



HIDE™

Series 4

(Handheld Interagency Identity Detection Equipment)
Software Version 4.0.2



User Guide

UG-30010-01 Rev 1.1

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HIIDE Series 4
Software Version 4.0.2
User Guide
Part Number: UG-30010-01 Rev 1.1
June 2008

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Document Version

HIIDE™ Series 4 – User Guide, Software Version 4.0.2. Part Number: UG-30010-01,
Rev 1.1, released June 2008.

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Introduction

The L-1 Identity Solutions, Biometrics Division's Handheld Interagency Identity Detection Equipment (HIIDE™) is the world's only portable device of its type allowing a user to capture three different biometric areas; iris, fingerprint and face. In addition, the HIIDE can also collect distinctive features like birthmarks, tattoos, scars, etc., to help create a comprehensive database on the enrolled subjects. Collected biometric data is linked to the biographic information of the individual and enrolled as a record for the purposes of accurately verifying that person's identity in the future. This highly effective means of personal identification provides improved security for people, institutions and society.

The HIIDE is a Microsoft XP embedded device that includes state-of-the art lens technology for both iris and facial image capture, as well as an FBI standards compliant 500 dpi capacitive fingerprint sensor.

This user guide details how to operate a HIIDE, putting the most effective means of personal identification available at your fingertips. This user guide complements the HIIDE device through easy-to-use step-by-step procedures starting with capturing a subject's left and right iris images, then capturing all ten finger prints and finally, the face image. This document will also show you how to use the HIIDE device to build a database through enrollments, and to identify individuals who are already enrolled.

Definition of Terms

The following definitions explain terms that you will find throughout this user guide.

Administrator: The administrator is a user with the highest level of permissions and the ability to set the HIIDE's configurable parameters (refer to [Remote Administrator](#) definition).

Biographic Information/Biographics: A subject's personal details, such as: name, birth date, address, identification number and gender. These details are combined with a subject's biometrics to create a portfolio.

Biometrics: The complex and unique physical features or biological traits that identify an individual. The HIIDE has the ability to scan and store three biometrics: iris, fingerprint and face.

Capture Device: Specialized equipment that measures or records anatomical or behavioral characteristics unique to an individual. The HIIDE is a hand-held capture device that scans an individual's iris, fingerprint and face, and then stores the data for future identification.

Confidence Score: When the HIIDE identifies a subject, that identification is given a score from 0-to-100. This score indicates how certain the HIIDE is that the match is correct.

Enrollment/Enroll: The process of scanning an individual's iris, fingerprint and/or face, capturing its unique pattern, and storing the data, along with the individual's biographic information, as a record in the HIIDE database. For detailed enrollment instructions see "[Collecting Biometric Data on a New Subject](#)" on page 32.

False Rejection: A situation in which a device indicates during a scan of an individual's iris, fingerprint or face, that there is no match within the database when, in fact, that individual has previously been enrolled.

Fingerprint Scanner: Located on the top of the HIIDE device between the shoulder triggers (refer to [Capture Device](#)).

Focus Bars: The bars to the left and right of the capture screens, used for operator reference to indicate the focus the individual's iris or fingerprint for a scan. The bar on the left hand side fills up first, representing a rough focus of 40-80%. The right side bar represents fine focus of 81-100%. When the HIIDE is performing a capture (trigger is activated) these bars turn green.

Host Application: A computer program, running on a desktop or laptop computer, used to communicate with the HIIDE device. Examples of actions preformed by a host application are downloads and uploads of subject portfolios or changing device settings.

HIIDE Device: Handheld Interagency Identity Detection Equipment device. A portable device for scanning and recognizing subjects from their unique iris, fingerprint and face patterns.

Identify/Identification Process: The process of a user scanning a subject's *biometrics* to see if they match a portfolio saved in the database.

Iris: The colored part of the eye containing delicate patterns that vary randomly and significantly from individual to individual, offering a powerful means of identification.

IrisCode®: A complex mathematical representation of the unique patterns contained in an individual's iris. Also known as an iris “template”.

Iris, Fingerprint or Face Scan: The process of acquiring a digital photograph or image of an individual's iris, fingerprint or face in order to identify that individual by analysis of the unique physical features of the scanned biometric.

Operator: The person using a HIIDE to scan, store, and retrieve data. An operator may not have all privileges on the HIIDE device (refer to [Administrator](#)).

Portfolio: Information about an individual that is stored in the HIIDE database. A portfolio includes biometric and biographic information linked together. Also, described as the *record*.

Pupil: The black circle in the center of the eye, and surrounded by the iris.

Record: (Refer to [Portfolio](#) definition.)

Remote Administrator: An administrator that logs onto the HIIDE™ using a host application. (See Administrator definition.)

Scan: (refer to [Iris, Fingerprint or Face Scan](#) definitions).

Specularity: The direct reflection of light bouncing off an eye's surface, creating a “hot spot,” that prevents the algorithm from producing an accurate IrisCode® during iris enrollment or verification.

Subject: The person whose iris, fingerprint and/or face are scanned for personal identification and security purposes.

User: (Refer to [Operator](#) definition.)

Verify: The process of the user scanning a subject's biometrics to see if they match the biometrics that have been linked to a particular portfolio. For more information refer to “[Verification of Identity](#)” on page 45.

The HIIDE™ Device: How It Works

The HIIDE includes two separate cameras for imaging an individual's irises and face, and a sensor pad for scanning fingerprints. These three sensors capture the minute details of a subject's iris, fingerprint and face, as digital photographs, or "scans." The HIIDE™ translates the photographic data into a binary code and links that code to biographic data about the individual, such as name and a personal identification number. The HIIDE then processes the code and biographic data and builds a portfolio for the individual that is stored in a database.

Once an individual has had a record created, or has been "enrolled," that individual is part of the HIIDE database. One can "recognize," or confirm that individual's identity in the future by comparing a live scan of the subjects: iris, fingerprints and/or face to the biometrics contained in the database.

Enrolling (collecting), identifying and verifying an individual are all accomplished the same way by "scanning" an individual's biometrics with a HIIDE™. The sections ["Collecting Biometric Data on a New Subject" on page 32](#), ["Identifying a Subject Using the COLLECT Button" on page 38](#) and ["Verification of Identity" on page 45](#) provide detailed step-by-step instructions for performing these tasks.

Hardware Specifications

[Table 1](#) lists the HIIDE hardware specifications.

Table 1. HIIDE Hardware Specifications

Item	Description	Specification
Physical Dimensions	Height:	5 inches (127 mm)
	Width:	8 inches (203 mm)
	Depth:	3 inches (76 mm)
	Weight:	2 lbs 3 oz. (1361 grams)
Hardware	CPU:	AMD 533 MHz, 16K Instruction 16K Data Cache
	Display:	640 x 480 Color Touch-Screen LCD
	Memory - RAM:	256 MB
	Compact Flash Socket:	Up to 4 GB supported
	Battery:	Dual 2000 mAh (Total 4000 mAh)
I/O	Connectivity:	10/100BaseT PCI Ethernet, 2 x USB ports

Table 1. HIIDE Hardware Specifications (Continued)

Item	Description	Specification
Image Capture	Iris Capture Camera:	640 x 480 (VGA) monochrome Focal distance — 8-to-10" Capture Rate — 15fps (approximately)
	Face Capture Camera:	640 x 480 (VGA) color Focal distance — 8-to-10" (approximately 36") Capture Rate — 15fps (approximately)
	Fingerprint Sensor	Capacitive 500dpi, Capture Rate — 14 fps
Illuminators	Infrared Illumination:	Dual Band IR (safety tested)
Accessories	Power Supply + Power Cord:	For charging HIIDE device
	Deluxe Hard & Soft Case:	For storage of HIIDE device
	External Battery Charger:	
	Additional Battery, Stylus:	
Capacity	There are four basic portfolio types; all assume the minimum biographical information is attached.	
	PORTFOLIO TYPE	AVERAGE SIZE (in KB)
	1. All biometrics -images.....:	652.5
	2. All biometrics - templates.....:	44
	3. 2 Irises, 2 Index, 2 Thumb, and Face - images.....:	601
	4. 2 Irises, 2 Index, 2 Thumb, and Face - templates.....:	40.5
	When preloading template portfolios that have all biometrics (assuming an approximated average portfolio size as noted above):	
	CAPACITY	ADDITIONAL FULL BIOMETRIC ENROLLMENTS
	Preloaded template portfolios (all biometrics)	
	10000	6525
	20000	3313
	33623	0
	When preloading template portfolios that have only 2 Irises, 2 Index, 2 Thumb, and Face biometrics:	

Table 1. HIIDE Hardware Specifications (Continued)

Item	Description	Specification
	PRELOADED TEMPLATE PORTFOLIOS (Iris, Index, Thumb, Face)	ADDITIONAL FULL BIOMETRIC ENROLLMENTS
	10000	6827
	25000	5094
	44975	0

Note: *The above values are approximate values based on averages, and varying portfolio sizes will affect these values.*

Environmental	Operating Temperatures:	4.4°C to 48.8°C (40°F to 120°F)
	Storage Temperatures:	-33.3°C to 71.1°C (-28°F to 160°F)
	Humidity:	5% to 95% humidity (n.c.)

Industry certifications

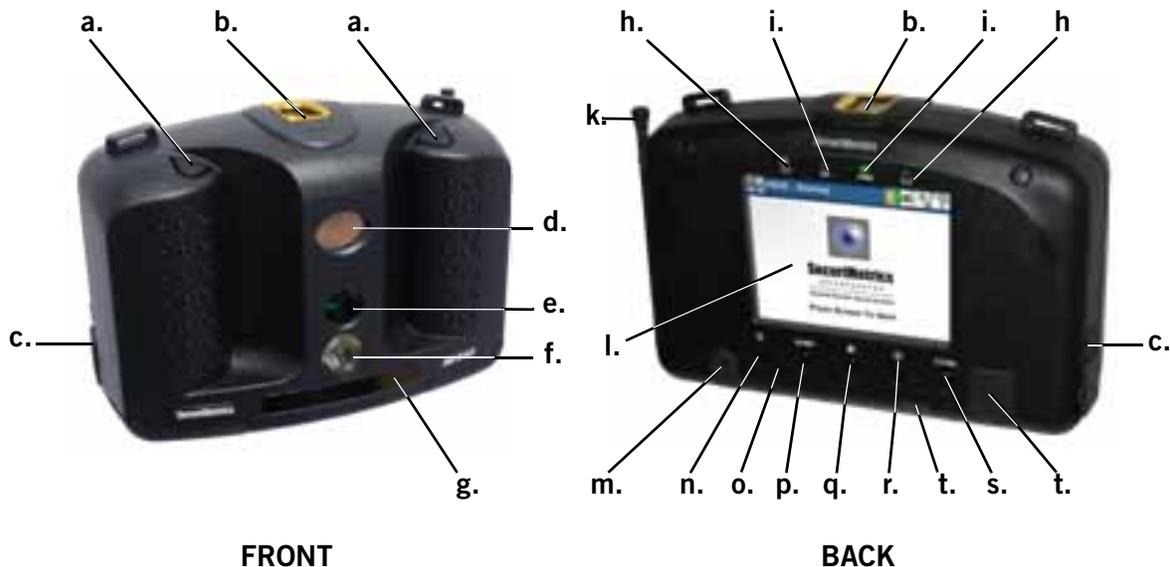


Controls and Indicators

Figure 1 lists the controls and indicators for the HIIDE.

Figure 1. HIIDE Controls and Indications

a). Shoulder Triggers	b). Fingerprint scanner
c). Ethernet port	d). Iris camera (mirror)
e). Face camera	f). Flash
g). IR illuminators	h). Battery light
i). Power light	j). On light
k). Stylus	l). Touch screen
m). Power port	n). Power button (on/off)
o). Hard Reset button	p). Sleep mode button
q). Brightness up button	r). Brightness down button
s). Battery toggle button	t). USB ports



How to use the HIIDE™ Device

This section provides information on how to use the basic core functions of the HIIDE.

Quick Start – Starting the HIIDE and Logging in

For more detailed information on logging into the HIIDE refer to [“Logging into the HIIDE™” on page 30.](#)

1. Powering up the HIIDE.

Before the HIIDE is started it must have power from a charged battery or an AC power adapter. Press the ON/OFF Power button for approximately 2-seconds.

After the power light is on, the boot up process takes about one minute. See [Figure 2.](#)

Figure 2. On / Off Power Button



2. Login with Touch Screen.

When the HIIDE startup process has completed, the splash screen is displayed, with the title bar as shown in [Figure 3.](#)

Figure 3. HIIDE Splash screen



Touch the splash screen to continue to the login screen.

3. Enter User Name and Password.

When the login screen is displayed (see [Figure 4](#)), touch a white text field area to the right of the “**User Name:**” to enter the authorized user name, then the white text field area to the right of the “**Password:**” to enter a valid password.

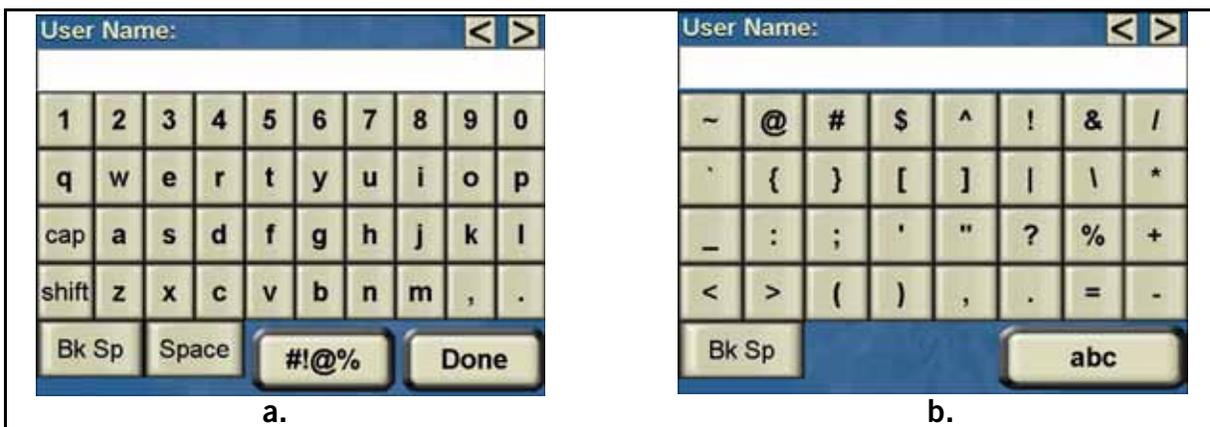
Note: You have the option to also login using the “**Login With Iris**” button as described in section “[Logging into the HIIDE™](#)” on [page 30](#).

Figure 4. HIIDE Login screen



After a white text field area is touched the keypad screen is displayed as shown in [Figure 5 a](#). Pressing the “**#!@%**” button will bring up the special characters keypad screen shown in [Figure 5 b](#). Using the keypad, enter your user name or password, then press the “**Done**” button when you have completed.

Figure 5. HIIDE Keypad screen



The login screen appears with the typed text populating the field that was touched. This process is completed twice to enter both the name and password.

4. Login to HIIDE.

When your user name and password have been entered press the “**Login**” button displayed in [Figure 4](#).

The HIIDE - Main screen appears displaying the “**COLLECT**” button as shown in [Figure 6](#). All biometric captures are performed through the “**COLLECT**” button.

Figure 6. HIIDE - Main Screen



Note: If the HIIDE is idle for five minutes it will enter the sleep mode. To wake the HIIDE up from sleep mode, hold down the power button until the green power light turns on. For more information on sleep mode, refer to section “[Turning the HIIDE™ ON/OFF and Letting it Sleep](#)” on page 29.

