



Zodiac Lite

OPERATOR GUIDE



Cutting edge simplicity

February 2008

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Zodiac Lite Reader

Congratulations on your purchase of the Zodiac Lite Stand-Alone Fingerprint Reader. Zodiac Lite 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 SmartLock Lite Hand-Held Programmer.

Your Zodiac Lite system consists of four components:

THE ZODIAC LITE FINGERPRINT READER

The Zodiac Lite Reader stores the fingerprint templates of up to 90 users. In addition, up to eight 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.



THE BYPASS KEYS



The Zodiac Lite Reader supports up to eight (8) bypass keys for users who are unable to enroll. The Hand-Held Programmer comes with five (5) keys and additional keys can be ordered as needed.

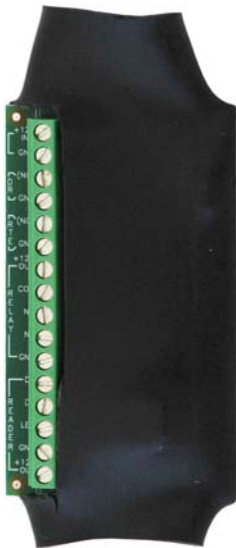
THE ZODIAC LITE HAND-HELD PROGRAMMER

Front Back



The Hand-Held Programmer (HHP) is a simple battery operated device used to initiate enrollment and other programming functions on the Zodiac Lite 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.

THE DOOR CONTROL MODULE



The Zodiac 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 Zodiac Lite Installation Instructions for connecting the necessary components.

ZODIAC LITE SETUP

POWERING UP THE ZODIAC LITE READER FOR THE FIRST TIME

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

If the Zodiac Reader indicators are behaving as described above, then continue. Otherwise, check the wiring and power supply for short circuits and sufficient operating voltage. **NOTE:** the **RIGHT** LED is externally controlled. If using door contacts, the **RIGHT** LED will be **RED** when the door is closed and **GREEN** when the door is open.

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 **RED** and **GREEN**. 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 Zodiac Lite Reader(s), a 10-digit password must be entered using the rotary switches. This password is then stored in the Zodiac Reader the first time the programmer is used on Zodiac.

NOTE: If the Zodiac Lite Reader is connected via Wiegand interface to an access control unit other than the Cansec Door Control Module, the last three 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 Door Control Module, do not be concerned with this note.

PROGRAMMING THE TEN-DIGIT PASSWORD

1. Choose a 10-digit password (five pairs of numbers) and write it down here for safekeeping. See ***Note** above.

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** (**NOTE**: if your password ends in two zeroes, the **LED** indicator will be blinking **RED**). 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.

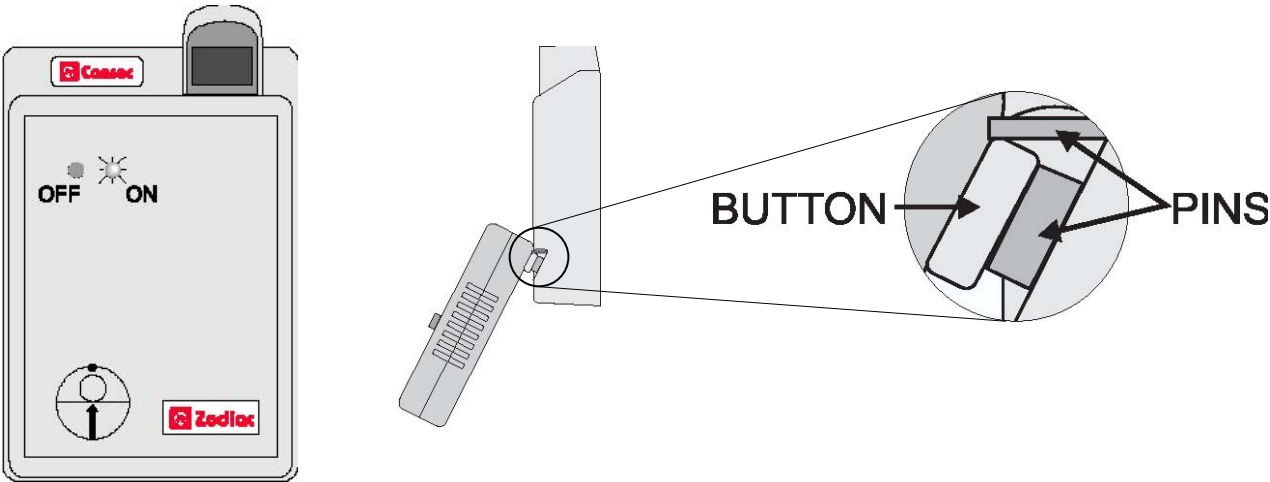
Setup is now complete !

ENROLLING AND DELETING USERS

G ENROLLING USERS

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 "Zodiac Lite Setup" as the unit is in a Factory Default state.
3. Place the Zodiac Reader into Program Mode by applying the Programming Button on the back of the programmer to the data port on the Zodiac Reader as shown below.



Important: When applying the programmer, there may be a slight delay before the programmer is ready for any operation. This is normal and is caused by the Zodiac Reader's fingerprint scanner cycling **ON** and **OFF**. The programmer is only detected when the scanner is off.

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.

