

User's Guide
Series 4000 Badge Timeclock

Series 4000

*Presents basic concepts of the Series 4000 badge timeclock,
instructions for performing functions at the Series 4000
timeclock, maintaining and servicing the timeclock, and
troubleshooting error conditions.*



*Document Part Number: 4702574-002
Document Revision: B*

The information in this document is subject to change without notice and should not be construed as a commitment by ADP, Inc. ADP is not responsible for any technical inaccuracies or typographical errors which may be contained in this publication. Changes are periodically made to the information herein, and such changes will be incorporated in new editions of this publication. ADP may make improvements and/or changes in the product and/or the programs described in this publication at any time without notice.

This document or any part thereof may not be reproduced in any form without the written permission of Kronos Incorporated. All rights reserved. © 2001, Kronos Incorporated.

ADP provides this publication "as is" without warranty of any kind, either express or implied, including, but not limited to, the implied warranties of merchantability or fitness for a particular purpose.

The ADP Logo is a registered trademark of ADP of North America, Inc. Enterprise eTIME is a trademark and eTIME is a registered trademark of Automatic Data Processing, Inc.

CardSaver, Datakeeper, Datakeeper Central, Gatekeeper, Gatekeeper Central, Imagekeeper, Improving the Performance of People and Business, Jobkeeper, Jobkeeper Central, Keep.Trac, Kronos, the Kronos logo, ShopTrac, ShopTrac Pro, the ShopTrac logo, Solution In A Box, Start.Time, TeleTime, Timekeeper, Timekeeper Central, TimeMaker, and VisionWare are registered trademarks of Kronos Incorporated. CommLink, Comm.Mgr, DKC/Datalink, HyperFind, Kronos Connect, Kronos e-Central, Labor Plus, Prism, Smart Scheduler, Starter Series, Start.Labor, Start.Quality, Start.WIP, Tempo, the Tempo logo, Timekeeper Decisions, Timekeeper Express, Timekeeper Web, Workforce Activities, Workforce Accruals, Workforce Central, Workforce Central Suite logo, Workforce Decisions, Workforce Express, Workforce Manager, Workforce Scheduler, Workforce Smart Scheduler, Workforce TeleTime, Workforce Timekeeper, Workforce Genie, Workforce Professional, Workforce Mobile Time, and Workforce Web are trademarks of Kronos Incorporated.

Adaptive Server is a trademark of Sybase, Inc. iSeries and WebSphere are trademarks, and AIX, AS/400, and IBM are registered trademarks of International Business Machines Corporation. Lotus and 1-2-3 are registered trademarks of Lotus Development Corporation. Carbon Copy and OpenVMS are trademarks of Compaq Computer Corporation. pcAnywhere is a trademark of Symantec Corporation. Cognos, Impromptu, and PowerPlay are registered trademarks, and PowerCube is a trademark of Cognos Incorporated. Crystal Reports is a registered trademark of Crystal Decisions. Ethernet is a registered trademark of Xerox Corporation. HandLink is a trademark of Time and Technology Systems. HandPunch is a trademark of Recognition Systems Corporation. INFORMIX-OnLine is a registered trademark of Informix Software, Inc. INTERSOLV is a registered trademark of Intersolv, Inc. Java and all Java-based trademarks and logos referenced in this document are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and other countries. Microsoft and Windows NT are registered trademarks and Windows 95 is a trademark of Microsoft Corporation in the United States and/or other countries. Netscape and Netscape Navigator are registered trademarks of Netscape Communications Corporation in the United States and other countries. Net8 is a trademark, and ORACLE, SQL*Net, and SQL*Plus are registered trademarks of Oracle Corporation. NexTrak is a trademark of Intellisys Corporation. Corel and Quattro are registered trademarks of Corel Corporation or Corel Corporation Limited. PeopleSoft is a registered trademark of PeopleSoft, Inc. Pervasive.SQL is a registered trademark of Pervasive Software Inc. in the United States and/or other countries. Show N Tel is a registered trademark of Brooktrout Technology, Inc. Solaris and Sun are registered trademarks of Sun Microsystems, Inc. in the United States and other countries. UNIX is a registered trademark in the United States and other countries, licensed exclusively through X/Open Company Ltd. Velcro is a registered trademark of Velcro Industries B.V. Visual DataFlex is a registered trademark of Data Access Corporation. All other trademarks are the property of their respective owners.

When using and applying the information generated by ADP products, customers should ensure that they comply with the applicable requirements of federal and state law, such as the Fair Labor Standards Act.

FCC Compliance

After testing, this equipment complies with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits provide reasonable protection against harmful interference when this equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with the instruction manual, it can cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case, the user, and not Kronos Incorporated, is required to correct the interference. In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and television reception.

Canadian DOC Compliance

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Cet appareil numérique respecte les limites de rayonnement de bruits radioélectriques applicables aux appareils numériques de classe A, prévues au Règlement sur le matériel brouilleur du ministère des Communications du Canada.

EN 55022 (CISPR 22)

This product is a Class A product. In a domestic environment, it may cause radio interference in which case the user may be required to take adequate measures.

Published by ADP, Inc.
Automatic Data Processing, Inc.
ADP, Inc.
One ADP Boulevard
Roseland, NJ 07068
(800)543-7994

For more information, see the following ADP, Inc. Web page:
<http://www.adp.com>

Document Revision History

Document Revision	Product Version	Release Date
A	1.0	September 2001
B	1.0	November 2001

Contents

About This Guide

Organization of This Guide	x
Abbreviations and Terms	xi
Related Documents	xii

Chapter 1: Overview

What Are the Series 4000 Timeclocks?	1-2
Standard Hardware Features	1-2
Optional Devices	1-3
Physical Description of the Timeclock	1-4
Timeclock Display	1-6
Understanding How the Series 4000 Timeclock Operates	1-7
How the Timeclock Functions with the Host Application	1-7
Cross-punching	1-8
Modes of Operation	1-8
Labor Tracking Functions	1-9
Entering Data at the Series 4000 Timeclock	1-10
Using the Badge Reader	1-10
Using the Keypad and Soft Keys	1-11
Guidelines for Entering Information Using the Timeclock	1-12

Chapter 2: Employee Functions

What Are Employee Functions?	2-2
Performing Employee Functions	2-4
Cancel Meal Deduction	2-4
End Activity	2-4
Enter Tips	2-5
Labor Transfer	2-5
Pay Code Hours Edit	2-6

Pay Code Money Edit	2-7
Review Punches	2-8
Simple Punch	2-8
Start Activity	2-9
View All Messages	2-9
View Current Schedule	2-10
View Future Schedule	2-10
View Punch Status	2-11
View Totals	2-11

Chapter 3: Supervisor Functions

What Are Supervisor Functions?	3-2
Performing Supervisor Functions	3-5
Add Punch	3-5
Change Password	3-6
Delete Punch	3-7
Display On/Off Premise Employees	3-8
Global Home Employee Restriction Override	3-8
Global Non-Home Employee Restriction Override	3-9
Pay Code Hours Adjustment	3-10
Single Home Employee Restriction Override	3-11
Single Non-Home Employee Restriction Override	3-12
View Employee Information	3-12

Chapter 4: Maintaining the Timeclock

Maintenance Basics	4-2
Types of Maintenance	4-2
Required Tools	4-2
Safety Considerations	4-3
Handling Static-Sensitive Components	4-3
Obtaining Replacement Parts	4-4
Preventive Maintenance	4-5
Cleaning the Timeclock	4-5
About the Lithium and Lead Acid Batteries	4-6
Running Diagnostic Tests and Reports	4-7

Servicing the Timeclock	4-8
Interior of Fully-Assembled Timeclock	4-9
Returning the Cover Assembly to ADP	4-10
Attaching the Cover Assembly to the Timeclock	4-15
Performing Basic Configuration at the Series 4000 Timeclock	4-20
Replacing the Backup Battery Charger Board	4-24
Adjusting the Width of the Badge Reader Slot	4-32
Replacing the Badge Reader Cover	4-38
Replacing the AC Power Supply (transformer)	4-40
What Are the Maintenance Functions?	4-43
Performing Maintenance Functions	4-46
Audio Setting (basic configuration)	4-46
Communication Setting (basic configuration)	4-47
Date/Time Setting (basic configuration)	4-48
Display Setting (basic configuration)	4-49
Symbology Setting (basic configuration)	4-50
Database Report	4-51
Device Status Report	4-51
Ethernet Report	4-52
File System Report	4-52
Memory Report	4-53
Readers Report	4-53
Badge Test	4-54
Beeper Test	4-54
Display Test	4-55
Keypad Test	4-55
LED Test	4-56
Sequential Tests	4-56
Change Password	4-57
FACTORY DEFAULT	4-57
Delete All Punches	4-58
Restart	4-58

Chapter 5: Upgrading Timeclock Firmware

Overview of a Softload	5-2
Performing a Softload	5-3

Chapter 6: Error Messages and Troubleshooting Procedures

Error Messages	6-2
Transaction Error Messages	6-2
Other Error Messages	6-6
Status Messages	6-8
Troubleshooting	6-9
Timeclock Hardware Failures	6-9
Troubleshooting Table	6-10
Verifying the Integrity of the Network	6-15

Appendix A: Timeclock Specifications

Appendix B: Differences Between the Series 4000 and the Series 400 Timeclocks

Physical Differences	A-2
Functional Differences	A-3

Glossary

Index

About This Guide

This guide is intended for all users of the Series 4000 timeclock. It describes basic concepts of the Series 4000 timeclock and contains instructions for performing operations and executing functions, maintaining and servicing the timeclock, and troubleshooting error conditions.

This preface contains the following sections:

- ♦ Organization of This Guide
- ♦ Abbreviations and Terms
- ♦ Related Documents

Organization of This Guide

This guide contains the following information:

- ♦ Chapter 1, “Overview,” describes the Series 4000 timeclock, explains how the timeclock operates, and describes how to enter data at the timeclock.
- ♦ Chapter 2, “Employee Functions,” describes employee functions and how to perform them. Examples of employee functions are simple punches and labor transfers.
- ♦ Chapter 3, “Supervisor Functions,” describes supervisor functions and how to perform them. Examples of supervisor functions are adding and deleting punches.
- ♦ Chapter 4, “Maintaining the Timeclock,” describes how to service the timeclock and how to perform maintenance functions. Examples of maintenance functions are configuring the timeclock and running diagnostics.
- ♦ Chapter 5, “Upgrading Timeclock Firmware,” contains information about using the correct versions of the timeclock firmware and downloading information to the timeclock.
- ♦ Chapter 6, “Error Messages and Troubleshooting Procedures,” includes descriptions and resolutions for error messages and procedures for diagnosing and resolving error conditions.
- ♦ Appendix A, “Timeclock Specifications,” lists the physical characteristics of the Series 4000 timeclock.
- ♦ Appendix B, “Differences Between the Series 4000 and the Series 400 Timeclocks,” explains the physical and functional differences between the Series 4000 timeclock and the Series 400 timeclock. This is useful for users who are familiar with using the Series 400 timeclocks.
- ♦ “Glossary,” contains a list of terms related to the use and configuration of the Series 4000 timeclock.

Abbreviations and Terms

The guide uses the following abbreviations and terms:

Abbreviation	Meaning
CSA	Canadian Standards Association
DCM	Data Collection Manager
FIFO	first-in-first-out data queue
FRU	field replaceable unit
I/O	input/output
LCD	liquid crystal display
LED	light-emitting diode
PIN	personal identification number
RAM	random access memory
TCP/IP	Transmission Control Protocol/Internet Protocol
UL	Underwriter's Laboratory
UPC	universal product code

Related Documents

The following list includes the other documentation in the Series 4000 timeclock's documentation set. Unless otherwise noted, these documents are **not** included in the box with the Series 4000 timeclock; you must order them separately.

- ♦ *Series 4000 Badge Timeclock Installation Guide* provides step-by-step instructions for installing the Series 4000 timeclock and performing basic configuration. This document is shipped with the Series 4000 timeclock.
- ♦ The following installation guides ship with the corresponding optional device:
 - *Backup Battery Option Kit Installation Guide*
 - *Internal AC Outlet Option Kit Installation Guide*

Chapter 1

Overview

This chapter contains the following sections:

- ♦ What Are the Series 4000 Timeclocks?
- ♦ Understanding How the Series 4000 Timeclock Operates
- ♦ Entering Data at the Series 4000 Timeclock

What Are the Series 4000 Timeclocks?

The Series 4000 timeclocks are data collection devices designed to communicate with the ADP Enterprise Labor Management Suite of host applications.

The Series 4000 timeclock collects information entered by employees using the barcode reader and the keypad. You use your host application software to collect data from the timeclocks to track and process labor-related data, generate management reports, and transfer information to your payroll service.

The Series 4000 timeclock features include the following:

- ♦ Schedule enforcement, which controls when specific employees can swipe in and out
- ♦ Display of employee names, vacation, sick time, and other totals (host application dependent)
- ♦ Messaging, which allows the timeclock to display messages to individual employees (host application dependent)
- ♦ Function keys to perform various functions and transactions, such as labor account transfers and pay code transactions

Standard Hardware Features

The hardware features of the Series 4000 timeclock include the following:

- ♦ 29-key keypad including 8 user-definable function soft keys
- ♦ 4.7 inches (11.9380 cm) 1/4 VGA 4X40 FSTN liquid crystal display (LCD)
- ♦ AC transformer
- ♦ Internal beeper
- ♦ Wall-mountable enclosure

- ♦ Integrated bar code badge reader supporting use of the following codes:
 - Interleaved 2-of-5
 - Code 3-of-9
 - Codabar
 - Universal Product Code (UPC-A and UPC-E with optional 2- and 5-character supplements)
 - European Article Numbering (EAN-8 and EAN-13 with optional 2- and 5-character supplements)
 - Code 128 (compressed and uncompressed)
- ♦ Light-emitting diodes (LEDs) that indicate whether an employee's badge is read successfully, and whether the timeclock is connected to an external power source or operating on battery backup

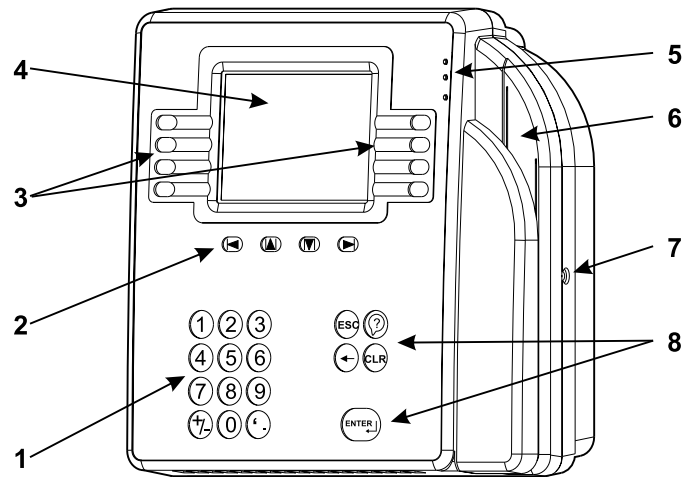
Optional Devices

You can order the following optional devices separately and connect them to the Series 4000 timeclock. Installation instructions are provided with each device.

- ♦ **Backup Battery Option** (part number 8601763-002)
Rechargeable 12 VDC lead-acid battery that you install to allow the Series 4000 timeclock to remain fully operational for up to 2 hours in the absence of AC power.
- ♦ **Internal AC Outlet Option Kit** (part number 8601824-002)
AC outlet that you can install inside the timeclock and connect to an AC power line. This device allows you to secure the AC power connection inside the timeclock.

Physical Description of the Timeclock

This section includes an illustration of the timeclock and brief descriptions of its parts. For a map of the timeclock's internal parts, see “Interior of Fully-Assembled Timeclock” on page 4-9.



MInst53

Number	Timeclock Part
1	Numeric keypad for data entry —Use to enter information when performing transactions and functions at the timeclock.
2	Navigational keys —Use to move within fields and scroll through lists.
3	Soft keys —Use to initiate transactions and functions at the timeclock. You program each soft key using the Data Collection Manager (DCM).
4	Display —1/4 VGA screen that displays soft key labels, possible functions, transaction steps, and transaction output.
5	LEDs —Visual indicators: The top LED is green and flashes when the timeclock successfully reads a badge that is swiped by a user. The middle LED is amber and flashes when the timeclock does not successfully reads a badge that is swiped by a user. The bottom LED is amber and indicates whether the timeclock is receiving power.
6	Badge reader (barcode)—Used to read employee, supervisor, and maintenance badges when swiping in and out and performing transactions and functions.
7	Security screw —Used to secure the timeclock's cover. Use the supplied security screw wrench to lock and unlock the cover.
8	Additional keys —ESC, Help, backspace and delete, CLEAR, and ENTER.

Timeclock Display

The Series 4000 timeclock is equipped with a backlit liquid crystal display to provide users with information such as:

- ♦ Current time
- ♦ Mode in which the timeclock is operating
- ♦ Transaction prompts
- ♦ Messages

The LCD display is a 1/4 VGA display that presents you with possible functions, transaction steps, and transaction output.