Quick Start – Collecting Data and Enrolling Subjects into the HIIDE™ Database

This section provides a brief overview of the enrollment and identification process. For a more detailed enrollment description refer to “[Collecting Biometric Data on a New Subject](#)” on page 32.

1. Start the Enrollment Process.

After you power up and log into the HIIDE you will see the HIIDE - Main screen as displayed in [Figure 6](#). Enrollment/Identification begins when you press the “**COLLECT**” button.

Note: The biometric enrollment and identification process starts with the “**COLLECT**” button. If no matches occur during collection of the iris and fingerprint process, the Enroll - Biographics 1 of 5 screen is displayed. This is the first of five (5) biographic screens where you will enter the subject’s biographic data and save the portfolio to the database. If a match occurs, then the Collect - Match screen is displayed (refer to “[Quick Start – Identify Subjects That Have Portfolios in the HIIDE™ Database](#)” on page 15).

Note: Biometric enrollment settings can be configured using the HIIDE Device Manager. Login time, allowed failures, power settings, sound, time and date, biometric, enroll, identify, network settings, and network properties can be set to meet user requirements. The Device Manager is also used for updating your device software, generating random key encryptions, and database purging. For more information, refer to the Device Manager User Guide, UG-10000-01.

This section describes the basic screens in the biometric collection / enrollment process.

Once started, at any time, you can press the “**Cancel**” button (see [Figure 7](#)). This stops the enrollment and returns you to the HIIDE - Main menu.

Figure 7. Collect - Left Iris - Cancel button



2. Capturing Iris Images of the Subject.
The irises are captured left to right. Either iris can be skipped during enrollment or search by pressing the “**Skip (Left or Right) Iris**” buttons (See [Figure 7](#)).

When capturing the iris (iris camera is active, focus bars are red), hold the camera about 12-to-14 inches from the subject's eye, with the iris centered in the crosshairs. Press one of the shoulder triggers of the HIIDE (focus bars will turn green) to begin the capture process. Move the HIIDE slowly towards then away from the subject's iris, keeping the iris centered in the crosshairs, while watching the green focus bars rise to maximum then fall. Release the shoulder trigger to complete the capture process.

3. Capturing Fingerprint Images of the Subject.
Fingerprints are captured, one by one, starting with the left index, and ending with the right thumb. Any finger, or hand, can be omitted from enrollment or search by pressing the “**Skip (Finger or Hand)**” buttons. See [Figure 8](#).

Figure 8. Fingerprint Collect screen



With the fingerprint capture screen active, have the subject put a fingerprint on the fingerprint sensor, located on top of the HIIDE. The preview window displays the fingerprint. To complete enrollment of that finger press the “**Accept**” button, or one of the shoulder triggers.

4. Capturing the Subjects Face Image.

While in the capture face screen (see [Figure 9](#)) hold the camera just under arms length from the subjects face. Once the subject's face is in focus, press one of the shoulder triggers on the shoulders of the HIIDE to complete the face capture.

You can leave the subject’s face out of enrollment by pressing the “**Skip Face**” button as displayed in [Figure 9](#).

Figure 9. Collect - Face screen



If a match occurs during any of the previous enrollment screens, the Collect - Match screen will appear. Refer to “[Quick Start – Identify Subjects That Have Portfolios in the HIIDE™ Database](#)” on page 15 for a description on the Collect - Match screen.

5. Entering the Subject's Biographic Data.

When no matches occur during collection, the Enroll - Biographics 1 of 5 screen is displayed. [Figure 10](#) shows the Enroll - Biographics screens. On these screens you will enter the biographic data of the subject. The “**Next**” and “**Back**” buttons navigate through the five (5) biographic screens. You must complete each field before proceeding to the next enroll screen. In some screens, if a field is not filled out a HIIDE screen will appear listing the field name and instructions to type in or select and entry as displayed in [Figure 11](#). Click the “**OK**” button to return to the Enroll - Biographics screen. In addition, the Biographic screen will also display if there are matches.

Note: When all information is entered in the Enroll - Biographics 1 of 5 screen, pressing the “**Next**” button will advance you to screen 2 of 5. If you press the “**Accept**” button a HIIDE screen will appear stating, “Gender: You must select an entry.” Press the “**OK**” button to go to Enroll - Biographics 1 of 3 screen and enter the gender information.

Figure 10. Enroll - Biographics screen

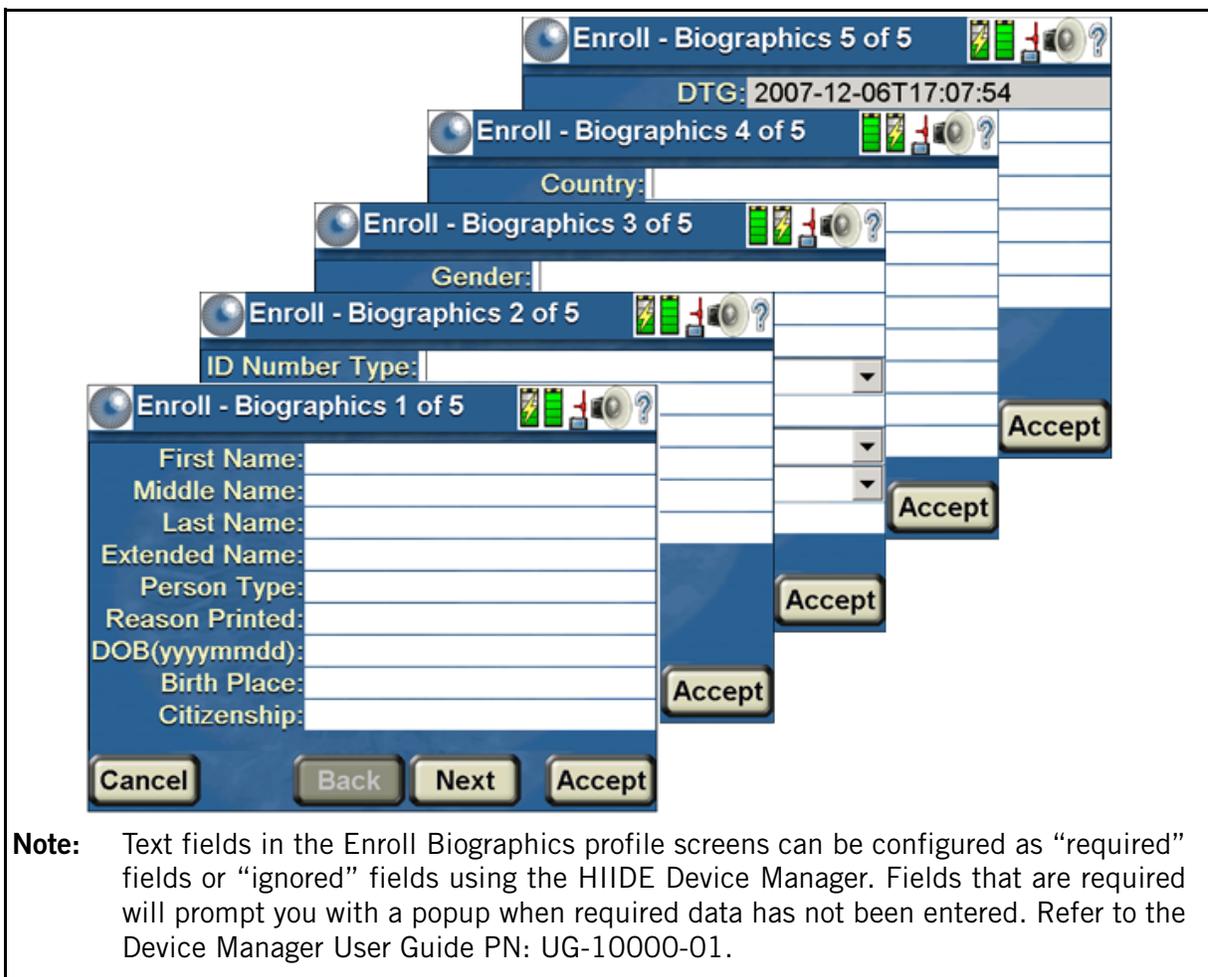
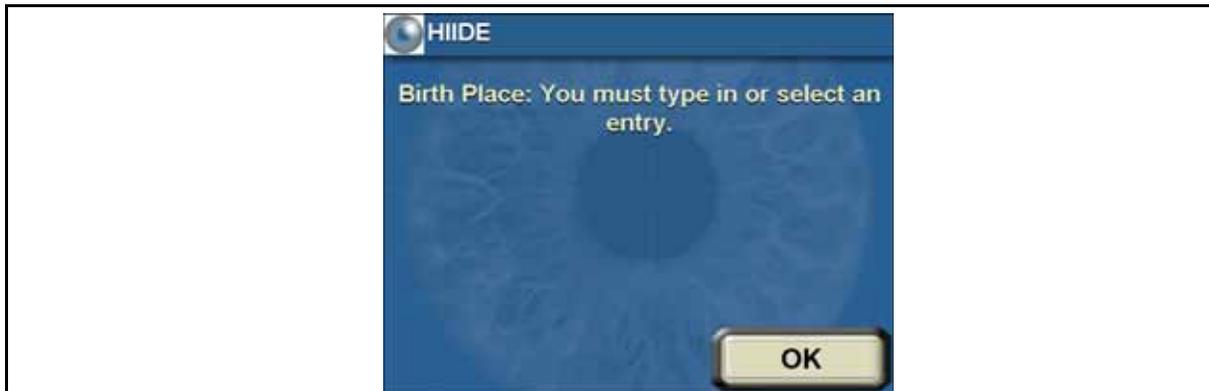


Figure 11. HIIDE Alert screen - Incomplete Biometric Data field



With the exception of the first screen (Enroll - Biographics 1 of 5), when all fields are filled out on each Enroll - Biographic screen, pressing the “**Accept**” button will bring up a HIIDE - Enroll screen as displayed in [Figure 12](#). After pressing the “**Save**” button, a HIIDE screen will appear stating, “Are you sure you want to save the enrollment?”. Press the “**No**” button to return to the enroll confirmation screen or press “**Yes**” to save all biometric and biographic data to the HIIDE database. You will then advance to the HIIDE - Main screen.

Figure 12. HIIDE - Enroll screen



The “**Trk Rpt**” button is located on the HIIDE - Enroll Confirmation screen and is used to add a tracking report to the enrolled portfolio. For more on adding tracking reports refer to section [“Adding a Tracking Report to a Portfolio”](#) on page 46.

Quick Start – Identify Subjects That Have Portfolios in the HIIDE™ Database

This section provides a brief description on identifying a subject. For a more detailed identification description refer to section [“Identifying a Subject Using the COLLECT Button” on page 38](#).

Note: The biometric enrollment and identification process starts with the **“COLLECT”** button. If no matches occur during collection of the iris and fingerprint process, the Enroll - Biographics 1 of 5 screen is displayed. This is the first of five (5) biographic screens where you will enter the subject’s biographic data and save the portfolio to the database. If a match occurs then the Collect - Match screen is displayed. For a detailed description, refer to [“Identifying a Subject Using the COLLECT Button” on page 38](#)). Proceed with the following steps for a basic introduction on how to identify a subject.

Note: Biometric enrollment settings can be configured using the HIIDE Device Manager. Login time, allowed failures, power settings, sound, time and date, biometric, enroll, identify, network settings, and network properties can be set to meet user requirements. The Device Manager is also used for updating your device software, generating random key encryptions, and database purging. For more information, refer to the Device Manager User Guide, UG-10000-01.

1. Start the Identification Process.

After you power up and log into the HIIDE, you will see the HIIDE - Main screen (see [Figure 13](#)). Identification begins when you press the **“COLLECT”** button.

Figure 13. HIIDE - Main screen



Once started, you can press the **“Cancel”** button at any time. This stops the Collect Search process and returns you to the HIIDE - Main menu.

2. When an iris, fingerprint or face is identified in the database, the Collect - Match screen will appear as shown in [Figure 14](#).

Figure 14. Collect - Match screen

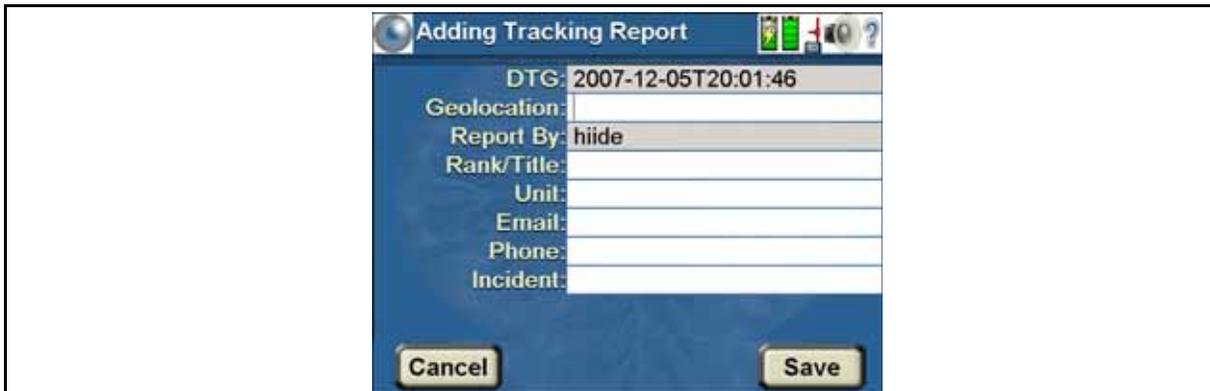


The Collect - Match screen displays the biographical data of the matched individuals. Use the scroll bar to view all information about this subject. If a face image is in the database it will also appear as displayed in [Figure 14](#). If additional images are available in the match, the buttons below the image will become active. The buttons at the bottom of the Collect - Match screen are described below.

- **Close** button: Press the “**Close**” button to return to the HIIDE - Main menu.
- **Trk Rpt** button: Press the “**Trk Rpt**” (Tracking Report) button to access the Adding Tracking Report screen as shown in [Figure 15](#). This button is used to add a tracking report to the enrolled portfolio. You can enter additional data to this screen, then press the “**Save**” button to save to the database or press the “**Cancel**” button to abort. For a detailed description on this feature, refer to section “[Adding a Tracking Report to a Portfolio](#)” on page 46.

Note: Pressing the “**Cancel**” button in the Add Tracking Report screen will display a HIIDE screen stating: “WARNING: Are you sure you want to cancel the tracking report?” Press the “**Yes**” button to cancel the Adding Tracking Report screen or “**No**” to continue.

Figure 15. Adding Tracking Report screen



- **Verify** button: Press the “**Verify**” button to verify the subject’s Left or Right Iris. The following screens will appear for each iris. If there is not a match with the left or right iris a HIIDE screen will appear stating: “No biometrics left to verify.”

Figure 16. Verify - Left / Right Iris



- **Collect** button: Pressing the “**Collect**” button will function in the same manner as pressing the “**Collect**” button from the HIIDE - Main screen.

How to Perform Quality Biometric Captures

Capturing Iris Images

Iris are captured during enrollment, biographic search and verification.

Note: You can also capture your iris as a method of logging into HIIDE.
Refer to section [“Logging into the HIIDE™”](#) on page 30.

From the HIIDE - Main menu, click on the **“COLLECT”** button. You will be prompted to first capture the left iris then the right. To begin a capture press either the **“Capture Left Iris”** button or **“Skip Left Iris”** button. If you press the **“Skip Left Iris”** button, the **“Capture Right Iris”** screen will appear. These buttons are found on screens similar to those shown in [Figure 17](#). After the capture button is pressed an iris is captured in four simple steps.

