

# BioRead 1000™

## Fingerprint Access System

### Setup and Operator Guide

#### v1.0



*Service Company: Place Contact Information Here*

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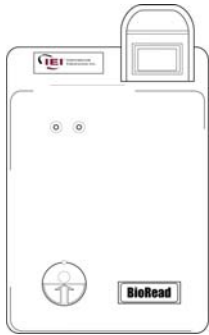
# **BIOREAD™ SETUP AND USERS GUIDE**

## **INTRODUCTION**

Congratulations on your purchase of the BioRead™ Fingerprint Access System. BioRead™ is a stand-alone biometric system capable of controlling access to doors or devices for up to 90 users. All programming is accomplished using the BioRead™ Hand-Held Programmer. The BioRead 1000 Reader has a weigand output and can be used as a fingerprint reader with IEI Access Systems

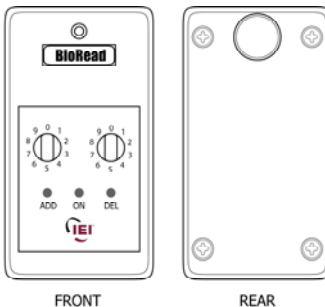
The BioRead™ system consists of three components:

### **1) The BioRead™ Fingerprint Reader**



The BioRead™ Reader stores the fingerprint templates of up to 90 users. In addition, up to 8 Bypass Keys can be programmed and issued to users who cannot be enrolled due to injury or poor fingerprint quality. All programming and enrollment is done at the reader using the Hand-Held Programmer. In normal operating mode, the reader continually scans for the presence of fingerprint data to capture and compare the “live” finger to that of the digital template stored in the reader. If a live finger is successfully authenticated, a signal is sent to momentarily activate the control relay of the Door Control Module.

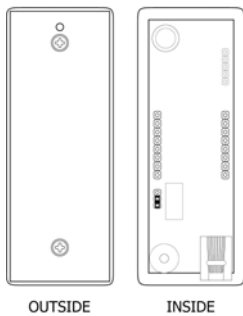
### **2) The BioRead™ Hand-Held Programmer**



The Hand-Held Programmer (HHP) is a simple battery operated device used to initiate enrollment and other programming functions on the BioRead™ Reader. The HHP features two rotary switches numbered from 0-9, ON, ADD, and DELETE buttons, and a Programming Button which is physically applied to the reader to initiate programming functions.

### **3) The BioRead™ Door Control Module**

(not included with BR-1100 which connects to IEI Access Systems)



The BioRead™ Door Control Module provides a relay output to control an electronic lock or to control access to other devices. The relay activation time is fixed at 7 seconds. The controller also features a Request-To-Exit Input and Door Contact Input. When a door contact is connected, the relay output will deactivate once the door re-closes after a previous activation. A mechanical pushbutton (normally open) may be connected to the Request-To-Exit Input. When this input is momentarily closed, the lock relay output will be activated. This Exit Button configuration may be used to activate the lock from the secure side of the door where a reader is not required.

See the BioRead™ Installation Instructions for connecting the necessary components.

## **BIOREAD™ SETUP**

### **Powering Up the BioRead™ Reader for the First Time**

If all the connections are properly terminated, the LEFT LED Indicator on the BioRead™ Reader should be alternating between a RED and GREEN state, while the RIGHT LED Indicator should be solid RED. This indicates that your reader is in a “FACTORY DEFAULT” state and must be programmed to operate.

If the BioRead™ Reader indicators are behaving as described above, then continue. Otherwise, check the wiring and power supply for short circuits and sufficient operating voltage. Note that the RIGHT LED is externally controlled.

### **Turning ON the Hand-Held Programmer for the First Time**

When you press the ON button for the first time, the LED Indicator should be alternating between a RED and GREEN state. This indicates that the Hand-Held Programmer is in a “FACTORY DEFAULT” state and must be programmed to operate.

