

# Fingerprint Handout

## Taking Fingerprint Impressions:

- A) **Pressure:** The pressure on the fingers, while rolling, should be light and even. Too much pressure, or uneven pressure, causes distortion of the print.
- B) **Removing Fingers from Card:** As each finger is completely rolled, it must be lifted with a quick, upward movement from the card. A slow, dragging movement may cause a smeared impression.
- C) **Rolling the Thumbs and Fingers** (See Figure 1): The thumb is rolled from the inside edge of the nail to the outside of the opposite edge of the nail, thus the right thumb is rolled from right to left, and the left thumb from left to right. The fingers of the right hand are rolled from left to right, and fingers of the left hand are rolled from right to left.

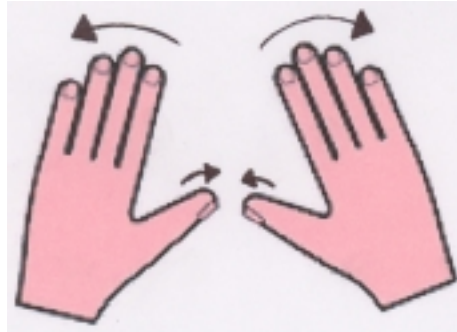


Figure 1

- D) **Make Sure That The Characteristics Of Each Individual Print Are Clear And Present:** The different finger print patterns are (Figure 2):
  - a) Loop (will have a core and a delta)
  - b) Whorl (will have two deltas)
  - c) Arch
  - d) Accidental (is a variation of two or more patterns)

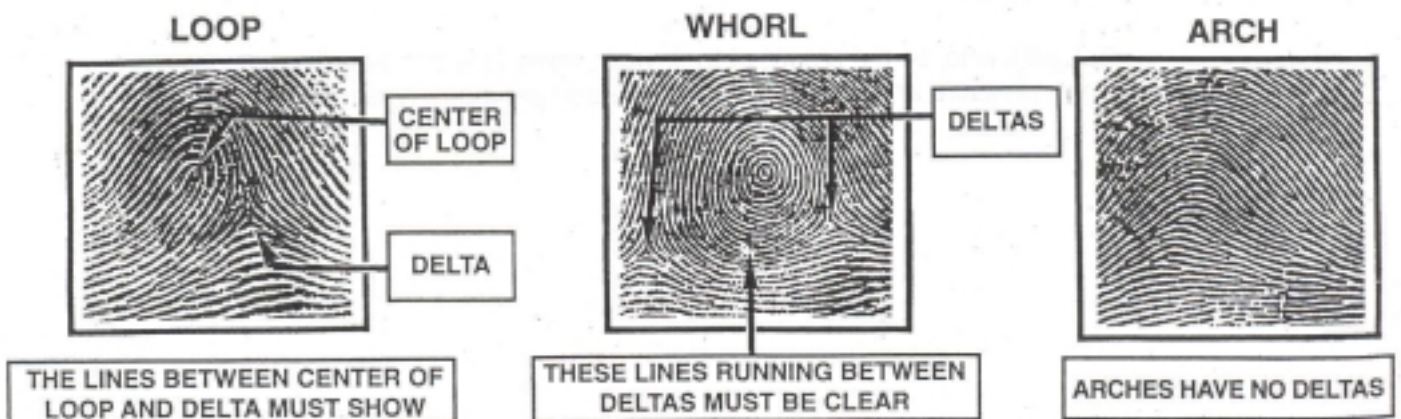
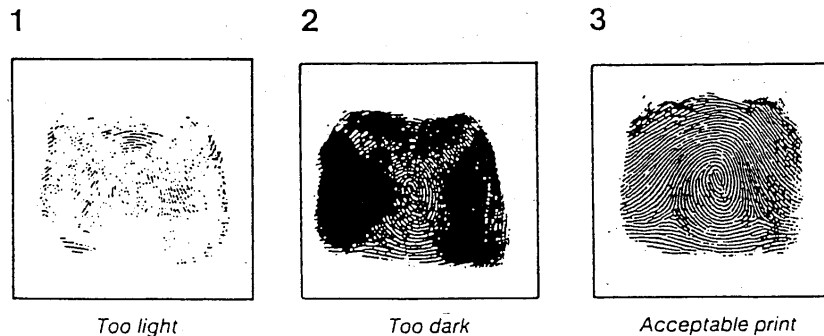