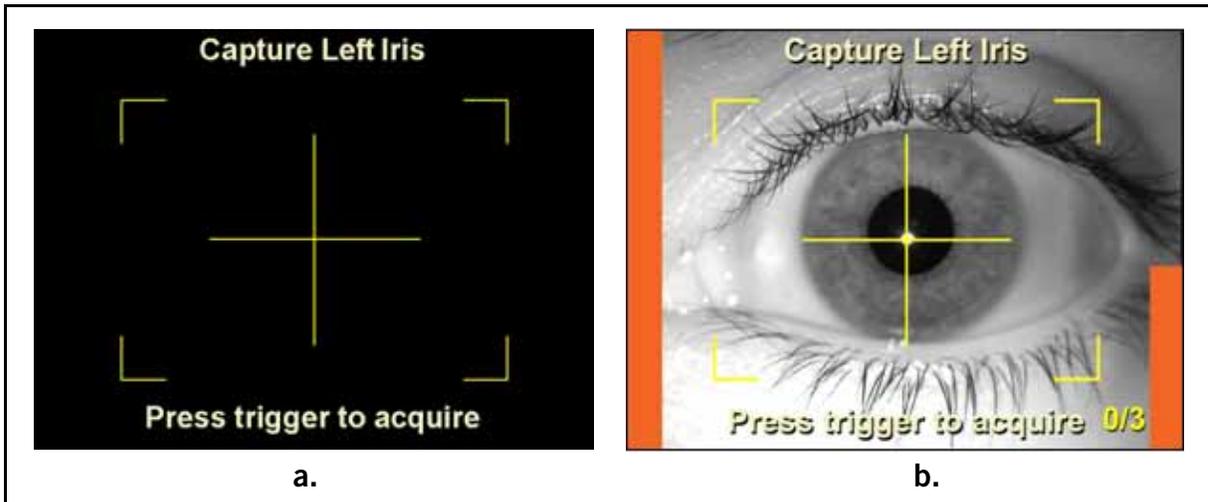
Figure 17. Collect - Left Iris screen



Step 1: Aim Crosshairs at the Iris

The crosshairs iris capture screen will appear as displayed in [Figure 18 a](#). Aim and center the HIIDE screen at the subject's pupil (see [Figure 18 b](#)). While aiming the crosshairs there are a few things to consider, in order to ensure a quality capture.

Figure 18. Iris Capture Screen Showing Crosshairs



- **The HIIDE is 12-to-14 inches from iris:** Position the camera 12-to-14 inches from the iris; this is the optimal capture distance. The live video will display the iris, and you will see orange bars appear as the iris comes into focus.

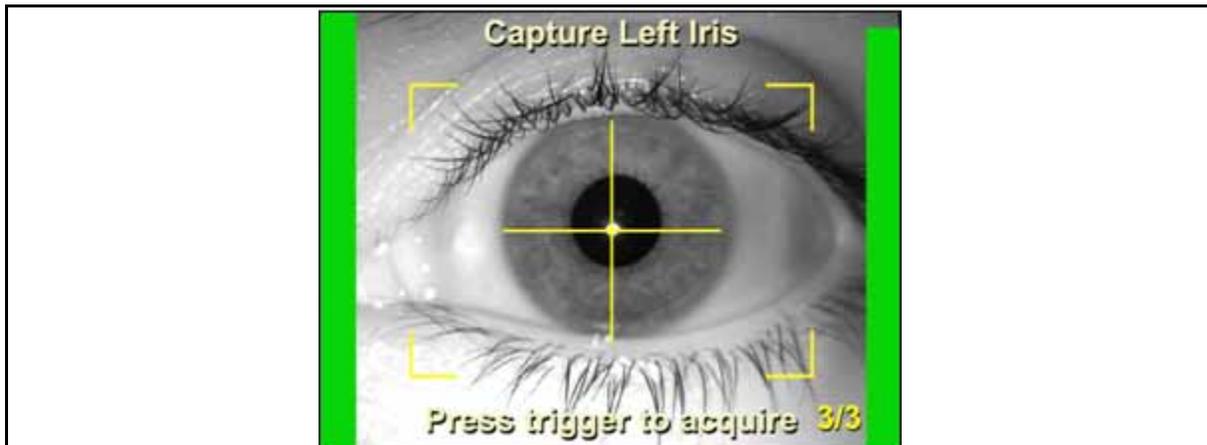
Note: When the shoulder trigger is pressed the orange bars will turn green (refer to [Step 2: Press and Hold Trigger Button](#)).

- **The correct eye is being captured:** Text on the capture screen as displayed in [Figure 18](#) will remind you of the iris currently being captured. The direction of the tear duct is an on-screen indicator of which iris is being displayed. The tear duct for the left iris points left, and the duct for the right iris points right.
- **Eye is looking straight ahead:** The subject should be looking directly into the camera so they can see their eye in the mirror that is covering the iris camera.
- **Eye is fully open with high percentage of iris showing:** The subject's eye should be fully open allowing for a large percentage of the iris to be captured.
- **Minimal light specularities:** Specularities can interfere with a good capture. The IR illuminators on the HIIDE should cause specularities in the center of the pupil, not on the iris. Additional specularities caused by other light sources should be minimized through the positioning of the subject in relation to problem light sources.
- **Eye is not tilted:** The subjects head should be level, and the irises should be closely lined up with the horizontal bar of the crosshairs.
- **Canceling the Iris Capture:** Touching the screen at any time will bring up a HIIDE screen stating: "No acceptable images found. Please try again..." You can click the "**Cancel**" button to return to the iris collect screen or press the "**Retry**" button to continue with the collect (enrollment), biometric search, or verification that you were working on.

Step 2: Press and Hold Trigger Button

Once the eye is centered, and the focus bars have appeared, press and hold one of the two HIIDE shoulder triggers. The focus bars turn green (see [Figure 19](#)), and the HIIDE begins to capture images.

Figure 19. Capture Screen Showing Focus bars



Collect Only: *On collect screens there is a counter in the lower right hand corner of the screen. A HIIDE collect requires three (3) in focus iris images. This counter transitions from 0/3 to 3/3 when three (3) acceptable images have been acquired.*

Step 3: Slowly Move the Camera In and Out

With the trigger button held down and the focus bars turned green, slowly move the camera in and out. As you move the camera the focus bars raise or lower. The left side bar indicates focus value 40 to 80% (rough focus) and the right bar indicates 81 to 100% (fine focus). The higher the focus value, the clearer the image and the better the enrollment.

Also, to ensure a quality capture you should verify that the subject's iris is remaining stable, keeping in mind all of the methods used in [Step 1: Aim Crosshairs at the Iris](#).

Step 4: Release the Trigger Button

When you are confident of a good capture, release the trigger button. If the capture is successful, the HIIDE will beep. If the capture is unsuccessful, you will see the following error message: "No acceptable images found. Please try again...", and hear multiple beeps. You can click the "**Cancel**" button to return to the iris collect screen or press the "**Retry**" button to continue with the collect (enrollment), biometric search, or verification that you were working on.

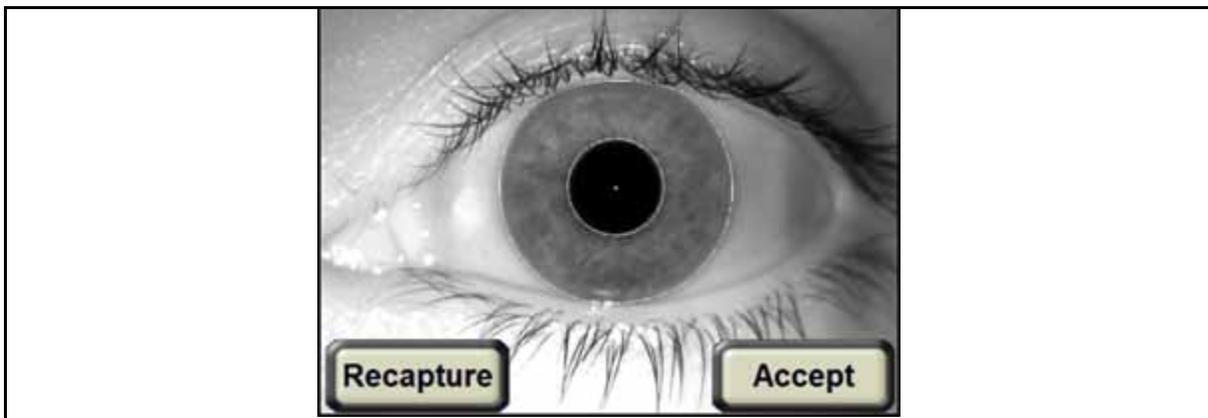
Tip: *The touch screen can be used in place of the trigger buttons when capturing iris images. Simply touch the screen during [Step 2: Press and Hold Trigger Button](#), and release the screen in [Step 4: Release the Trigger Button](#).*

Enrollment and ID Only: *When the counter has reached 3/3 the HIIDE has the images required for an enrollment. However, these images may fail quality checks.*

The Iris Capture Confirmation Screen

Following a successful iris capture the HIIDE displays a confirmation screen (Figure 20), for you to verify that it is a good iris capture. The processed image should outline the iris and pupil accurately, and have none of the poor iris image traits found in the Poor Iris Images section below.

Figure 20. Successful Iris Capture



If the image meets enrollment standards the “**Accept**” button will save the image, and the next collect screen will be displayed. If the image does not meet enrollment standards the “**Recapture**” button will return the iris capture process back to [Step 1: Aim Crosshairs at the Iris](#).

Note: If a Match is found in the database the Collect - Match screen will appear. Refer to [“Identifying a Subject Using the COLLECT Button”](#) on page 38.

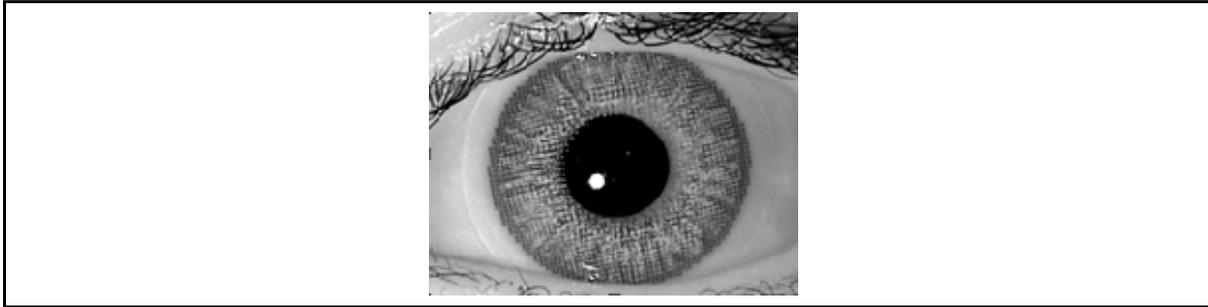
Poor Iris Images

Normally, quality checks of the HIIDE prevent a user from capturing poor quality iris images. However, in some instances the HIIDE will accept poor quality images that should be rejected by a trained HIIDE operator. Below are some enrollment images that are examples of problem iris captures.

Pattern Contact Lens

[Figure 21](#) shows a contact lens that has a colored pattern etched onto the lens. This can obstruct the iris and lead to a failure to recognize.

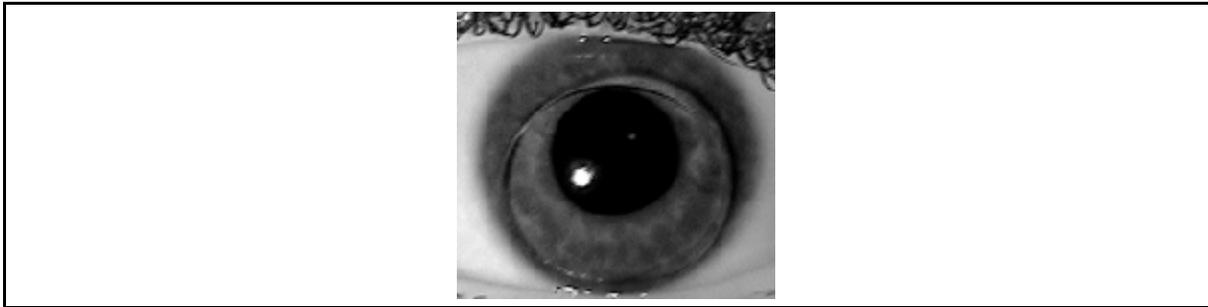
Figure 21. Pattern Contact Lens



Floating Contact Lens

A floating contact lens can obstruct and/or distort the iris image. [Figure 22](#) shows an example of an iris image with a floating contact lens.

Figure 22. Floating Contact Lens



Tilted Image

An eye that is tilted during iris image capture may have difficulty matching future or past captures of the same iris when the eye was not tilted. [Figure 23](#) shows an example of an iris image where the eye is tilted.

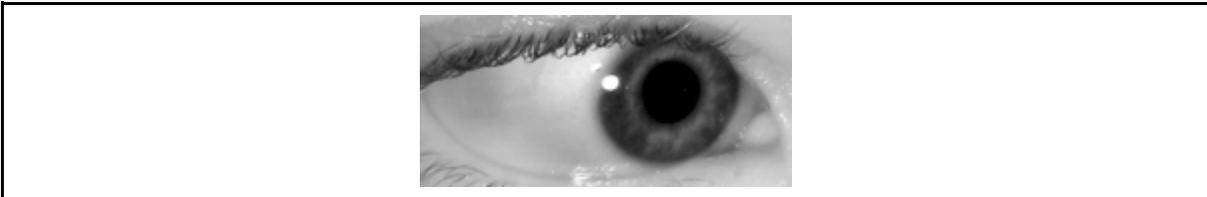
Figure 23. Tilted Iris Image Capture



Subject looking away from HIIDE™

When a subject looks away during the iris image capture their Iriscodes® can be distorted making them difficult to match with future or past captures. [Figure 24](#) shows an example of a subject looking away as the iris image is taken.

Figure 24. Subject Looking Away from HIIDE



Capturing Fingerprint Images

Fingerprints are captured during enrollment, identification and verification. You are always prompted to first capture the left hand, starting with index finger and finishing on the thumb, then the right hand. To begin a capture press the “**Capture (Any) Finger**” button. These buttons are found on screens similar to the one shown in [Figure 25](#). After the button is pressed, fingerprints are captured in three simple steps.

Figure 25. Collect - Left Index screen



Step 1: Have the Subject Place Finger on the Sensor

When you are in the fingerprint capture screen (see [Figure 26 a](#)) have the subject place their fingertip on to the fingerprint sensor located on top of the HIIDE. During this step you should keep a few things in mind.

- The correct fingerprint is being captured:** Text on the capture screen displayed in [Figure 26 a](#) is a reminder of which fingerprint is currently being captured. Verify that the subject has placed the correct finger on the sensor (see [Figure 26 b](#)) Left and Right fingers are referring to the “**subjects**” left and right hand.

Figure 26. Fingerprint Capture screen



- **Fingerprint visible in the preview area:** You will see the fingerprint displayed in the preview area, and green focus bars appear.
- **Pressing the Cancel button:** Pressing the “Cancel” button, at any time, brings you back to the finger collect screen. You can then continue with the collect (enrollment), biographic search, or verification that you were working on.

Step 2: Adjust the Finger for Best Focus

To achieve a higher quality capture the subject may need to adjust the placement of their finger on the sensor. There are a few ways that finger placement can increase the capture quality.

- **The subject is touching the copper edges of the sensor:** The subject’s fingertip is placed so that the edges of their finger touch the sensor’s copper frame. This will improve focus and flatten the finger out over the sensor.
- **Capture as much of the fingerprint as possible:** Have the subject place their finger flat and firm, spreading as much of the fingerprint over the sensor as possible.
- **Slight rotations of the finger may improve focus:** If you are having difficulty with focusing the subjects fingerprint, a small rotation of the users fingerprint may improve focus.