### **Programming a Password Into the Hand-Held Programmer**

To prevent other Hand-Held Programmers from being used on your BioRead™ Reader(s), a 10 digit password must be entered using the rotary switches. This password is then stored in the BioRead™ Reader the first time the Programmer is used on BioRead™.

**\*Note:**

If the BioRead™ Reader is connected via Wiegand interface to an access control unit other than the BioRead™ Door Control Module, the last 3 Digits of the password will be used as the Wiegand Facility Code. Use a number between 1-255 to emulate 26 bit Wiegand. The ID number transmitted will correspond to the memory location where the fingerprint template is stored. If you are using the BioRead™ Door Control Module, do not be concerned with this note.

#### **Step 1: Programming the 10 Digit Password**

1. Choose a 10 Digit Password (5 pairs of numbers) and write it down here for safekeeping. See \*Note above.

#### **THE LAST 3 DIGITS OF THE 10 DIGIT PASSWORD CANNOT BE 000**

Pair 1	Pair 2	Pair 3	*Pair 4	*Pair 5

2. Press the ON button on the Hand-Held Programmer. The LED should be alternating between RED and GREEN, indicating a factory default state.
3. Select the first pair of numbers using the rotary switches on the programmer. Press the ADD button once. The LED indicator should now be flashing slightly faster than previously.
4. Select the second pair of numbers using the rotary switches on the programmer. Press the ADD button once. The LED indicator should now be flashing slightly faster than previously.

5. Select the third pair of numbers using the rotary switches on the programmer. Press the ADD button once. The LED indicator should now be flashing slightly faster than previously
6. Select the fourth pair of numbers using the rotary switches on the programmer. Press the ADD button once. The LED indicator should now be flashing slightly faster than previously.
7. Select the fifth pair of numbers using the rotary switches on the programmer. Press the ADD button once.  
The LED indicator should now remain solid amber. You have finished programming the password.

**Note:**

The Programmer will power OFF automatically after approximately 30 seconds of inactivity to conserve battery power. Simply press the ON button to resume use.

Setup is now complete !

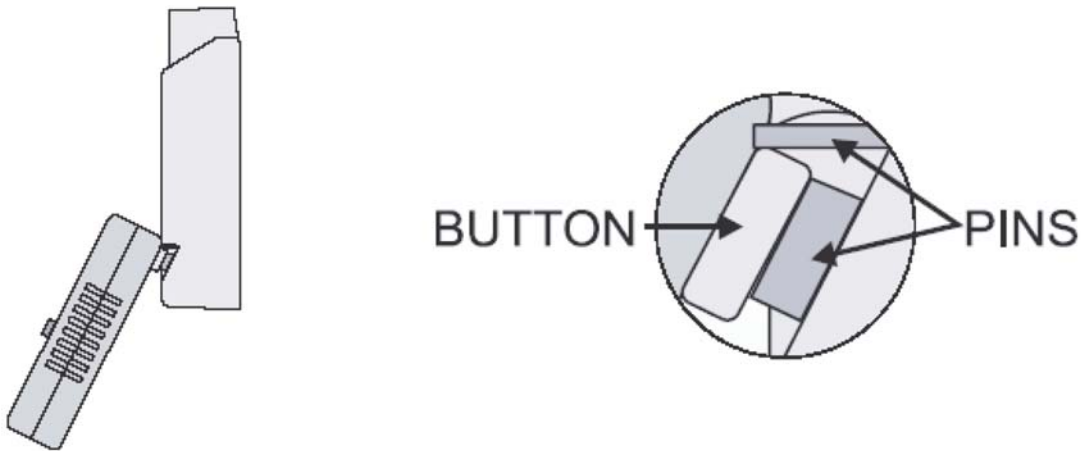
**ENROLLING AND DELETING USERS**

***Enrolling Users: Please Read this Section Completely Before Enrolling Users***

1. Prepare for enrollment. The administrator and person being enrolled must watch the Zodiac scanner and listen/watch the Zodiac BEEPER and LEDs during enrollment as they provide audible and visual indications during the enrollment process.
2. Assuming the Administrator (YOU) and the person to be enrolled are at the reader, turn the Hand-Held Programmer ON by pressing the ON button. Set the rotary switches both to "0". The Programmer LED indicator should be flashing RED only. If the Programmer is flashing between RED and GREEN, follow the steps outlined in "BioRead™ Setup" as the unit is in a Factory Default state.
3. Place the BioRead™ Reader into Program Mode by applying the Programming Button on the back of the Programmer to the Data Port on the BioRead™ Reader as shown below.

