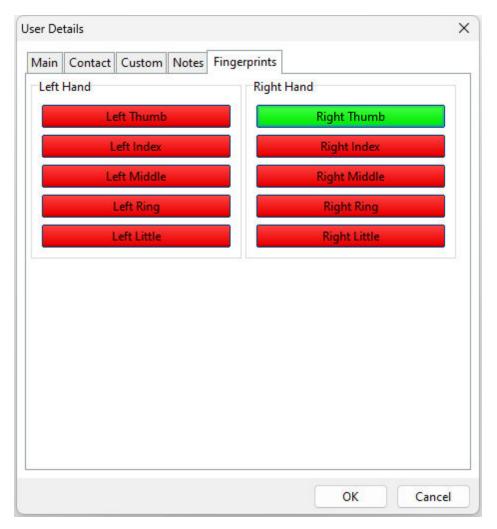
Once you place the finger on the scanner, the device will begin capturing the fingerprint information. Keep the finger on the scanner until the red field turns green.



Then, remove and replace the finger on the scanner two mores times for the colors above "2" and "3" to turn green as well.



After the scans are complete, the appropriate finger will be color coded to green that a print has been stored.



7 Command Syntax

R:Biometric includes a plugin to instruct the scanner when to start and stop scanning from within your application. As per the <u>installation</u> instructions, the plugin and VeriFinger files must be located within the R:BASE program directory.

Syntax:

PLUGIN RBiometric vResult | Parameters

Parameters:

Parameter	Value	Description
START		Instructs the scanner to start
		scanning for a fingerprint
ENROLL		Specifies to enroll a user in the RB_Fingerprints table. The USERID and FPID parameters are required for the plugin to know the user and what finger is being
USERID		scanned/registered. Specifies the RB_UserID value
USERID		(user ID)
FPID		Specifies the RB_FPID value (finger type ID)
STOP		Instructs the scanner to stop scanning for a fingerprint
ENROLL_USE_QUALITY	ON OFF	When ON, fingerprint quality check is performed during enrollment. If fingerprint's quality threshold is less than specified value, fingerprint template will not be created
ENROLL_QUALITY_THRESHOLD	0100	Specifies how strict rules are applied when determining the quality of a fingerprint for extraction.
ENROLL_TEMPLATE_SIZE	SMALL LARGE	Specifies the size of fingerprint image templates. Can be a Large or Small template. It is recommended to use the large template size.
ENROLL_GENERALIZATION_THRESHOLD	0.1 0.01 0.001 0.00	Specifies the generalization false rejection rate.
ENROLL_MAX_ROTATION	0360	Specifies the maximal fingerprint's rotation value.
MATCHING_THRESHOLD	0.1 0.01 0.001 0.000000002	Specifies the threshold that separates identical and different fingerprints. Matching threshold is linked to false acceptance rate (FAR, different fingerprints erroneously accepted as of the same) of matching algorithm. The higher is threshold, the lower is FAR and higher FRR (false rejection rate, same fingerprints erroneously accepted as different) and vice a versa.
MATCHING_MAX_ROTATION	0360	Specifies the maximal fingerprint's rotation value.

Where:

vResult is the text variable to return the status

Text Variable	Description
OK	No errors
-ERROR-	Displays exact error message, if error exists in parameters

Note:

- The variable and parameters must be separated by a "|" pipe symbol.
- The scanner must be initialized first, using the START parameter before using the ENROLL parameter, and before applying the "enroll" and "match" settings.
- The enrollment process is similar to the R:Biometric enrollment in the GUI. The same dialog is shown because 3 scans is needed for each finger.
- For enrollment saving, if a row for USERID and FPID does not exist in RB_Fingerprints, then one will be added. Otherwise the RB_FingerprintData of the USERID and FPID row will be updated.

Examples:

```
--Initialize the scanner
PLUGIN RBIOMETRIC vStart | START
-- Use RBiomtric as usual
-- ...
--Enroll users
PLUGIN RBIOMETRIC vResult ENROLL USERID 8 FPID 1 -- right thumb for user 8
PLUGIN RBIOMETRIC vResult ENROLL USERID 8 FPID 6 -- left thumb for user 8
PLUGIN RBIOMETRIC vResult | ENROLL | USERID 5 | FPID 1
                                                       -- right thumb for user 5
PLUGIN RBIOMETRIC vResult | ENROLL | USERID 5 | FPID 6
                                                      -- left thumb for user 5
PLUGIN RBIOMETRIC vResult | ENROLL | USERID 9 | FPID 1
                                                       -- right thumb for user 9
PLUGIN RBIOMETRIC vResult | ENROLL | USERID 9 | FPID 6
                                                      -- left thumb for user 9
--At the end of the application, close the scanner
PLUGIN RBIOMETRIC vStop STOP
```

8 Command Line Parameters

R:Biometric supports a database connection command line parameter to include within desktop shortcut properties, or use with the R:BASE LAUNCH command. The "DB CONNECT" parameter supports the same syntax as the R:BASE CONNECT command.

- **-DB CONNECT** specifies to launch R:Biometric and automatically connect to a database. An owner name and user may be specified for password protected databases.
- **-NO_DBOWNER_CHECK** specifies to launch R:Biometric and automatically connect to a password protected database, where the user account is not the OWNER

Notes:

• The DB CONNECT string must be enclosed in quotes.