Step 3: Press the Accept Button

Once you are confident that you are getting a good capture press the “Accept” button on the fingerprint capture screen. The HIIDE shoulder triggers will also work to capture fingerprints. If the capture is successful, the HIIDE will beep once. If the capture is unsuccessful, you will see the following error message: “No acceptable images found. Please try again...”, and hear multiple beeps. You can click the “Cancel” button to return to the fingerprint collect screen or press the “Retry” button to continue with the collect (enrollment), biometric search, or verification that you were working on.

The Fingerprint Confirmation Screen

Following a successful fingerprint enrollment capture the HIIDE displays a confirmation screen (see [Figure 27](#)) for you to verify that it is a good fingerprint capture.

Figure 27. Fingerprint Confirmation screen



If the image meets enrollment standards the “**Accept**” button will save the image, and the next collect screen will be displayed. If the image does not meet enrollment standards the “**Recapture**” button will return the fingerprint capture process back to [Step 1: Have the Subject Place Finger on the Sensor](#).

Note: If a Match is found in the database the Collect - Match screen will appear. Refer to [“Identifying a Subject Using the COLLECT Button” on page 38](#).

Poor Fingerprint Images

Normally, quality checks of the HIIDE prevent you from capturing poor quality fingerprint images. However, in some instances the HIIDE will accept poor quality images that should be rejected by a trained HIIDE operator. Below are some enrollment images that are examples of poor quality fingerprint images.

Subject partially lifting their finger

The fingerprint sensor is designed to accept all sizes of fingers. A subject may not apply enough pressure to get a scan of their full fingerprint. So, a larger fingerprint that is being lifted may pass quality checks while showing only a small portion of the actual fingerprint. See [Figure 28](#) for examples of a fingerprint that is either lifted or adequate pressure has not been used.

Figure 28. Bad Fingerprint Captures



Capturing a Face Image

The face is captured during collect (enrollment), and verification. To begin a capture press the **“Capture Face”** button. These buttons are found on screens similar to the one shown in [Figure 29](#). The **“Skip Face”** button will abort the face capture screen.

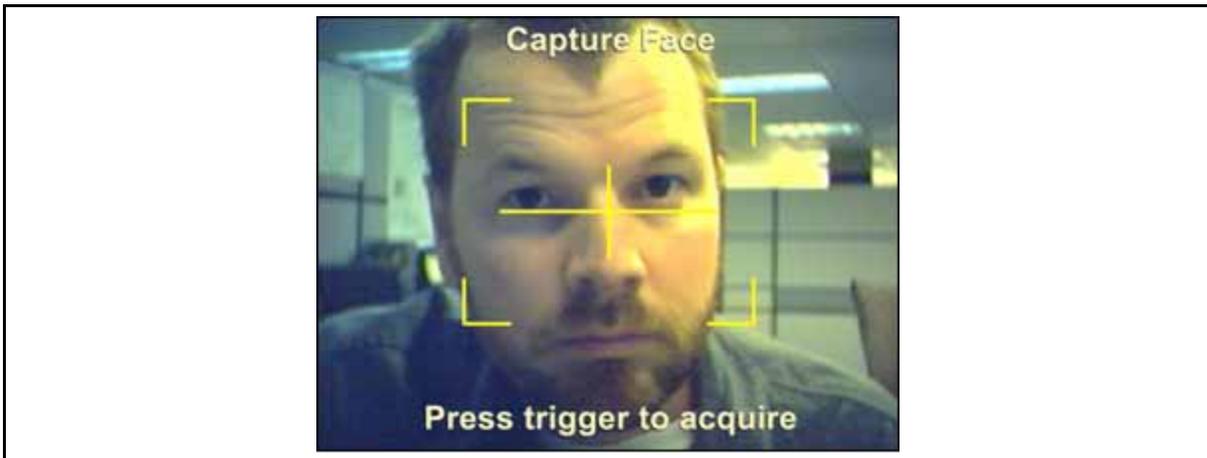
Figure 29. Collect - Face screen



Step 1: Aim Crosshairs at the Center of the Face

After the **“Capture Face”** button is pressed, the crosshairs that are displayed on the face capture screen are aimed at the center of the subject’s face, between the eyes. See [Figure 30](#). While aiming the crosshairs there are a few things to keep in mind, in order to ensure a quality capture.

Figure 30. Capture Screen Showing Crosshairs



- **The HIIDE is 3-to-4 feet from the face:** Position the camera at the optimal capture distance, 3-to-4 feet from the face. Streaming live video will display the face.
- **Subject is looking directly into the camera:** Have the subject look directly into the camera, while keeping their head level.
- **The Subject should have an expressionless look:** The subject's face should be relaxed and expressionless.
- **The face should fill the view:** The subject's face should almost fill the view of the camera.
- **The horizontal bar intersects with the eyes:** The camera should be aimed so that the horizontal bar of the crosshairs is level intersecting both eyes.
- **There are no focus bars for the face:** On this screen there are no focus bars, so you should not be expecting, or trying to position the camera to try to get them.

Step 2: Press and Release Trigger Button

When you are confident of a good face image capture, you should press then release the trigger button. If the capture is successful, the HIIDE will beep once. If the capture is unsuccessful, you will see an error message, hear multiple beeps, and be able to attempt the capture again.

Tip: *The touch screen can be used in place of the trigger buttons when capturing face images. Simply touch the screen during [Step 2: Press and Release Trigger Button](#).*

The Face Confirmation Screen

Following a successful face enrollment capture the HIIDE displays a confirmation screen (see [Figure 31](#)) for you to verify that it is a good face capture.

Figure 31. Capture Face Confirmation screen



If the image meets enrollment standards the “**Accept**” button will save the image, and the biographics screens will be displayed. If the image does not meet enrollment standards the “**Recapture**” button will return the face capture process back to [Step 1: Aim Crosshairs at the Center of the Face](#).

Note: If a Match is found in the database the Collect - Match screen will appear. Refer to [“Identifying a Subject Using the COLLECT Button” on page 38](#).

Turning the HIIDE™ ON/OFF and Letting it Sleep

To power up the HIIDE, press and hold the power button. When the green power light turns on release the power button. The HIIDE performs a self test, as it is powering up, producing the appropriate beep codes and status indication using LEDs. After boot up the splash screen is displayed and you can continue Logging on (refer to section [“Logging into the HIIDE™” on page 30](#)).

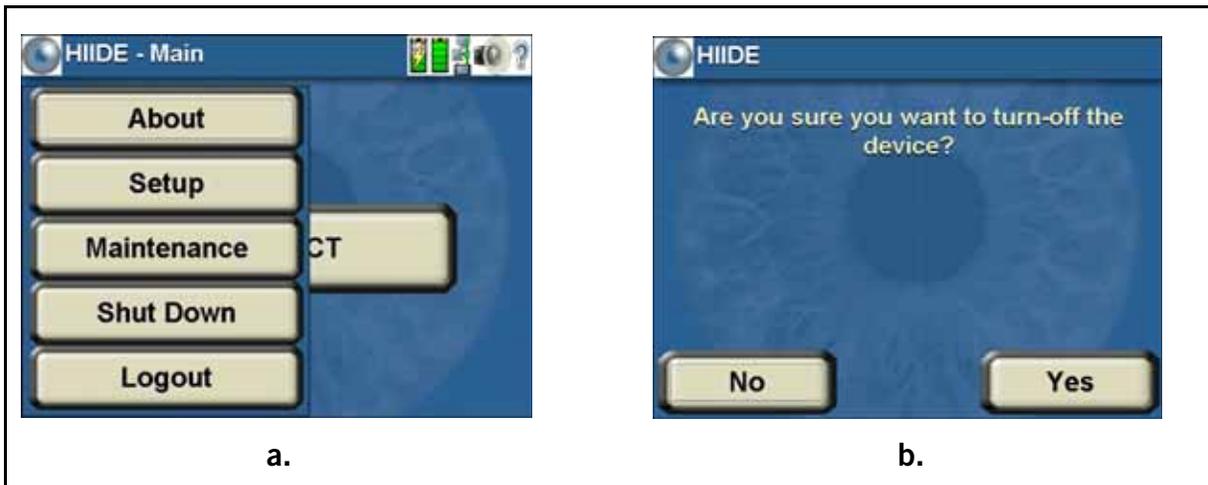
If the HIIDE is left to sit idle for five minutes, it will enter the sleep mode. You can also put the HIIDE to sleep manually by holding down the sleep mode button for a second. While sleeping the HIIDE is in a power saving mode with the touch screen turned off. Sleep mode can help to extend battery life. Also, the HIIDE will wake from sleep mode and be ready for use faster than if the HIIDE had been turned off.

To wake the HIIDE from sleep mode hold down the power button until the green power light turns on. The Login screen is then displayed and you must login to continue using the HIIDE.

If the HIIDE™ is idle for thirty minutes it will turn off.

To shut down the HIIDE from the screen, touch the iris Logo at the top left screen and drop down menu will appear (see [Figure 32 a](#)). Press the **“Shut Down”** button. A confirmation screen will appear (see [Figure 32 b](#)). Press the **“Yes”** button to shutdown or the **“No”** button to cancel and return to the HIIDE - Main menu.

Figure 32. HIIDE Dropdown Menu



The HIIDE can also be turned off using the power button (see [Figure 1](#)). To do this press and hold the power button, then release it when the green power light turns off. The HIIDE will then go through the shut down process.

Logging into the HIIDE™

This section covers information about logging into the HIIDE device. For information on logging out refer to section “Logging Out” on page 55.

When the HIIDE is turned on, you will first see the splash screen as displayed in Figure 33 a). Touch the splash screen to view the HIIDE - Login screen and the screen displayed in Figure 33 b) will appear. From here you will have three options.

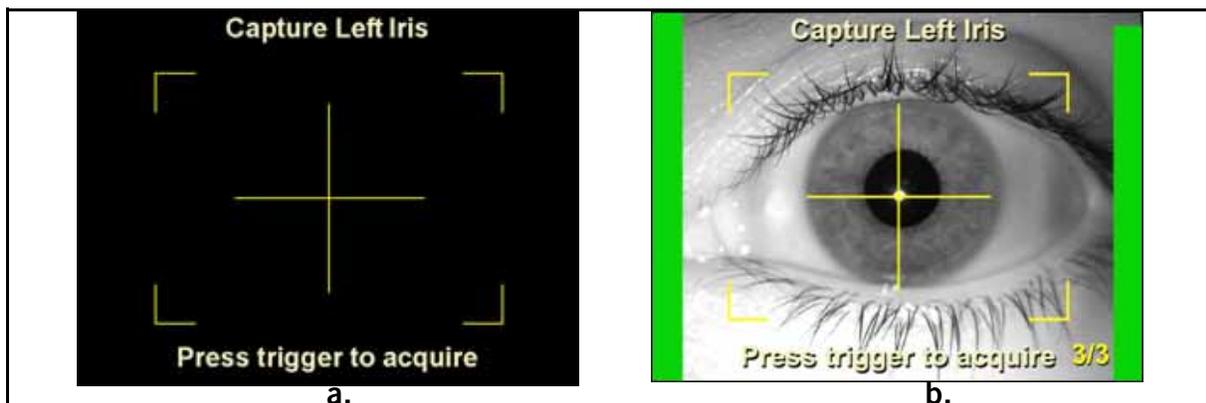
Figure 33. Login into HIIDE screens



- Login with Iris:** To start iris login, press the “Login With Iris” button. This opens the iris capture login screen (see Figure 34 a). Hold the HIIDE 12-to-14 inches from your eye, while viewing your eye in the mirror (see Figure 34 b). The HIIDE will make a ticking sound when the iris is in focus. Holding then releasing one of the shoulder triggers completes the iris login process. This is done as in section “Capturing Iris Images” on page 18, except that you can not see the screen while they are capturing your own irises.

Note: In order to log in with an iris, your iris must be added during the user setup process using the HIIDE Device Manager program. For more information, refer to the Device Manager User Guide, UG-10000-01.

Figure 34. Capture Left or Right Iris screen



If the iris is captured successfully, the user is logged in and will see the HIIDE - Main menu (see [Figure 6](#)). If the capture is unsuccessful, the user will see an error message and be able to try again.

- Login with name and password:** To login using a name and password, touch the “**User Name**” or “**Password**” text field to bring up the keypad screen (see [Figure 35](#)). Using the keypad, type your user name. Press the “**Done**” button to return to the Login screen. The user name is inserted into the user name text field. Repeat the same process with the “**Password**” text field. After a user name and password have been entered, press the “**Login**” button.

Figure 35. HIIDE Keypad screen



- If a valid user name and password is entered, you will see the HIIDE Main - menu as displayed in [Figure 6](#). If the name and/or password are invalid, you will see an error message screen stating, “Invalid login”. Press the “**OK**” button and try again.

Note: After four (4) attempts to log in with an invalid user name or password, the login will be temporarily disabled for five (5) minutes.

- Quit login process:** Pressing the “**Cancel**” button, quits the login and returns you to the HIIDE splash screen.

Collecting Biometric Data on a New Subject

Collecting biometric data (enrolling a subject) is the process of an operator scanning an individual's biometric details, coupling them with biographic data, and then saving them as a portfolio in the HIIDE database. The steps below detail the enrollment procedure.

This section focuses on how to collect biometric data on a new subject including all related screens.

During the collection session, all biometrics that the HIIDE user captures from a subject are buffered. Rather than having to recapture a biometric for a Verify or Collect the buffered images are used. When a profile is closed or collection is cancelled, the buffer is cleared, and the user is returned to the Main-Menu.

Step 1: Starting the Enrollment Process

After logging in, the HIIDE - Main screen is displayed as shown in [Figure 36](#). Press the “**COLLECT**” button to begin creating a portfolio of a subject.

Note: The biometric enrollment and identification process starts with the “**COLLECT**” button. If no matches occur during collection of the iris and fingerprint process, the Enroll - Biographics 1 of 5 screen is displayed. This is the first of five (5) biographic screens where you will enter the subject's biographic data and save the portfolio to the database. Continue with the following steps for the enrollment process. If a match occurs then the Collect - Match screen is displayed (refer to [“Identifying a Subject Using the COLLECT Button”](#) on page 38).

Figure 36. HIIDE - Main screen



Step 2: Capturing the Left and Right Iris

The Collect - Left Iris screen (see [Figure 37](#)) is the first screen that you see. Though the process begins with the left iris screen, both the left and right iris collect screens operate the same way. On these screens you have three choices on how to continue with the enrollment of the subject.

Figure 37. Collect - Left Iris screen



- **Capture an iris:** To capture an iris image follow the steps outlined in section [“Capturing Iris Images”](#) on page 18.

If the iris is captured successfully, you will see the next biometric screen. If the left iris was just captured, the capture right iris screen will appear. If the right iris was just captured then the Collect - Left Index screen will appear as displayed in [Figure 38](#).

- **Skip capturing the current iris:** To do this the user presses the **“Skip (Left or Right Iris)”** button. This action skips enrollment of the subjects left or right iris and brings the user to either the enroll right iris screen (if the left iris was just skipped), or the enroll left index finger screen (if the right iris was just skipped).
- **Quit the enrollment process:** If the user presses the **“Cancel”** button, the enrollment process is stopped and the HIIDE returns to the main menu. *Any biometrics already captured will be lost.*

Step 3: Capturing the Fingerprints of the Left and Right Hand

After both the subject’s irises have been either enrolled or skipped, the Enroll - Left Index finger screen (see [Figure 38](#)) is displayed. This screen is the beginning of the series of fingerprint collect screens. The fingerprint collect screens step the operator through the enrollment of each finger, one by one, until all fingerprints have been either enrolled or skipped. These screens provide the user with four (4) different options on how to continue with the enrollment of the subjects fingerprints.