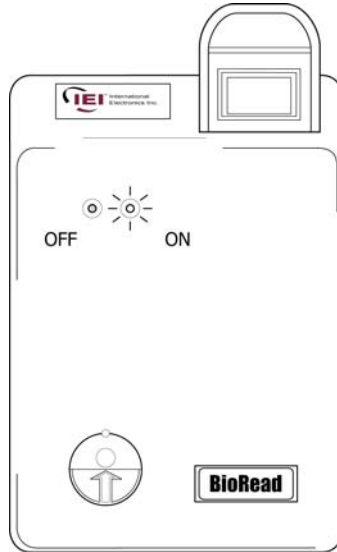
**IMPORTANT:**

**If the BioRead™ Reader is in normal operating mode and the fingerprint scanner is cycling ON and OFF, you must wait for the scanner to turn OFF before applying the Programmer for any operation.**



You must apply the Programmer on an angle as show in the diagram, making contact against both metal pins on the reader. It is recommended to apply the Programmer Button to the large pin, and then press upward to make momentary contact with the small pin.

The BioRead™ reader will emit a tone for approximately 3 seconds and the left LED will turn OFF.



The BioRead™ Reader is now in PROGRAM MODE.

4. Using the rotary switches on Programmer, select a memory location for which to store the user's fingerprint template in the BioRead™ reader. Valid locations are from 01 through 90. For example, to select location 01, set the left rotary switch to "0" and the right rotary switch to "1".

The Programmer LED should be AMBER at this point.

5. Press the ADD button. The Programmer LED should change to GREEN.
6. Apply the Programmer Button to the BioRead™ reader's Data Port. If the memory location is empty, the fingerprint scanner will immediately turn ON. If the memory location is already used, the BioRead™ reader will beep 3 times and you should select another memory location as per Step 4. Otherwise, the user being enrolled should now apply their finger to the sensor.

**How to Apply Your Finger:** Apply the finger with light pressure, evenly across the scanner. Cover as much of the glass part of the scanner as possible.

BioRead™ will capture two images of the finger. Once the first image is successfully captured, the scanner will turn OFF, the LEFT LED will turn GREEN momentarily, and the reader will emit a brief tone. The person being enrolled should remove the finger briefly until the scanner comes ON again. Apply the finger a second time until the scanner turns OFF, the LEFT LED turns GREEN momentarily, and the reader emits a brief tone.

If two images were successfully captured as described above, the BioRead™ reader should now be waiting in Program Mode. The left LED should be OFF and the right LED should be solid RED. If you are not able to enroll a user due to poor quality fingerprints on all fingers, consider issuing a Bypass Key to that user. See the section “Bypass Keys for Non-Enrollable Users” on the next page.

7. Record the name of the user and the BioRead™ memory location used so you can delete that specific template if necessary. A sample form is included.
8. At this point, you can continue to enroll users as per Steps 4 through 7.
9. To return the BioRead™ reader to normal operating mode, set both rotary switches on the Programmer to “0” and turn the Programmer ON if necessary. The Programmer LED indicator should be flashing RED only. Apply the Programmer Button to the BioRead™ reader as shown in Step 3 - Enrolling Users.

The BioRead™ reader should emit a tone and resume normal operation. Both LED indicators on the BioRead™ reader should now be RED and the scanner should be continuously cycling ON/OFF.

Enrolled users can now present their finger for authentication.

### ***Deleting Users***

Follow these steps to delete user templates from the BioRead™ reader.