Figure 2

**Light / Dark Fingerprint Impressions** (See Figure 3):

- A) **Too Light:** Usually caused by dry skin. This can be remedied by first cleaning the fingers with a fingerprinting towelette or other cleaning agent. Apply a hand lotion sparingly and wipe off any excess with a lint-free cloth. Light prints may also be caused by too little pressure.
- B) **Too Dark:** Usually caused by wet or oily skin. Clean the fingers with a fingerprinting towelette or other alcohol-based hand cleaner. Keep these handy to wipe any recurring perspiration from the fingers during printing. Dark prints may also be caused by excessive pressure.



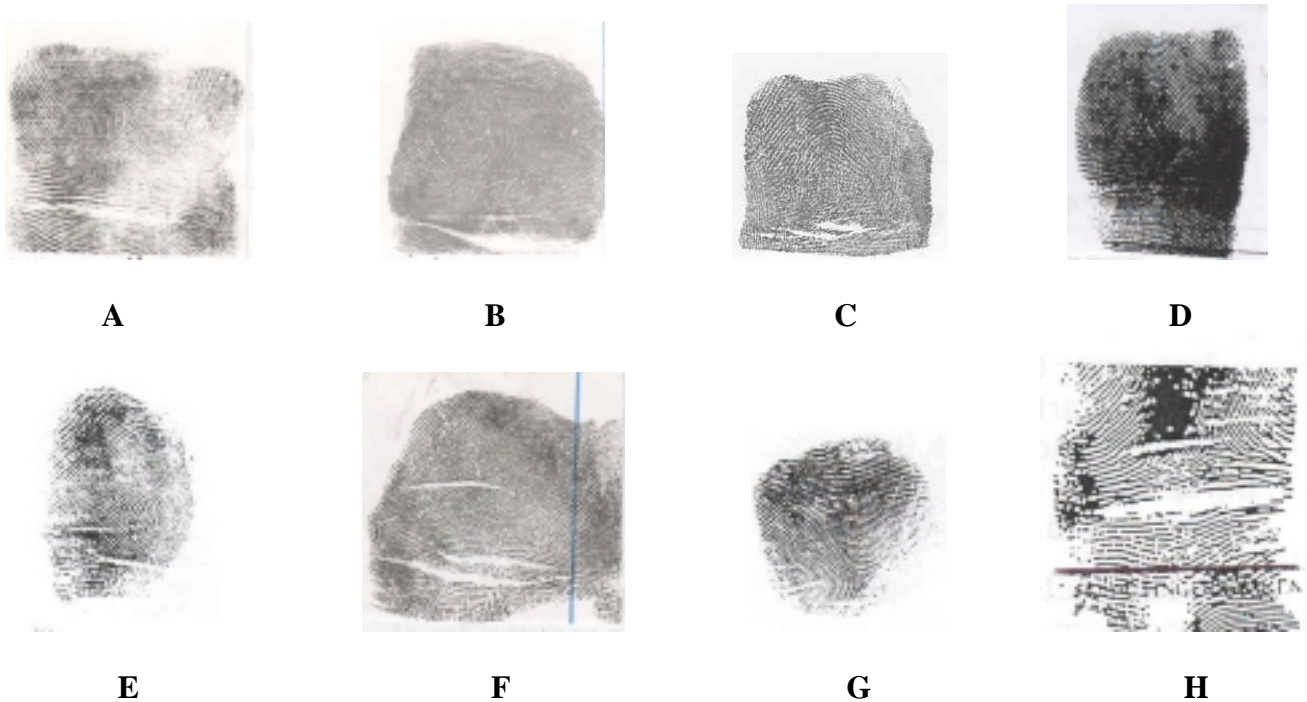
**Figure 3**

**Reasons for poor quality inked impressions:** Poor impressions with ink are usually caused by one of the errors listed below.