The following figure shows a sample idle display:

2:03^{PM}

Fri 24 - Aug - 2001

Global message area

Review Punches	Employee Report
Punch Status	Current Schedule
	Future Schedule

When you have more than 8 soft keys configured on the timeclock, the More soft key appears on the first screen and the 8th soft key appears on the second screen. You use the More soft key to access the second screen.

Understanding How the Series 4000 Timeclock Operates

Before using the Series 4000 timeclock to perform time and attendance, and labor tracking functions, it is helpful to understand:

- ♦ How the timeclock functions with the host application
- ♦ Cross-punching
- ♦ Modes of operation
- ♦ Labor tracking functions

How the Timeclock Functions with the Host Application

You use the host application to configure employees and employee information such as schedules, schedule margins, shift length, punch restrictions, and labor accounts. You then use the host application software to send this information to the Series 4000 timeclock. The timeclock accepts or restricts employee punches based on this downloaded information. Non-home employees can use a timeclock if cross punching is enabled from the host application.

When you swipe in at the Series 4000 timeclock, the punch information is collected and stored in the first-in-first-out (FIFO) data queue of the timeclock's memory. You use the host application to collect the stored data. The host application totals the hours, computes any overtime, calculates the wages, tracks the labor, and generates reports based on the data it collects from the timeclocks.

If your host application is **eTIME**, you use its data collection timeclock communication feature (Commlink application) to define which functions and transactions users can perform at the timeclocks. You also use the host application's communication functions to transfer data between the application and the timeclock. For more information, see the *eTIME System Manager's Guide* and the eTIME online Help.

If your host application is **Enterprise eTIME**, you use Data Collection Manager (DCM) to define which functions and transactions users can perform at the timeclocks. You also use DCM to collect, transfer, and monitor the flow of data between the host application and the Series 4000 timeclock. For more information, see the *Data Collection Manager System Administrator's Guide* and the DCM online Help.

Cross-punching

The cross-punching feature enables employees to use timeclocks that they are not assigned to. Each employee is assigned to a specific timeclock. They are considered a home employee to that particular timeclock. At times, an employee may need to use a timeclock that they are not assigned to for simple punching purposes. In this case, they are considered a non-home employee. This is where the cross-punching feature comes in.

You enable the cross-punching feature in the timeclock's data collection communication feature.

Modes of Operation

The Series 4000 timeclock operates in three modes. Each mode has its own set of functions and requires a specially coded badge for access.

- ♦ **Employee**

The Series 4000 timeclock most often operates in Employee Mode. In Employee Mode, the timeclock accepts punch data entered using the badge reader and keypad. In this mode, only "home" employees (employees who have been assigned to the timeclock from the host application) whose badge number or employee ID have been downloaded from the host application can use the timeclock. If cross-punching is enabled in the timeclock program, then non-home employees can use the timeclock as well as home employees.

- ♦ **Supervisor**

Supervisor Mode allows you to perform tasks such as editing employee punches, adding missed employee punches, and overriding restrictions to allow employees to punch. Supervisor Mode is accessible only to those who have a supervisor badge and unique password.

- ♦ **Maintenance**

Maintenance Mode allows you to display technical information about the timeclock, execute the timeclock's self-diagnostic tests, and perform timeclock configuration functions. Maintenance Mode is available only to those who have a maintenance badge and unique password.

Labor Tracking Functions

In addition to performing time and attendance functions, your Series 4000 timeclock may be configured to perform labor tracking functions using either departments or labor accounts.

If your Series 4000 timeclock is configured to use departments, an employee's time is associated with a single cost center, for example, shipping, medical, or engineering.

If your Series 4000 timeclock is configured to use labor accounts, an employee's time can be associated with multiple labor levels. Typically, when labor accounts are used, an employee's time is associated with cost centers that have a hierarchical relationship to each other, for example, programmer-software-engineering or drill press operator-tooling-manufacturing.

When your Series 4000 timeclock is initialized with the host application, a list of valid department numbers and labor levels can be downloaded to the timeclock.

If your timeclock is configured to perform labor account validation, employees enter labor levels by pressing the numeric keys on the timeclock or by accepting a default number by pressing ENTER. The Series 4000 timeclock validates each labor level against the list of labor levels stored in its database. If you attempt to enter an invalid labor level, the entry is rejected and an error message appears on the display.

Entering Data at the Series 4000 Timeclock

When entering data at the Series 4000 timeclock, you use the timeclock's badge reader, keypad, and soft keys.

Using the Badge Reader

You most often enter data at the Series 4000 timeclock by swiping a badge through the timeclock's badge reader. To allow the timeclock to read the badge successfully, users should:

- ♦ Hold the badge so that the bar code is positioned on the back left edge.
- ♦ Swipe the badge through the reader's slot from top-to-bottom or bottom-to-top.

If the Series 4000 timeclock reads the badge successfully, the green LED illuminates and its internal beeper emits a single tone. If the timeclock fails to read the badge, the amber LED illuminates, its internal beeper emits three tones in quick succession, and an error message appears on the display.

Using the Keypad and Soft Keys

The following table summarizes the timeclock's keys:

Keys	Use
Soft keys	<p>These keys are the timeclock's function keys. You can configure each of these keys with functions for Employee Mode and Supervisor Mode. You configure these keys using your host application software.</p> <p>The bottom soft keys on each side of the display are used as toggle keys in transactions. Press these soft keys to toggle between options.</p>
Navigational keys	<p>Use the left and right arrow keys to move the cursor within a text field.</p> <p>Use the up and down arrow keys to move the cursor to a different text field and to scroll through output.</p>
Numeric keys (0 - 9)	Use to enter numeric data such as personal identification numbers (PINs), department numbers, badge numbers, and so on.
+ or - keys	At timeclocks so configured, press the + and - keys to enter positive or negative values to adjust settings such as contrast and volume.
' or . keys	At timeclocks so configured, press the ' and . keys to enter tip (decimal) data.
ESC	<p>Use for the following:</p> <ul style="list-style-type: none">♦ To go back one screen♦ To cancel the transaction you are performing♦ To restore the previous settings on a configuration screen
Backspace	Press to clear data entered by the user one-character-at-a-time from the right.
CLR	Press to clear all data in a field.
ENTER	Press to accept data in a field and move to the next field. If you are in the last field of a transaction, pressing ENTER initiates the transaction validation.

Guidelines for Entering Information Using the Timeclock

Use the following guidelines when entering information using the keypad:

- ♦ To display settings for a menu item, press the soft key next to the menu item.
- ♦ To save settings on a screen, press ENTER at the last prompt.
To cancel the transaction you are performing, press ESC at any time.
- ♦ To move the cursor in a text field, use the left and right arrow keys directly under the display.
- ♦ To move the cursor to different text fields, use the up and down arrow keys directly under the display.
- ♦ The active text field (field in which the cursor is currently located) is indicated by an outline of the text box and a flashing cursor.
- ♦ If you enter characters in a field that already contains data, the existing data is not overwritten; it is pushed to the right. To remove individual characters, position the cursor immediately to the right of the characters, and press the Backspace key (←).
- ♦ To clear all characters in a field, press the CLR key.
- ♦ If you complete a field incorrectly and move to the next field, an error message appears at the top of the display.
- ♦ To save data that you entered, press the ENTER key at the last field on the screen.
- ♦ To restore the previous settings on a configuration screen, press the ESC key.
- ♦ Black up and down arrows appear at the bottom middle of the screen if there is additional information to display before or after the current screen. The arrows look like this:



Use the up and down arrow keys directly under the screen to move to the various screens.

Chapter 2

Employee Functions

This chapter contains the following sections:

- ♦ What Are Employee Functions?
- ♦ Performing Employee Functions

What Are Employee Functions?

Use Employee functions to perform activities such as a simple punch, labor transfer, start activity, and end activity. With the timeclock in Employee Mode (default mode), you initiate an employee function by pressing the corresponding soft key.

The following figure shows a sample Employee Mode screen:

2:03 ^{PM}		Fri Aug - 24 - 2001	
Global message area			
<input type="button" value=""/>	Review Punches	Employee Report	<input type="button" value=""/>
<input type="button" value=""/>	View Punch Status	View Current Schedule	<input type="button" value=""/>
<input type="button" value=""/>		View Future Schedule	<input type="button" value=""/>
<input type="button" value=""/>			<input type="button" value=""/>

The following list shows the Employee functions that you can perform using the Series 4000 timeclock. The transaction names are the default names. When setting up these transactions using the host application software, you can customize the names.

Note

Your timeclock can only perform the following functions after the soft keys have been configured using the host application software.

- ♦ Cancel Meal Deduction
- ♦ End Activity
- ♦ Enter Tips
- ♦ Labor Transfer
- ♦ Pay Code Hours Edit
- ♦ Pay Code Money Edit
- ♦ Review Punches
- ♦ Simple Punch
- ♦ Start Activity
- ♦ View All Messages
- ♦ View Current Schedule
- ♦ View Future Schedule
- ♦ View Punch Status
- ♦ View Totals

The remainder of this chapter contains more information about each of these Employee functions.

Performing Employee Functions

This section describes the steps you must follow to perform employee functions at the Series 4000 timeclock.

Cancel Meal Deduction

Your Series 4000 timeclock can be configured to automatically deduct time for meals so that employees do not have to punch out or in for meals or breaks. Use the Cancel Meal Deduction transaction to override the automatic deduction for special situations such as when employees work through meals or breaks.

Step	Display	Action
1	Idle screen	Press the Cancel Meal Deduction soft key.
2	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe your badge from top to bottom.♦ Type your badge number using the keypad, and press ENTER.

End Activity

Use the End Activity transaction to associate an end time with a specific activity that you just completed.

Step	Display	Action
1	Idle screen	Press the End Activity soft key.
2	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe your badge from top to bottom.♦ Type your badge number using the keypad, and press ENTER.

Enter Tips

Use the Enter Tips transaction to record tips that you have received.

Step	Display	Action
1	Idle screen	Press the Enter Tips soft key.
2	Enter Tips	Type the tip amount and press ENTER.
3	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe your badge from top to bottom.♦ Type your badge number using the keypad, and press ENTER.

Labor Transfer

Use the Labor Transfer transaction to specify to which labor account your time worked should be applied to. Your timeclock can have up to 7 labor levels.

Step	Display	Action
1	Idle screen	Press the Labor Transfer soft key.
2	Labor Level <i>x</i>	Do one of the following to each labor level: <ul style="list-style-type: none">♦ Press ENTER to accept the default labor level.♦ Press CLR, type a new labor level, and press ENTER.
3	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe your badge from top to bottom.♦ Type your badge number using the keypad, and press ENTER.

Pay Code Hours Edit

Use the Pay Code Hours Edit transaction to associate a period of time you specify to a pay code. This is especially useful for entering non-productive time such as sick, vacation, or personal time where employees are not able to punch in and out.

Step	Display	Action
1	Idle screen	Press the Pay Code Hours Edit soft key.
2	Hours worked	Type the hours and press ENTER.
3	Date worked	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default date.♦ Press CLR, type a new date using <i>mm/dd/yyyy</i> format, and press ENTER.
4	Time work started	Type the 4-digit time using <i>24-hour</i> format, then press ENTER.
5	Pay Code	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default pay code.♦ Press CLR, type a new pay code, and press ENTER.
6	Affect OT	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default.♦ Use the toggle soft keys to select Yes or No, and press ENTER.
7	Activity Code (optional)	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default activity code.♦ Press CLR, type a new activity code, and press ENTER.
8	Labor Account (optional)	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default labor account.♦ Press CLR, type a new labor account, and press ENTER.
9	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe your badge from top to bottom.♦ Type your badge number using the keypad, and press ENTER.

Pay Code Money Edit

Use the Pay Code Money Edit transaction to enter a money amount for an employee, as opposed to having the host application calculate the information based on start and end times. The timeclock displays a currency format placeholder when prompting for the money amount.

Step	Display	Action
1	Idle screen	Press the Pay Code Money Edit soft key.
2	Money amount	Type the money amount and press ENTER.
3	Date worked	Do one of the following: <ul style="list-style-type: none"> ♦ Press ENTER to accept the default date. ♦ Press CLR, type a new date using <i>mm/dd/yyyy</i> format, and press ENTER.
4	Time work started	Type the 4-digit time using <i>24-hour</i> format, then press ENTER.
5	Pay Code	Do one of the following: <ul style="list-style-type: none"> ♦ Press ENTER to accept the default pay code. ♦ Press CLR, type a new pay code, and press ENTER.
6	Activity Code (optional)	Do one of the following: <ul style="list-style-type: none"> ♦ Press ENTER to accept the default activity code. ♦ Press CLR, type a new activity code, and press ENTER.
7	Labor Account (optional)	Do one of the following: <ul style="list-style-type: none"> ♦ Press ENTER to accept the default labor account. ♦ Press CLR, type a new labor account, and press ENTER.
8	Enter Badge	Do one of the following: <ul style="list-style-type: none"> ♦ Swipe your badge from top to bottom. ♦ Type your badge number using the keypad, and press ENTER.

Review Punches

Use the Review Punches transaction to view your punches. The timeclock will default to a maximum of the past 72 hours unless your host application is configured differently.

Step	Display	Action
1	Idle screen	Press the Review Punches soft key.
2	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe your badge from top to bottom.♦ Type your badge number using the keypad, and press ENTER.

Simple Punch

Use the Simple Punch transaction to make an in or out punch by swiping your badge through the Series 4000 timeclock's integral badge reader or by keying in your badge number using the keypad.

Note

You do not need to press any keys prior to keying in your badge number as you had to do with the Series 400 timeclocks.

Step	Display	Action
1	Idle screen	Do one of the following: <ul style="list-style-type: none">♦ Swipe your badge from top to bottom.♦ Type your badge number using the keypad, and press ENTER.

Start Activity

Use the Start Activity transaction to associate the time you are about to work with a specific activity.

Step	Display	Action
1	Idle screen	Press the Start Activity soft key.
2	Activity Code	Do one of the following: <ul style="list-style-type: none">♦ Accept the default activity code by pressing ENTER.♦ Press CLR, type a new activity code, and press ENTER.
3	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe your badge from top to bottom.♦ Type your badge number using the keypad, and press ENTER.

View All Messages

Use the View All Messages transaction to view any messages you have. You can have multiple messages assigned to you.

Step	Display	Action
1	Idle screen	Press the View All Messages soft key.
2	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe your badge from top to bottom.♦ Type your badge number using the keypad, and press ENTER.

View Current Schedule

Use the View Current Schedule transaction to display the start and end times for the shift that you are currently working.

Step	Display	Action
1	Idle screen	Press the View Current Schedule soft key.
2	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe your badge from top to bottom.♦ Type your badge number using the keypad, and press ENTER.

View Future Schedule

Use the View Future Schedule transaction to display your upcoming schedule. Depending on what your schedule is set to in your host application, the Series 4000 timeclock can display up to 14 different shifts. For example, if your host application has a 14-day schedule for you, and 10 days of that schedule have passed, the timeclock displays the schedule for the remaining 4 days.

Step	Display	Action
1	Idle screen	Press the View Future Schedule soft key.
2	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe your badge from top to bottom.♦ Type your badge number using the keypad, and press ENTER.

View Punch Status

Use the View Punch Status transaction to see whether your last punch was an in or out punch, date and time of your last punch, and how long ago that punch was made.

Step	Display	Action
1	Idle screen	Press the View Punch Status soft key.
2	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe your badge from top to bottom.♦ Type your badge number using the keypad, and press ENTER.

View Totals

Use the View Totals transaction to display total hours amounts, such as accrued hours or accruals, for a specific employee. This transaction allows you to view accrued information such as vacation time, sick time, hours worked so far this pay period, and so on. You use your host application to configure what data you want to be displayed here.

Step	Display	Action
1	Idle screen	Press the View Totals soft key.
2	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe your badge from top to bottom.♦ Type your badge number using the keypad, and press ENTER.

Chapter 3

Supervisor Functions

This chapter contains the following sections:

- ♦ What Are Supervisor Functions?
- ♦ Performing Supervisor Functions

What Are Supervisor Functions?

You use Supervisor functions to perform activities such as adding and deleting punches, adjusting pay code hours, and overriding restrictions. With the timeclock in Supervisor Mode, you initiate Supervisor functions by pressing the soft keys to the left or right side of the display.

The following figure is a sample of Supervisor Mode:

2:03 ^{PM} Fri Aug - 24 - 2001	
Supervisor Mode	
<input type="radio"/> On/Off Premises	Global NH Override <input type="radio"/>
<input type="radio"/> Add Punch	Single NH Override <input type="radio"/>
<input type="radio"/> Delete Punch	Single Home Override <input type="radio"/>
<input type="radio"/>	<input type="radio"/>

Note

The difference between Supervisor functions and Employee functions is that the Supervisor functions allow you to edit any employee data, while the Employee functions allow employees to perform basic administrative tasks on their own. Your Series 4000 timeclock can be configured to allow users to perform Employee functions while in Supervisor Mode. For more information about Employee functions that can also be performed as Supervisor functions, see Chapter 2, “Employee Functions.”

