

The purpose of this document is to give the enroller guidelines on enrolling fingerprints on the CS TimeClock. These guidelines will enhance the ability of the reader to identify and match the fingerprint to the correct employee.

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## Before You Enroll an Employee Fingerprint

Employees should only be enrolled once the clock has been installed and mounted against the wall (at about shoulder height for the average person).

It is a good idea to keep a cloth handy during the enrollment process to clean or dry employee fingers and to clean the scanner surface if necessary.

Before starting the enrollment process, please check the following:

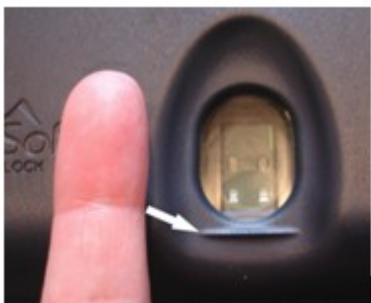
- **The employee's hands must be clean.** This will ensure the best possible fingerprint capture. Dusty, greasy or dirty hands must not be enrolled.
- **The employee's hands should not be wet or sweaty.** If there is too much moisture on the skin it will fill up the valleys between the ridges of the fingerprint to create an even surface which the scanner may see as a black blob. Use a cloth to clean and dry the fingers if these symptoms are experienced.
- **The employee's hands should not be overly dry.** This may be a problem especially during the winter time. A finger with very little moisture will hardly be noticeable on the scanner surface. Rubbing the finger on the forehead or behind the ears will add bodily oils and some moisture to the skin.
- **The employee's finger should not have any cuts** or any physical damage that will heal. If the employee's profession is such that some damage may occur to the fingers, try and select a finger that is less likely to be damaged.

## Finger Positioning

### Futronics reader

The correct positioning of the finger on the reader is essential during enrollment as well as when the employee is clocking.

1. **Placement:** As shown in the pictures below, the CS TimeClock has a ridge below to scanner as a placement guide. The employee must place the crease in their finger on the ridge when enrolling or clocking.



2. **Inclination and rotation:** The finger must be placed flat on the reader with the crease touching the ridge below the scanner and the core of the finger touching the scanner surface. A finger that is lifted from the scanner or rotated with only the side of the finger touching the scanner will result in a partial scan of the finger.



This finger is lifted



This finger is rotated to the left

3. **Pressure:** Applying too much or too little pressure can have adverse effects on the quality of the overall enrollment quality. Too much pressure will cause the ridges and valleys to contract as the skin flexes. Too little pressure may result in a partial scan of the finger. The employee must place their finger firmly on the scanner when enrolling as to leave a proper imprint.

### Lumidigm reader

The correct positioning of the finger on the reader is essential during enrollment as well as when the employee is clocking.

1. **Placement:** To ensure the same placement the finger must be placed against the back of the cover, even if the crease of the finger joint is on the reader.



2. **Inclination and rotation:** The finger must be placed flat on the reader. A finger that is lifted from the scanner or rotated with only the side of the finger touching the scanner will result in a partial scan of the finger.



This finger is lifted



This finger is rotated to the right

3. **Pressure:** Applying too much or too little pressure can have adverse effects on the quality of the overall enrollment quality. Too much pressure will cause the ridges and valleys to contract as the skin flexes. Too little pressure may result in a partial scan of the finger. The employee must place their finger firmly on the scanner when enrolling as to leave a proper imprint.

## The Enrollment Procedure

An employee's fingerprint is enrolled against a card number. This card number can be a proximity card or a PIN number and must be a unique number for each employee. During the enrollment process the employee would need to place their finger on the reader three times at different angles to create their fingerprint template. It is advisable to demonstrate to the employee how to place their finger on the reader before enrollment.

### Futronics reader

To enroll the finger of a new employee whose employee number does not exist on the clock:

1. Press # on the clock keypad to display the menu options.
  - a. Press 3 (*Employee*).
  - b. Select option 1 (*New Employee*).
  - c. "Authorize Emp-Card-Assign. Enter Supervisor Card, PIN or Finger" is displayed on the screen. Enter the supervisor/administrator PIN code, or swipe the supervisor / administrator card or finger.
  - d. "Enter Employee Num" is displayed. Enter the employee number on the keypad and press # to accept.
  - e. "Employee not found. Add Employee?" is displayed. Press # to accept.
  - f. "Enter Card Number" is displayed. Enter the PIN number or swipe the proximity card against which the employee fingerprint should be enrolled.
  - g. If the card is not in the clock database "Card not found. Add Card?" will be displayed. Press # to accept.
  - h. "Enroll Fingerprint?" will be displayed. Press # to start enrollment.
  - i. "Place Finger" will be displayed. The employee must place his/her finger on the scanner in a straight line as shown below and lift it from the reader when "Remove Finger" is displayed on the clock.