1. Turn the Hand-Held Programmer ON by pressing the ON button. Set the rotary switches both to “0”. The Programmer LED indicator should be flashing RED only.
  2. Place the BioRead™ Reader into Program Mode by applying the Programming Button on the back of the Programmer to the Data Port on the Zodiac Reader as described in Step 3 - Enrolling Users.
  3. Using the rotary switches on Programmer, select the memory location of the user’s fingerprint template that you wish to delete.
  4. Press the DELETE button. The Programmer LED should change to solid RED.
  5. Apply the Programmer Button to the BioRead™ reader’s Data Port. The reader’s left LED should briefly turn RED while the reader also emits a momentary tone.
- Note:** If the memory location is already empty, the BioRead™ reader will beep 3 times.
6. To delete other user templates, repeat Steps 3 through 5.
  7. To return the BioRead™ reader to normal operating mode, set both rotary switches on the Programmer to “0” and turn the Programmer ON if necessary. The Programmer LED indicator should be flashing RED only. Apply the Programmer Button to the BioRead™ reader as shown in Step 3 - Enrolling Users.

The BioRead™ reader should emit a tone and resume normal operation. Both LED indicators on the BioRead™ reader should now be RED and the scanner should be continuously cycling ON/OFF.

## **BYPASS KEYS AND NON-ENROLLABLE USERS**

In the event that a user cannot be enrolled due to poor quality fingerprints, you can issue a Bypass Key to that user. A Bypass Key can be applied and read from the BioRead™ reader's Data Port. If the Bypass Key has been added in BioRead's memory, the user will have access to whatever device is being controlled. This allows your BioRead™ system to still be usable even though one or a small number of users cannot be enrolled. Your BioRead™ system comes with 5 Bypass Keys and a maximum of 8 are supported.

### ***To ADD a Bypass Key***

1. Turn the Hand-Held Programmer ON by pressing the ON button. Set the rotary switches both to "0". The Programmer LED indicator should be flashing RED only.
2. Place the BioRead™ Reader into Program Mode by applying the Programming Button on the back of the Programmer to the Data Port on the BioRead™ Reader as described in Step 3 - Enrolling Users.
3. Using the rotary switches on Programmer, select a memory location for which to store the user's Bypass Key in the BioRead™ reader. Valid locations are from 91 through 98.

The Programmer LED should be AMBER at this point.

4. Press the ADD button. The Programmer LED should change to GREEN.
5. Apply the Programmer Button to the BioRead™ reader's Data Port momentarily. If the memory location is empty, the reader will emit a chirping sound as long as contact is made. It is only necessary to make brief contact with the reader. If the memory location is already used, the BioRead™ reader will beep 3 times and you should select another memory location between 91 and 98.
6. Now apply the Bypass Key to the BioRead™ reader's Data Port. The reader will emit a single tone and the left LED will turn GREEN momentarily.

The Bypass Key has now been successfully added

Record the name of the user and the BioRead™ memory location used so you can delete that specific template if necessary. A sample form is included.

7. Repeat the procedure above to add more Bypass Keys.
8. To return the BioRead™ reader to normal operating mode, set both rotary switches on the Programmer to "0" and turn the Programmer ON if necessary. The Programmer LED indicator should be flashing RED only. Apply the Programmer Button to the BioRead™ reader as shown in Step 3 - Enrolling Users.

The BioRead™ reader should emit a tone and resume normal operation. Both LED indicators on the BioRead™ reader should now be RED and the scanner should be continuously cycling ON/OFF.

### **To Delete a Bypass Key**

1. Turn the Hand-Held Programmer ON by pressing the ON button. Set the rotary switches both to "0". The Programmer LED indicator should be flashing RED only.
2. Place the BioRead™ Reader into Program Mode by applying the Programming Button on the back of the Programmer to the Data Port on the BioRead™ Reader as described in Step 3 - Enrolling Users.
3. Using the rotary switches on Programmer, select the memory location of the user's Bypass Key that you wish to delete. Press the DELETE button. The Programmer LED should change to solid RED.
4. Apply the Programmer Button to the BioRead™ reader's Data Port. The reader's left LED should briefly turn RED while the reader also emits a momentary tone.