The following list shows the Supervisor functions you can perform using the Series 4000 timeclock. The transaction names are the default names. When setting up these transactions using the host application software, you can customize the names.

Note

Your timeclock can only perform the following functions after the soft keys have been configured using the host application software.

- ♦ Add Punch
- ♦ Change Password
- ♦ Delete Punch
- ♦ Display On/Off Premise Employees
- ♦ Global Home Employee Restriction Override
- ♦ Global Non-Home Employee Restriction Override
- ♦ Pay Code Hours Adjustment
- ♦ Single Home Employee Restriction Override
- ♦ Single Non-Home Employee Restriction Override
- ♦ View Employee Information

Note

You need to be careful about performing Supervisor functions that might affect data that has already been sent to your Payroll.

The remainder of this chapter contains more information about each of these Supervisor functions.

To perform Supervisor functions, you must first access Supervisor Mode. Then, you can select the desired Supervisor function.

To **access** Supervisor Mode:

Step	Display	Action
1	Idle screen	Do one of the following: <ul style="list-style-type: none">• Swipe your supervisor badge from top to bottom and press ENTER.• Type in your supervisor badge number using the keypad, and press ENTER.
2	Supervisor Login	Type the password (up to 6 digits), and press ENTER.
3	Supervisor Mode screen	Press the desired Supervisor Command soft key.

To **exit** from Supervisor Mode, press ESC.

Note

If the timeclock is idle for 45 seconds without any input from the keypad, it automatically exits from Supervisor Mode and returns to Employee Mode.

Performing Supervisor Functions

This section describes the steps you must follow to perform Supervisor functions at the Series 4000 timeclock.

Add Punch

Use the Add Punch transaction to add a missing punch for an employee. You can perform this transaction for 30 days forward or backward from the current date. The current date is considered day 0.

Note

Midnight (12:00 A.M.) is the first minute of a day. This means that 11:59 P.M. is the last minute of a day.

You can perform this transaction on more employees for the same punch date and time by entering additional badges after each transaction has been verified and accepted.

Step	Display	Action
1	Supervisor Mode screen	Press the Add Punch soft key.
2	Edit Date	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default date.♦ Press CLR, type a new date using <i>mm/dd/yyyy</i> format, then press ENTER.
3	Edit Time	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default date.♦ Press CLR, type a 4-digit time using <i>24-hour</i> format, then press ENTER.

Step	Display	Action
4	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe the employee badge from top to bottom.♦ Type the employee badge number using the keypad, and press ENTER.♦ Press ESC to end the transaction.

Change Password

Use the Change Password transaction to change the password for a specific supervisor badge.

Step	Display	Action
1	Supervisor Mode screen	Press the Change Password soft key.
2	Old Password	Type the old password for the badge.
3	New Password	Type the new password.
4	Verify Password	Type the new password a second time.

Delete Punch

Use the Delete Punch transaction to delete an improperly entered employee punch. You can perform this transaction for 30 days forward or backward from the current date, which is considered Day 0.

You can perform this transaction on more employees for the same punch date and time by swiping additional badges after each transaction has been verified and accepted.

Step	Display	Action
1	Supervisor Mode screen	Press the Delete Punch soft key.
2	Edit Date	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default date.♦ Type the date over the default date using <i>mm/dd/yyyy</i> format, then press ENTER.
3	Edit Time	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default time.♦ Type the 4-digit time over the default time using <i>24-hour</i> format, then press ENTER.
4	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe the employee badge from top to bottom.♦ Type the employee badge number using the keypad, and press ENTER.♦ Press ESC to end the transaction.

Display On/Off Premise Employees

Use the Display On/Off Premise Employees transaction to see a list of employees who are currently on or off of the premises.

Step	Display	Action
1	Supervisor Mode screen	Press the Display On/Off Premise soft key.
2	On/Off Premises	Press the toggle soft keys to select On or Off and press ENTER.

Global Home Employee Restriction Override

Use the Global Home Employee Restriction Override transaction to override schedule and punch restrictions for home employees when unusual circumstances arise (such as allowing all employees to punch out early when the company closes due to a snow storm or power outage). This enables employees to punch when they normally would not be able to do so.

Step	Display	Action
1	Supervisor Mode screen	Press the Global Home Employee Restriction Override soft key.
2	Enable/Disable	Use the toggle soft keys to select Enable or Disable, and press ENTER.
3	Duration	Type the length of time that the override is in effect using the <i>hh:mm</i> format, and press ENTER.

When a Restriction Override is enabled, a star icon appears on the timeclock display.

Global Non-Home Employee Restriction Override

Use the Global Non-Home Employee Restriction Override transaction to temporarily or indefinitely allow all non-home employees to punch at restricted times. This enables employees to punch when they normally would not be able to do so. This is useful when unusual circumstances arise such as allowing employees to punch out early when the company closes due to a snow storm or power outage.

Step	Display	Action
1	Supervisor Mode screen	Press the Global Non-Home Employee Restriction Override soft key.
2	Enable/Disable	Use the toggle soft keys to select Enable or Disable, and press ENTER.
3	Duration	Type the length of time that the override is in effect using the <i>hh:mm</i> format, and press ENTER.

When a Restriction Override is enabled, a star icon appears on the timeclock display.

Pay Code Hours Adjustment

Use the Pay Code Hours Adjustment transaction to move hours from one pay code to another (such as regular time to overtime) for an employee.

Step	Display	Action
1	Supervisor Mode screen	Press the Pay Code Hours Adjustment soft key.
2	Hours Worked	Type the hours and press ENTER.
3	Edit Date	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default date.♦ Press CLR, type a new date using <i>mm/dd/yyyy</i> format, then press ENTER.
4	Edit Time	Type the 4-digit time using <i>24-hour</i> format, then press ENTER.
5	Pay Code (Taken)	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default pay code.♦ Press CLR, type a new pay code, then press ENTER.
6	Pay Code (Moved to)	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default pay code.♦ Press CLR, type a new pay code, then press ENTER.
7	Activity Code (optional)	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default activity code.♦ Press CLR, type a new activity code, then press ENTER.
8	Labor Account (optional)	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default labor account.♦ Press CLR, type a new labor account, then press ENTER.
9	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe the employee badge from top to bottom.♦ Type the employee badge number using the keypad, and press ENTER.

Single Home Employee Restriction Override

Use the Single Home Employee Restriction Override transaction to override schedule and punch restrictions for home employees when unusual circumstances arise (such as allowing a selected employee to start early or leave early). This enables an employee to punch when they normally would not be able to do so.

In the Number of Credits step, you enter a specific number of times that you want to allow the employee to be able to punch. This prevents you from having to enter information for an employee every day when you know ahead of the time that they are going to need this option for any length of time.

You can perform this transaction on more employees by swiping additional badges after each transaction has been verified and accepted.

Step	Display	Action
1	Supervisor Mode screen	Press the Single Home Employee Restriction Override soft key.
2	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe the employee badge from top to bottom.♦ Type the employee badge number using the keypad, and press ENTER.♦ Type the next employee badge number using the keypad, and press ENTER.♦ Press ESC to end the transaction.
3	Number of Credits	Type the number of credits (up to 99), and press ENTER. Note If you type a number greater than 99, the Maximum Field Length Reached message appears. Press CLR, then type the correct number.

When a Restriction Override is enabled, a star icon appears on the timeclock display.

Single Non-Home Employee Restriction Override

Use the Single Non-Home Employee Restriction Override transaction to enter a punch for a non-home employee when there is a Global Restriction in effect. This enables an employee to punch when they normally would not be able to.

You can perform this transaction on more employees by swiping additional badges after each transaction has been verified and accepted.

Step	Display	Action
1	Supervisor Mode screen	Press the Single Non-Home Employee Restriction Override soft key.
2	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe the employee badge from top to bottom.♦ Type the employee badge number using the keypad, and press ENTER.

When a Restriction Override is enabled, a star icon appears on the timeclock display.

View Employee Information

Use the View Employee Information transaction to display all information for a specific employee, such as in/out status, state (working or at break or meal), last punch, last schedule, and so on. You use your host application to configure what data you want to be displayed here.

Step	Display	Action
1	Idle screen	Press the View Employee Information soft key.
2	Enter Badge	Do one of the following: <ul style="list-style-type: none">♦ Swipe the employee badge from top to bottom.♦ Type the employee badge number using the keypad, and press ENTER.

Chapter 4

Maintaining the Timeclock

This chapter contains the following sections:

- ♦ Maintenance Basics
- ♦ Preventive Maintenance
- ♦ Servicing the Timeclock
- ♦ What Are the Maintenance Functions?
- ♦ Performing Maintenance Functions

Maintenance Basics

This section presents basic guidelines for maintaining and servicing the Series 4000 timeclock, including the tools you need, and safety considerations.

Types of Maintenance

There are two types of maintenance you perform on the Series 4000 timeclock:

- ♦ **Preventive maintenance**—Includes basic cleaning of the timeclock, and running diagnostic tests and reports using Maintenance Mode functions.
- ♦ **Servicing procedures**—Includes ordering and replacing parts, testing the timeclock, and performing basic configuration at the timeclock.

Required Tools

You need the following tools to service and maintain the Series 4000 timeclock:

- ♦ Screwdrivers: Phillips #0, #1, #2; and straight blade 1/8 inch and 1/4 inch
- ♦ 5-32 security-head Allen wrench
- ♦ A nonmetallic pointed tool
- ♦ Soft, clean, lint-free cleaning cloths
- ♦ Spray bottle of general-purpose glass cleaner
- ♦ Isopropyl alcohol
- ♦ ADP Field Service Anti-Static Kit
- ♦ Wire cutters/strippers

Safety Considerations

The Series 4000 timeclock is approved by Underwriter's Laboratories (UL), the Canadian Standards Association (CSA), and the Federal Communications Commission (FCC), and ships from the factory in a safe condition.

Warning

This chapter contains information that you must follow to ensure safe operation and maintenance of the timeclock. Failure to follow a warning statement can result in personal injury.

Handling Static-Sensitive Components

Many assemblies in the Series 4000 timeclock have static-sensitive components. Static electricity can cause hardware components to fail. Use the ADP Field Service Anti-Static Kit (part number 3600166-001) when handling static-sensitive assemblies.

You can damage components if you do not take the following precautions:

- When handling a static sensitive assembly for any reason, first put on the Anti-Static Kit's wrist strap. Wrap the conductive wrist strap around your wrist so that it is comfortable, and secure the fastener. Be sure the other end of the strap is grounded.
- When you finish handling the assembly, replace it in the Series 4000 timeclock, or place it on a grounded conductive surface.

Obtaining Replacement Parts

The following listing shows the parts that you can order for the Series 4000 timeclock. To order a part, contact your TLM Representative.

Part Number	Description
8900052-001	Anchors, 3
8601763-001	Backup battery
9600015-001	Badge reader cover
6800134-001	Badges, maintenance
6800133-001	Badges, supervisor
9600020-001	Hinge
9000104-001	Hinge screws, 2
8601824-001	Internal AC outlet
9600016-001	I/O panel
9000151-001	Mounting screws, 3
7200200-001	Power cord, 6-foot
7200201-001	Power cord, 12-inch
8400408-001	Power cord strain relief clip
9100200-001	Power cord strain relief nuts, 2
9000203-001	Power cord strain relief screws, 2
8900018-001	Security wrench
8400428-001	Square cable plate
9100104-001	Square cable nuts, 2
7800102-001	Transformer
8400433-001	Transformer holder

Preventive Maintenance

The Series 4000 timeclock requires periodic preventive maintenance to ensure trouble-free operation. ADP recommends that you perform preventive maintenance at least once a year, depending on the environment in which the timeclock is used.

Cleaning the Timeclock

Keep the Series 4000 timeclock case and badge reader clean to prevent dirt and grease from obscuring the LCD display or getting inside the badge reader.

To clean the timeclock's **case and keyboard**:

1. Using a soft, lint-free cloth, and a spray bottle of glass cleaner, clean the outside of the Series 4000 timeclock's cover and case. **Do not** spray the cleaner inside the timeclock's case. When cleaning the timeclock's case, spray the cleaner on the cloth—do not spray the cleaner directly on the timeclock.
2. Clean the polycarbonate lens that covers the timeclock's display.

Do not use steel wool or any other abrasives, or solvents such as alcohol, benzene, or acetone, as they can damage the timeclock.

To clean the **badge reader**:

1. Fold a paper towel over an inactive badge.
2. Spray the towel gently with a glass cleaner.
3. Swipe the badge several times in the badge reader.

About the Lithium and Lead Acid Batteries

This section describes the two types of batteries used by the Series 4000 timeclock.

Each Series 4000 timeclock is equipped with a lithium battery. As an option, you can also install a lead acid battery for backup power in the event of a power outage.

Note

Be sure to check all local and national regulations pertaining to the proper storage and disposal of batteries.

Lithium Battery

The lithium battery is a 3 VDC battery that powers the timeclock's internal real-time clock if external power is lost. You cannot perform any timeclock operations while the timeclock is operating on lithium battery backup.

You should replace the lithium battery when it is 3 years old or if the date and time do not reset correctly after a power failure.

To replace the lithium battery, do the following:

1. Open the timeclock's cover by using the security wrench to loosen the security screw on the right side of the timeclock.
2. Use a nonmetallic pointed tool to remove the lithium battery.
3. Install the new lithium battery.
4. Close and lock the timeclock cover using the security wrench.

Lead Acid Battery

The lead acid battery is an optional 12-VDC backup battery that you can order separately. The lead acid battery provides up to two hours of full functionality in the event of a power failure, including support of:

- ♦ Full LCD display (backlight automatically dimmed)
- ♦ Badge reader
- ♦ Keypad entries
- ♦ Ethernet communications

You should replace the backup battery when it is 4 years old. When you order a new backup battery, you also receive an installation guide.

Note

It takes 24 hours for the Series 4000 timeclock to recharge the backup battery after the backup battery has been completely depleted.

Running Diagnostic Tests and Reports

You can run diagnostic tests and reports to test parts of the timeclock or to get specific information about the timeclock. For more information about diagnostic tests and reports, see the “What Are the Maintenance Functions?” section beginning on page 4-43.

Servicing the Timeclock

Servicing the Series 4000 timeclock consists mainly of checking status, configuring the timeclock, testing components, and removing and replacing malfunctioning components of the timeclock.

Depending on the nature of the problem you are having with the timeclock, you will do one of the following:

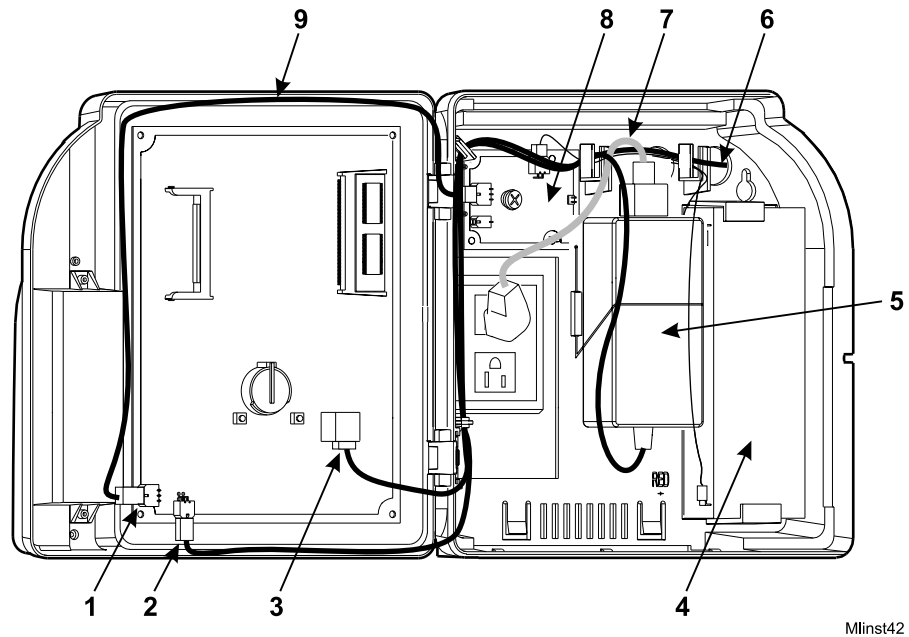
- ♦ **Send the front cover assembly back to ADP, Inc.** Do this if there is something wrong with the main board of the timeclock, or you and your TLM Representative cannot readily identify the problem with the timeclock. See the “Returning the Cover Assembly to ADP” section on page 4-10 in this chapter for detailed instructions.
- ♦ **Obtain a replacement part.** Examples of replacement parts are the transformer, backup battery, and badge reader cover. See the “Replacing the Backup Battery Charger Board” section on page 4-24 in this chapter for a complete list of parts and the procedure for ordering parts.