- j. "Place Finger" will be displayed again and the employee must now place his/her finger at an angle as shown in the picture below until "Remove Finger" is displayed on the clock.



- k. “Place Finger” will be displayed once more. The employee must place his/her finger at the opposite angle as shown below. He/she can lift their finger when “Remove Finger” is displayed.



- l. “Assign Card Successful” will be displayed at the end of the procedure.
2. To enroll a fingerprint of an employee whose employee number exists on the clock:
- a. Press # on the clock keypad to display the menu options.
  - b. Press 3 (*Employee*).
  - c. Select option 3 (*Add Fingerprint*).
  - d. “Authorize Enroll Finger. Enter Supervisor Card, PIN or Finger” is displayed on the screen. Enter the supervisor/administrator PIN code, or swipe the supervisor / administrator card or finger.
  - e. “Enter Card Number” is displayed. Enter the PIN number or swipe the proximity card against which the employee fingerprint should be enrolled.
  - f. If the card is not in the clock database “Card not found. Add Card?” will be displayed. Press # to accept.
  - g. “Enroll Fingerprint?” will be displayed. Press # to start enrollment.
  - h. “Place Finger” will be displayed. The employee must place his/her finger on the scanner in a straight line as shown below and lift it from the reader when “Remove Finger” is displayed on the clock.



- i. *“Place Finger”* will be displayed again and the employee must now place his/her finger at an angle as shown in the picture below until *“Remove Finger”* is displayed on the clock.



- j. *“Place Finger”* will be displayed once more. The employee must place his/her finger at the opposite angle as shown below. He/she can lift their finger when *“Remove Finger”* is displayed.



- k. *“Enroll Finger Successful”* will be displayed at the end of the procedure.

### Lumidigm reader

1. To enroll the finger of a new employee whose employee number does not exist on the clock:
  - a. Press # on the clock keypad to display the menu options.
  - b. Press 3 (*Employee*).
  - c. Select option 1 (*New Employee*).
  - d. *“Authorize Emp-Card-Assign. Enter Supervisor Card, PIN or Finger”* is displayed on the screen. Enter the supervisor/administrator PIN code, or swipe the supervisor / administrator card or finger.
  - e. *“Enter Employee Num”* is displayed. Enter the employee number on the keypad and press # to accept.
  - f. *“Employee not found. Add Employee?”* is displayed. Press # to accept.
  - g. *“Enter Card Number”* is displayed. Enter the PIN number or swipe the proximity card against which the employee fingerprint should be enrolled.
  - h. If the card is not in the clock database *“Card not found. Add Card?”* will be displayed. Press # to accept.
  - i. *“Enroll Fingerprint?”* will be displayed. Press # to start enrollment.
  - j. *“Use enroll type”* is displayed. Select \* to select the Fast enrollment type.
  - k. *“Place Finger”* will be displayed. The employee must place his/her finger on the scanner in a straight line. The light of the reader will flash green to show that the finger has been read and *“Remove Finger”* will be displayed. At this point the employee must lift his/her finger off the reader. This sequence will be repeated twice more.
  - l. *“Enroll Finger Successful”* and *“Assign Card Successful”* will be displayed at the end of the procedure.

2. To enroll a fingerprint of an employee whose employee number exists on the clock:
  - a. Press # on the clock keypad to display the menu options.
  - b. Press 3 (*Employee*).
  - c. Select option 3 (*Add Fingerprint*).
  - d. “*Authorize Enroll Finger. Enter Supervisor Card, PIN or Finger*” is displayed on the screen. Enter the supervisor/administrator PIN code, or swipe the supervisor / administrator card or finger.
  - e. “*Enter Card Number*” is displayed. Enter the PIN number or swipe the proximity card against which the employee fingerprint should be enrolled.
  - f. If the card is not in the clock database “*Card not found. Add Card?*” will be displayed. Press # to accept.
  - g. “*Enroll Fingerprint?*” will be displayed. Press # to start enrollment.
  - h. “*Use enroll type*” is displayed. Select \* to select the Fast enrollment type.
  - i. “*Place Finger*” will be displayed. The employee must place his/her finger on the scanner in a straight line. The light of the reader will flash green to show that the finger has been read and “*Remove Finger*” will be displayed. At this point the employee must lift his/her finger off the reader. This sequence will be repeated twice more.
  - j. “*Enroll Finger Successful*” and “*Assign Card Successful*” will be displayed at the end of the procedure.

## Troubleshooting

Before starting to troubleshoot, please ensure that your clock is on the latest firmware release. Please contact your supplier if you have any questions or if you require assistance to update your clock.

### “*No Fingerprint Match*” is displayed when an employee clocks.

The reader is unable to match the employee fingerprint to one in its database.