**Note:** If the memory location is already empty, the BioRead™ reader will beep 3 times.

5. To delete other user Bypass Keys, repeat Steps 1 through 4.
6. To return the BioRead™ reader to normal operating mode, set both rotary switches on the Programmer to "0" and turn the Programmer ON if necessary. The Programmer LED indicator should be flashing RED only. Apply the Programmer Button to the BioRead™ reader as shown in Step 3 - Enrolling Users.

The BioRead™ reader should emit a tone and resume normal operation. Both LED indicators on the BioRead™ reader should now be RED and the scanner should be continuously cycling ON/OFF.

## **MAINTENANCE**

### **Setting the BioRead™ Reader to Factory Default**

If you would like to clear the BioRead™ Reader's memory of all user fingerprint templates and the stored password, follow one of these procedures.

**Warning:** All user templates will be lost.

#### **Method 1:**

1. Turn the Hand-Held Programmer ON by pressing the ON button. Set the rotary switches both to "0". The Programmer LED indicator should be flashing RED only.
2. Place the BioRead™ Reader into Program Mode by applying the Programming Button on the back of the Programmer to the Data Port on the BioRead™ Reader as described in Step 3 - Enrolling Users.
3. Set the rotary switches on the Programmer to "99" and press the Delete button. The Programmer LED should change to solid RED.
4. Apply the Programmer Button to the BioRead™ reader's Data Port. The reader's left LED should turn AMBER while the reader also emits a momentary tone. At this point, you must press the DELETE button again and apply the Programmer again to confirm that you want to reinitialize the BioRead™ reader.

Once the Programmer Button is applied a second time, the BioRead™ reader will emit a tone for approximately 7 seconds.

The left LED will begin to flash between RED and GREEN indicating a factory default state.

**Method 2:**

BioRead™ comes with a “Black Initialization Key” which can be used to clear the reader’s memory and restore it to a factory default condition. This is a special key that can only be used on the BioRead™ reader it came with. All BioRead™ readers come with their own unique Initialization Key.

1. While BioRead™ is normal operating mode, apply the BLACK Initialization Key to the Data Port on the BioRead™ Reader.

The left LED will change to AMBER and the reader will emit a continuous tone.

2. After approximately 3-5 seconds, the tone will change. At this point, apply the BLACK Initialization Key to the Data Port on the BioRead™ Reader one more time to confirm that you want to reinitialize the unit.

The BioRead™ reader will emit a tone for approximately 7 seconds and the left LED will begin to flash between RED and GREEN indicating a factory default state.

**Changing the 10 Digit Password in the BioRead™ Hand Held Programmer**

**Note:** Remember that the BioRead™ reader stores the 10 digit password that is stored in the Programmer. If you change the Password in the Programmer, you will only be able to Program a BioRead™ reader in factory default mode.

If you are setting the password in a new Programmer that you wish to use on an existing and programmed BioRead™ reader, use the password initially used to program the initial Programmer and BioRead™ reader. This was the 10 Digit Password that was “stored for safe keeping”.

To reset the Programmer to a factory default state and erase the password, follow these steps:

1. Turn the Hand-Held Programmer ON by pressing the ON button. Set the rotary switches both to “0”. The Programmer LED indicator should be flashing RED only.
2. Press and hold the ADD and DELETE buttons simultaneously for approximately 4 seconds.
3. The Programmer LED should now be flashing between RED and GREEN, indicating a factory default state.
4. Follow the steps under Programming a Password Into the Hand-Held Programmer on Page 3.

### **Replacing the Battery in the Hand Held Programmer**

The BioRead™ Programmer uses a standard 9V alkaline battery that can be purchased at any local store that sells batteries.

1. Remove the four screws on the back of the Programmer using a Philips screwdriver
2. Because the switch tops must be removed, set them both to “0” as a reference point for replacement.
3. Remove the two gray switch tops so the unit can be opened.
4. Carefully pull the two halves of the Programmer apart.
5. Replace the dead battery and reassemble the Programmer.