Caution

Before servicing the Series 4000 timeclock, save its data by using your host application software to collect the data. For more information about collecting data, see the “Using the Host Application Software to Collect Data” section on page 4-10.

Interior of Fully-Assembled Timeclock

The following figure shows the interior of the Series 4000 timeclock:



MInst42

Number	Description
1	Battery charger board connection to the main board (if the backup battery is installed)
2	Transformer connection to main board
3	Ethernet connection to main board
4	Backup battery (optional)
5	Transformer
6	Ethernet cable (shown run through the wall and into the timeclock)
7	AC power cable
8	Battery charger board (if the backup battery is installed)
9	Cables for the transformer and battery charger board (optional) routed to their connection points on the main board (see numbers 1 and 2)

Returning the Cover Assembly to ADP

If the mainboard of the Series 4000 timeclock is not operating properly or you and your TLM Representative cannot identify a problem with the timeclock, you need to return the front cover assembly to ADP for repair or replacement.

The front cover assembly includes the following major components:

- ♦ Main board
- ♦ Badge reader and cover
- ♦ DC power supply
- ♦ Keypad
- ♦ Keypad membrane
- ♦ Liquid crystal display (LCD)

Using the Host Application Software to Collect Data

Before you remove the front cover, use your host application software to collect all data.

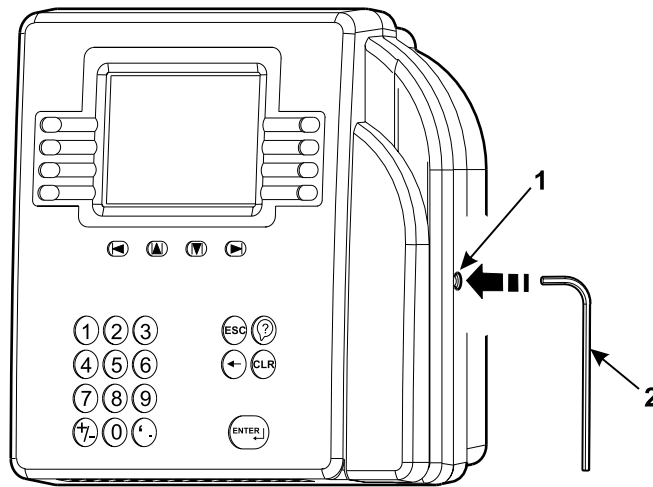
If your host application is eTIME, you use its data collection timeclock communication feature (Commlink application) to collect data. For more information about this process, see the *eTIME System Manager Guide* and the eTIME online Help.

If your host application is Enterprise eTIME, you use Data Collection Manager (DCM) to collect data. For more information about this process, see the *DCM System Administrator's Guide* and the DCM online Help.

Removing the Cover Assembly from the Timeclock

To remove the front cover, you must disconnect the timeclock from its power source. For example, you may have to remove and replace the timeclock's lithium battery, or replace the timeclock itself.

1. Open the timeclock's cover by using the security wrench to loosen the security screw on the right side of the timeclock.

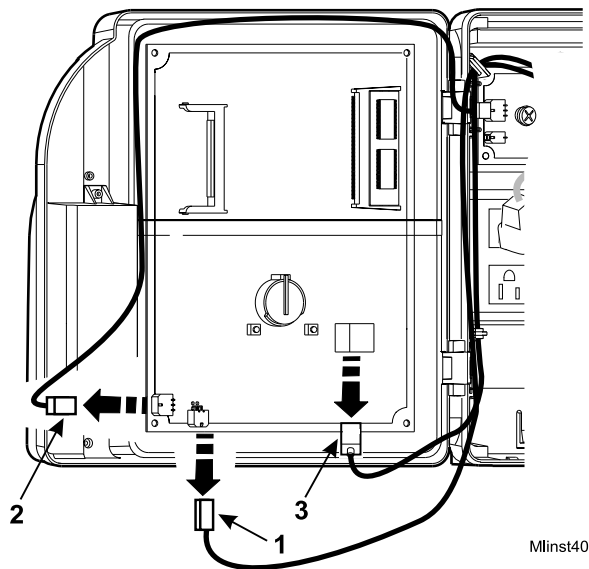


MInst24

Number	Description
1	Security screw
2	Security wrench

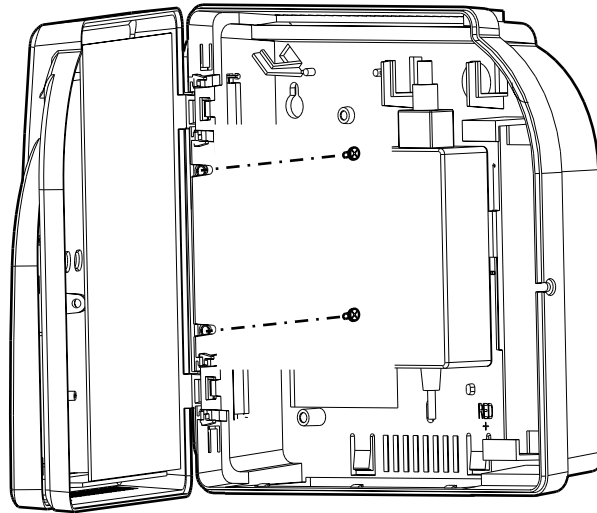
2. Disconnect the transformer in the timeclock from the AC power source. Depending on how you installed the timeclock, do one of the following:
 - Unplug the power cord from an AC outlet external to the timeclock.
 - If the timeclock is mounted over an AC outlet, unplug the power cord from that outlet.
 - If you used the internal AC outlet, unplug the power cord from the internal outlet.

3. Disconnect the following cables from the main board in the order shown. Refer to the following illustration:
- ♦ Transformer cable
 - ♦ Backup battery cable (if the backup battery is installed)
 - ♦ Ethernet cable



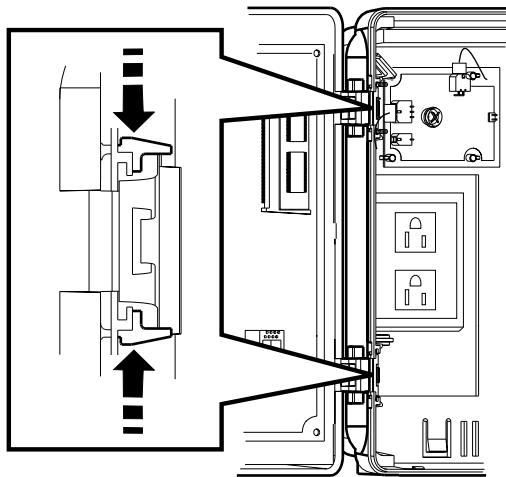
Number	Description
1	Disconnecting the transformer from the main board
2	Disconnecting the battery charger board from the main board (if you installed the backup battery)
3	Disconnecting the Ethernet cable from the main board

4. Locate and remove the two screws on the left side of the base. See the following illustration. Keep the screws in a safe place.



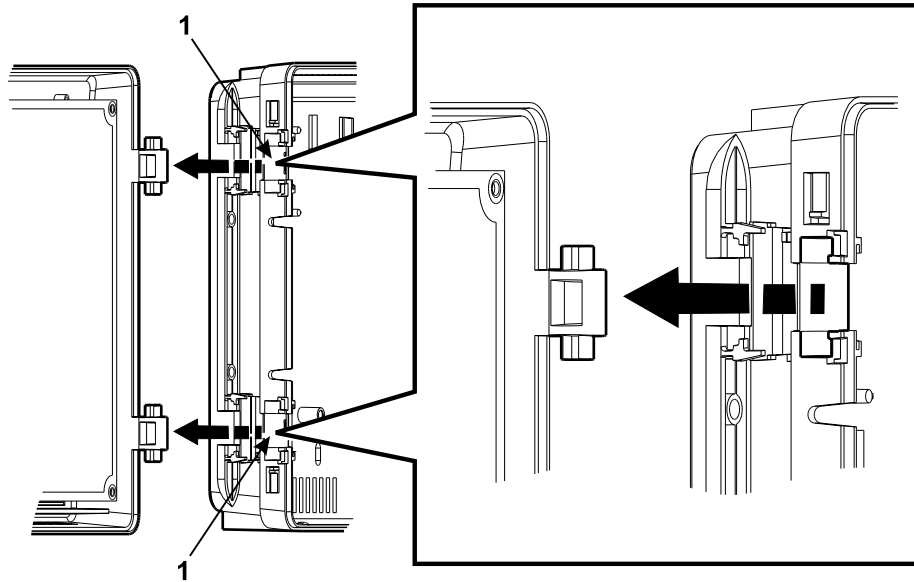
MInst57

5. While supporting the cover with one hand, squeeze the two clips shown in the following illustration to release the hinge clip holding the cover in place.



MInst48

6. Separate the cover from the base.



MInst41

Number	Description
--------	-------------

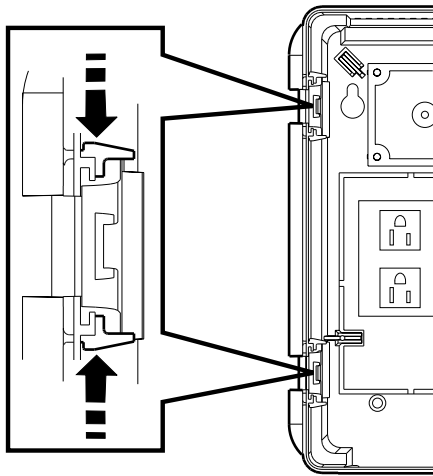
1	Recessed areas in the base where the hinges were seated
---	---

Returning the Cover Assembly

When you return the cover assembly to ADP for any reason, you must use the original ADP carton in which it was shipped.

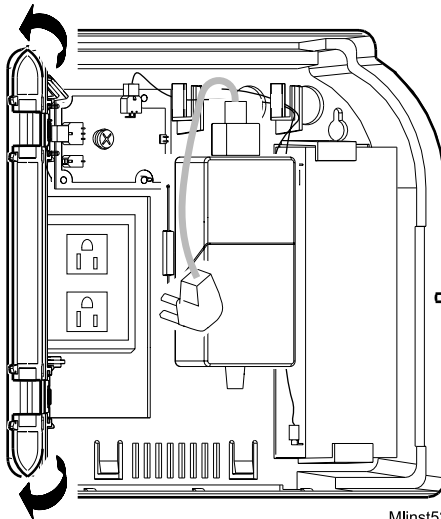
Attaching the Cover Assembly to the Timeclock

1. Release the plastic hinge clip by squeezing the retainers at each hinge position. You can squeeze each retainer one at a time or simultaneously until you feel the clip release.



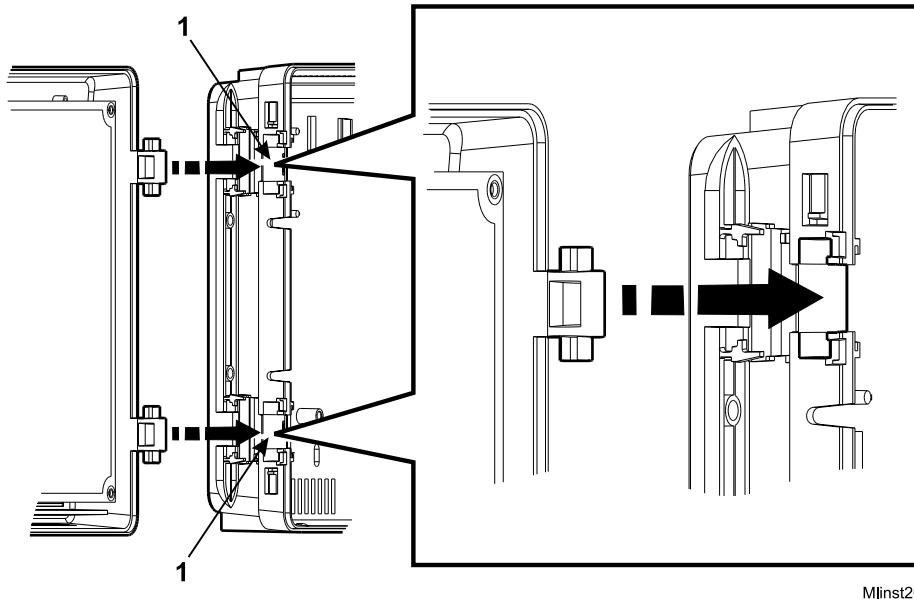
MInst14

2. Rotate the hinge clip to the left.



MInst52

3. Fit the two hinges on the cover into the corresponding areas molded in the base.

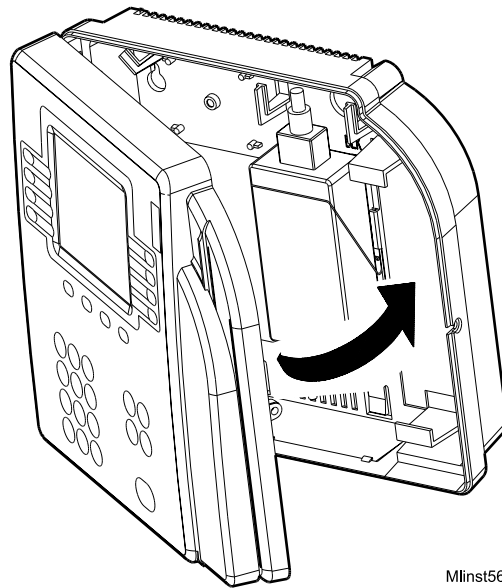


Number	Description
1	Recessed areas in the timeclock base for seating the hinges

4. Carefully close the cover of the timeclock, making sure that the two hinges remain properly seated in place.

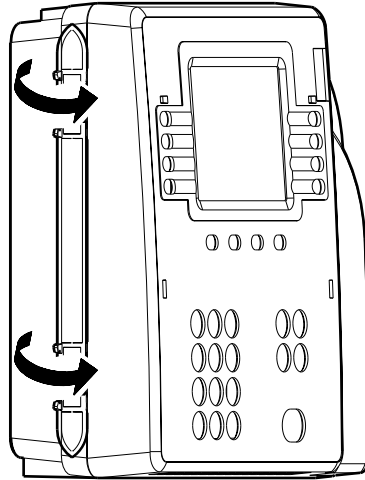
Caution

After the cover is closed, continue to hold it securely in place as you perform the next step.



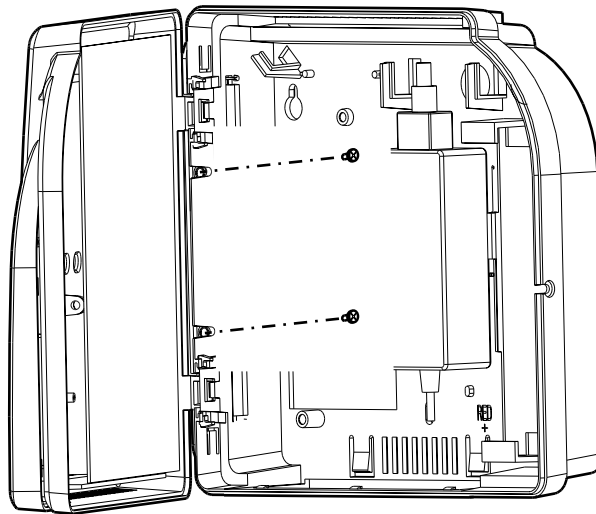
MInst56

5. Rotate the hinge clip forward until it snaps into place.



MInst15

6. Open the cover and install the two small, flat (not pointed) screws to secure the hinge clip, as shown in the following illustration.



MInst57

7. Reconnect the cables inside the timeclock and plug in the power cable. If necessary, refer to the *Series 4000 Badge Timeclock Installation Guide* that you received with your timeclock.

When the Series 4000 timeclock is initialized and the Communication Setting screen appears, go to “Performing Basic Configuration at the Series 4000 Timeclock” on page 4-20 to perform basic configuration at the timeclock.

Performing Basic Configuration at the Series 4000 Timeclock

Whenever you restore the Series 4000 timeclock to the factory defaults, you must complete the basic configuration settings on the timeclock before you can restore the timeclock's overall configuration from the host application.

When the Series 4000 timeclock is first powered on and initializes ("boots up"), the Communications Setting screen appears:

Changing comm settings causes a reboot!		
Device ID	<input type="text"/>	
IP Address		
Gateway		
Subnet Mask		

1. On the **Communication Setting** screen, complete the following fields, with the help of your network administrator:

Settings	Description
Device ID	Enter an ID number (at least six digits) for the timeclock. The host application uses this number to identify the timeclock.
IP Address	Enter the IP address, including the periods, assigned to the timeclock by your system administrator.
Gateway	Enter the IP address, including the periods, of the default device that forwards data to the host application. This field holds up to 15 digits.
Subnet Mask	Specify a number that identifies a subnetwork so that an IP address can be found on a LAN. This field holds up to 15 digits.