Figure 38. Collect - Left Index screen



- **Capture a fingerprint:** To capture a fingerprint image follow the steps described in section [“Capturing Fingerprint Images”](#) on page 23.

If the capture is successful you will see the screen for the next biometric to be collected. The next biometric screen will be a finger unless all the fingers have been either captured or skipped, then [Step 4: Capturing the Face](#), will be the next enrollment process.

- **Skip capturing the current fingerprint:** To omit enrollment of the current finger, press the **“Skip Finger”** button. This choice skips enrollment of the current finger and takes you to the next collect screen. The next screen will be a finger unless all the fingers have been either captured or skipped, then [Step 4: Capturing the Face](#), will be next enrollment process.
- **Skip capturing of the current hand:** To omit enrollment of all the fingers on the current hand, the user presses the **“Skip Hand”** button. This button skips the collection of data for the remaining fingers on the current hand and begins enrollment of the fingers on the other hand, or if both hands are skipped then [Step 4: Capturing the Face](#) will be next enrollment process.
- **Quit the enrollment process:** If you press the **“Cancel”** button at any time, the enrollment process is stopped and the HIIDE returns to the HIIDE - Main menu. *Any biometrics already captured will be lost.*

Step 4: Capturing the Face

After all the fingerprints have been either captured or skipped, the Collect - Face screen becomes the current view as displayed in [Figure 39](#). You can choose from three actions on the Collect- Face screen.

Figure 39. Collect - Face screen



If the face is captured successfully, you will see the Collect - Biographics screens (see [Figure 40](#)), and move on to [Step 5: Entering Subject's Biographic Data](#).

- **Skip capturing the face:** If you press the “**Skip Face**” button the face is not enrolled and the user continues to the Enroll - Biographics screen (see [Figure 40](#)).
- **Skip Face:** If you press the “**Skip Face**” button you will continue to the Enroll - Biographics screen (see [Figure 40](#)).
- **Quit the enrollment process:** If the user presses the “**Cancel**” button, the enrollment process is stopped and the HIIDE returns to the HIIDE - Main menu. *Any biometrics already captured will be lost.*

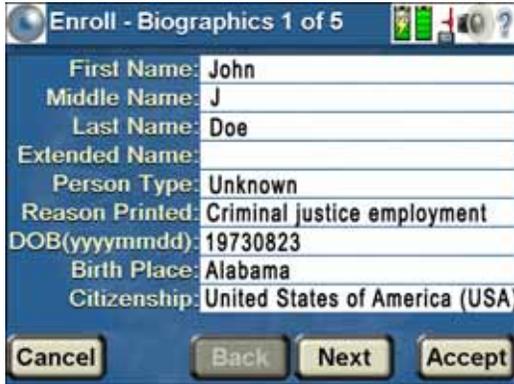
For complete instructions on capturing the face image follows the steps outlined in section “[Capturing a Face Image](#)” on [page 26](#).

After you have captured or skipped the Collect - Face feature, you will see the Collect - Biographics screens (see [Figure 40](#)), and move on to [Step 5: Entering Subject's Biographic Data](#).

Step 5: Entering Subject's Biographic Data

After capturing or skipping the Face, the Enroll - Biographics 1 of 5 screen (see [Figure 40](#)) is displayed. This is the first of five (5) biographics screens where you will enter the subject's biographic data and save the portfolio to the database. These screens provide you with three options on how to complete the enrollment.

Figure 40. Enroll - Biographics 1 of 5 screen

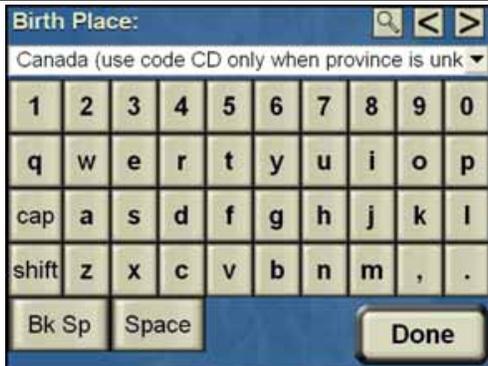


Note: Text fields in the Enroll Biographics profile screens can be configured as “required” fields or “ignored” fields using the HIIDE Device Manager. Fields that are required will prompt you with a popup when required data has not been entered. Refer to the Device Manager User Guide PN: UG-10000-01.

- **Moving between biographic screens:** The “Back” and “Next” buttons are used to navigate between the five (5) biographic screens. Mandatory data on a screen must be filled out before moving to the next screen.
- **Enter biographic data:** Not all text fields have dropdown list boxes on the biographics screens. For all other text boxes touch the white text field you want to edit; this will bring up the keypad screen (see [Figure 41](#)). The user either types the information, that is to be inserted into the selected text field or uses a dropdown list to select an item. There are some text fields that are a combination of a dropdown list and typed entry. Pressing the “Done” button adds the typed text to the enroll portfolio screen.

For more information on entering biometric data, refer to [Entering the Subject's Biographic Data in step 6 on page 11](#).

Figure 41. HIIDE Keypad screen



- **Create a portfolio:** To create a portfolio press the “**Accept**” button. This action links all enrollment data (iris, finger, face) and biographic data, saving it to the database as a portfolio.
- **Quit the enrollment process:** If the user presses the “**Cancel**” button, a HIIDE confirmation window stating, “WARNING: Are you sure you want to cancel the enrollment?” will appear. You can press either the “**Yes**” or “**No**” button. If the “**Yes**” button is pressed the enrollment process is stopped, all captured data is lost, and the HIIDE returns to the main menu. Pressing the “**No**” button returns you to the Enroll - Biographics screen.

Identifying a Subject Using the COLLECT Button

Identification of individuals is one of the core functions of the HIIDE. Identification is when an operator scans a biometric of a subject to see if that individual already has a portfolio stored in the HIIDE database. The steps below detail the identification procedure.

Step 1: Starting the Identification Process

After logging in, you will see the HIIDE - Main menu (see [Figure 42](#)). To start the identity process press the “**COLLECT**” button.

Figure 42. HIIDE - Main Menu



Once started, you can press the “**Cancel**” button at any time. This stops the process and brings you back to the HIIDE - Main menu.

Note: The biometric enrollment and identification process starts with the “**COLLECT**” button. If no matches occur during collection of the iris and fingerprint process, the Enroll - Biographics 1 of 5 screen is displayed. This is the first of five (5) biographic screens where you will enter the subject’s biographic data and save the portfolio to the database as described in [Step 5: “Entering Subject’s Biographic Data” on page 35](#). If a match occurs then the Collect - Match screen is displayed as shown in [Figure 43](#).

Note: Biometric enrollment settings can be configured using the HIIDE Device Manager. Login time, allowed failures, power settings, sound, time and date, biometric, enroll, identify, network settings, and network properties can be set to meet user requirements. The Device Manager is also used for updating your device software, generating random key encryptions, and database purging. For more information, refer to the Device Manager User Guide, UG-10000-01.

Figure 43. Collect - Match screen



Step 2: Identifying With Iris

Pressing the **“Collect”** button on the Collect - Match screen will bring up the Collect - Left Iris screen (see [Figure 44](#)). Though the process begins with the left iris screen, both the left and right iris collect screens function the same way. On these screens you have three choices on how to continue with the identification of the subject.

Figure 44. Collect - Left Iris screen



- Capture an iris:** To capture an iris image follow the steps outlined in section [“Capturing Iris Images”](#) on page 18.

If a match is found for the captured iris you will be taken to the Collect - Match screen (see [Figure 46](#)). Refer to [Step 5: Viewing Portfolio and Verifying a Subject’s Biometrics](#) for details on the Collect - Match screen. If no match occurs during collection, you will be prompted to save each biometric capture (iris, fingerprint, and face) then the Enroll - Biographics 1 of 5 screen is displayed and you will enter biographic enrollment data as described in [Step 5: “Entering Subject’s Biographic Data”](#) on page 35.

Note: If a match is found and an “Alert” has been entered in the database for the subject, the last alert Collect - Match screen will appear in red.

- **Skip capturing the current iris:** Press the “**Skip (Left or Right) Iris**” button. This action skips capture of the subjects left or right iris and brings the user to either the Collect Right iris screen (if the left iris was just skipped).
- **Quit the identification process:** If you press the “**Cancel**”, button the identification process is stopped and you are returned to the HIIDE - Main menu.

Step 3: Identifying With Fingerprint

If you have not been able to identify a subject using irises or they have been skipped, the Collect - Left Index finger screen (see [Figure 45](#)) is displayed. This is the first screen of the fingerprint identification series of screens. The fingerprint identification steps you through the subject’s fingers until a finger is found that identifies the subject, or all the fingers are skipped. These screens provide the user with four different options on how to proceed with identifying a subject by fingerprint.

Figure 45. Collect - Left Index screen



- **Capture a fingerprint:** To capture a fingerprint image follow the steps outlined in section “[Capturing Fingerprint Images](#)” on page 23.

If a match is found for the captured fingerprint the user will be taken to the Collect - Match screen (see [Figure 46](#)). Refer to [Step 5: Viewing Portfolio and Verifying a Subject's Biometrics](#) below. If no match is found during collection, you will be prompted to save each biometric capture (iris, fingerprint, and face) then the Enroll - Biographics 1 of 5 screen is displayed and you will enter biographic enrollment data as described in [Step 5: “Entering Subject's Biographic Data”](#) on page 35.

- **Skip capturing the current fingerprint:** Press the “**Skip Finger**” to skip scanning of the current finger. This will bring you to the next screen. The next screen will be a finger capture screen or, if all the fingers have been captured or skipped, the capture face screen.
- **Skip capturing the fingerprints on the current hand:** Press the “**Skip Hand**” button. This skips identification of the remaining fingers on the current hand and begins the enrollment of the fingers on the other hand or, if all the fingers have been captured or skipped, the capture face screen.
- **Quit the identification process:** If you press the “**Cancel**” button the identification process is stopped and returns you to the HIIDE - Main menu.

Step 4: Capturing the Face

The face is captured during collect (enrollment), and verification.

- **Capture a face:** To capture a face image follow the steps outlined in section “[Capturing a Face Image](#)” on page 26.
- **Skip capturing the face:** Press the “**Skip Face**” button to skip the capture face screen and go to the Enroll - Biographics 1 of 5 screen.
- **Quit the identification process:** If you press the “**Cancel**” button the identification process is stopped and returns you to the HIIDE - Main menu and no biographic captures will be saved.

Step 5: Viewing Portfolio and Verifying a Subject’s Biometrics

After a subject has been identified the Collect - Match screen is displayed (see [Figure 46](#)). Sometimes more than one portfolio is returned as a match (refer to section “[Viewing Multiple Results](#)” on page 44). The Collect - Match screen displays the biographical data of the matched individual. On this screen there is a confidence score, for more information on this score refer to section “[The Confidence Score](#)” on page 45. There are also five buttons that provide the following information.

Figure 46. Collect - Match screen

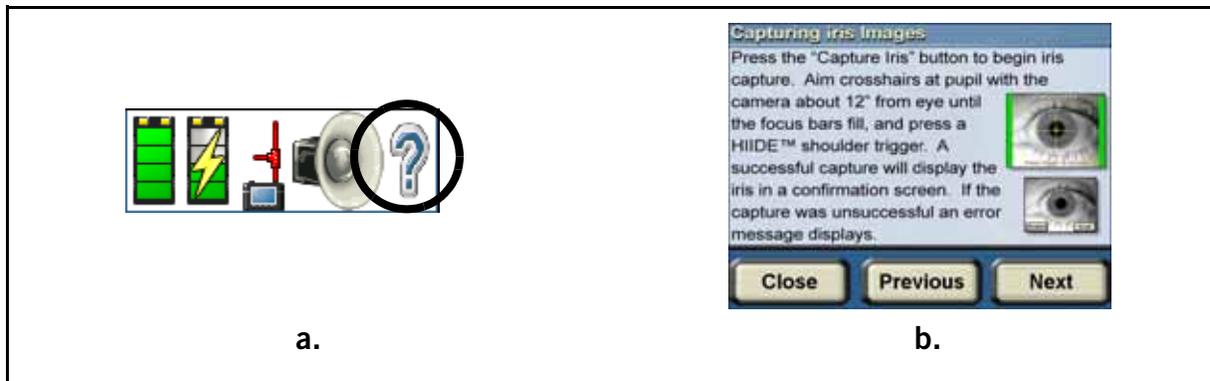


- **Verify** button: This option is available only if the subject has biometrics, other than the one used to initially access the portfolio, which can be used to further verify the identity of the subject. Press the “**Verify**” button to begin this process. Refer to section “[Verification of Identity](#)” on page 45, for details on the verification procedure.
- **Collect** button: This button allows the user to capture biometrics previously skipped during the initial collection process. Pressing the “**Collect**” button will function in the same manner as pressing the “**Collect**” button from the HIIDE - Main screen. See [Figure 6](#).
- **Add Tracking Report**: The “**Trk Rpt**” button is used to add a tracking report to the identification session. For more on adding tracking reports refer to section “[Adding a Tracking Report to a Portfolio](#)” on page 46.
- **Back and Next** buttons: These buttons are used for browsing through multiple portfolios. For more on browsing multiple portfolios refer to section “[Viewing Multiple Results](#)” on page 44.
- **Close** button: If you press the “**Close**”, button the identification process is stopped and returns you to the HIIDE - Main menu.

Using the Help Screens

The help screens are a series of slides that describe how to perform the functions of the HIIDE™. Touching the help icon (see [Figure 47 a.](#)), accesses the help screens (see [Figure 47 b.](#)), and provides information on the active screen.

Figure 47. HIIDE Help screen



Once in the help screen you can press the “**Close**” button at any time to return to the screen you were viewing before entering help. You can navigate back and forth through the help using the “**Previous**” and “**Next**” buttons.

Advanced Operations

This section covers the in-depth functions of the HIIDE.

Viewing Multiple Results

The identification process described in section [“Identifying a Subject Using the COLLECT Button” on page 38](#) may return multiple matches. The syncing of multiple databases can lead to creating duplicate portfolios of the same subject.

When multiple matches have been returned, the “Collect - Match” screen navigation buttons located below the mug shot will become activated (highlighted). These buttons will be grayed out unless the portfolio displayed has additional images attached. The Collect - Match screen title bar will also display the number of match screens indicated in parentheses. In addition, the **“Back”** and **“Next”** buttons will be enabled when multiple matches have been returned. These buttons are used to navigate between the portfolios.

Note: The **“Back”** button will be grayed out on the initial Collect - Match screen.

[Figure 48](#) shows two active match navigation buttons indicating that the current portfolio is one of a series of matches.

Figure 48. Collect - Match screen



The confidence level can be increased or decreased through verification (refer to [“Verification of Identity” on page 45](#)). Each portfolio handles verification independently. If there are four portfolios, you would scan the right index finger four times, testing it against each portfolio.

Verification of Identity

When you reach the “Collect - Match” screen (see [Figure 49](#)), you can adjust the confidence score (refer to “[The Confidence Score](#)” below) of a portfolio by verifying the portfolio against additional biometrics. Pressing the “**Verify**” button starts the process of scanning the biometrics linked to the portfolio. If there are no other biometrics linked to a portfolio a HIIDE screen will appear stating, “No biometrics left to verify.”

Figure 49. Collect - Match screen - Confidence Score



Only biometrics linked to the portfolio, and not previously used in adjusting the confidence score are available to scan. The biometrics are stepped through and scanned, in pairs, similar to the enrollment process (refer to “[Collecting Biometric Data on a New Subject](#)” on page 32). You will see a message after each pair of scans indicating if there was a match with the portfolio. After each pair of biometrics is verified, the portfolio screen is displayed with an updated confidence score.