- A) **Poor Ink:** The use of old or poor ink, such as colored ink, thin ink, or stamp pad ink. These result in blotchy, pale prints.
- B) **Improper Cleaning:** Failure to clean the inking equipment or the fingers. Foreign particles may cause false marking, distorted ridges, or the disappearance of characteristics. Hands and fingers should be wiped dry of perspiration. Cleaning fluid, denatured alcohol, or any good cleaning agent may be used.
- C) **Incomplete Inking:** Failure to ink the entire bulb of the finger, from joint to tip and from side to side of nail. Result: possible omission of deltas and cores. These ridge details are essential for classifying fingerprints.
- D) **Improper rolling:** Failure to roll the finger fully from one side to the other
- E) **Excessive Inking:** The use of too much ink, filling between and obscuring the ridges. Just a touch of the tube end will allow enough printers' ink for several sets of prints. The ink should be spread to a thin, even film with the roller.
- F) **Insufficient Inking:** Insufficient ink on fingertips results in the ridges being too light to count or trace.
- G) **Excessive Pressure:** Ink is a grease base. Therefore too much pressure fills in between the ridges.
- H) **Insufficient Pressure:** Insufficient pressure while printing results in the ridges being too light to count or trace.

**Examples of improperly recorded impressions** (Figure 4):

- A) **Example A:** Blotched or weakly printed portions (ink unevenly distributed on roller slab)
- B) **Example B:** Smear caused by perspiration or blotch caused by foreign matter on finger (hands not clean)
- C) **Example C:** Flattened ridges (excessive finger pressure)
- D) **Example D:** Smear print (fingers unevenly rolled)
- E) **Example E:** Delta of loop missing (finger not fully rolled)
- F) **Example F:** Print not properly centered in card square
- G) **Example G:** Absent print below flexure crease
- H) **Example H:** Print overrun into next square



**Figure 4**

**Abnormalities of the hand:**

- A) **Recording Amputations:** It is imperative that amputations be recorded on the card in the allotted square of the rolled impressions and in the vacant space in the flat impressions.
  - a) **AMP** – Finger amputated at or below the first joint. **DO NOT PRINT** in rolled or flat sections of the fingerprint card.
  - b) **TA** – Fingertip amputated above the first joint. **PRINT** finger.
- B) **Recording Deformities:** Any finger or hand deformity of the subject must be noted on the fingerprint card. Examples: fingers missing from birth, fingers deformed, paralyzed, fractured, burned, scarred, or bandaged, fingers with ridges partly or wholly destroyed by occupational work and/or surgery, hands with skin diseases, with double or webbed fingers, or fingers with pores only (no ridges).

- a) **MAB** – Finger missing at birth. DO NOT PRINT stub of finger in rolled or flat sections of the fingerprint card.
  - b) **BAND** – Finger in bandage or cast. DO NOT PRINT bandage in rolled or flat sections of the fingerprint card.
  - c) **DEF** – Finger is deformed/crippled. DO NOT PRINT finger in rolled or flat sections of the fingerprint card.
  - d) **SCR** – Finger is scarred. PRINT finger.
- C) **Injured Finger, Unbandaged:** An injured finger bearing a sore, a bruise, or an open cut MUST NOT BE PRINTED. Tell the subject to return when the temporary wound has healed.
- D) **Occupational Hands:** The utmost care must be taken when coating and printing hands of subjects whose occupations cause partial effacement or destruction of the ridges. If the occupation is permanent, the hands are printed with the utmost consideration to the proper coating and correct pressures. If the occupation is temporary, printing is preferably done later, after the skin has returned to normal.

