MYOB Electronic Timeclock

User Guide

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Contents

1 Before You Begin

This guide is intended to help you install the Electronic Timeclock at your premises.

Supplies

Supplied by MYOB

- Electronic Timeclock (pictured)

- Mounting bracket
- Power pack
- 2mm allen key + 4 mounting screws for attaching the Timeclock to the mounting bracket

Not supplied by MYOB

- 4 mounting screws, normally wood screws, for fixing the mounting bracket to the wall
- Cabling to the PC

Tasks

Electrician

Refer to page 9 for details on electrical wiring.

Mounting Location

You will need to identify a suitable mounting location, taking the following points into account:

- The swipe card reader and the finger reader should be mounted at chest height for ease of operation
- Avoid exposure to moisture
- Avoid exposure to direct sunlight
- You will need a flat vertical surface which is capable of taking a square metal mounting bracket of 300mm x 300mm
- The Timeclock weighs 2 kg and is screwed into the mounting surface
- An area 1000mm high x 150mm wide and adjacent to the Timeclock is often occupied by a card rack (non-biometric clocks).

Wiring

For Timeclocks which connect via serial ports, the Timeclock can only be polled via direct connection, not via the IP network. Discussion with your Network Administrator may be required to confirm the existence of any cabling that has already been laid.

For IP Timeclocks, one end of the cable is plugged into the network jack via RJ45 connector, and the other end of the cable is plugged into the Timeclock via RJ45 connector. The network jack needs to be patched at the Ethernet hub/switch.

The Timeclock is powered by either a 9.3V AC power pack or a 12V DC power pack, both of which require connectivity to a 250V AC mains connection with a 3-point power socket.

Network Administrator

Internet Protocol Setting

1. Allocate a spare TCP/IP address on the network (preferably a static address).
2. Set the IP address on the Timeclock via the keypad.

Personal Computer Provide a personal computer with an Ethernet adapter for the Time & Attendance / Timeclock polling software. Refer to page 11 for details on establishing network connectivity with your MYOB Electronic Timeclock.

Site Manager – Timeclocks with Swipe Card Readers

The slot that runs down the right hand side of the Timeclock is known as a swipe card reader.

Entering employees in Time and Attendance

The recommended process for managers with employees who will be using the swipe card reader is as follows:

1. Add the employee to the payroll and/or Time and Attendance system.
2. Assign a card number to the employee (note that an employee can have more than one card, and that the card number does not have to be the same as the person's employee code).
3. Check that the company card prefix is unique to the payroll company.
4. Print and check the Card File report to ensure that your employees have been entered correctly.

Repeat the same process when hiring new employees.

Employee Training for Swipe Card readers Before any employees can be paid on the Time and Attendance system, you will need to schedule a time for:

- Training the employee on how to perform a clocking.
- Training the employee on how to carry their card, or locate their card on the card rack.
- Training the employee on which Timeclock they will be using (in larger workspaces with multiple Timeclocks) and which card to use for the Timeclock in question.
- Labelling the card with the employee's name, with a device such as an adhesive labeller, so that the card can be easily identified, and not confused with any other employee's card(s).

Site Manager – Timeclocks with Finger Readers

The raised device on the lower left of the Timeclock is known as the finger reader.

Entering employees in Time and Attendance

The recommended process for taking secure clockings by way of the finger reader is as follows:

1. Add the employee to the payroll and/or Time and Attendance system.
2. Assign a card number to the employee.
3. Check that the company card prefix is unique to the payroll company.
4. Print and check the Card File report, to ensure that all of the employees have been entered correctly.

Repeat the same process when hiring new employees.

Employee Training for finger readers Before any employees can be paid on the Time and Attendance system, you will need to schedule a time for:

- Enrolling the employee's fingerprint and backup fingerprint in the Timeclock's memory (see page 15 for more details on enrollment).
- Training the employee on how to perform a clocking.
- Backing up the entire fingerprint file via the Time and Attendance special clock functions.
- Restoring the entire fingerprint file into any other Timeclocks which may be used on the site (see page 18 for more details on restoring fingerprints).

2 The Electronic Timeclock

This chapter provides an overview of connecting the electronic Timeclock.

Connecting the Timeclock

Power Supply Connections

In order to install an Electronic Timeclock, you will need to be familiar with the MYOB wiring connectors. The Timeclock is powered by either a 9.3V AC power pack or a 12V DC power pack. The power supply socket is located on the rear of the Timeclock together with the RJ45 connectors and the bell relay connector. It is extremely important that no other voltage be used to supply the Timeclock, as this may cause overheating and permanent damage to the Timeclock.