2. Press ENTER at the last prompt. The timeclock reboots itself so that the new communications settings take effect, and then the idle screen appears:

2:03 PM	Fri 17-Aug-2001

3. Swipe the Maintenance badge that came with the Series 4000 timeclock (the badge has an “M” on the front). To do this, hold the badge so that the bar code is positioned on the back left edge and swipe the badge up or down through the reader’s slot. The Maintenance Mode menu screen appears:

2:03 PM	Fri 17-Aug-2001
Maintenance Mode	
Comm Setting	Symbology Setting
Display Setting	Restart
Audio Setting	FACTORY DEFAULT
Date/Time Setting	More...

4. To change the current appearance of text on the screen, press the **Display Setting** soft key and complete the following fields. To quickly set a field to its minimum value, press CLR.

Settings	Description
Contrast	Use the + and - keys indicated at the bottom of the screen to increase or decrease the degree of difference between light and dark extremes of color on the timeclock's display. The minimum value is 16; the maximum value is 22.
Brightness	Use the + and - keys indicated at the bottom of the screen to increase and decrease the brightness of the timeclock display.

5. Press ENTER to save the settings and return to the Maintenance Mode screen.
6. To change, enable, or disable the key click, or adjust the beeper volume, press the **Audio Setting** soft key and complete the following fields:

Settings	Description
Beeper volume	Use the + and - keys indicated at the bottom of the screen to increase and decrease the degree of beeper volume. The minimum value is 1; the maximum value is 7.
Key click	Use the Off and On keys indicated at the bottom of the screen to enable or disable the key click sound. The Off/On choices appear when you position the cursor in this field.

7. Press ENTER to save the settings and return to the Maintenance Mode screen.
8. Press the **Date/Time Setting** soft key and enter the current date and time using the indicated format.

Settings	Description
Date (mm/dd/yyyy)	Enter the current month, day, and year. For the year, enter all four digits. Do not enter the slashes.
Time (24 hour)	Enter the current time of day in 24-hour format. Do not enter the colon. For example, enter 1730.

9. Press ENTER to save the settings and return to the Maintenance Mode screen.
10. Press the **Symbology Setting** soft key and use the On and Off soft keys to indicate the type of bar codes used on your employees' badges. This allows the timeclock to read the badges properly.

Symbology Setting	
Code 3-of-9:	<input type="text"/> Off
12-of-5:	On
UPC-A:	Off
UPC-E:	Off
Code 128:	Off
EAN-8:	Off
EAN-13:	Off
Codabar:	Off
On	Off

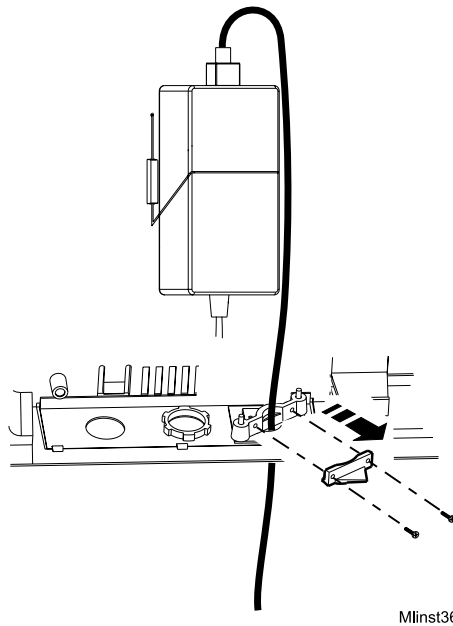
11. Press ENTER to save the settings and return to the Maintenance Mode screen.
12. To create a password that allows access to the Maintenance Mode screen in the future, press the **More** soft key and then the **Change Password** soft key. Complete the following fields:

Settings	Description
Old Password	Enter the old password, if there was one.
New Password	Enter the new password.
Verify Password	Enter the new password again to verify that you entered it correctly.

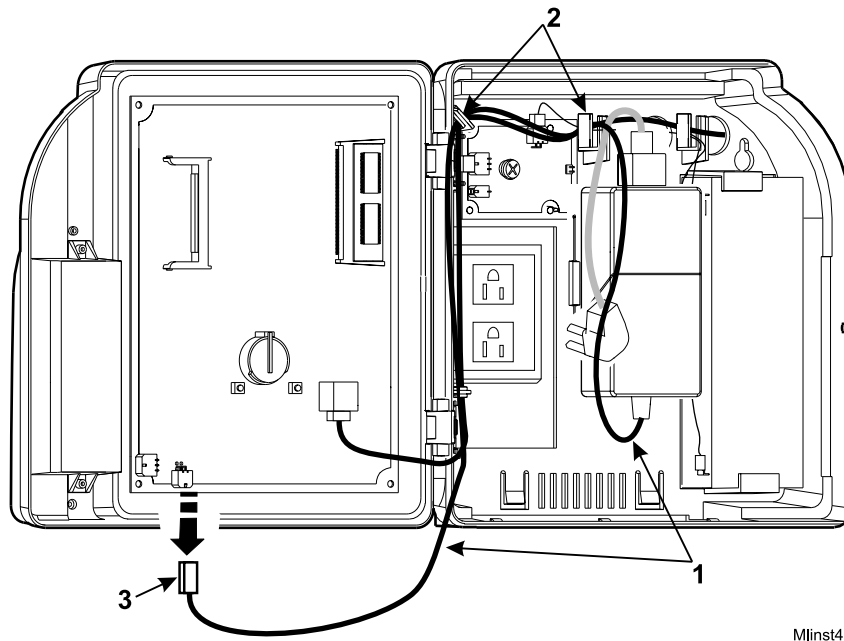
13. Press ENTER to save the password and return to the Maintenance Mode screen.
14. Press ESC to exit Maintenance Mode and return to the idle screen.

Replacing the Backup Battery Charger Board

1. Before you begin, collect data from the timeclock using your host application software. For more information, see the “Using the Host Application Software to Collect Data” section on page 4-10.
2. Open the timeclock’s cover by using the security wrench to loosen the security screw on the right side of the timeclock.
3. To disconnect and remove the battery charger board, you must first remove the transformer. Do the following:
 - a. Unplug the transformer from the AC power source. If you plugged the timeclock into an external outlet, disassemble the strain relief clip at the power cord’s point of entry into the timeclock. See the following illustration.



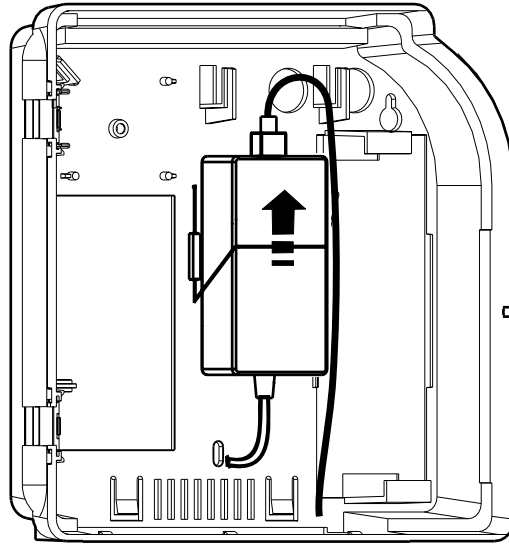
- b. Unplug the power cord from the transformer.
- c. Disconnect the transformer cable from the timeclock's main board.



Number	Description
1	Transformer cable
2	Hooks holding the cable in place
3	Transformer connection to the main board (DC power)

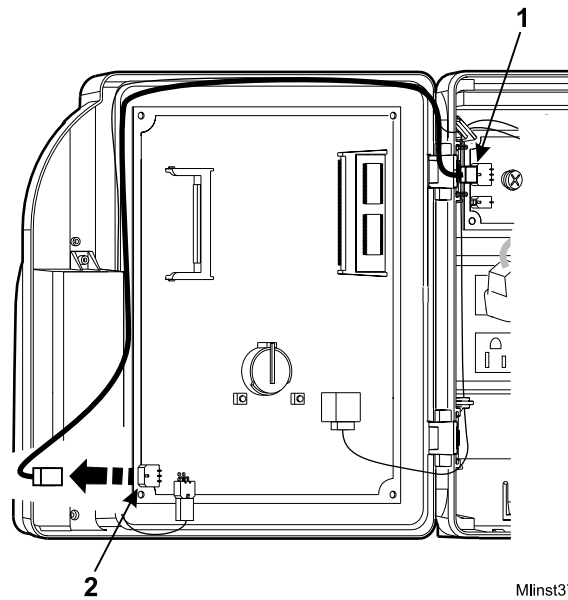
- d. Trace the wire back to the transformer, freeing it from the hooks molded into the base of the timeclock.

- e. Lift the transformer from behind the wire clip, and out of the timeclock.



MInst35

4. Disconnect the battery charger board from the timeclock's main board.



Number	Description
1	Battery charger board cable
2	Charger board connection to the main board

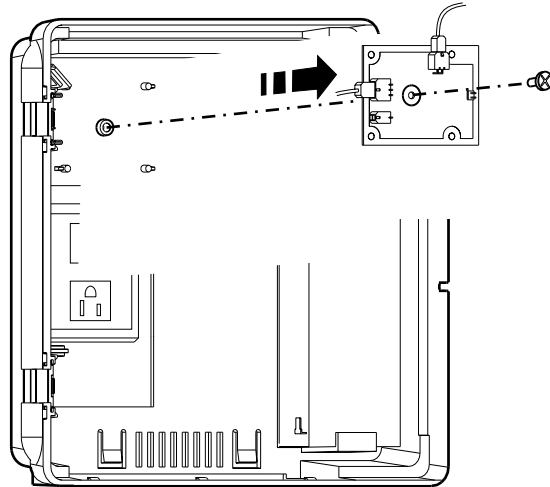
5. Trace the wires back to the charger board.

- ADP, Inc.*



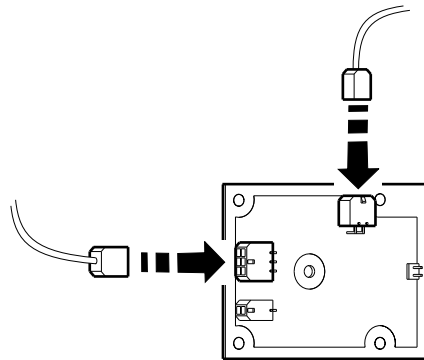
Number	Description
1	Hooks molded into the base
2	Negative terminal connection
3	Positive terminal connection

7. Loosen the screw in the center of the battery charger board and remove the board from the timeclock.



MInst38

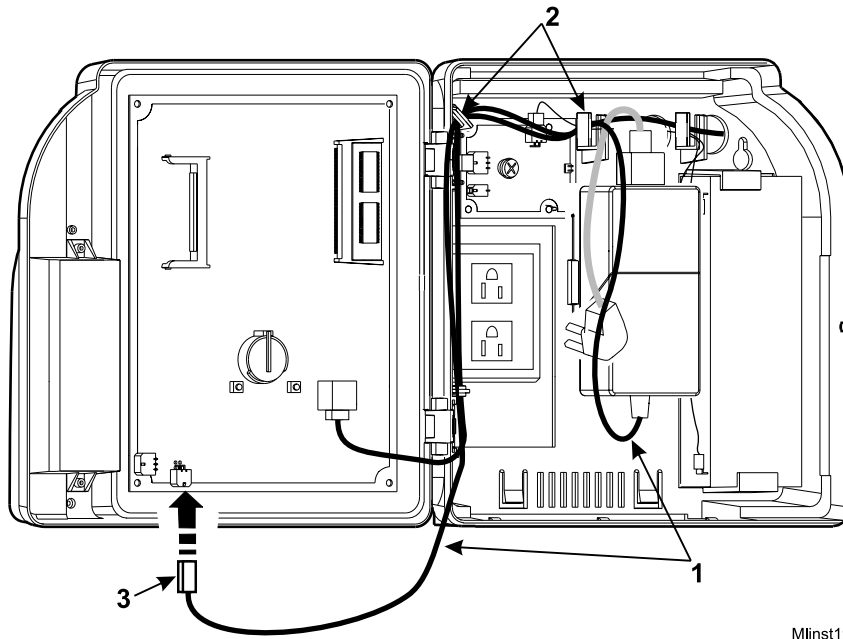
8. Unplug the cables from the connectors on the charger board.
9. Plug the cables into the connectors on the new charger board. Match the ends of each cable with the appropriate pin connector on the charger board.



MInst28

10. Re-install the battery charger board into the timeclock.
11. Reconnect the wires from the charger board to the battery terminals.

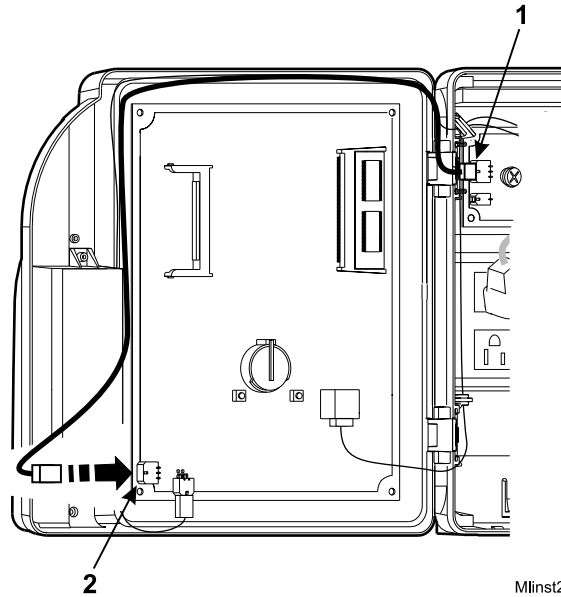
12. Position the transformer back into place behind the wire clip, route the cable back to its connection on the main board, and plug in the cable.



MIInst19

Number	Description
1	Transformer cable
2	Hooks for routing the cable
3	Transformer connection to the main board (DC power)

13. Route the charger board cable back to its connection on the main board and plug in the cable.



Number	Description
1	Battery charger board cable
2	Charger board connection to the main board

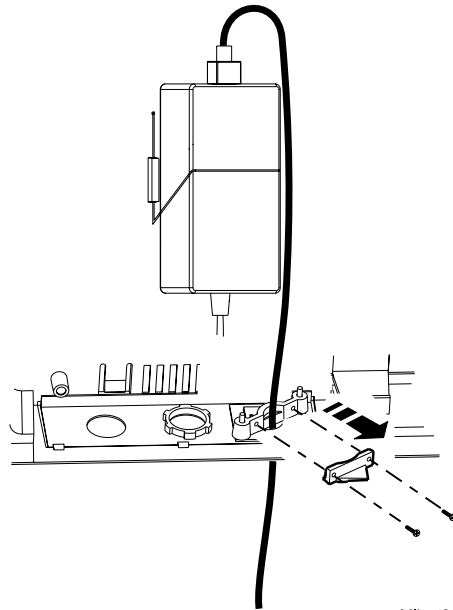
14. Plug the transformer back into the AC power source.
15. Test the battery backup by watching the amber LED on the front of the Series 4000 timeclock. When you remove AC power while the battery backup option is installed, the amber LED flashes on and off, indicating that the timeclock is being powered by battery. When you restore AC power, the LED lights continuously.

Adjusting the Width of the Badge Reader Slot

Removing the Reader Spacers

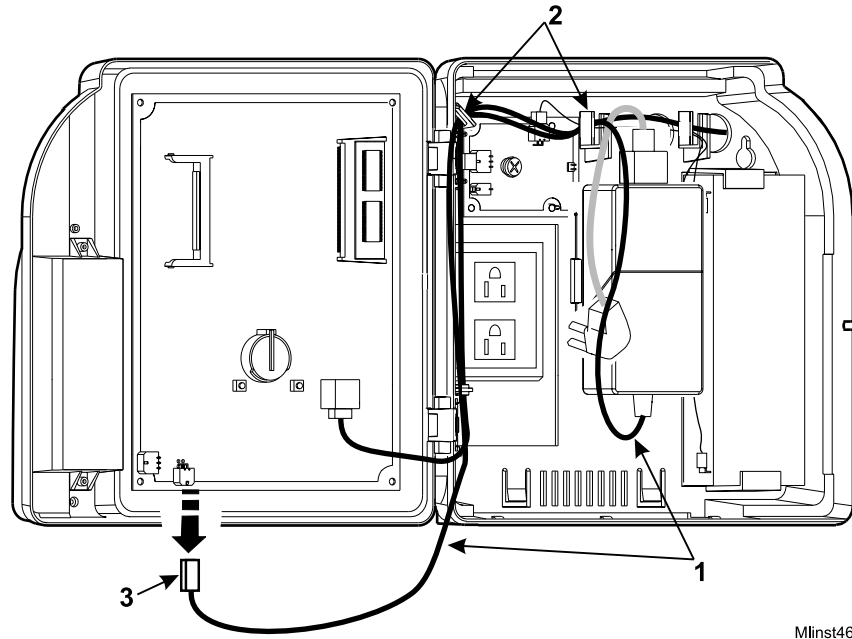
If you did not remove the spacers before you installed the Series 4000 timeclock, you need to perform the following procedure to remove them from the back of the timeclock:

1. Before you begin, collect data from the timeclock using your host application software. For more information, see the “Using the Host Application Software to Collect Data” section in this chapter.
2. Open the timeclock’s cover by using the security wrench to loosen the security screw on the right side of the timeclock.
3. Unplug the transformer from the AC power source. If you plugged the timeclock into an external outlet, disassemble the strain relief clip at the power cord’s point of entry into the timeclock.