**Rejected Fingerprint Cards: Cause and Cure:** The reasons for rejected fingerprint cards are easily detected and should be corrected BEFORE submission. The following factors are the most common causes of rejection:

- A) If **the ink is unevenly distributed**, it will cause the impression to have light and dark zones. Redistribute the ink on the inking plate with a roller
- B) When **fingers are not fully inked or rolled**, part of the fingerprint pattern will be left off the impression and a delta or core could go unrecorded. Roll the fingers from nail to nail.
- C) **Too much ink** will obscure the details of the fingerprint impression. When using printers' ink, only a small amount of ink is needed. If too much ink is present on the inking plate, remove the excess with a paper towel and redistribute the remaining ink to a thin, uniform film with a roller.
- D) **Insufficient ink** will cause the ridges of the impression to be too faint to count.
- E) **If fingers are allowed to slip or twist during rolling**, the impressions will appear as smears. This is often caused when the subject being printed attempts to assist in the process. Other causes of smears are wet fingers or too much pressure on the finger while rolling the impression.
- F) If the **ridges are worn smooth** because of the subjects' occupation or hobby, the impressions will have insufficient detail for classification. To fingerprint this subject use very little ink and very little pressure when rolling the impression. Another idea in this situation is to try using a VERY small amount of ridge builder on this subject and reattempt to obtain fingerprints.
- G) **One or more fingers can accidentally be printed twice** if the person taking the impressions does not insure the fingers are printed in the correct sequence.
- H) **One or more impressions missing** from the card is usually indicative of amputations or birth defects of the hand or fingers. If the subject being printed is missing one or more fingers for any reason, make a notation on the fingerprint card in the appropriate finger block. Remember bandaged, broken, or crippled fingers MUST be printed. In the case of a temporary disability, the person should return when the injury has healed. The classification calls for all ten fingers or an accounting of impressions missing on the card. If the

indication on the finger block denotes “cut, bandaged, or in a cast”, for example, the card will be returned.

- I) **Fingerprint impressions placed on the back of the card** will cause the card to be rejected. In the past, if the fingerprint impression was not clear and distinct, it could be reprinted on the back of the card. This procedure is no longer acceptable due to the advance in computerized fingerprint searching. The computer cannot read fingerprint impressions on the back of the card.
- J) **Failure to include complete information** in appropriate sections on the card will result in a rejection even if the impressions are properly recorded.
- K) **Highlighting on the fingerprint card** will cause the card to be rejected. In the past the FBI has accepted cards that had highlighted areas. However, this is no longer the case due to the computerized scanning process that has been implemented. The computer cannot read highlighted cards.

**Example Of Properly Recorded Fingerprints:**

- A) **The applicants information is legibly completed** (see figure 5), including:
  - a) Signatures of the subject and the fingerprint technician
  - b) Addresses are listed
  - c) Name is written correctly (Last name, First Name, and Middle Name)
  - d) Alias names are listed
  - e) Citizenship
  - f) Social security number
  - g) INS registration number is listed in the miscellaneous field
  - h) Physical descriptors have been completed
  - i) Place of birth
  - j) Date of birth