The Confidence Score

The confidence score is a number 0 to 100, designed to give a rough estimation of the quality of a match based on the combined biometric match and/or mismatches. This score is located below the mug shot buttons in the Collect - Match screen as displayed in [Figure 49](#). It is *not* a percentage, and is *not* a match probability (a false accept / reject rate). A well trained HIIDE user does not make any meaningful statistical estimates of probabilities based on the scores.

The confidence score is a rough way of sorting portfolios. You can find good matches and eliminate bad matches. A good rule of thumb is that higher scores are better than lower scores.

The confidence scores are used to sort the portfolios on the “Collect - Match” screen. The portfolios with the highest scores are the best matches and listed first. Each time a biometric is scanned during identification or verification the confidence score may

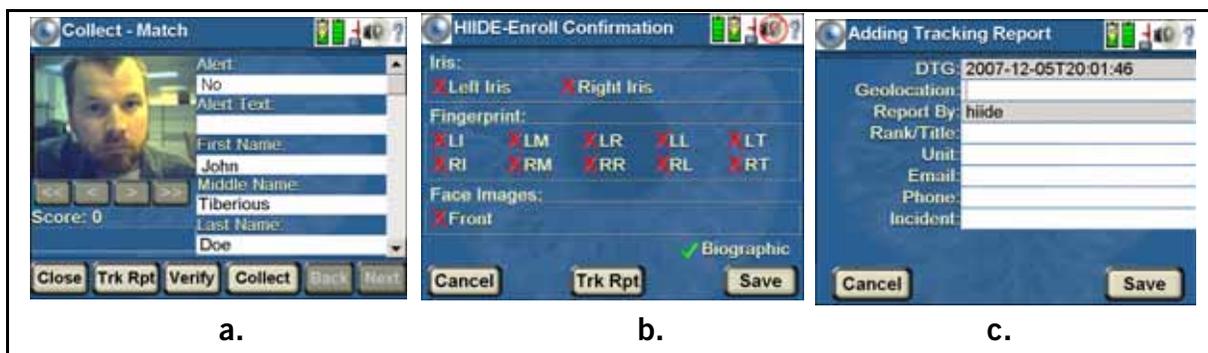
be adjusted. A successful match increases the confidence score, while a scan that does not match decreases the score. As the scores change, the list is resorted to keep the best matches at the top of the list.

Adding a Tracking Report to a Portfolio

A tracking report is additional information that can be added to either a portfolio during enrollment or after identification. Once this information is entered it is only available to a HIIDE remote operator. A tracking report that has been added is extracted from the HIIDE using a host application.

The Collect - Match and HIIDE - Enroll Confirmation screens have buttons used to add tracking reports (see [Figure 50 a and b](#)). Pressing the “**Trk Rpt**” button will bring up the Adding Tracking report screen (see [Figure 50 c](#)).

Figure 50. Collect - Match, Enroll Biographic Confirmation, and Adding Tracking Report screens



A remote administrator can set up the HIIDE user information to automatically populate text boxes in the adding tracking report display. You will add text to the tracking report in the same way that biographic information is entered during an enrollment (refer to section [Collecting Biometric Data on a New Subject, Step 5: Entering Subject's Biographic Data](#)). Pressing the “**Save**” button attaches the tracking report to the portfolio.

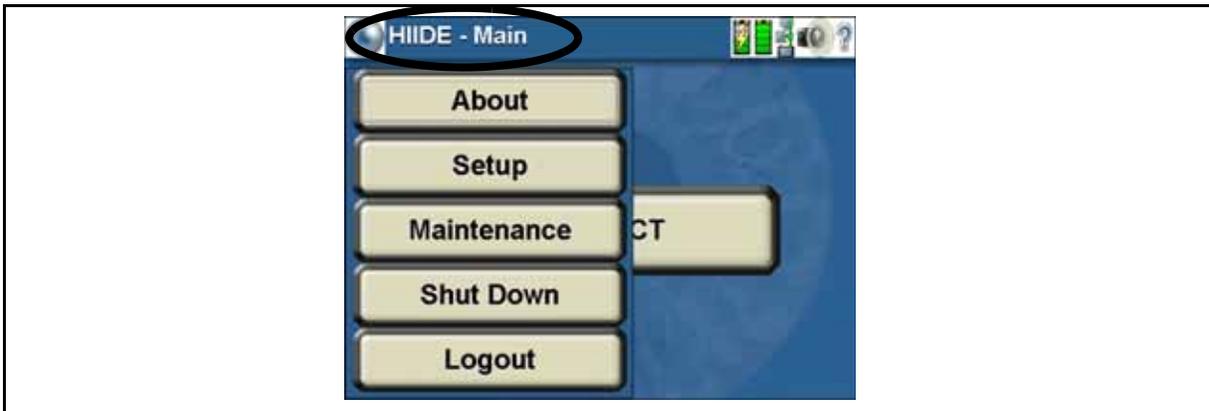
During enrollment the user can move in and out of the tracking report window saving many times, but the information is not added until the portfolio is saved. Following identification the tracking report is added as soon as the save has been confirmed.

The “**Cancel**” button will exit the tracking report screen without adding the tracking report to the portfolio. A HIIDE screen will appear stating: “WARNING: Are you sure you want to cancel the tracking report?”. Press the “**Yes**” button to return to the previous screen you were at or “**No**” to return to the Add Tracking Report screen.

Using the Dropdown Menu

The drop down menu is accessed by touching the iris Logo or screen title in the upper left area of the screen (see [Figure 51](#)).

Figure 51. HIIDE Dropdown Menu



Note: If you access the About dropdown menu without logging in only the About and Shut Down buttons will be active as displayed in [Figure 52](#). In addition, pressing the “**About**” button without logging in will only display the HIIDE, Power, and Storage tabs.

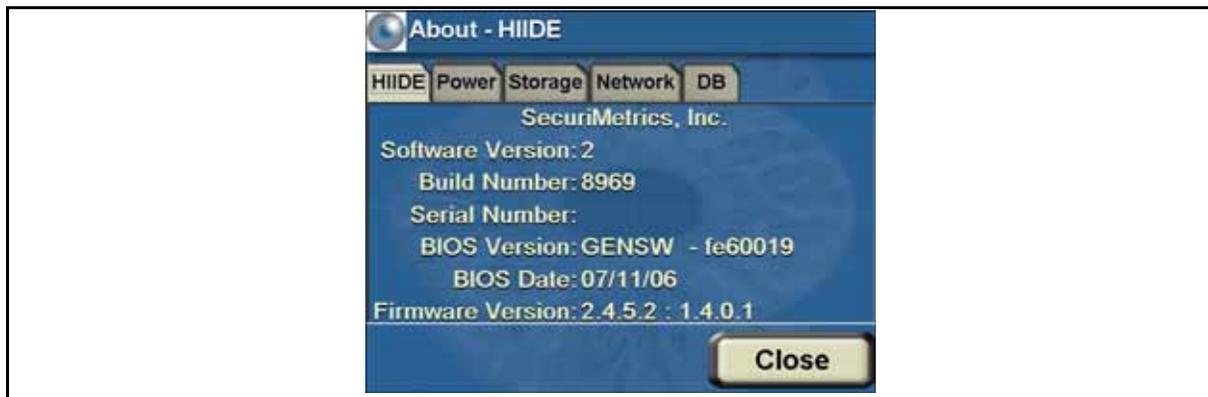
Figure 52. HIIDE Dropdown Menu - Not Logged in



Display Information About Current HIIDE™ Status

On the dropdown menu of [Figure 51](#) press the “**About**” button. The About- HIIDE screen (see [Figure 53](#)) will appear. From this screen you can access the Power, Storage, Network, and DB screens by pressing the associated tab that you want to view. The HIIDE tab is the default screen.

Figure 53. HIIDE About Status screen



Pressing the **“Close”** button at any time will return you to the screen you were at before viewing the about screen. Click anywhere on the screen to close the dropdown menu.

The following paragraphs describe each HIIDE screen tab.

About HIIDE™

When you press the **“About”** button from the dropdown menu the About - HIIDE screen (see [Figure 54](#)) will appear with the **“HIIDE”** tab activated. This screen displays the following information: Software Version, Build Number, Serial Number, BIOS Version, BIOS Date, and the Firmware Version.

Figure 54. About - HIIDE screen

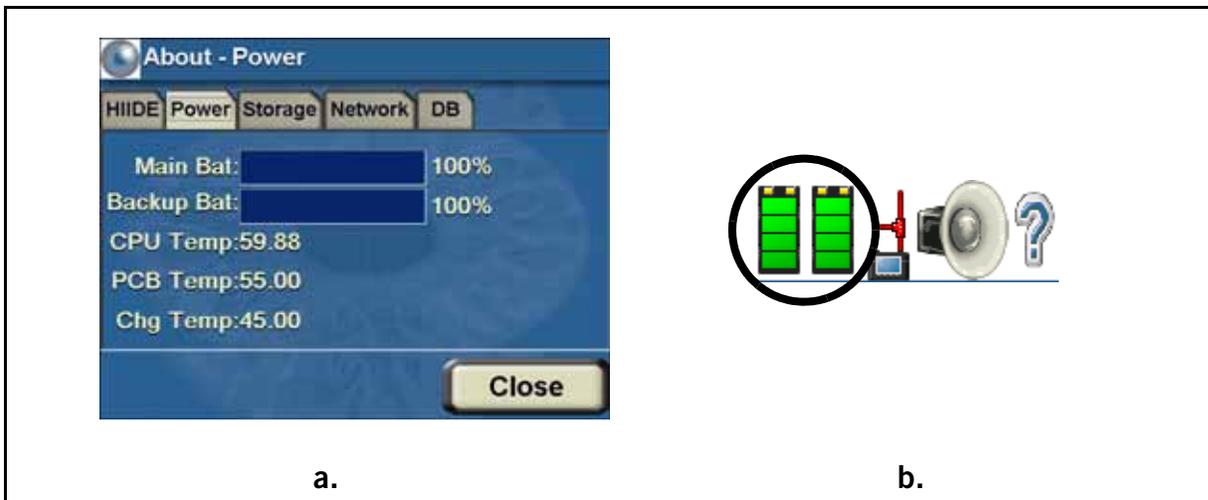


Note: If you press the **“About”** button without logging in only the HIIDE, Power, and Storage tabs will be available from the About - HIIDE screen.

About Power

Pressing the **“Power”** tab will bring up the “About - Power” screen (see [Figure 55 a](#)). This screen displays the current charge of the two HIIDE batteries (see [Figure 55 b](#)). The battery icons are visible in most screens and are located in the icon bar.

Figure 55. About - Power screen

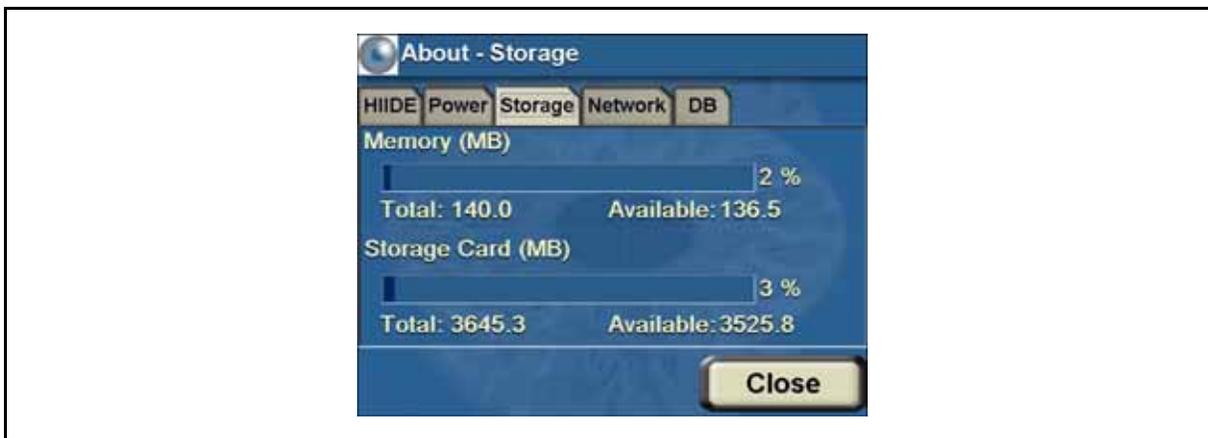


Also, refer to [“Charging the HIIDE™ and Checking the Power Status”](#) on page 56.

About Storage

Pressing the **“Storage”** tab will enter the about About - Storage screen (see [Figure 56](#)). This screen displays the onboard memory used and available, as well as the memory used and available of any storage card plugged into the HIIDE.

Figure 56. About - Storage screen



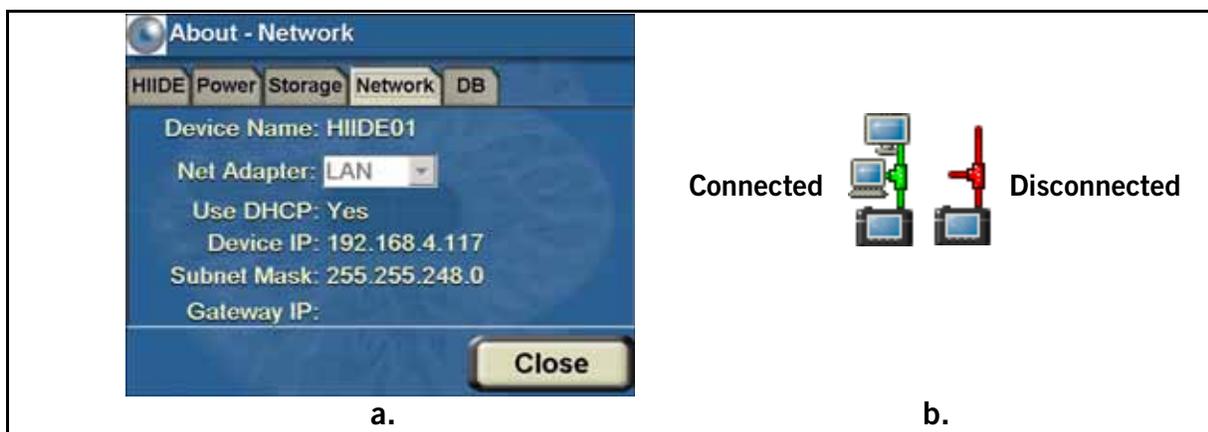
About Network

Pressing the “**Network**” tab will enter the About - Network screen (see [Figure 57 a](#)). This screen displays: the device name, if the DHCP is used, IP address, Subnet mask, Gateway and Host IP address.

The “Net Adapter” drop down menu will be grayed out if the HIIDE’s only network interface is an Ethernet port.

The network icon is visible in most screens and located in the icon bar. It is a quick indicator to the user of the network status. There are two states the network icon indicates: disconnected and connected (see [Figure 57 b](#)).