4. Unplug the power cord from the transformer.

5. Disconnect the transformer cable from the timeclock's main board.

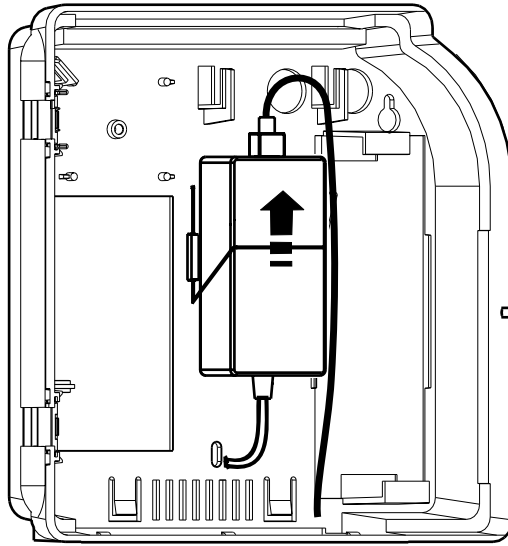


MInst46

Number	Description
1	Transformer cable
2	Hooks for routing the cable
3	Transformer connection to the main board (DC power)

6. Trace the wire back to the transformer, freeing it from the hooks molded into the base of the timeclock.

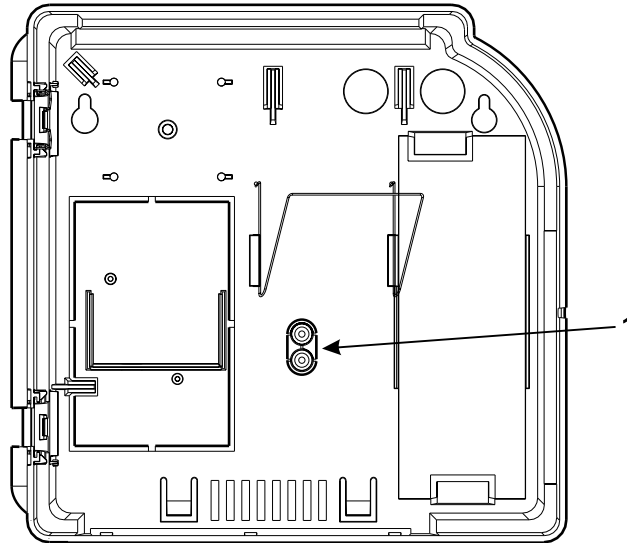
7. Lift the transformer from behind the wire clip and out of the timeclock.



MInst35

8. Unplug the AC power cord from the top of the transformer and lay the transformer in a safe place.

9. Use a utility knife to remove the two round spacers from the back of the timeclock where the transformer had been positioned.



MInst54

Number	Description
--------	-------------

- | | |
|---|--|
| 1 | Badge reader spacers molded into the base. |
|---|--|

10. Install the transformer back in the timeclock as follows:
 - a. Position the transformer behind the wire clip in the timeclock.
 - b. Route the transformer cable to its connection point on the main board and plug the connector in.
 - c. Plug the transformer back into the AC outlet. If you are plugging the timeclock into an external AC outlet, route the power cord out of the timeclock and re-assemble the strain relief clip to secure the cord.
11. Close and lock the timeclock cover using the security wrench.

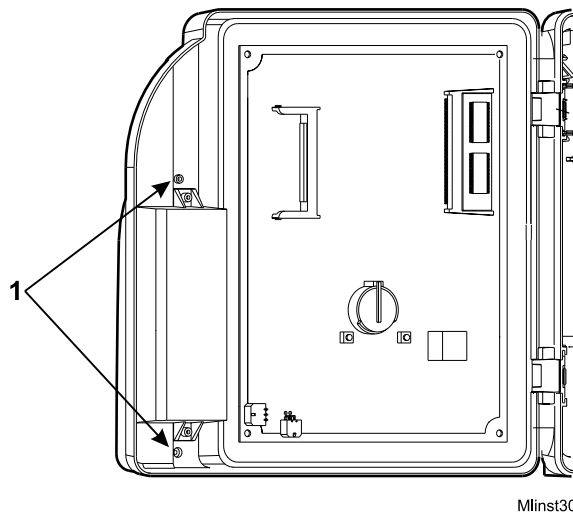
Installing the Reader Spacers

You need to widen the badge reader slot if the badges your employees use are more than .125 in (3.175 mm) thick. To widen the slot, you install two reader spacers that come molded into the base of the timeclock.

Note

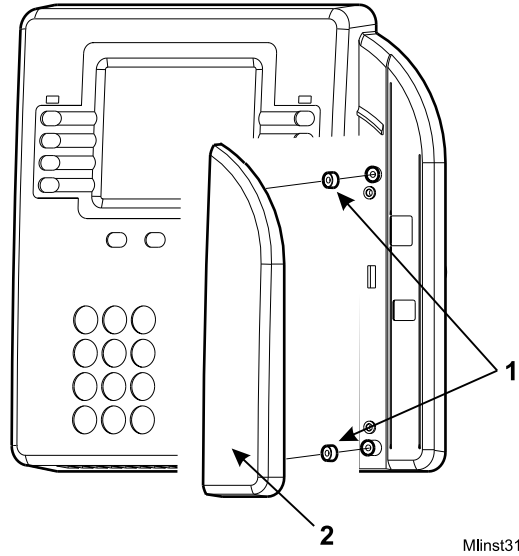
If you did not remove the spacers before you installed the Series 4000 timeclock, you will need to remove them as explained in “Removing the Reader Spacers” on page 4-32.

1. Open the timeclock’s cover by using the security wrench to loosen the security screw on the right side of the timeclock.
2. Use a Phillips screwdriver to loosen the two captive screws inside the timeclock cover that hold the badge reader cover in place.



Number	Description
1	Screws that hold the badge reader cover in place

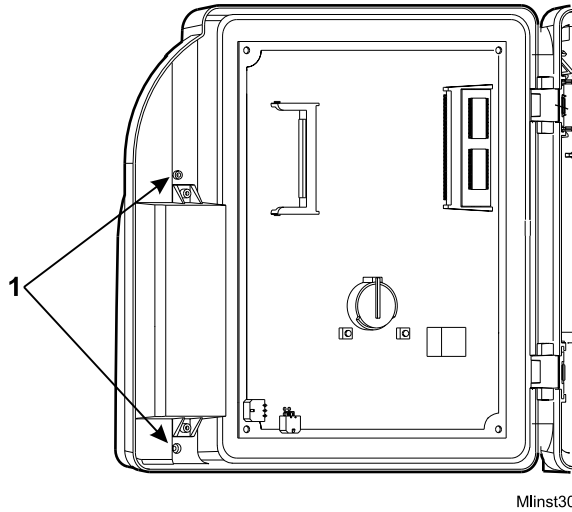
3. On the outside of the timeclock cover, press the two spacers onto the tops of the channels that hold the screws for the reader cover.
4. Position the reader cover back into place and tighten the two screws.



Number	Description
1	Badge reader spacers
2	Badge reader cover

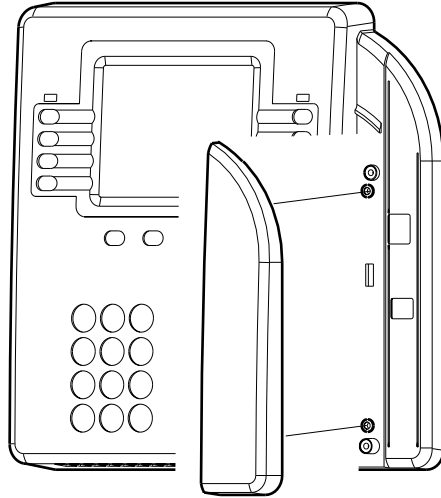
Replacing the Badge Reader Cover

1. Open the timeclock's cover by using the security wrench to loosen the security screw on the right side of the timeclock.
2. Use a Phillips screwdriver to loosen the two captive screws inside the timeclock cover, that hold the badge reader cover in place.



Number	Description
1	Screws that hold the badge reader cover in place

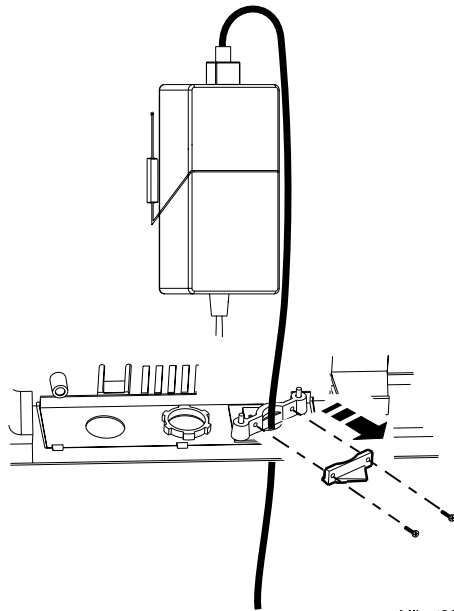
3. Position the new reader cover into place and tighten the two screws.



MInst47

Replacing the AC Power Supply (transformer)

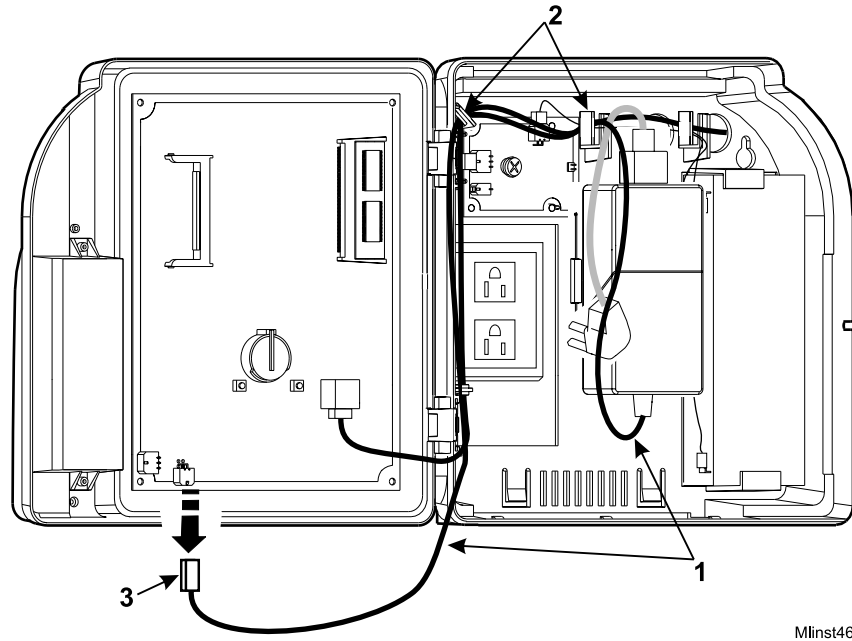
1. Before you begin, collect data from the timeclock using your host application software. For more information, see the “Using the Host Application Software to Collect Data” section in this chapter.
2. Open the timeclock’s cover by using the security wrench to loosen the security screw on the right side of the timeclock.
3. Unplug the transformer from the AC power source. If you plugged the timeclock into an external outlet, disassemble the strain relief clip at the power cord’s point of entry into the timeclock.



MInst36

4. Unplug the power cord from the transformer.

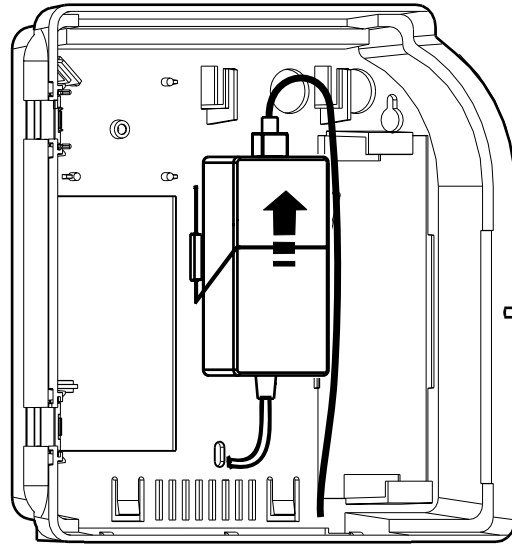
5. Disconnect the transformer cable from the timeclock's main board.



Number	Description
1	Transformer cable
2	Hooks for routing the cable
3	Transformer connection to the main board (DC power)

6. Trace the wire back to the transformer, freeing it from the hooks molded into the base of the timeclock.

7. Lift the transformer from behind the wire clip and out of the timeclock.



MInst35

8. Unplug the AC power cable from the top of the transformer.
9. Install the new transformer as follows:
 - a. Plug the AC power cord into the top of the transformer.
 - b. Position the transformer behind the wire clip in the timeclock.
 - c. Route the transformer cable to its connection point on the main board and plug in the connector.
 - d. Plug the transformer back into the AC outlet. If you are plugging the timeclock into an external AC outlet, route the power cord out of the timeclock and re-assemble the strain relief clip to secure the cord.
10. Close and lock the timeclock cover using the security wrench.

What Are the Maintenance Functions?

Maintenance Mode allows you to display technical information about the timeclock, perform configuration functions, and execute the diagnostic tests. The diagnostic tests are extremely useful when troubleshooting hardware malfunctions.

The following figure is a sample of Maintenance Mode:

2:03 ^{PM} Fri Aug - 24 - 2001	
Maintenance Mode	
<input type="radio"/> Comm Setting	<input type="radio"/> Symbology Setting
<input type="radio"/> Display Setting	<input type="radio"/> Restart
<input type="radio"/> Audio Setting	<input type="radio"/> FACTORY DEFAULT
<input type="radio"/> Date/Time Setting	<input type="radio"/> More...

Note

You can access Maintenance Mode only if you are authorized to use a Maintenance badge at the Series 4000 timeclock.

The following list shows the Maintenance functions that you can perform using the Series 4000 timeclock. The remainder of this chapter contains more information about each of these functions.

Settings

- ♦ Audio Setting (basic configuration)
- ♦ Communication Setting (basic configuration)
- ♦ Date/Time Setting (basic configuration)
- ♦ Display Setting (basic configuration)
- ♦ Symbology Setting (basic configuration)

Reports

- ♦ Database Report
- ♦ Device Status Report
- ♦ Ethernet Report
- ♦ File System Report
- ♦ Memory Report
- ♦ Readers Report

Diagnostic Tests

- ♦ Badge Test
- ♦ Beeper Test
- ♦ Display Test
- ♦ Keypad Test
- ♦ LED Test
- ♦ Sequential Tests

Miscellaneous

- ♦ Change Password
- ♦ FACTORY DEFAULT
- ♦ Delete All Punches
- ♦ Restart

To perform Maintenance functions, you must first access Maintenance Mode. Then, you can select the desired Maintenance command.

Note

The first time that you power up the Series 4000 timeclock, the Communication Settings screen will appear. For more information about what to enter in communication settings, see the “Communication Setting (basic configuration),” section in this chapter.

To **access** Maintenance Mode:

Step	Display	Action
1	Idle screen	Swipe the Maintenance badge from top to bottom.
2	Maintenance Login	Type the password (up to 6 digits), and press ENTER. If you enter the wrong password, an error message appears. Press CLR to clear the screen, then type the password again.
3	Maintenance Mode idle screen	Press the desired Maintenance Command soft key.

To **exit** from Maintenance Mode, press ESC.

Note

If the timeclock is idle for 45 seconds without any input from the keypad, it automatically exits Maintenance Mode and returns to Employee Mode.

Performing Maintenance Functions

This section presents brief descriptions of Maintenance functions, and instructions about how to perform them.

Audio Setting (basic configuration)

Use Audio Setting to adjust the volume of the beeper and to enable or disable the keys click when pressed. The beeper volume is saved when you exit the Beeper Volume field. The Beeper Volume soft key is used to test the volume.

Note

These settings are part of the basic configuration of the timeclock. You must complete these settings when you power up the timeclock for the first time and if you replace the cover assembly.

Step	Display	Action
1	Maintenance Mode idle display	Press the Audio Setting soft key.
2	Beeper Volume (1-14)	Press the (+) and (-) soft keys to adjust the volume, then press ENTER.
3	Key Click	Press the (Off) and (On) soft keys to enable or disable the key click, then press ENTER.

Communication Setting (basic configuration)

Use Communication Setting to establish communications with the host application. This screen will appear if any information is missing from the text boxes when the Series 4000 timeclock is powered on.

The following settings are in Communication Setting:

- ♦ **Device ID**—A six-digit ID number that identifies the timeclock. The host application uses this number to identify the timeclock.
- ♦ **IP Address**—The IP address, including the periods, assigned to the timeclock by your system administrator.
- ♦ **Gateway**—The IP address, including the periods, of the default device that forwards data to the host application. This field holds up to 15 digits.
- ♦ **Subnet Mask**—A number that identifies a subnetwork so that an IP address can be found on a local area network (LAN). This field holds up to 15 digits.