1. Please check if the employee places their finger correctly on the reader.
2. Re-enroll the same finger or enroll a different finger. Use the *Slow* enroll type. The sequence will take a few seconds longer, but you will get a fingerprint quality value at the end of the enroll. If the quality is below 60%, enroll a different finger.
3. Drop the [fingerprint security level](#) in the CS TimeClock web interface or in your TNA software.
4. Use [fingerprint verification](#) i.e. the employee must enter a PIN or swipe a card before placing their finger. This will increase the chance of a positive match as it would only have to match the employee fingerprint to one template in its database. You can change the setting in the CS TimeClock web interface (Cards or Pins, Reader Required) or in your TNA software.
5. If the employee still struggles to clock, try changing the verification options in point 4 above.

### “*Card not assigned*” is displayed when an employee clocks.

The finger is matched to a template on a card which is not assigned to an employee.

1. A card number will be displayed when the employee clocks. If the card number displayed is correct, check that the [card is assigned to the employee](#) in the TNA software or in the CS TimeClock web interface.
2. If a different card number is displayed on the clock it is possible that the employee’s finger was previously enrolled on a different card number that is no longer in use. Force a refresh of the templates on the reader from the web interface: go to the **Hardware** menu, select [Child Clocks](#), select and change the child clock, select **Force Full FP Reader Refresh** and click on Save.

### “*Unknown Card*” is displayed when an employee clocks.

The finger is matched to a template on a card which does not exist in the clock database.

1. A card number will be displayed when the employee clocks. If the card number displayed is correct, add the card in the TNA software or in the [clock web interface](#) and assign it to the employee. If not, force a refresh of the reader: go to the **Hardware** menu, select [Child Clocks](#), select and change the child clock, select **Force Full FP Reader Refresh** and click on Save.

**“Unknown employee” is displayed when an employee clocks.**

The clock does not recognize the employee number to which the card is assigned.

1. This problem may occur when using versions of TNA software which is not case sensitive with alphanumeric employee numbers. Please ensure that alphanumeric employee numbers are all in upper case.

**Another employee’s name is displayed when the employee clocks.**

The reader has matched the employee finger to another template in the reader database (a false positive).

1. Increase the fingerprint security level for the employee who clocked as well as the employee whose name displayed on the clock. At a low fingerprint security level the reader will use less identification points (minutia) to match a finger to a template and it is therefore possible that the same minutia may occur in more than one fingerprint template. See the **CS TimeClock Web Interface Manual**, [Changing a Card or PIN number](#): *Fingerprint Security Level*.
2. Use fingerprint verification i.e. the employee must enter a PIN or swipe a card before placing their finger. This will increase the chance of a positive match as it would only have to match the employee fingerprint to one template in its database. See the **CS TimeClock Web Interface Manual**, [Changing a Card or PIN number](#): *Reader Required*.

**No response to any employee fingers placed on the reader.**

1. Check that the fingerprint reader is enabled and set to the correct reader type in the TNA software or web interface.

**Futronics Readers:**

Go to the **Hardware** menu in the clock web interface, select **Child Clocks**, select and change the child clock and click on the **Fingerprint** tab. The reader must be **Enabled** and the **Type** set to **FS83 Identify** or to **FS83 Verify**. If it is necessary to change any of these settings, **Save** the changes and reboot the clock from the clock keypad menu (#, 9, 1).

**Lumidigm Readers:**

Go to the **Hardware** menu in the clock web interface, select **Child Clocks**, select and change the child clock and click on the **Fingerprint** tab. The reader must be **Enabled** and the **Type** set to **Lumidigm Identify Only**, **Lumidigm Verify Only** or to **Lumidigm Verify (Extended)**. If it is necessary to change any of these settings, **Save** the changes and reboot the clock from the clock keypad menu (#, 9, 1).

2. **Lumidigm reader:** The fingerprint reader’s database is empty. If there are no fingerprints enrolled the reader will not scan for fingers. If there are fingerprint templates in the software database, force a refresh of the templates on the reader from the web interface: go to the **Hardware** menu, select [Child Clocks](#), select and change the child clock, select **Force Full FP Reader Refresh** and click on Save.
3. There is a hardware problem. Please contact your supplier.

**The reader does not respond to some employees fingerprints.**

In certain professions it is possible that the employee’s fingerprints have eroded to such a point where the ridges and valleys of the fingerprint are no longer distinguishable by the reader. In extreme cases the employee can only clock using a PIN or proximity card. See the **CS TimeClock Web Interface Manual**, [Changing a Card or PIN number](#): *Reader Required*.



With the **Lumidigm reader** try to enroll the employee's fingers using the Slow enroll type to get a sense of the quality of the fingerprints.

Permalink: <http://tinyurl.com/y47vgrqg>