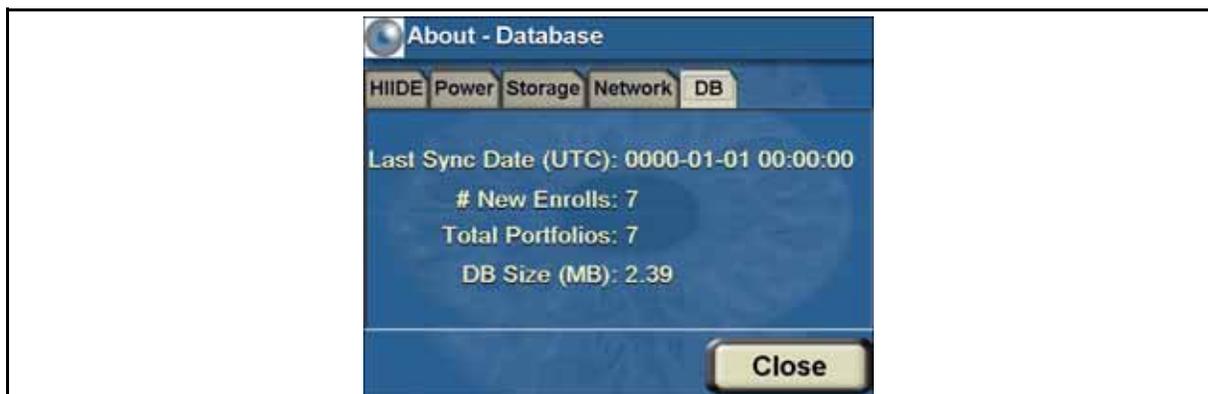
Figure 57. About - Network screen



About DB (Database)

Pressing the “**DB**” tab will enter the About - Database screen (see [Figure 58](#)). This screen displays the Last Sync Date, Number of New Enrollments, Total number of Portfolios and the DB Size in MB.

Figure 58. About - Database screen

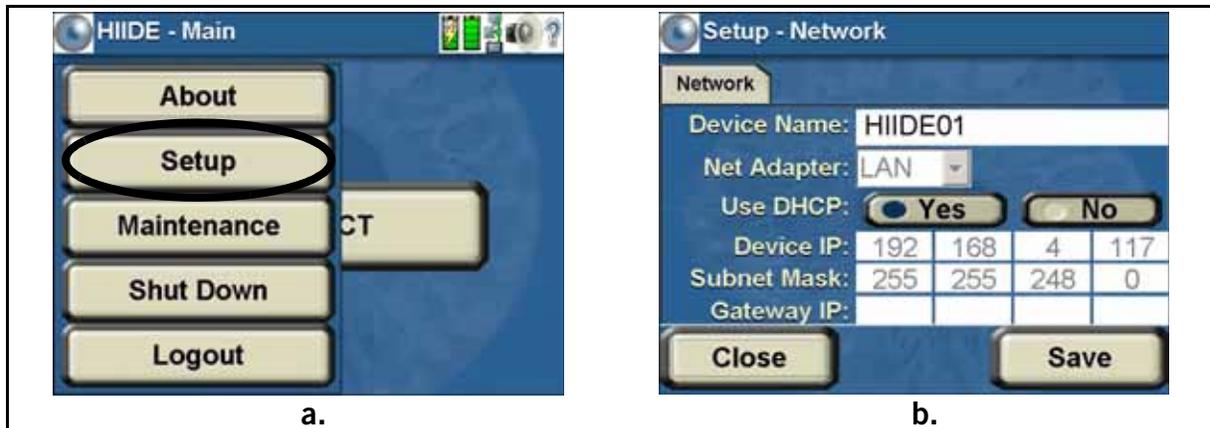


Setup

This option is only available if an administrator is logged into the HIIDE.

On the dropdown menu press the “**Setup**” button (see [Figure 59 a](#)), to access the setup screen. The Setup - Network screen (see [Figure 59 b](#)), will appear.

Figure 59. Accessing Setup screens

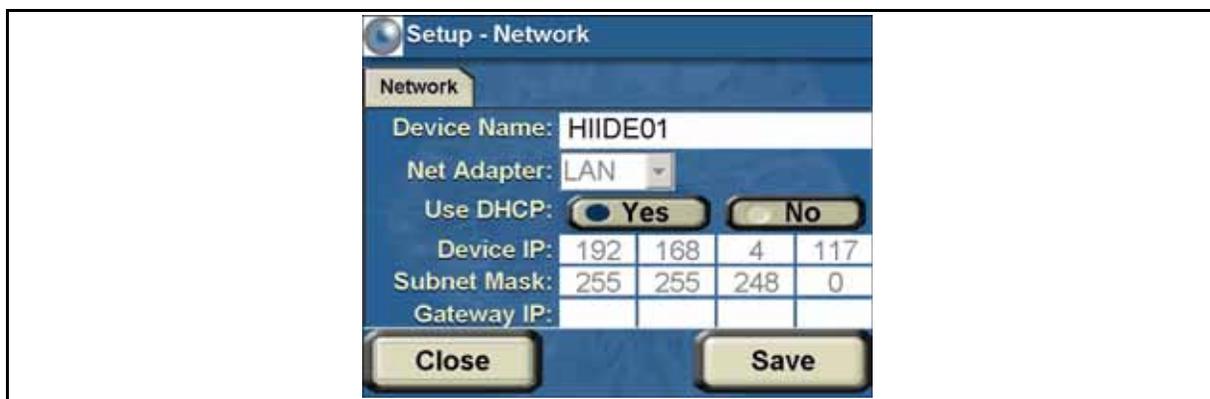


Pressing the “**Close**” button at any time returns the user to the screen they were at before viewing the about screen. Click anywhere on the screen to close the dropdown menu.

Changing Network Settings

To access the network settings screen (see [Figure 60](#)), press the network tab on the Setup - Network screen. From this screen you can perform four actions.

Figure 60. Setup - Network screen



- **Change the name of the HIIDE™ device:** You can change the device name, first by touching the text field that displays the name. This will bring up the keypad screen. The name is displayed above the keypad, and is edited by pressing the keys. When the editing is complete, the user presses the “**Done**” button, to return to the network settings screen, and the new name is inserted.
- **Net Adapter:** This dropdown field allows you to select a Network Adapter type.
- **Toggle on/off DHCP:** “**Yes**” toggles DHCP on, and “**No**” toggles it off. If the user has turned off the DHCP, then they can set the device IP, subnet mask, and the gateway IP. To do this the user touches the white text field they want to edit. This brings up the Device IP number keypad screen (see [Figure 61](#)), where the user types what is inserted into the chosen field. Clicking on each 3-digit number field will bring up the Device IP keypad. Enter the new IP number then press the “**Done**” button to close the keypad. The field will be updated and the next 3-digit field will be highlighted. Select that field and proceed until all fields have been updated.

Note: If you enter digits greater than the maximum value a HIIDE screen will appear stating: “Input data is greater than the maximum value. Pressing the “OK” button will return you to the keypad with a default value of 255. Enter the correct IP or submask number and press the “**Done**” button.

Figure 61. Device IP Keypad screen



- **Saving the new information:** Pressing the “**Save**” button allows the user to save the updated network information.
- **Quit without saving:** Pressing the “**Close**” button at anytime brings the user back to the screen they were previously viewing, and does not save any changes that were made to the network settings screen.

Note: If you enter digits greater than the maximum value a HIIDE screen will appear stating: “Input data is greater than the maximum value. Pressing the “OK” button will return you to the keypad with a default value of 255. Enter the correct Server IP and press the “**Done**” button.

You can also update the Server Port in the same manner from the Device Initiated mode but not from the TactiComp Dev Init mode. The Transfer Mode buttons are only selectable in the Device Initiated mode.

- **Saving the new information:** Pressing the “**Save**” button allows the user to save the updated mode information.
- **Quit without saving:** Pressing the “**Close**” button at anytime brings the user back to the screen they were previously viewing, and does not save any changes that were made to the mode settings screen.

Maintenance

From the HIIDE dropdown menu press the “**Maintenance**” button (see [Figure 62 a](#)), to bring up the maintenance screen (see [Figure 62 b](#)). This screen gives options to the user to reset the database, and delete the master key.

Figure 62. Accessing Maintenance screen



Purge the Database

This option is used when the operator wants to clear the database. To purge the database press the “**Purge Database**” button on the dropdown menu (see [Figure 62 b](#)). A HIIDE confirmation window then appears stating, “Are you sure you want to purge all data in the database?” To complete deleting the database press the “**Yes**” button. This completely and irretrievably deletes the database. Press the “**No**” button to cancel and return to the Maintenance screen.

Restore Database

Pressing the “**Restore Database**” button (see [Figure 62](#)) retrieves all backed up portfolios and makes them available to the user. To restore the database, press the “**Restore Database**” button. A HIIDE confirmation window then appears stating, “Are you sure you want to restore the database?” Press the “**Yes**” button to restore the database. Press the “**No**” button to cancel and return to the Maintenance screen.

Destroy Key

Note: *This option is only available if an administrator is logged into the HIIDE.*

Pressing the “**Destroy Key**” button (see [Figure 62](#)) destroys the master key used for encrypting the database. When this option is used all access to the database is lost.

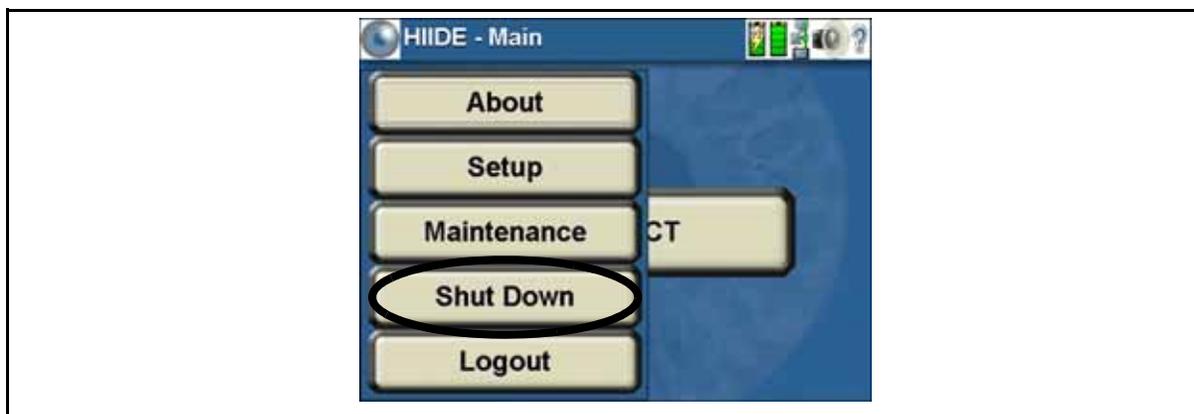
Note: The “**Destroy Key**” button will only be enabled if there is an encryption key set on the HIIDE.

CAUTION: *This process is irreversible. A remote administrator is required to allow a user to access the HIIDE again. All data will be lost if an encryption key different to the destroyed key is set on the HIIDE by a remote administrator.*

ShutDown

Pressing the “**ShutDown**” button from the HIIDE Dropdown menu (see [Figure 63](#)), will bring up a HIIDE confirmation screen stating: Are you sure you want to turn-off the device?” Pressing the “**No**” button will return you to the HIIDE dropdown menu. Pressing the “**Yes**” button will shut down the device.

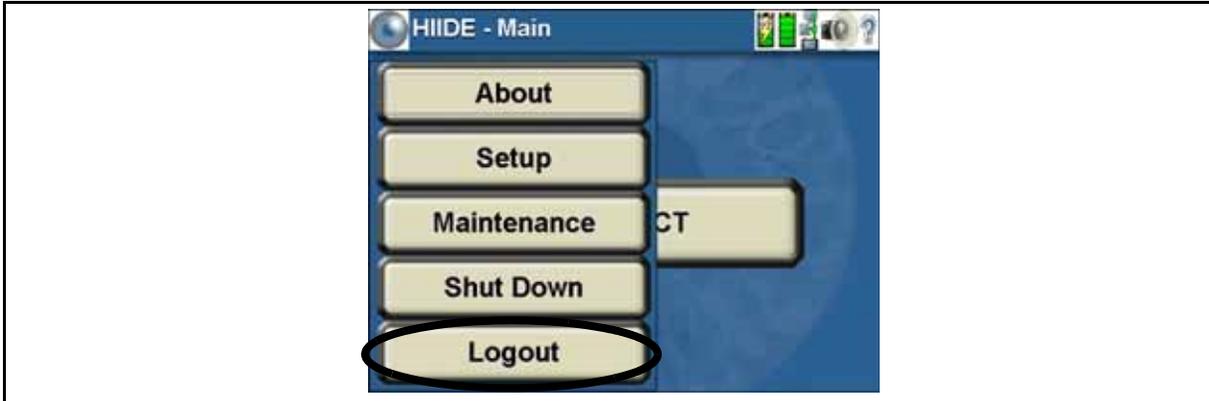
Figure 63. HIIDE Dropdown menu - Shutdown button



Logging Out

This option is used when the operator wants to return to the login screen. To logout, the user presses the “**Logout**” button (see [Figure 64](#)), on the dropdown menu. The display then returns to the splash screen and the user must log back in to use the HIIDE. To log back in refer to section “[Logging into the HIIDE™](#)” on page 30.

Figure 64. HIIDE Dropdown menu - Logout button



Muting Sound

The sound icon, located on the icons panel, can be muted by clicking on the speaker. Click on the speaker again to unmute the sound. See [Figure 65](#).

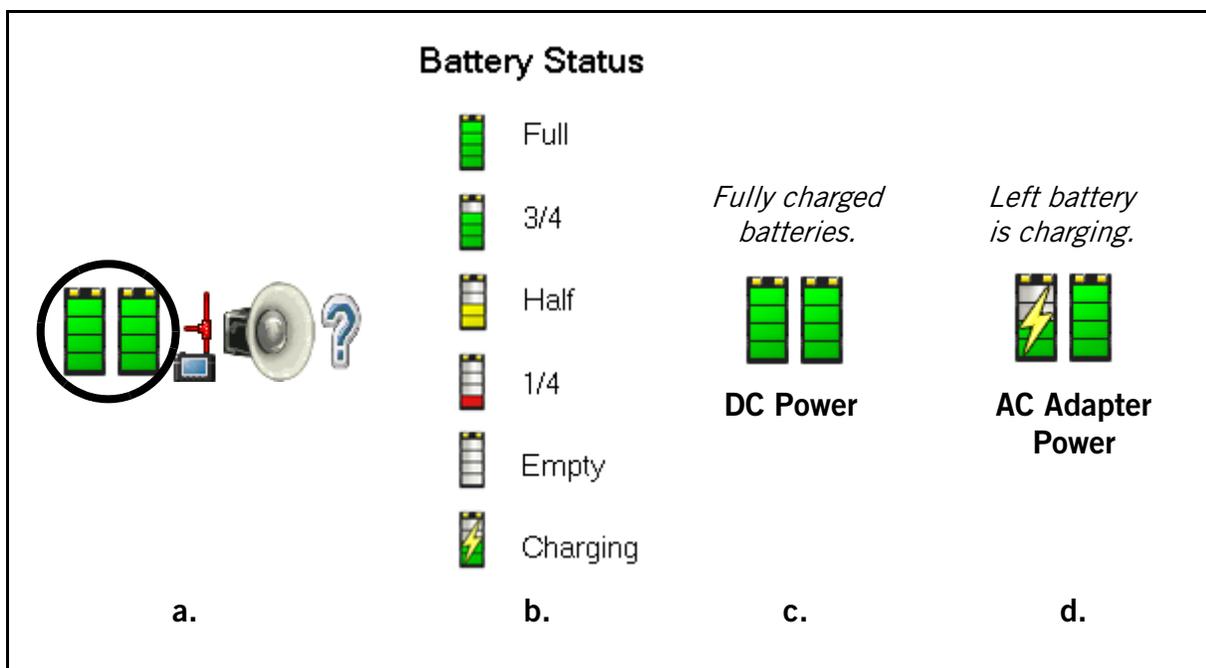
Figure 65. Muting and Unmuting Sound



Charging the HIIDE™ and Checking the Power Status

The power/battery icon is visible in most screens and located in the icon bar, see [Figure 66 a](#). This is a quick indicator to the user of the battery status. There are two battery icons to represent the two HIIDE batteries. There are five battery level icons to indicate the battery charge status, and one to indicate charging (see [Figure 66 b](#)). [Figure 66 c](#) shows the two fully charged batteries. When the HIIDE AC adapter is plugged in, a charging indicator appears on the battery currently being charged as indicated in [Figure 66 d](#). For information on the HIIDE power status, refer to section “About Power” on page 49.