Note

These settings are part of the basic configuration of the timeclock. You must complete these settings when you power up the timeclock for the first time and if you replace the cover assembly.

You need to enter the periods as you type the settings in Communication Setting. When you complete the screen, the timeclock reboots so that the settings can take effect.

Step	Display	Action
1	Maintenance Mode idle display	Press the Communication Setting soft key.
2	Device ID	Type the Device ID setting and press ENTER.
3	IP Address	Type the IP Address setting and press ENTER.
4	Gateway	Type the Gateway setting and press ENTER.
5	Subnet Mask	Type the Subnet Mask setting and press ENTER.

Date/Time Setting (basic configuration)

Use Date/Time Setting to set the date and time on the timeclock display. Note that you must enter the time in 24-hour format.

Note

These settings are part of the basic configuration of the timeclock. You must complete these settings when you power up the timeclock for the first time and if you replace the cover assembly.

Step	Display	Action
1	Maintenance Mode idle display	Press the Date/Time Setting soft key.
2	Date (mm/dd/yyyy)	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default date.♦ Type the date using <i>mm/dd/yyyy</i> format, and press ENTER.
3	Time (24-hour)	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default time.♦ Type the time using <i>hh:mm</i> format, and press ENTER.

Display Setting (basic configuration)

Use Display Setting to set the contrast and brightness of the display screen. The screen shows the effect after you have completed the transaction.

Note

These settings are part of the basic configuration of the timeclock. You must complete these settings when you power up the timeclock for the first time and if you replace the cover assembly.

Step	Display	Action
1	Maintenance Mode idle display	Press the Display Setting soft key.
2	Contrast (16-22)	Press the (+) and (-) soft keys to adjust the contrast of the display, then press ENTER.
3	Brightness (4-16)	Press the (+) and (-) soft keys to adjust the brightness of the display, then press ENTER.

Symbology Setting (basic configuration)

Use Symbology Setting to indicate the type of bar code used on your employees' badges, so that the timeclock can read the badges properly.

Caution

If you shut the Interleaved 12-of-5 setting off, you will not be able to read a maintenance badge, preventing you from accessing Maintenance Mode.

Note

These settings are part of the basic configuration of the timeclock. You must complete these settings when you power up the timeclock for the first time and if you replace the cover assembly.

Step	Display	Action
1	Maintenance Mode idle display	Press the Symbology Setting soft key.
2	Code 3-of-9 12-of-5 UPC-A UPC-E Code 128 EAN-8 EAN-13 Codabar	For each of the symbology settings, do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default setting.♦ Press the toggle soft keys to select OFF or ON and press ENTER. Note Press ENTER on the last field to complete the transaction.

Database Report

Use Database Report to display information about the database.

Step	Display	Action
1	Maintenance Mode idle display	Press the More... soft key twice.
2	Maintenance Mode display	Press the Database Report soft key.

Device Status Report

Use Device Status Report to display information about the timeclock such as:

- ♦ Application version
- ♦ Boot version
- ♦ Comm version
- ♦ OS version

Step	Display	Action
1	Maintenance Mode idle display	Press the More... soft key twice.
2	Maintenance Mode display	Press the Device Status Report soft key.

Ethernet Report

Use Ethernet Report to display the following information about the Ethernet connection to the timeclock:

- ♦ Speed
- ♦ Receive error count
- ♦ False carrier count
- ♦ Remote Faults

Step	Display	Action
1	Maintenance Mode idle display	Press the More... soft key twice.
2	Maintenance Mode display	Press the Ethernet Report soft key.

File System Report

Use File System Report to display the amount of space available in the timeclock.

Step	Display	Action
1	Maintenance Mode idle display	Press the More... soft key twice.
2	Maintenance Mode display	Press the File System Report soft key.

Memory Report

Use Memory Report to display the RAM size in the timeclock and the amount of available RAM.

Step	Display	Action
1	Maintenance Mode idle display	Press the More... soft key twice.
2	Maintenance Mode display	Press the Memory Report soft key.

Readers Report

Use Readers Report to display information about the bar code reader:

Step	Display	Action
1	Maintenance Mode idle display	Press the More... soft key twice.
2	Maintenance Mode display	Press the Readers Report soft key.

Badge Test

Use Badge Test to check a badge or the badge reader. (The Badge test is not part of the “Sequential Tests” function on page 4-56.)

Step	Display	Action
1	Maintenance Mode idle display	Press the More... soft key.
2	Maintenance Mode display	Press the Badge Test soft key.
3	Symboloy Badge Data	Swipe a badge.

Beeper Test

Use Beeper Test to check the Beeper. The beeper will beep twice at two different pitches during this test. (The Beeper test is part of the “Sequential Tests” function on page 4-56.)

Step	Display	Action
1	Maintenance Mode idle display	Press the More... soft key.
2	Maintenance Mode display	Press the Beeper Test soft key.
3	Start Test?	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default answer.♦ Press the toggle soft keys to select YES or NO, and press ENTER.

Display Test

Use Display Test to check the timeclock display. The timeclock lights up the four quadrants of the display in a pattern during this test. (The Display test is part of the “Sequential Tests” function on page 4-56.)

Step	Display	Action
1	Maintenance Mode idle display	Press the More... soft key.
2	Maintenance Mode display	Press the Display Test soft key.
3	Start Test?	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default answer.♦ Press the toggle soft keys to select YES or NO, and press ENTER.

Keypad Test

Use Keypad Test to check the keypad. (The Keypad test is not part of the “Sequential Tests” function on page 4-56.)

Step	Display	Action
1	Maintenance Mode idle display	Press the More... soft key.
2	Maintenance Mode display	Press the Keypad Test soft key.
3	Key	Type various keys on the keypad, then press ESC to exit the Test Mode.

LED Test

Use LED Test to check the timeclock's LEDs. During the test, the three LEDs in the top right corner of the timeclock flash in sequence twice. (The LED test is also part of the "Sequential Tests" function.) Then, the bottom LED remains lit to indicate that the timeclock is receiving power.

Step	Display	Action
1	Maintenance Mode idle display	Press the More... soft key.
2	Maintenance Mode display	Press the LED Test soft key.
3	Start Test?	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default answer.♦ Press the toggle soft keys to select YES or NO, and press ENTER.

Sequential Tests

Use Sequential Test to run through the Display, LED, and Beeper diagnostic tests. The test is finished after sounding two pitches for the Beeper test.

Note

You can run each test included in this Sequential Tests function individually, using each test's own maintenance function.

Step	Display	Action
1	Maintenance Mode idle display	Press the More... soft key.
2	Maintenance Mode display	Press the Sequential Tests soft key.

Change Password

Use Change Password to change the password for a specific Maintenance badge.

Step	Display	Action
1	Maintenance Mode idle display	Press the More... soft key three times.
2	Maintenance Mode display	Press the Change Password soft key.
2	Old Password	Type the old password for the badge.
3	New Password	Type the new password.
4	Verify Password	Type the new password a second time.

FACTORY DEFAULT

Use FACTORY DEFAULT to set the Series 4000 timeclock back to the factory defaults.

Warning

Only use the FACTORY DEFAULT settings if your Series 4000 timeclock is not operating properly. You lose all settings and data if you complete this transaction.

Step	Display	Action
1	Maintenance Mode idle display	Press the FACTORY DEFAULT soft key.
2	FACTORY DEFAULT?	Do one of the following: <ul style="list-style-type: none">◆ Press ENTER to accept the default answer.◆ Press the toggle soft keys to select YES or NO, and press ENTER.
3	Communication Settings display	Restore your Communication Settings. See “Communication Setting (basic configuration)” on page 4-47.

Delete All Punches

Use Delete All Punches to delete all punches from the FIFO to correct the last punch invalid error. For more information, see “Error 04-2: Last punch invalid” in Chapter 6 on page 6-3. After performing the Delete All Punches transaction, the timeclock contains only home employee data associated with schedule enforcement.

Caution

Performing Delete All Punches causes all transactions stored in the FIFO (collected and uncollected) to be deleted.

Step	Display	Action
1	Maintenance Mode idle display	Press the More... soft key three times.
2	Maintenance Mode display	Press the Delete All Punches soft key.
2	Delete all punches?	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default answer.♦ Press the toggle soft keys to select YES or NO, and press ENTER.

Restart

Use Restart to restart the Series 4000 timeclock.

Step	Display	Action
1	Maintenance Mode idle display	Press the Restart soft key.
2	Restart?	Do one of the following: <ul style="list-style-type: none">♦ Press ENTER to accept the default answer.♦ Press the toggle soft keys to select YES or NO, and press ENTER.

Chapter 5

Upgrading Timeclock Firmware

This chapter contains the following section:

- ♦ Overview of a Softload
- ♦ Performing a Softload

Overview of a Softload

A communication protocol between Data Collection Manager (DCM) and the Series 4000 badge timeclock initiates and controls the softload process. The timeclock displays a message indicating that a softload is in progress. All user input is disabled.

DCM performs a Batch first-in-first-out (FIFO) command to collect all uncollected punches from the FIFO database before the download process begins.

Note

Before attempting to upgrade the firmware in your Series 4000 timeclock, check with your ADP TLM Representative or the customer support section of www.adp.com for the latest firmware information.

Performing a Softload

Before you perform a softload, you should verify that the Data Collection Manager (DCM) Collection Agent is working. The softload process does not start until the Collection Agent completes the collection process.

Caution

To ensure a successful softload, do not reboot the timeclock while it is in Softload Mode.

To perform a softload, do the following:

1. Access the DCM Device Manager application.
2. Select **Tools > Advanced Device Manager**.
3. Select a device or device group in the left pane of the Advanced Device Manager window.
4. Select **Device > Load Firmware**.
5. In the Load Firmware Name dialog box, do the following:
 - a. In the File of types textbox, select .krm.
 - b. Browse to select the appropriate .krm file.
 - c. Click Open.

You can view the status of the softload process in the Request Status window in Advanced Device Manager. When the softload process is complete, you need to initialize your timeclock. For more information about initializing a timeclock, see the *Data Collection Manager System Administrator's Guide*.

Chapter 6

Error Messages and Troubleshooting Procedures

This chapter provides error and status messages to help isolate the source of malfunctions that occur while the Series 4000 timeclock is operating. It includes the following sections:

- ♦ **Error Messages**—Includes descriptions and solutions for all errors that can be displayed at the timeclock
- ♦ **Troubleshooting**—Includes procedures for diagnosing and resolving error conditions, communication, and operational problems

Error Messages

The Series 4000 timeclock displays two types of messages that can provide helpful information when you are troubleshooting timeclock malfunctions:

- ♦ Error Messages
- ♦ Status Messages

This chapter contains all of the error and status messages that the Series 4000 timeclock can display. It also describes the possible causes of the error message.

Transaction Error Messages

These error conditions are found after a transaction is completed.

Error 01-1: Error reading badge barcode

The timeclock was able to detect that a badge was swiped, but the data on the badge could not be decoded into a barcode. It is possible that the barcode symbology is disabled.

Swipe the badge again. Enable the barcode symbology if applicable.

Error 02-1: Unrecognized badge format

The timeclock was able to decode the data on the badge, but the barcode does not match any of the associated formats. The Series 4000 timeclock accepts only ADP standard badges; any other badge formats (generic barcode badges) must be identified via your host application software. Each step in a transaction has its own set of badge formats, so while the badge format might be known by the timeclock, it is possible it cannot be used for a specific step in a transaction.

Re-enter using a different badge.

Error 04-1: Punch rejected

The timeclock has detected that the time span since the last punch for this employee does not meet the minimum time between punches. The minimum time is configured using your host application software.

Wait the appropriate amount of time, then punch again.

Error 04-2: Last punch invalid

The date and time of the last punch for this employee is in the future, making schedule enforcement impossible.

Perform a Delete All Punches transaction in Maintenance Mode. For more information, see “Delete All Punches” in Chapter 4 on page 4-58. If data was already collected from the timeclock, you need to correct the data in the host application.

Error 05-1: Punch rejected (xxx)

Schedule enforcement logic has determined that the employee cannot punch. This error includes a reason (xxx) for the rejection.

Values include:

101 - Schedule enforcement is disabled but a repunch error was detected

102 - The restriction profile the employee is assigned to is not available (not downloaded by DCM)

103 - The generic schedule the employee is assigned to is not available (not downloaded by DCM)

104 - The last punch is in the future (see Error 04-2)

105 - Repunch error (see Error 04-1)

106 - An error was found in the data in the generic schedule the employee is assigned to

107 - According to the employee's generic schedule, it is a punch off time

108 - The employee is attempting to start a new shift but an individual or generic schedule cannot be found

109 - The employee is attempting to punch before a scheduled start time but earlier than is allowed (early start restriction)

110 - The employee is attempting to punch after the schedule start time but later than is allowed (late start restriction)

111 - The employee is attempting to punch after the schedule end time but later than the maximum time specified in the pay rules (late end restriction)

Do one of the following:

- ♦ Swipe the employee badge while the timeclock is in Supervisor Mode.
- ♦ Enable a single or global restriction credit from Supervisor Mode.

Error 06-1: Valid for home employees only

This transaction can only be performed by home employees, but the employee badge does not match any of the home employees loaded in the timeclock.

Perform this transaction with a home employee badge.

Error 06-2: Unknown home employee

The employee badge does not match any of the home employees loaded in the timeclock and punching by non-home employees is not allowed.

Do one of the following:

- ♦ In the host application, add the employee to the timeclock group and use the host application software to update the timeclock.
- ♦ In the host application software, allow non-home employees to punch.
- ♦ Swipe the employee badge while the timeclock is in Supervisor Mode.
- ♦ Enable a single or global restriction credit from Supervisor Mode.

Error 08-1: Invalid restriction level

The employee badge does not match any of the home employees loaded in the timeclock, punching by non-home employees is allowed, but not for the restriction level encoded on the badge.

Do one of the following:

- ♦ In your host application software, allow the restriction level to be used by non-home employees.
- ♦ Swipe the employee badge while the timeclock is in Supervisor Mode.
- ♦ Enable a single or global restriction credit from Supervisor Mode.

Error 09-1: Invalid for home employees

The employee badge matches a home employee loaded in the timeclock but this transaction can only be performed by non-home employees.

Do one of the following:

- ♦ Re-enter the badge number.
- ♦ Enable a single or global non-home restriction override from Supervisor Mode.

Error 36-1: System cannot save data - Contact supervisor

An error was detected when the transaction was being written into the database. All activity at the timeclock will be suspended.

Contact your TLM Representative.

Error 41-1: Restriction profile not found

The restriction profile the employee is assigned to is not available.

Using your host application software, re-initialize the timeclock.

Error 41-2: Generic schedule not found

The generic schedule the employee is assigned to is not available.

Using your host application software, re-initialize the timeclock.

Error 41-3: Generic schedule not valid

An error was found in the data in the generic schedule the employee is assigned to.

Using your host application software, re-initialize the timeclock.

Error 95-1: Password is incorrect

An invalid password has been entered for the supervisor or maintenance badge.

Enter the correct password.

Other Error Messages

Data Error Messages

Data error conditions are detected when you enter the data for a step in a transaction. These are format and content validation errors. The user must correct the rejected data in order to complete the step. These messages appear at the top of the display and the rest of the screen remains the same.

The data error messages are:

- ♦ 75-1: Enter valid data
- ♦ 91-1: This field is required
- ♦ 92-1: Maximum value is xx
- ♦ 92-2: Minimum value is xx
- ♦ 93-1: Enter a numeric value

- ♦ 94-1: Enter a valid date
- ♦ 94-2: Enter a valid time
- ♦ 94-4: Enter *xx* digits after decimal
- ♦ 94-5: Enter data in decimal format
- ♦ 94-6: Badge data exceeds field length
- ♦ 94-7: Enter a valid IP address
- ♦ 94-8: Enter valid data
- ♦ 96-1: Maximum length is *xx*
- ♦ 96-2: Minimum length is *xx*
- ♦ 10-1: Unrecognized barcode
- ♦ 10-2: Use keypad to enter data

Transaction Error Conditions

Transaction error conditions are detected after you enter all the data for a transaction. This is called transaction validation. You must correct all of the data in order to complete the transaction.

The transaction error conditions are:

- ♦ 91-2: Complete all fields
- ♦ 92-3: Maximum days in future is *xx*
- ♦ 92-4: Maximum days in past is *xx*
- ♦ Effective date must be today or earlier
- ♦ Error: The override ends in the past

Status Messages

The Series 4000 timeclock displays status messages that provide information, such as current mode of operation and FIFO status.

- ♦ Supervisor Mode
- ♦ Maintenance Mode
- ♦ Database is nearly full
- ♦ Soft Load Mode

Supervisor Mode

The timeclock is operating in Supervisor Mode.