NOTE: The supplied power pack is the only one that should be used.

Mounting Location

The Electronic Timeclock should be mounted inside; it is not designed for outdoor use. Do not place the Timeclock in a location that is exposed to direct sunlight, extremes of temperature or areas that are hosed clean. The Timeclock is not waterproof. If the Timeclock is mounted in a dusty environment you may experience excessive wear on the card reader. If you are unable to keep the Timeclock out of such an area we recommend regular cleaning with Timeclock cleaning cards.

Special Considerations for Finger Readers

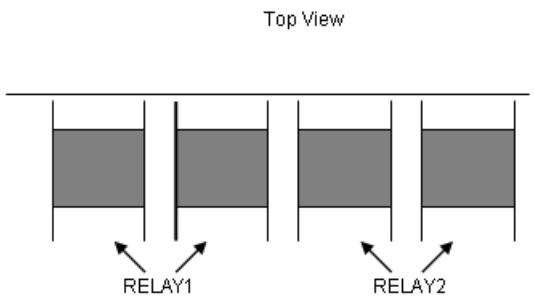
Electronic Timeclocks that are fitted with finger readers have special mounting considerations. The Timeclock should be mounted with the reader around 1.5 metres above the floor. If the Timeclock is much lower than this, it becomes difficult for employees to place their finger in the correct position. The employees should be able stand on a flat surface in front of the Timeclock. If the Timeclock is mounted over an uneven surface, employees may have difficulty placing their finger correctly.

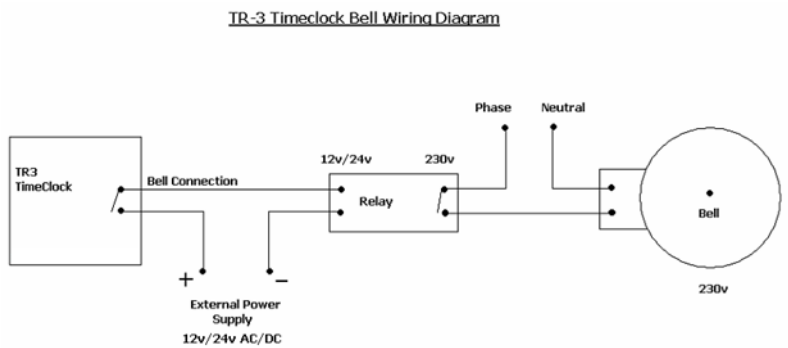
Relay Connections

Two Relay contacts are provided for ringing external bells. They are located on the green connector on the back of the Electronic Timeclock next to the two RJ45 connectors. The connector unplugs from the Electronic Timeclock so that bell cables can easily be terminated into the connector and then plugged into the Electronic Timeclock. The contacts are rated at 24 volts DC with a maximum current rating of 1 amp.

NOTE: DO NOT CONNECT MAINS VOLTAGE TO THESE CONTACTS. These contacts do not provide any voltage for driving the bells or external relays. The relays within the Electronic Timeclock

are low voltage relays; if these are connected to mains voltage, serious damage will occur to the Timeclock. There is also the possibility of electrical shock. If mains voltage relays are required to drive mains voltage bells, low voltage external supply must be provided so that the Timeclock relay contacts can activate the mains voltage relay.





PS/2 Keyboard and Barcode Scanner Connector

A full PS/2 Keyboard and/or a Barcode Scanner can be connected to the Electronic Timeclock by plugging them into the 5-pin DIN connector located at the bottom of the Electronic Timeclock (a PS/2 to 5-pin DIN adapter is required). To connect both a keyboard and a scanner to this connector a keyboard wedge (splitter) will have to be used.

This port can only supply approximately 300mA, so care must be taken when connecting both a keyboard and a scanner to make sure that the combined current draw from both these devices does not exceed this limit. If a battery backup module is installed, using both keyboard and scanner will dramatically reduce the battery backup time.

Ethernet Module

The Ethernet module fitted to an Electronic Timeclock uses the Internet Protocol (IP) for network communications and the Transmission Control Protocol (TCP) to ensure that no data is lost or duplicated, and that everything sent to the connection arrives correctly at the target. These are standard networking protocols; the Ethernet module should plug straight into most computer networks.

The module also supports the AutoIP and DHCP protocols.