Figure 66. Battery Icons



The HIIDE recharges its replaceable batteries while it is plugged into wall power. The HIIDE can be turned on or off while charging.

There is an AC Lithium-Ion Battery Charger accessory for the HIIDE. It charges batteries that can then be used to replace drained HIIDE batteries.

Battery Replacement

The HIIDE is provided with two replaceable rechargeable Lithium-Ion batteries. The HIIDE has the ability to run on just one battery. The operator can replace a battery without turning off the HIIDE, as long as the other battery still has a charge. Information on checking the current charge of the HIIDE batteries can be found in section “[Charging the HIIDE™ and Checking the Power Status](#)” on page 56.

To remove a battery proceed as follows:

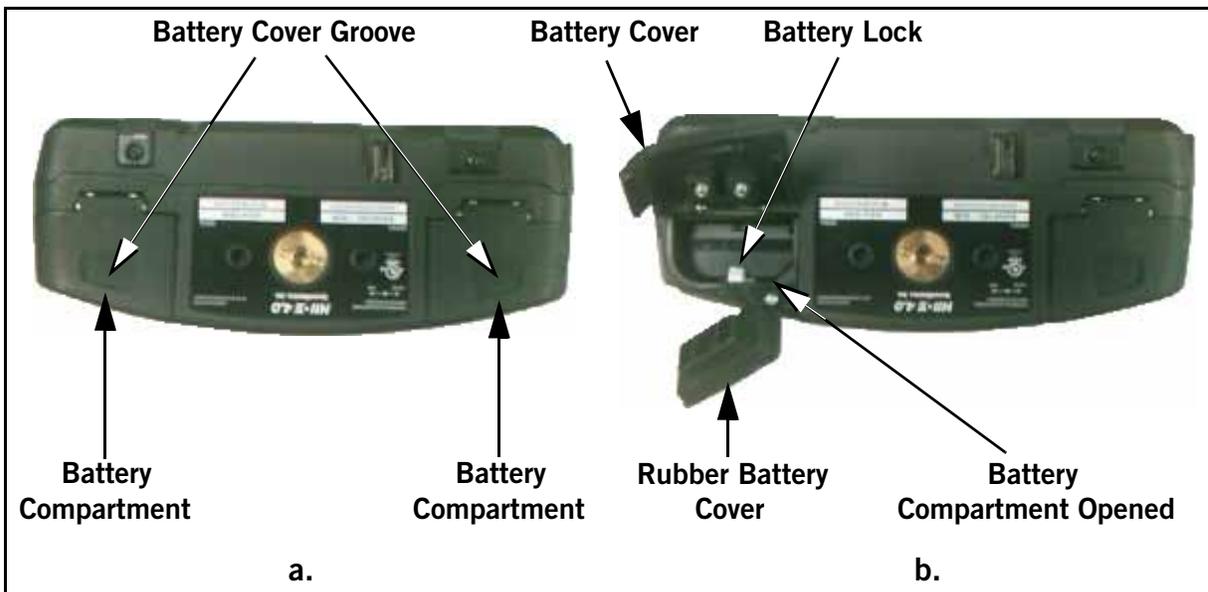
Note: The following battery replacement steps are applicable for either battery.

CAUTION: *There is a risk of explosion if a HIIDE battery is replaced by an incorrect type. Dispose of used batteries according to the instructions described in section “Battery Safety” on page 59.*

Step 1: Open the Battery Compartment

Turn the HIIDE upside down with the front facing you. See [Figure 67 a](#).

Figure 67. Replacing the Batteries



Firmly hold the HIIDE and place your finger or thumb in the battery cover groove located in the left or right side of the HIIDE Battery compartment and pull towards you (see [Figure 67a](#)). The Compartment will click open.

Step 2: Removing the Battery

With the battery compartment opened, raise the cover and lift the rubber cover protecting the battery (see [Figure 67 b](#)).

Press the white plastic battery lock in (see [Figure 67 b](#)), and the battery will pop up.

Remove the old Lithium-Ion battery and recycle it as described in section “[Battery Safety](#)” on page 59.

Step 3: Replacing the Battery

Insert a good Lithium-Ion battery into the battery compartment and push it inward until the white battery lock clicks and locks the battery in place.

Step 4: Closing the Battery Compartment

Replace the rubber battery cover over the battery compartment, close the battery cover and push in (away from you) until the cover clicks and locks.

The battery replacement is complete.

Cleaning the HIIDE™

The HIIDE includes a microfiber cloth that is used to clean the LCD touch screen. When dirty, this cloth can be hand washed in warm water with a small amount of detergent, then air dried. Also, the cloth can be sanitized by boiling it for 5-10 minutes to kill any organisms hidden in the fibers.

CAUTION: *The HIIDE's LCD screen is vulnerable to damage. Do not touch the screen with any sharp and/or hard objects. Permanent damage can result from the use of coarse materials (Kleenex, paper towels, shop towels, etc.) on the screen. Do not use liquid cleaners on the screen; they can cause damage to the coatings and/or LCD polarizers.*

Cleaning the LCD Touch Screen

Before cleaning the screen ensure that you do not use excessive pressure on the screen or that the microfiber cloth does not contain any grit or sand that can scratch the screen.

The steps for using the microfiber cloth to clean the screen are as follows.

Step 1: Turn Off the HIIDE

With the HIIDE off it is easier to see dirt and fingerprints on the black screen.

Step 2: Remove any Large Dirt Specks

Using the microfiber cloth, gently brush any larger dirt specks off the screen, and wipe the edges, using a lifting motion, to remove dirt from the borders of the screen.

Step 3: Use Microfiber Cloth to Clean the Screen Surface

Finally, while applying light pressure wipe the screen, being careful not to overwork any one area.

Battery Safety

Recycling Lithium-Ion Batteries

The HIIDE contains a Lithium-Ion battery. Lithium-Ion batteries are recyclable and must be disposed of properly.

If the unit case is crushed or the battery is otherwise exposed, please return the unit to your L-1 Identity Solutions, Biometrics Division representative for repair or replacement. Alternately, you can help preserve our environment by returning your used rechargeable batteries to the collection and recycling location nearest you.

CAUTION: *Do not handle damaged or leaking Lithium-Ion batteries. Never dispose of batteries in a fire because they may explode. For more information regarding recycling of rechargeable batteries, call toll free 1-800-822-8837, or visit <http://www.rbrc.org/>.*

To maximize the battery's performance:

1. Always use the switching power adapter provided by L-1 Identity Solutions, Biometrics Division with the unit for charging the HIIDE.
2. Maintain the battery at or near room temperature when charging.
3. Do not expose batteries to temperatures below -10 °C (14 °F) or above 45 °C (113 °F). Always take your HIIDE with you when you leave your vehicle.

Troubleshooting the HIIDE™

This section covers common errors and unexpected events that occur while operating a HIIDE device including solutions to these problems.

Duplicate Portfolios for a Single Subject

Duplicate portfolios may be created when using only fingerprints to enroll a subject. The reason for this is during enrollment fingerprints taken are not checked against fingerprints already stored in the data base. They are only checked against fingerprints scanned for the current enrollment (refer to section [“Capturing the Same Fingerprint a Second Time” on page 61](#)). This can result in multiple portfolios containing the same individual’s fingerprints. These inconsistencies are managed by the HIIDE host application.

Unanticipated Events While Capturing a Biometric

While a biometric is being captured the HIIDE can give responses that are not what the user was expecting. This section explains some of the common departures from the normal course of a capture.

A Captured Iris Recognized During Enrollment

During enrollment, the HIIDE checks a scanned iris against the database, to see if the iris has been previously enrolled. When the user captures an iris of a subject that has already been enrolled, the subject’s portfolio is displayed directly after the capture is complete (refer to section [“Identifying a Subject Using the COLLECT Button” on page 38](#)).

Capturing the Same Iris During Both Left and Right Iris Enrollment

During iris enrollment the HIIDE checks the iris being scanned against the other iris that has been captured during the current enrollment. When the user tries to capture the same iris twice, an error message stating, *“Same Eye Captured”*, appears for a few seconds, then the user can try the capture again.

Note: If the user is getting this message while they are enrolling the correct iris for the current screen, the mistake was made previously; the previous iris has already been incorrectly enrolled. The only way to correct this is to press the **“Cancel”** button, exit enrollment, and reenrolling the subject from the beginning by pressing the **“Collect”** button.

Capturing the Same Fingerprint a Second Time

During fingerprint scanning the HIIDE checks the finger being scanned against the other fingers that have been captured during the current process. When the user tries to capture the same fingerprint again, an error message: “*You have already submitted this finger. Please try the other one*”, is displayed for a few seconds, then the user can try the capture again.

Note: If the user is getting this message while they are scanning the correct fingerprint for the current screen, a mistake was made previously; the fingerprint has already been scanned in the wrong place. The only way to correct this is to press the “**Cancel**” button, exit and start scanning the fingerprints of the subject from the beginning again.

HIIDE Error Messages and Possible Solutions

Table 1 provides a complete list of HIIDE Error Messages.

Table 2. HIIDE Error Messages

ERROR	PROBABLE CAUSE	POSSIBLE SOLUTION
Volume control open failed!	Volume Control failed to open.	Reboot the HIIDE. If this continues send the HIIDE to L-1 Identity Solutions, Biometrics Division for repairs.
Error loading the resource manager.	Fatal error loading a crucial piece of HIIDE software.	Return the HIIDE to L-1 Identity Solutions, Biometrics Division for repairs.
Error instantiating the resource manager.	Fatal error loading a crucial piece of HIIDE.	Return the HIIDE to L-1 Identity Solutions, Biometrics Division for repairs.
No acceptable images found. Please try again.	The image[s] submitted for enrollment/identification / verification are too blurry, dark, bright, or otherwise not good enough to perform the operation.	Try capturing them again.
HIIDE application has already started.	The system is trying to run a second copy of HIIDE. Fatal Error.	Return the HIIDE to L-1 Identity Solutions, Biometrics Division for repairs.
The input data does not meet the minimum characters required.	Input field validation problem. The user didn't give HIIDE enough data.	Reenter the data and meet the minimum requirement.
Error loading portfolio data.	Data corruption on the disk.	Purge the database and reboot.

Table 2. HIIDE Error Messages (Continued)

ERROR	PROBABLE CAUSE	POSSIBLE SOLUTION
No match found. Press <OK> button to continue.	Nobody in the database matches the template the user submitted.	Keep submitting the subject's biometrics.
Error loading biographic fields for enrollment.	Biographics fields failed to open.	Reboot the HIIDE. If this continues send the HIIDE to L-1 Identity Solutions, Biometrics Division for repairs.
No biometrics left to verify.	The user has tried to match against every template that this portfolio entry contains.	Verify against another portfolio.
Internal error. Failed to save enrollment.	Fatal error loading a crucial piece of HIIDE.	Return the HIIDE to L-1 Identity Solutions, Biometrics Division for repairs.
Internal error processing template.	Error when processing a template.	Reboot the HIIDE. If this continues send the HIIDE to L-1 Identity Solutions, Biometrics Division for repairs.
Error changing the device name.	Name change failed.	Reboot and try again. Check to ensure that the name given is correctly formatted.
Error changing the IP address.	IP address change failed.	Ensure the settings are correct (e.g., no netmask of 0.0.0.1) and try again. Alternately, reboot and try again.
Invalid device IP mask.	The IP netmask is not sensible	If this is confusing to the user, the user should not adjust IP settings for these devices without instructions from a network admin.
Error purging the HIIDE database.	Serious error probably indicative of disk failure.	Reboot the HIIDE. If this continues send the HIIDE to L-1 Identity Solutions, Biometrics Division for repairs.
The user has already submitted this finger / iris. Please try another one.	The user has submitted this fingerprint or iris before during this enrollment / identification session.	Retry with other fingerprint.
Duplicate enrollment has been found.	A subject whose biometrics match the subject being enrolled has been found in HIIDE database.	Consider the consequences of enrolling this person again. This may put the subject in the database a second time.
Cannot identify. Database is empty.	Subject not enrolled.	Enroll the subject.

Table 2. HIIDE Error Messages (Continued)

ERROR	PROBABLE CAUSE	POSSIBLE SOLUTION
No biometrics left to identify.	The user has tried identifying with all 12 biometrics (2 eyes and 10 fingers).	There's nothing left to do. All biometrics have been identified.
Database was corrupted and a blank database will be restored.	Fatal failure reading the HIIDE database.	HIIDE will work correctly after the database has been restored, but the data will be lost. Contact L-1 Identity Solutions, Biometrics Division and report what was happening when this error occurred.
Unable to enroll. This device has reached the maximum number of enrollees.	The HIIDE database is full.	The HIIDE database is full and cannot store new enrollments. Sync the database to make more storage space available.
More than one account matches. Please log in using a username / password.	More than one account has an iris template that matches the user.	Use a clearly defined user name and password for login.
The cryptographic key has been erased. Please log in remotely and replace it.	HIIDE key has been erased.	The database is STILL INTACT. The only operation HIIDE allows is logging in remotely and setting the key again. If the user set the same key and crypto algorithm, the data will remain in place. If there is a change in the key or algorithm, the database will be purged. Either way, HIIDE will begin working again.
Login is temporarily disabled.	Somebody has failed to log in correctly enough times that HIIDE has locked itself up for a short while.	Wait a bit (5 minutes by default) and try again.
Error destroying key.	Major failure.	Return the HIIDE to L-1 Identity Solutions, Biometrics Division for repair. If sensitive data is on the HIIDE, the user may have to physically destroy the disk.
Error connecting to the power controller. Device will restart shortly.	Hardware failure.	If the restart does not fix the problem, return the device to L-1 Identity Solutions, Biometrics Division for repairs.
Error restoring the HIIDE database.	Disk error or the backup database is corrupted.	If rebooting and retrying the HIIDE does not work, return to L-1 Identity Solutions, Biometrics Division for repairs.

Table 2. HIIDE Error Messages (Continued)

ERROR	PROBABLE CAUSE	POSSIBLE SOLUTION
Cannot perform enrollment. There is not enough disk space available.	HIIDE disk is full.	Sync the HIIDE to clear more disk space for enrollments.
Cannot perform enrollment. There is not enough memory available.	The database is too big for HIIDE to fit in its memory.	Sync the HIIDE to clear more disk space for enrollments.
Input data is less than the minimum value.	Too few characters entered.	Enter the minimum amount of characters.
Input data is greater than the maximum value.	Too many characters entered.	Enter the maximum amount of characters.
Invalid date of birth.	Birth date entered is invalid.	Enter a valid birth date.
Invalid data.	Some unspecified problem with the input in a field.	Correct the data.
The user is required to enroll %d fingers. The user has only enrolled %d.	HIIDE requires a minimum number of fingers enrolled for each enrollment. The enrollment does not meet the minimum.	HIIDE will ask the user for the remaining fingers.
Volume control open failed!	Volume Control failed to open	Reboot the HIIDE. If this continues send the HIIDE to L-1 Identity Solutions, Biometrics Division for repairs.

FCC Declaration of Conformity Labeling and User Information

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Increase the separation between the equipment and receiver
- Move the computer away from the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

L-1 Identity Solutions, Biometrics Division Contact Information

L-1 Identity Solutions, Biometrics Division develops unique devices that use biometric technology to establish an individual's identity instantly, automatically and with the highest level of certainty possible. Our devices offer the most effective means of personal identification available.



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