Desktop Shortcut Examples (Target field):

```
C:\RBTI\RBiometric11\RBiometric11.exe "-DB CONNECT RRBYW20"

C:\RBTI\RBiometric11\RBiometric11.exe "-DB CONNECT RRBYW20 IDENTIFIED BY DBOWNER"

C:\RBTI\RBiometric11\RBiometric11.exe "-DB CONNECT RRBYW20 IDENTIFIED BY SAM

SAM1234" -NO DBOWNER CHECK
```

LAUNCH Command Examples:

```
LAUNCH 'C:\RBTI\RBiometric11\RBiometric11.exe|"-DB CONNECT RRBYW20"'

LAUNCH 'C:\RBTI\RBiometric11\RBiometric11.exe|"-DB CONNECT RRBYW20 IDENTIFIED BY
DBOWNER"'
```

LAUNCH 'C:\RBTI\RBiometric11\RBiometric11.exe|"-DB CONNECT RRBYW20 IDENTIFIED BY SAM SAM1234" -NO_DBOWNER_CHECK'

9 R:Biometric Integration

Integrating R:Biometric within your R:BASE application is performed by using an R:BASE form to capture the information returned by the fingerprint scanner. When creating the form, the "On Before Start" and "On after Close" EEPs should be used to run the PLUGIN command parameters to START and STOP the scanning of fingerprints.

The form should contain a DB Edit or Variable Edit field as the single location for focus. A DB or Variable Edit field should be used as a password character can be defined so the actual value on the screen is not displayed.

After the users are added to the database within the R:Biometric interface, a unique key integer value was automatically assigned to each user. Reviewing the contents of the **RB_Users** table will display the users and the unique column, **RB_UserID**, which stores the integer. The value stored in the RB_UserID column is what will be returned into the form field.

So, when the fingerprint scanning has been started, and the finger is placed on the scanner, the RB_UserID value is inserted into the field followed by a hard return/carriage return. With the hard return provided with the RB_UserID value, a second field should be added to the form so the cursor focus has somewhere to land. This field does not need to be displayed and can be set to a width of 0.

For an example of the above, please refer to the RBio_Login form in the sample database within the R:Biometric program directory.

Before using R:Biometric in a form, please be sure to activate the Plugin by selecting "Help" > "Product Activation" from the main Menu Bar.

10 Technical Support

Please read over the help documentation at least once before seeking support. We have worked very hard to make the help documentation clear and useful, but concise. It is suggested that you reread these instructions once you have become accustomed to using the software, as new uses will become apparent.

If you have further questions, and cannot find the answers in the documentation, you can obtain information from the below sources:

- Email our Technical Support Staff at: support@rbase.com
- Access the R:BASE Technologies Support home page online at https://www.rbase.com/support

You may be required to purchase a technical support plan. Several support plans are available to suit the needs of all users. <u>Available Technical Support Plans</u>

Please be prepared to provide the following:

- The product registration number, which is located on the invoice/order slip for the purchased product
- The type of operating system and hardware in use
- Details regarding your operating environment; such as available memory, disk space, your version
 of R:BASE, local area network, special drivers, related database structures, application files, and
 other files that are used or accessed by your application

All provide information will be used to better assist you.

R:BASE Technologies has a number of different services available for R:BASE products. As a registered user, you will receive information about new features for R:BASE and other R:BASE Technologies products. Please remember to register your software. https://www.rbase.com/register/

11 Useful Resources

. R:BASE Home Page: https://www.rbase.com

. Up-to-Date R:BASE Updates: https://www.rbaseupdates.com

. Current Product Details and Documentation: https://www.rbase.com/rbg11

. Support Home Page: https://www.rbase.com/support

. Product Registration: https://www.rbase.com/register

. Official R:BASE Facebook Page: https://www.facebook.com/rbase

. Sample Applications: https://www.razzak.com/sampleapplications

. Technical Documents (From the Edge): https://www.razzak.com/fte

. Education and Training: https://www.rbase.com/training

. Product News: https://www.rbase.com/news

. Upcoming Events: https://www.rbase.com/events

. R:BASE Online Help Manual: https://www.rbase.com/support/rsyntax

. Form Properties Documentation: https://www.rbase.com/support/FormProperties.pdf

. R:BASE Beginners Tutorial: https://www.rbase.com/support/rtutorial

. R:BASE Solutions (Vertical Market Applications): https://www.rbase.com/products/rbasesolutions

12 Feedback

Suggestions and Enhancement Requests:

From time to time, everyone comes up with an idea for something they'd like a software product to do differently.

If you come across an idea that you think might make a nice enhancement, your input is always welcome.

Please submit your suggestion and/or enhancement request to the R:BASE Developers' Corner Crew (R:DCC) and describe what you think might make an ideal enhancement. In R:BASE, the R:DCC Client is fully integrated to communicate with the R:BASE development team. From the main menu bar, choose "Help" > "R:DCC Client". If you do not have a login profile, select "New User" to create one.

If you have a sample you wish to provide, have the files prepared within a zip archive prior to initiating the request. You will be prompted to upload any attachments during the submission process.

Unless additional information is needed, you will not receive a direct response. You can periodically check the status of your submitted enhancement request.

If you are experiencing any difficulties with the R:DCC Client, please send an e-mail to rdcc@rbase.com.

Reporting Bugs:

If you experience something you think might be a bug, please report it to the R:BASE Developers' Corner Crew. In R:BASE, the R:DCC Client is fully integrated to communicate with the R:BASE development team. From the main menu bar, choose "Help" > "R:DCC Client". If you do not have a login profile, select "New User" to create one.

You will need to describe:

- What you did, what happened, and what you expected to happen
- The product version and build
- Any error message displayed
- The operating system in use
- Anything else you think might be relevant

If you have a sample you wish to provide, have the files prepared within a zip archive prior to initiating the bug report. You will be prompted to upload any attachments during the submission process.

Unless additional information is needed, you will not receive a direct response. You can periodically check the status of your submitted bug.

If you are experiencing any difficulties with the R:DCC Client, please send an e-mail to rdcc@rbase.com.

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