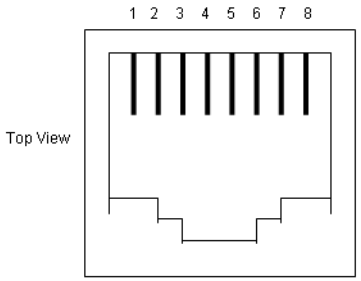
The network interface is RJ45 Ethernet 10Base-T or 100Base-TX (Auto-sensing) and is compatible with Ethernet Version 2.0/IEEE 802.3.

The following software versions are required for network connectivity:

- Electronic Timeclock Polling software version 5.00
- Electronic Timeclock software versions:
  - Display Version 2.00 or higher
  - CPU Version 2.00. or higher

Ethernet Connections

Two 8-pin RJ45 connectors are provided on the back of the Electronic Timeclock. A standard UTP patch cable with a straight-through connection will plug into these connectors to communicate with the Electronic Timeclock over the Network. Both connectors are connected in parallel, so it does not matter which connector is used; however, only one connector can be used at a time.



Signal Name	DIR	Contact	Primary Function
TX+	Out	1	Differential Ethernet Transmit Data +
TX-	Out	2	Differential Ethernet Transmit Data -
RX+	In	3	Differential Ethernet Receive Data +
RX-	In	6	Differential Ethernet Receive Data -
Not Used		4	(open)
Not Used		5	(open)
Not Used		7	(open)
Not Used		8	(open)

Networking

The Ethernet Module's IP address must be configured before a network connection is available. Only one person at a time may be logged into the network port. In most installations, a fixed IP address is desirable. The Network Administrator generally provides the IP address.

Addresses and Port Number The Ethernet address is also referred to as the hardware address or the MAC address. The first three bytes of the Ethernet Address are fixed and read 00-20-4A. The fourth, fifth and sixth bytes are unique numbers assigned to each unit, e.g.

00-20-4A-14-01-18 or 00:20:4A:14:01:18

Every device connected to an IP network must have a unique IP address. This address is used to reference the specific unit.

Every TCP connection and every UDP datagram is defined by a destination IP address and a port number. For example, a Telnet application commonly uses port number 23. A port number is similar to an extension on a PBX system. The Ethernet Module uses port number 14001.

DHCP The unit ships with a default IP address of 0.0.0.0, which automatically enables DHCP. Provided a DHCP server exists on the network, it will provide the unit with an IP address, gateway address, and subnet mask when the unit boots up. You can use the Electronic Timeclock Polling software (version 5.00 or later) to search the network for the IP address your unit has been assigned by the DHCP server and record it for future reference.

AutoIP The unit ships with a default IP address of 0.0.0.0, which automatically enables Auto IP within the unit. AutoIP is an alternative to DHCP that allows hosts to automatically obtain an IP address in smaller networks that may not have a DHCP server. A range of IP addresses (from 169.254.0.1 to 169.254.255.1) has been explicitly reserved for AutoIP-enabled devices.

If your unit cannot find a DHCP server, and you have not manually assigned an IP address to it, the unit automatically selects an address from the AutoIP reserved range. The unit then sends out an ARP request to other nodes on the same network to see whether the selected address is being used.

If the selected address is not in use, the unit uses it for local subnet communication.

If another device is using the selected IP address, the unit selects another address from the AutoIP range and reboots itself. After reboot, the unit sends out another ARP request to see if the selected address is in use, and so on.

AutoIP is not intended to replace DHCP. The unit will continue to look for a DHCP server on the network. If a DHCP server is found, the unit will switch to the DHCP server-provided address and reboot.

> **NOTE: If a DHCP server is found, but it denies the request for an IP address, the unit does not attach to the network, but waits and retries.**

AutoIP can be disabled by setting the unit's IP address to 0.0.1.0. This setting enables DHCP but disables AutoIP.

Assigning an IP Address

To manually assign an IP address to the Ethernet Module, the address must be entered from the menu on the Electronic Timeclock. This address is stored permanently in the Electronic Timeclock and is also programmed into the Ethernet Module.