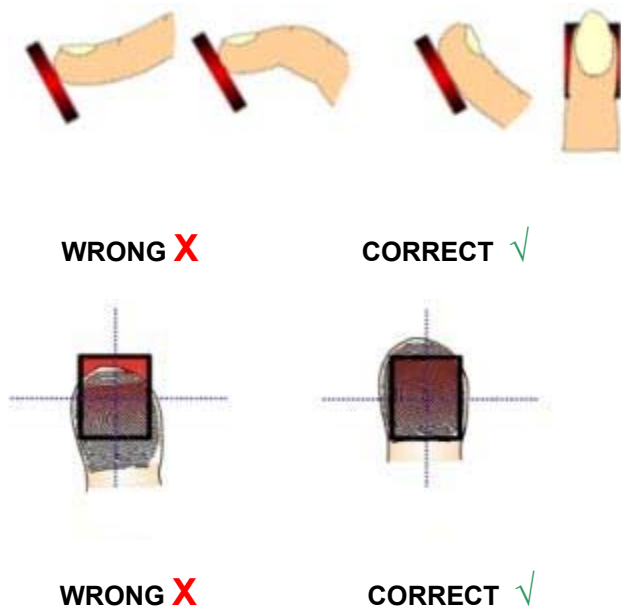
The Zodiac Reader will emit a tone for approximately three (3) seconds and the left LED will turn **OFF**. The Zodiac Reader is now in **PROGRAM MODE**.

4. Using the rotary switches on Programmer, select a memory location for which to store the user's fingerprint template in the Zodiac 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 Programming Button to the Zodiac 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 Zodiac reader will beep three (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.**



Zodiac 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, the Zodiac reader should now be waiting in Program Mode. The **LEFT LED** should be **OFF**. 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 Zodiac memory location used so you can delete that specific template in the future if necessary. A sample form is included.

8. Continue to enroll users as per Steps 4 through 7.

9. To return the Zodiac 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 Programming Button to the Zodiac reader as shown in Step 3 - Enrolling Users.

The Zodiac reader should emit a tone and resume normal operation. The **LEFT LED** indicator on the Zodiac 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 Zodiac 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 Zodiac 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 Programming Button to the Zodiac 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 Zodiac Reader will beep three (3) times.

6. To delete other user templates, repeat Steps 3 through 5.
7. To return the Zodiac 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 Programming Button to the Zodiac reader as shown in Step 3 - Enrolling Users.

The Zodiac Reader should emit a tone and resume normal operation. The **LEFT** LED indicator on the Zodiac Reader should now be **RED** and the scanner should be continuously cycling **ON/OFF**.

BYPASS KEYS FOR 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 Zodiac Reader’s data port. If the Bypass Key has been added in Zodiac’s memory, the user will have access to whatever device is being controlled. Your Zodiac Lite system comes with five (5) Bypass Keys and a maximum of (eight) 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 Zodiac 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 a memory location for which to store the user’s Bypass Key in the Zodiac 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 Programming Button to the Zodiac 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 Zodiac reader will beep (three) 3 times and you should select another memory location between 91 and 98.
6. Now apply the Bypass Key to the Zodiac 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 Zodiac 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 Zodiac 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 Programming Button to the Zodiac reader as shown in Step 3 - Enrolling Users.

The Zodiac reader should emit a tone and resume normal operation. Both LED indicators on the Zodiac 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 Zodiac 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 Bypass Key that you wish to delete. Press the **DELETE** button. The programmer LED should change to solid **RED**.
4. Apply the Programming Button to the Zodiac 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 Zodiac reader will beep three (3) times.

5. To delete other user Bypass Keys, repeat Steps 1 through 4.
6. To return the Zodiac 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 Programming Button to the Zodiac reader as shown in Step 3 - Enrolling Users.

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

MAINTENANCE

SETTING THE ZODIAC READER TO FACTORY DEFAULT

If you would like to clear the Zodiac 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 Zodiac 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. Set the rotary switches on the programmer to "99" and press the **DELETE** button.
4. The Programmer LED should change to solid **RED**.
5. Apply the Programming Button to the Zodiac Reader's data port. The reader's **LEFT** LED will change to **AMBER** and the reader will emit a continuous tone.
6. After approximately three to five (3-5) seconds, the tone will change. At this point, you must press the **DELETE** button again and apply the programmer again to confirm that you want to reinitialize the Zodiac Reader.
7. Once the Programming Button is applied a second time, the Zodiac Reader will emit a tone for approximately seven (7) seconds.
8. The **LEFT** LED will begin to flash between **RED** and **GREEN** indicating a factory default state.

Method 2:

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

1. While Zodiac is normal operating mode, apply the **BLACK** Initialization Key to the data port on the Zodiac Reader.
2. The Zodiac reader’s **LEFT** LED will change to **AMBER** and the reader will emit a continuous tone.
3. After approximately three to five (3-5) seconds, the tone will change. At this point, apply the **BLACK** Initialization Key to the data port on the Zodiac Reader one more time to confirm that you want to reinitialize the Zodiac Reader.
4. The Zodiac Reader will emit a tone for approximately seven (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 HAND HELD PROGRAMMER

NOTE: When the Zodiac Reader is programmed for the first time, it stores the programmer's 10-digit password. If you change the programmer's password, you will **NOT** be able to use the programmer with the Zodiac Reader again. You will only be able to use the programmer with a Zodiac Lite Reader that is in factory default mode.

If you are setting the password in a new programmer that you wish to use on an existing Zodiac Lite Reader that has *already* been programmed, use the password initially used to program the Zodiac Reader.

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 four (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 5.

REPLACING THE BATTERY IN THE HAND HELD PROGRAMMER

The Zodiac Lite programmer uses a standard 9 V 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.