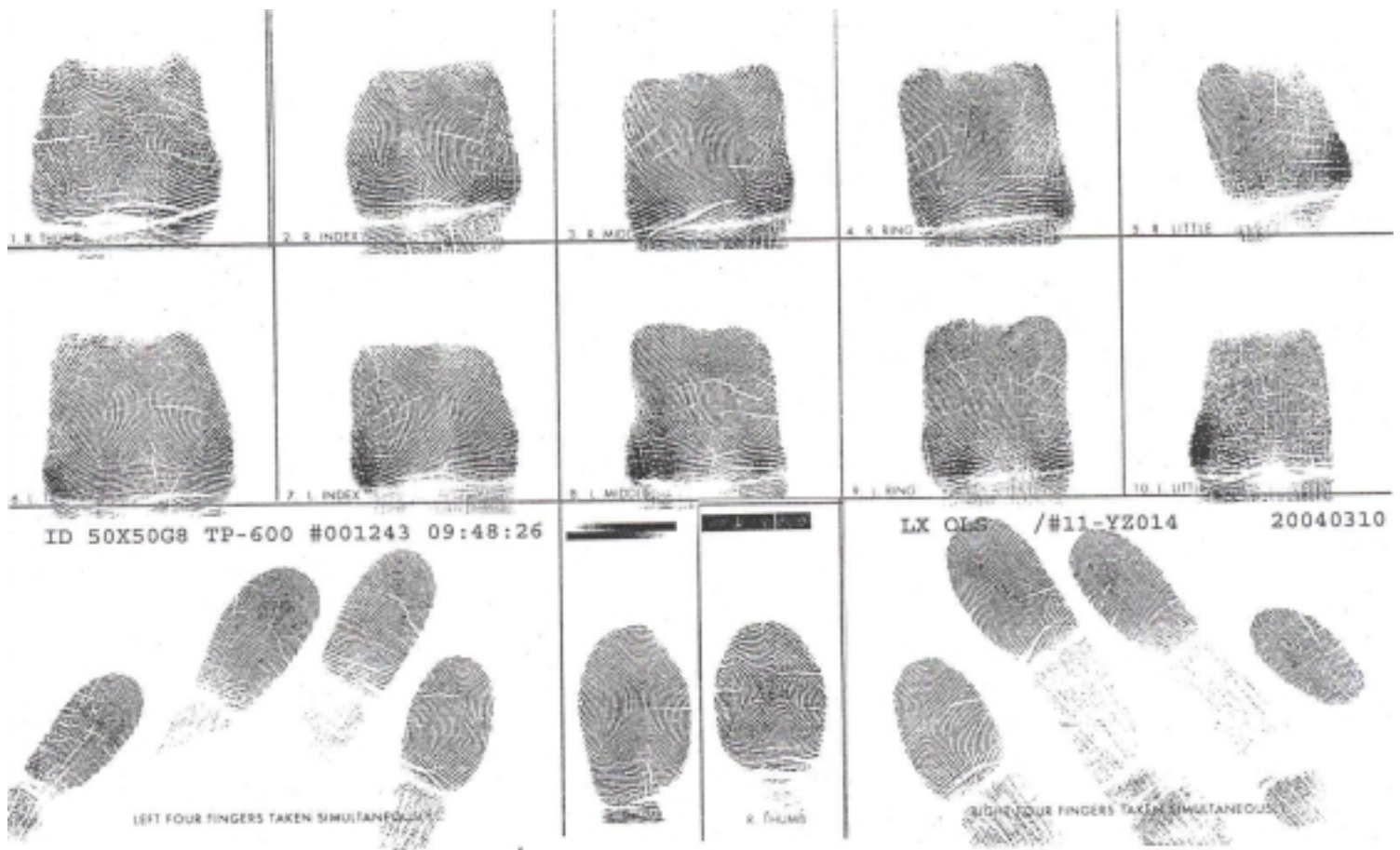
**Please note:** It does not matter what information is in the “ORI” or “Reason” fields, as BCI will place a sticker over the information if it is incorrect. As long as the fingerprint card is the “blue applicant card”, it does not matter what agency is listed.