To set the IP address

1. Enter Electronic Timeclock Menu by pressing the left and right side buttons at the same time. The default access code is 1234 (press the ENTER key to accept).
2. Press the **UP** or **DWN** buttons until menu item **13. Network Settings** is highlighted.
3. Press the ENTER key to select **Network Settings**.
4. Select sub-menu item **1. Enter IP Address** and press the ENTER key. This will cause the last stored IP address to be displayed. If this is the first time you have set an address then the address should read **000.000.000.000**.
5. To change the IP address, either enter it on the numeric keypad or use the **UP** and **DWN** buttons to increment/decrement each number in turn until all digits have been modified. To change to another digit use the NEXT key.
6. If an error has been made, use the NEXT key to cycle back around to the digit in error. To abort the process without making any permanent changes press the QUIT key.
7. Once all digits have been correctly modified, press the ENTER key. The Electronic Timeclock programs the Ethernet Module with the new IP address. This can take up to 60 seconds.
8. Once the new IP address has been entered, record the address for use in the Electronic Timeclock Polling software.

   The second sub-menu item **2. Reset Network Connection** is not usually needed. This option resets the Ethernet module and programs it with the factory setup defaults, and also resets the IP address with the one stored in the Electronic Timeclock. This option is to be used as a last resort if the interface suddenly stops working for no reason and powering the Timeclock down and back up again does not fix the problem. This option will take much longer to complete than just resetting the IP address.

   It is extremely important that the IP address assigned to the Ethernet Module is a unique network address. A duplicate address may cause other devices on the network to stop working.

Polling Software

Electronic Timeclock Polling software version 5.00 and higher has the ability to communicate with an Electronic Timeclock over the network.

To select Network communications

1. From the menu bar select **Options** then **Comm Port** and then select the **Network** option at the bottom of the list.
2. Select **Options** then **IP Address**. This opens an edit box that allows you to type in the IP address of the Electronic Timeclock on the network.
3. Enter the Electronic Timeclock's IP Address and press the **OK** button.

   The Polling software is now ready to communicate with the specified Time Clock over the network.

   If more than one Electronic Timeclock is present on the network, each Timeclock can have a unique station address as well as a unique IP address. The station address is used to identify each Timeclock in the data file.

When using the Polling software, the Electronic Timeclock Station address must also be specified.

The **Find Clocks** function also works over the network. Make sure that the **Network** option is selected in the Comm Port menu. If it is not selected, the Find Clocks function will scan the serial ports. The Find Clocks function only scans for Electronic Timeclock Ethernet modules attached to the network—it does not scan for Station addresses.

Use **Find Clocks** to find out the IP Address of the Electronic Timeclock attached to the network, if an IP Address has not been pre-assigned.

If a Firewall is in use, make sure that port 14001 is open for the Timeclock and any computers that will be polling the Timeclock.

Time and Attendance Software

A record for the Electronic Timeclock must be set up in the MYOB Time and Attendance software.

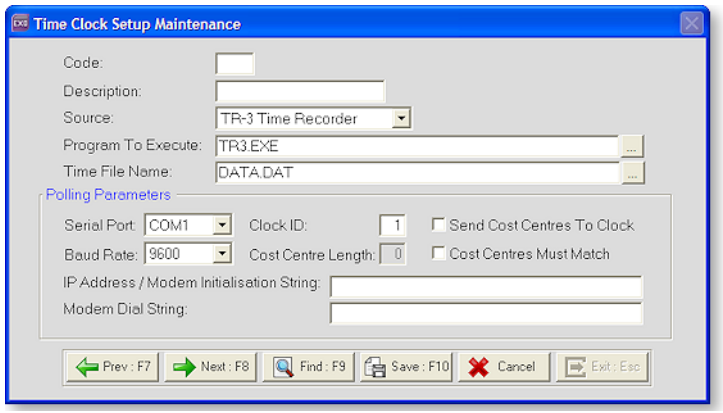
To set up Time and Attendance:

1 Open the Time and Attendance software and select Setup Cycle from the Help menu.

2 Click on **Step 1 - Time and Attendance Setup**

3 Click on **Step One A - Timeclock Setup**.

4 Click **Add**.



5 Enter a code and description for the Timeclock.

6 For the **Source** property, select "TR-3 Time Recorder" for a serial Timeclock or "TR-3 IP Time Recorder" for an IP Timeclock.

7 Specify all other details as they are configured in the Timeclock.

The Timeclock's IP address must be entered for the **IP Address/Modem Initialisation String** property. The required format is the TCP/IP number prefixed with the letters "IP", for example:

IP193.102.168.007

8 Click **Save** to save the Timeclock's details.

9 Click **Exit** on all open setup windows.

3 The Finger Reader

This chapter is intended to help you enroll users on the Electronic Timeclock Bio reader Timeclock. The Timeclock uses a fingerprint reader module to prevent employees from cross clocking (i.e. using other staff members' cards).

