

# INTRODUCTION TO FINGERPRINTING

Fingerprints are made up of tiny lines known as friction ridges. These lines form patterns such as arches, loops and whorls. These ridge patterns are used to classify fingerprints. In addition, small details are found in each fingerprint known as minutiae. These minutiae are used for fingerprint identification. When fingerprints are properly recorded these minutiae are easily recognizable. However, when fingerprints are smeared or smudged the minutiae may not be recognizable, rendering the fingerprints unreadable and causing your cards to be rejected. It is important that fingerprints be rolled properly. A complete fingerprint is rolled from fingernail to fingernail and only in one direction, covering the area of the finger from near the tip to just below the first joint.

## Proper Technique

A standard 10-print fingerprint card requires two types of prints, rolled and flat. Rolled are used in the first two rows and the flat prints are used on the bottom row. Examples below represent a correct and incorrect rolled print (see figure 1) as well as a correct and incorrect flat print (see figure 2).

figure 1 - Rolled Prints

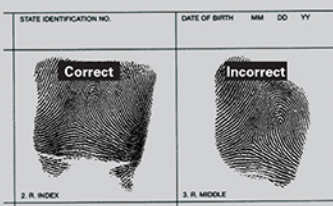


figure 2 - Flat Prints

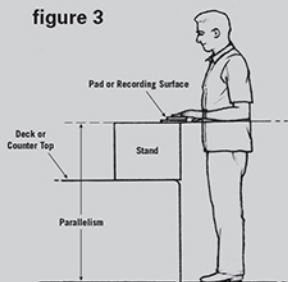


Before fingerprinting, the subject should wash and dry their hands thoroughly. This can be accomplished with soap and water or using ID Kleen towelettes. If the individual has excessively moist or dry calloused fingers, a PrePrint towelette may be used to remove excess moisture and soften the skin on the fingers, improving the friction ridge detail. DO NOT use lotions or moisturizers on the skin prior to fingerprinting. A fingerprint cardholder should be used to hold the fingerprint card in place during fingerprinting. A magnifier may be used to examine a rolled or flat fingerprint for quality and clarity once an individual has been fingerprinted.

## Ergonomics

Placement of the pad and recording surface should be at the edge of the table, desk, stand, or countertop to make access to them by fingers easier and to prevent the adjacent fingers from getting in the way of the finger being printed. The furniture top must be smooth, flat, hard, leveled, and secure. The correct finger posture is easiest to obtain when the forearm is parallel to the ground. The forearm in this position will also make rolling the fingers easier. Be sure to place both the pad and recording surface at the proper elevation and use a fingerprinting stand if necessary (see figure 3).

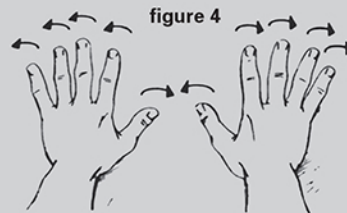
figure 3



## Applying Ink

Always begin with the thumb on the subject's right hand. Extend the thumb away from the body. Make sure the rest of the fingers are out of the way. Firmly grasp the thumb at the base and coat it evenly by rolling the fingers across the pad, from the tip to below the first joint. Coat the finger from nail edge to nail edge. It is not necessary to push the finger into the ink. You are simply trying to coat the thin friction ridges on the surface of the finger. It is recommended that each individual finger is inked and then rolled. If all the fingers are first inked, there is a chance the finger may contact the card as it is curled out of the way before rolling.

## Rolled Fingerprints

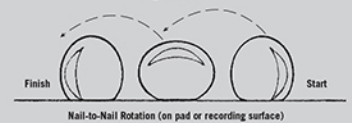


When rolling fingerprints, you should always roll from an uncomfortable position to a comfortable one. Thumbs should begin rolling from the far edge of the thumb and roll inward toward the center of the body.

Fingers are rolled away from the center of the body (see figure 4). Place the finger over the appropriate block on the fingerprint card. Be sure to place each fingerprint in the proper box. With even pressure, press the finger against the card and roll it in the same direction that the finger was inked. Roll the finger completely from side to side and lift off quickly in one continuous outward movement (see figure 5). Remember, always roll from an uncomfortable position to a comfortable one.

Once the right hand is complete, lift the arm on the fingerprint cardholder and slide the card up so that the blocks for the fingers of the left hand are visible through the cardholder window. Firmly close the arm, locking the card into place and roll the fingers of the left hand, beginning with the thumb. Remember, thumbs are rolled in toward the body. The other fingers are rolled away from the body.

figure 5



After you have created rolled fingerprints from both of the subjects hands, the bottom of the fingerprint card must be completed with the flat prints. Lift the lid of the cardholder and position the card so that the eight flat print boxes are visible through the cardholder window. Close the lid, locking the card in place.

## Flat Fingerprints

Flat prints are done in finger groups; the thumb and then four fingers simultaneously. Flat prints are not rolled, but are pressed directly down against the card. Flat prints are used to determine how an individual's fingerprints look in relation to each other. With the four fingers of the left hand extended, lightly press them on the inking surface with gentle pressure on the back of the fingers. Repeat the process on the inking finger block on the fingerprint card, pressing straight down on the card and then lifting straight up (see figure 6A). It may be necessary to place the fingers in the block on an angle, depending on how long the fingers are (see figure 6B). Then, with the left thumb of the subject extended, lightly press the thumb flat on the inking surface. Do not roll the thumb. Then place the thumb on the thumb block of the card. Repeat this process with the fingers and thumb of the right hand.

figure 6A



figure 6B