APPLICANT		LEAVE BLANK		TYPE OR PRINT ALL INFORMATION IN BLACK		LEAVE BLANK	
		LAST NAME <u>NAM</u>		FIRST NAME		MIDDLE NAME	
		<u>Doe</u>		<u>Jane</u>		<u>Mary</u>	
SIGNATURE OF PERSON FINGERPRINTED		ALIASES <u>AKA</u>		ORI		DATE OF BIRTH <u>DOB</u>	
<u>Jane M. I. Doe</u>		<u>Maiden: Deer</u>		<u>1</u>		Month Day Year	
RESIDENCE OF PERSON FINGERPRINTED		CITIZENSHIP <u>CIT</u>		SEX <u>F</u>		WEIGHT <u>130</u>	
<u>229 W. Meadow Lane</u>		<u>US</u>		<u>W</u>		<u>bro</u>	
<u>Midvale, UT 84047</u>		FOUR NO. <u>OCA</u>		HEIGHT <u>5'5"</u>		HAIR <u>brn</u>	
DATE		FBI NO. <u>FBI</u>		EYES <u>brn</u>		PLACE OF BIRTH <u>POB</u>	
4-19-04		ARMED FORCES NO. <u>MNU</u>		CLASS		<u>Greenland</u>	
SIGNATURE OF OFFICIAL TAKING FINGERPRINTS		SOCIAL SECURITY NO. <u>30C</u>		REF.			
<u>Donnie Danko</u>		<u>520-67-6891</u>					
EMPLOYER AND ADDRESS		MISCELLANEOUS NO. <u>MNU</u>					
<u>ABC Corp.</u>		<u>AR# 208161405</u>					
<u>Box 27</u>							
<u>SLC, UT 84110</u>							
REASON FOR FINGERPRINTING							
<u>UCA 53-5-706</u>							

**Figure 5**

**B) The prints meet the requirements of the FBI (see figure 6), including;**

- a. Fingers have been rolled from one edge of the nail all the way over to the other edge and just below the first joint.
- b. The ridge characteristics are clear and unsmudged.
- c. If the pattern is a loop, the core and delta are visible.
- d. If the pattern is a whorl, both deltas are present.
- e. The impressions are uniform in tone and not too dark or too light.
- f. There is an impression in each block.
- g. There are four impressions and a thumb impression in the simultaneous impression block
- h. Placing simultaneous prints at or about a 45% angle on the fingerprint card has enabled all the fingers to be clearly printed.



**Figure 6**

# Fingerprinting Supplies

## **Black Printer's Ink, and Kit with Ink and Roller**

Sirchie Fingerprint Lab  
100 Hunter Place  
Youngsville, NC 27596  
www.sirchie.com  
Kit #CFP 600A & 123.95 (as of 02/21/03)  
Replacement Ink #231T 4 oz tube \$6.50  
(800) 356-7311 (\$25.00 minimum order)  
(800) 899-8181 FAX

## **"Perfect Ink" Pad, and Kit with Pad**

Armor Forensics  
13386 International Parkway  
Jacksonville, FL 32218  
www.armorforensics.com  
Kit #PI39 \$120.00 (as of 02/21/03)  
Replacement Ink Pad for kit \$65.00  
(800) 852-0300  
(800) 588-0399 FAX

## **Retabs**

Armor Forensics  
13386 International Parkway  
Jacksonville, FL 32218  
www.armorforensics.com  
Retabs by Indicator \$18.00 per box of 500  
(800) 852-0300  
(800) 588-0399 FAX

## **Hand Cleaner Towels**

Regal Industries  
6708 South 1525 West  
West Jordan, UT 84084  
Rough Touch Scrubs in a Bucket  
\$78 per case (6 buckets)  
(801) 264-0988  
(801) 264-1105 FAX

**Fingerprint Cards**

Utah Bureau of Criminal Identification (BCI), AFIS  
3888 West 5400 South  
Taylorsville, UT 84118  
(801) 965-4569  
(801) 965-4749 FAX

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**Lansberry's Ridge Builder**

Sirchie Fingerprint Lab  
100 Hunter Place  
Youngsville, NC 27596  
www.sirchie.com  
Part Number: LRB20 4 oz. Liquid, \$12.95  
Part number: LRB20T 100 Disposable Pads, \$24.95  
(800) 356-7311 (\$25.00 minimum order)  
(800) 899-8181 FAX

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