Enrollment

An employee can clock in using a registered fingerprint only, or the fingerprint can be used to verify a card swipe, keypad entry or barcode clocking.

NOTE: The Timeclock does not store the actual fingerprint of the Employee. The Timeclock uses a three dimensional capacitive measurement of the differential points of the fingerprint. No image is stored and the data in the Timeclock cannot be used with anything other than the fingerprint module.

The Timeclock has the ability to store a maximum of 1000 finger templates. If you back up fingerprints for each of your employees, then a maximum of 500 staff can be registered on the Timeclock.

How the Reader Works

The fingerprint module works by matching the finger placed on the reader with the finger templates that have been enrolled on the Timeclock. If a match is found, the Timeclock registers a clocking for that employee ID. If no match is found, the Timeclock displays "Invalid Finger".

The finger reader will work with dirty fingers but employees should be encouraged to have clean and dry hands when using the Timeclock, as the reader surface can be damaged by chemical solvents and abrasive materials. Because the finger reader uses a capacitive measurement, it is affected by moisture or electrically conductive materials. If your finger is damp you may have difficulties registering on the Timeclock.

Cleaning Procedure Any build up of dirt on the reader should be cleaned with a clean damp cloth and then wiped dry. DO NOT USE ANY SOLVENTS OR ABRASIVE CLEANERS.

Tips for Enrolling Fingerprints

The most important point to remember when enrolling employees and using the fingerprint reader is consistent finger placement. A good read of the fingerprint is essential to make a match.

In order for the fingerprint sensor to capture a unique image, the 'core' part of the finger must be captured. This 'core' area lies in the middle between the tip of the finger and the first joint. This is the area of the finger which contains all the unique swirl patterns of the fingerprint.

The very tip of the finger does not contain enough information to provide a unique code between different fingers and should not be used. To ensure a consistent read of the finger, a black plastic guide is positioned around the reader. The guide is designed to help employees place their finger in the right position on a consistent basis.

The reader is most sensitive to a finger that is placed vertically on the sensor. To ensure a consistent read, make sure the core area of the fingerprint is placed in the same location each time.

Place the core section of the finger in the centre of the reader window. The finger should be flat on the reader. Do not slide the finger onto the reader. You do not need to apply much pressure; if you press too hard on the reader you will distort the fingerprint and the reader won't be able to read it.

Pressing lightly makes it easier to clock in and out successfully. The reader is mounted at an angle so that it is easier to keep the fingerprint flat while it is being registered. The finger should not be rotated to one side. The guides on each side of the reader should help to keep the finger aligned correctly. If you find employees are having problems enrolling or using the reader they can practice the finger placement using Training Mode (see page 18).

Accessing Fingerprint Options

Before enrolling users on the using the finger reader, you should assign card numbers in Time and Attendance and print the Card File report report, so you know which ID number to use when enrolling each employee.

Remember that while the Card File report shows the card number without the prefix, the full card number, including prefix, must be used when enrolling fingerprints. This must be the correct number of digits (usually six). For example, card number 9 on the report from a company with card prefix 800 would be 800009; card number 51 from the same company would be 800051.

To Enroll an Employee

To enroll a user on the Bio reader you need to access the menu functions on the Electronic Timeclock.

1. Enter Electronic Timeclock Menu by pressing the left and right side buttons at the same time. The default access code is 1234 (press the ENTER key to accept).
2. Press the **UP** or **DWN** buttons until menu item **14. Fingerprint Options** is highlighted.
3. Press ENTER. You will see a list of seven options:
   - **Enroll Fingerprint**
   - **Card Verification**
   - **Set Employee Exception**
   - **Finger Security**
   - **Sensor Sensitivity**
   - **Delete Finger**
   - **Training Mode**
4. From **Fingerprint Options**, select **Enroll Fingerprint**.

   You are asked for an employee code. This is the ID that the Timeclock will assign to the finger template and corresponds to the employee's card

number on the Card File report, with the appropriate company card prefix and padding with leading zeroes, if required.

5 Enter the employee code by:

- swiping through a Time and Attendance card
- scanning an employee barcode printed from Time and Attendance
- entering the code with the keypad.

6 Enter the company prefix (usually 800). You can find the prefix for your Time and Attendance system by selecting the **Setup Time and Attendance** option on the **Utilities** menu in Time and Attendance. If you have multiple companies in Time and Attendance, each will have a different prefix, so you will need to make sure the correct one is entered for the employee you are enrolling.

The employee is prompted to place their finger on the finger sensor.

7 The employee places their finger on the sensor. The Timeclock displays a score out of 100 (higher is better).

The employee is asked to place their finger on the sensor once more for verification.

8 The employee places their finger on the sensor again. A message is displayed on the screen stating whether the fingerprint was successfully enrolled.

If a user is having problems enrolling make sure they have a discernable fingerprint on the finger they are using. In some cases employees may have broken skin, cuts or other damage to the finger which may make the print unusable. People with very narrow fingers (too narrow to touch the sides of the guide) may find it easier to register with their thumb.

Enrolling a Backup Fingerprint

A backup fingerprint is useful in case an employee has a problem with their primary fingerprint. To enroll a backup fingerprint, follow the same steps as enrolling the first fingerprint. Make sure you specify the same ID number as the primary finger. This will add the second fingerprint so the employee can have the option of using the backup if their main fingerprint is not working. When enrolling a backup fingerprint, make sure the employee uses a different finger than their primary finger.

Card Verification

This option allows you to specify if cards or barcodes swiped through the Timeclock need to be verified with a fingerprint. If you have some staff that you want to clock in with a fingerprint and others that will use a card only then Card Verification should be switched off (this is the default setting). When card verification is switched on, any card swipe must be verified by placing a finger on the reader. The finger used must be enrolled as the same number as the card used, i.e. if card 800001 is swiped, the finger enrolled as 800001 must be used to verify the swipe.

Set Employee Exception

The option to set an Employee Exception is used in conjunction with card verification. If you are using cards with the card verification option switched on each card swipe must be verified with a finger. The Employee Exception allows you to enter a card number that does not have to verify, i.e. the card swipe for the exception number will be accepted without requiring a fingerprint.

Finger Security

The finger security option sets the tolerance level of the reader.

There are three levels:

- 1 in 10,000
- 1 in 100,000
- 1 in 1,000,000

The default setting is 1 in 100,000.

Sensor Sensitivity

The Sensor Sensitivity setting adjusts the reader sensitivity. The range is 0 to 7. At 7 (the default setting) the reader is easier to use and can pick up a finger that is placed with very little pressure. Lower sensitivity settings require more pressure and more accurate finger placement. This setting is not normally changed.

Delete Finger

The delete finger option is used to remove an employee finger print that is no longer being used. To delete a finger you must enter the full number that it was enrolled with, e.g. 800001. It is recommended that you clear out unused fingerprints on a regular basis.

Training Mode

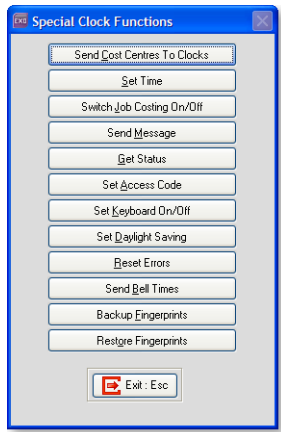
The Training Mode option allows employees to practise their finger placement. It is useful for employees who have difficulties registering or clocking in or out.

To Use Training Mode

1. Select the **Training mode** option. The screen displays `Training Mode: OFF`.
2. Press the ON button, then press ENTER. The screen displays `Enrolling Place Finger on Sensor`.
3. Place your finger on the sensor. If the enrollment is successful the Timeclock displays `Enroll OK` and shows an enrollment score out of 100. To practice with the same finger, press the SCAN button and then place the same finger on the sensor. While in training mode, finger swipes are not recorded and will not show up in Time and Attendance. To exit training mode, use the QUIT button.

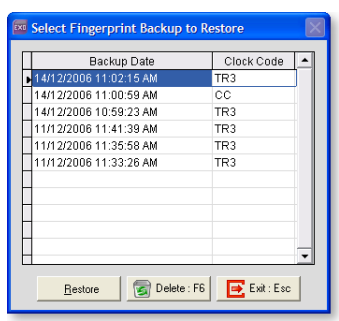
Backing Up and Restoring Fingerprint Templates

Time and Attendance includes an option in the Special Clock Functions menu to backup or restore fingerprints.



Upon selecting the **Backup Fingerprints** option, you are asked to select the Timeclock that you want to backup. The backup can take several minutes, depending on the number of fingerprints enrolled on the Timeclock. When restoring fingerprints you can select which backup to upload to the Timeclock.

NOTE: Restoring a backup will overwrite all the finger templates in the Timeclock and replace them with those from the backup.



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