Maintenance Mode

The timeclock is operating in Maintenance Mode.

Database is nearly full

The timeclock has reached the FIFO Nearly Full condition.

Using your host application software, collect the punches from the timeclock.

Soft Load Mode

The timeclock is operating in Soft Load Mode. Text is visible showing the status of the soft load.

Troubleshooting

This section provides troubleshooting procedures to help you isolate the source of hardware malfunctions that can occur while operating the Series 4000 timeclock.

Troubleshooting procedures are provided for the following types of problems:

- ♦ Timeclock Hardware Failures
- ♦ Troubleshooting Table
- ♦ Verifying the Integrity of the Network

For diagnostic testing, refer to “What Are the Maintenance Functions?” on page 4-43.

Timeclock Hardware Failures

Since error messages do not appear for most hardware failures, you must perform some hands-on troubleshooting to determine their causes. You need the following tools to troubleshoot the Series 4000 timeclock’s hardware:

- ♦ #0, #1, and #2 Phillips screwdrivers
- ♦ 1/8-inch and 1/4-inch flat blade screwdrivers
- ♦ A nonmetallic pointed tool
- ♦ 5-32 security-head Allen wrench
- ♦ AC/DC voltmeter
- ♦ Ohmmeter

You also need the following functioning elements of the front cover assembly. For part numbers, see “Replacing the Backup Battery Charger Board” on page 4-24.

- ♦ LCD display assembly
- ♦ DC wall transformer
- ♦ Keypad
- ♦ Auxiliary power source (APS)
- ♦ Remote swipe bar code badge reader
- ♦ Ethernet option board

Troubleshooting Table

The following table summarizes the steps that you should follow when troubleshooting the Series 4000 timeclock’s hardware. For additional information, contact your TLM Representative.

Symptom	Probable Cause	Corrective Action
The power LED is turned on, but nothing appears on the screen.	Display’s cable is not connected to mainboard.	Make sure cable is connected to the mainboard.
	Display board is malfunctioning.	Replace the front cover assembly. Contact your TLM Representative.
	Mainboard is malfunctioning.	Replace the Field Replaceable Unit (FRU). Contact your TLM Representative.
	Run the Display Test.	<ol style="list-style-type: none">1. Access Maintenance Mode.2. Press the More soft key.3. Press the Display Test soft key.4. Press ENTER to start the test and note the result.5. Contact your TLM Representative.

Symptom	Probable Cause	Corrective Action
The Series 4000 timeclock does not power up, and the power LED is not turned on.	The transformer is not plugged in properly to the timeclock's main board, the AC outlet, or both.	Check the connections to the main board and the AC outlet. Important: If the power cord is not plugged into the AC outlet, do not plug it in until you ensure that the transformer is properly connected to the main board. For instructions, see "Supplying Power to the Timeclock" in the <i>Series 4000 Badge Timeclock Installation Guide</i> .
	No power available to AC outlet.	Restore power.
	While running on backup battery power, the backup battery expired.	Restore power via AC outlet.
	Poor connection to the main board.	Check the connections to the main board.
	Bad cable.	Replace cable. Contact your TLM Representative.
	Power supply is bad.	Replace power supply. See "Replacing the AC Power Supply (transformer)" in Chapter 4 on page 4-40.
Power LED is off	LED indicator light is burned out.	Replace the front cover assembly. Contact your TLM Representative.
	Run the LED test.	<ol style="list-style-type: none"> 1. Access Maintenance Mode. 2. Press the More soft key. 3. Press the LED Test soft key. 4. Press ENTER to start the test and note the result. 5. Contact your TLM Representative.

Symptom	Probable Cause	Corrective Action
No LCD backlight	The contrast and brightness of the display screen are not appropriate for the timeclock's environment.	Adjust the contrast and brightness of the display screen. See "Display Setting (basic configuration)" on page 4-49.
Keypad fails to work	The keypad's ribbon cable is improperly connected to mainboard.	If you can, determine the exact nature of the problem (for example, is the cable twisted or cut?), then contact your TLM Representative.
	Run the Keypad test.	<ol style="list-style-type: none">1. Access Maintenance Mode.2. Press the More soft key.3. Press the Keypad Test soft key.4. Type various keys on the keypad.5. Note which key or keys fail to work.6. Contact your TLM Representative.
Lead-acid battery failure	The battery backup option is improperly installed.	Reinstall according to specifications.
	Battery backup board battery-charging circuit is not functioning properly.	Replace with functioning battery backup board. Contact your TLM Representative.
	Battery is defective.	Replace with a functioning battery. Contact your TLM Representative.
	Poor connections.	Check connections.

Symptom	Probable Cause	Corrective Action
Series 4000 timeclock fails to read badges.	The badge is unreadable or does not meet the required badge specification.	<ol style="list-style-type: none"> 1. Inspect the badge for cleanliness. 2. Clean the badge and badge reader.
	PIN punching only is enabled.	Using Data Collection Manager (DCM), enable badge punching.
	The bar code on the badge is worn or scraped off.	Replace the badge.
	You did not configure the timeclock to read the symbology encoding your badges use.	<ol style="list-style-type: none"> 1. Access Maintenance Mode. 2. Press the Symbology Setting soft key. 3. Turn on the appropriate symbology.
	The timeclock is not enabled for the correct badge reader type or company ID code (if you are using a code).	Using Data Collection Manager (DCM), correct the badge reader and company ID code settings.
	The badge reader may not be working correctly.	<p>Run the Badge Test test:</p> <ol style="list-style-type: none"> 1. Access Maintenance Mode. 2. Press the More soft key to display the test functions. 3. Press the Badge Test soft key. 4. Follow the prompts to conduct the test and note the result. <p>If the test does not indicate a problem, run a Reader Report:</p> <ol style="list-style-type: none"> 1. Access Maintenance Mode. 2. Press the More soft key twice. 3. Press the Reader Report soft key. <p>Note the report results and contact your TLM Representative.</p>

Symptom	Probable Cause	Corrective Action
Communication fails.	Communication settings are incorrect either at the timeclock or the host PC.	To check settings at the timeclock: <ol style="list-style-type: none">1. Access Maintenance Mode.2. Press the Communication Settings soft key.3. Check and, if necessary, correct the Device ID, IP Address, Gateway, and Subnet Mask settings. If communication continues to fail, check the communication settings at the host PC. Refer to the documentation for your ADP host application.
	Communications cabling is connected incorrectly.	Ensure that all communications cables are routed correctly and connected properly. If the connections are secure, determine whether the cable is defective by doing the following: <ul style="list-style-type: none">♦ Check to see if the green communications LED on the Series 4000 timeclock is lit. Use the security wrench to unlock and open the cover of the timeclock. The green LED is located inside the cover and to the left of the Ethernet connection on the main board.♦ Check to see if the green link light on the hub to which the timeclock is connected. If both lights are lit, the cable is not defective. The problem may lie in the network configuration. If both lights are not lit, the cable may be defective. Consult with your system administrator to resolve the problem.
	Poor connections.	Check connections.
	Bad mainboard.	Replace the Field Replaceable Unit (FRU). Contact your TLM Representative.

Verifying the Integrity of the Network

Verify the integrity of the Series 4000 timeclock's communications capabilities by following these steps:

1. Perform a general inspection of the installation site. Ensure that all communications cables are routed properly and are securely connected to the timeclock(s), the host PC, and any other ADP equipment that may be installed at the site.
2. Inspect the cables. Make sure they are properly attached.
3. Check wires for any breaks.
4. Using a lap top connected to the Series 4000 timeclock's Ethernet external jack, PING the host PC.

If there are any communication problems, take appropriate action to resolve them. For more information, contact your TLM Representative.

Appendix A

Timeclock Specifications

Case:	Black, advanced polycarbonate/ABS resin, dust and moisture-resistant
Dimensions:	Width: 10.75 inches (27.30 cm) Height: 11.75 inches (29.85 cm) Depth: 4 inches (10.16cm)
Weight:	5 lbs. (2.25 kg)
Keypad:	Silicon Elastomer numeric keypad and 8 programmable soft keys
Power Supply:	50/60 Hz 110/220 V transformer
Power requirements:	100 to 240V, 1.5A maximum
Display:	4 x 40 FSTN LCD
Host communications:	10/100 Mbit auto-sensing Ethernet
CPU:	Motorola MPC 860DT
Memory:	16 MB RAM, upgradeable to 64 MB 8 MB Flash, ability to upgrade to 100 MB
Badge Reader:	Integrated bar code badge reader
Battery Backup:	Optional, 12 VDC lead acid battery to provide the timeclock up to two hours of full functioning operation
Operating Environment:	Temperature: 0 to 40 ^o Celsius (32 to 104 ^o Fahrenheit) Humidity: 10% to 95% non-condensing
Shock:	Withstands 40 Gs of force when packed in original shipping carton
ESD Protection:	Withstands 20 kV electrostatic discharge without failures

AC Surge Protection:	Timeclock withstands AC power surges induced by lightning, the local power company, or inductive switching transients as tested in accordance with IEEE Standard 587
FCC:	Meets all Federal Communications Commission (FCC) requirements for Class A computing device
Approvals:	Underwriter's Laboratories (UL) Canadian Standards Association (CSA)

Appendix B

Differences Between the Series 4000 and the Series 400 Timeclocks

This appendix contains information about the differences between the Series 400 timeclocks and the Series 4000 timeclock. This appendix contains the following sections:

- ♦ Physical Differences
- ♦ Functional Differences

Physical Differences

The following table shows the physical differences between the Series 4000 and the Series 400 timeclocks.

	Series 4000	Series 400
Display	4.7", 1/4 VGA LCD	2 X 20 LCD
Configurable soft keys using DCM	14 Employee Mode 14 Supervisor Mode	Used command numbers to perform functions
Device message length	40 character	20 characters
Host communications	10/100 Mbit auto-sensing Ethernet	N/A
Memory	16 MB RAM, upgradeable to 64 MB 8 MB Flash, ability to upgrade to 100 MB	128 kilobytes up to 256 kilobytes

Functional Differences

The following table shows the functional differences between the Series 4000 and the Series 400 timeclocks.

	Series 4000	Series 400
Punch status information display	Users can view punch status.	Users can view punches, elapsed time, and last punch.
Individual employee information display	Users can display individual employee information.	Users can display and print individual employee information.
Keying in a punch	Users enter the badge number only.	Users press the * key before entering the badge number.
Supervisor functions	Supervisor uses soft keys to initiate functions.	Supervisors enter command numbers to initiate functions.
Restriction override repunch interval field	A '1' interval means a one minute restriction, a '2' interval means a two minute restriction, and so on.	A '0' interval means a one-minute restriction, a '1' interval means a two-minute restriction, and so on.
Timeclock configuration	Users configure timeclocks in their host application software, such as DCM	Users configure timeclocks using AFT commands.
Installation and maintenance	Performed by customer.	Performed by TLM Representatives.

Glossary

The following is a list of terms related to the use and configuration of the Series 4000 timeclock.

10BASE-T

Specifications of the speed of data transmission on an Ethernet network. 10BASE-T represents 10 megabits per second.

100BASE-T

Specifications of the speed of data transmission on an Ethernet network. 100BASE-T represents 100 megabits per second.

account transfer

Employees' hours that are associated with an account other than their home account.

accrual field

Storage area for the total of a type of “non-productive” time that employees can accrue. Examples of non-productive time are vacation, sick, and personal time.

accruals

Allow you to track “non-productive” hours that employees accrue over time. Examples of non-productive hours are vacation, sick, and personal time. You create accrual fields for each type of non-productive time and assign them to employees.

activity code

Allows employees who work special shifts to change activities in the [eTIME](#) application or at the timeclocks. For example, a “Charge Nurse” in a hospital is a nurse assigned temporary responsibility for his or her floor. The Charge Nurse is paid differently for taking on this responsibility. You can create activity codes and set up employees' pay rules to award bonus hours or money for activity shifts, according to your payroll policies.

American Banking Association (ABA) track

The magnetic stripe track for the ABA. The ANSI/ISO Track 2 is encoded at 75 bits per inch (bpi) density in binary coded decimal (bcd) format.

American National Standards Institute (ANSI)

Organization that coordinates a variety of standards activities in the United States and serves as a representative to the ISO and the IEC standard bodies.

backlight

The degree of luminosity (brightness) of the timeclock's display. You set this as part of the local configuration of the timeclock.

barcode reader

A device that reads and interprets bar code symbologies on employee badges. A bar code reader is shipped as an integral part of the Series 4000 timeclock.

barcode wand

Bar code reader wand that you connect to the Series 4000 timeclock's main board using an RJ-41 connector.

basic configuration

Settings you specify at the timeclock to establish proper communication with the host application, time and date, and the appearance of the display.

brightness

The radiance or luminosity of a visible object.

Codabar

A bar code symbology used for ID cards, blood banks, and some package delivery carriers.

Code 39

A bar code symbology used for industrial, medical, and government applications.

Code 128

A bar code symbology endorsed by several industry trade groups and used widely in manufacturing, especially in Europe.

contrast

The degree of difference between light and dark extremes of color on the timeclock's display. You set this as part of the local configuration of the timeclock.

Ethernet

Widely used LAN technology. Defined by the IEEE 802.3 specification.

European Article Numbering (EAN)

The EAN-8 and EAN-13 bar code symbologies that have a character set consisting of the numeric characters 0 through 9 and a check digit.

FIFO (first-in-first-out)

A storage retrieval method or buffering scheme in which the data that enters the buffer or storage medium first is the first to be retrieved.

File Transfer Protocol (FTP)

An industry-standard protocol used to transfer files to and from a remote computer.

flash memory

A constantly charged memory in which each bit of data is stored in a cell or transistor as one of two voltage levels.

function

Operations you perform at the timeclock to view and edit employee data (for example, add punches, display totals).

function key

Data Collection Manager (DCM) equivalent to a soft key.

generic schedule

A pattern of shifts that applies seven days a week. Generic schedules are an easy-to-maintain pattern of expected start times that are the same every day. Use these schedules for employees who generally work the same hours every day and for whom a precise control of start and stop times is not important.

home labor account

The main labor account (also called a “cost center”) in which an employee's worked hours accrue. When a supervisor adds an employee in the host application, the supervisor assigns the employee a “home” account. The employee’s worked hours apply to this account unless he or she performs an account transfer when punching in.

host application

The ADP software application for which the timeclock is collecting information. You use the host application to update the timeclock with new employee information and collect punches and transactions from the timeclock.

International Air Transport Association (IATA) track

The magnetic stripe track for the IATA. The ANSI/ISO Track 1 is encoded at 210 bits per inch (bpi) density in ALPHA format.

International Electrotechnical Commission (IEC)

A voluntary organization that focuses on the technical aspects of electricity.

Interleaved 2-of-5

A popular bar code symbology used frequently in shipping, warehousing, and medical fields.

Internet Protocol (IP) address

A number typically written as four numbers separated by periods that uniquely identifies a computer that is using Transmission Control Protocol/Internet Protocol (TCP/IP) to communicate across an Internet. The address consists of the network number, the subnet number, and the machine number.

International Organization of Standardization (ISO)

A voluntary organization that facilitates the international interchange of goods and services and encourages cooperation in economic, intellectual, technological, and scientific endeavors.

internal AC outlet

An optional device that you can install inside the timeclock and connect to an AC power line. This eliminates the need to install an AC outlet in the wall.

linear imager

Hand-held scanning device for reading bar codes that you connect to the Series 4000 timeclock's main board.

labor account

Labor accounts (also called “cost centers”) are where employees' worked hours accrue. Each employee is assigned a home account to which his or her hours accrue, unless a shift is an account transfer. Accounts consist of up to seven labor levels to allow you to clearly define the account. Your hierarchy should start with a general description and get more specific.

labor entry

Unit that defines one level of a given labor account.

Labor accounts (also called “cost centers”) consist of up to seven labor levels. Labor entries associated with each level contribute to defining the labor account.

labor level

Labor levels make up the structure of labor accounts (“cost centers” to which employees' hours accrue). Your labor account structure can consist of up to seven labor levels.

labor tracking

Labor tracking allows users to define precise labor accounts to which employees' hours accrue, and track hours worked in each labor account.

local configuration

See basic configuration.

local area network (LAN)

A network system confined to a small geographical area that does not use long-distance carriers, such as telephone connections. The area is usually limited by the cable length restrictions of the transportation media being used.

Network File System (NFS)

A distributed file system that allows users to access remote files and directories on a network as if they were local.

password

A code used to secure access to device configuration.

pay code

Holds worked hours and tells the host application how to calculate wages for those hours. In your system, all possible types of hours that employees can work (regular, overtime, premium, and so on) are set to accrue in the appropriate pay codes to comply with your organization's pay policies. You can also set up pay codes to hold money to accommodate tips and bonuses.

pay period

Period of time for which employees are paid on a regular basis. Pay periods that the host application supports are weekly, bi-weekly, four weeks, semi-monthly, and monthly.

personal identification number (PIN)

A number that is entered manually into a system to identify an employee.

punch

A punch registers, using a data collection device, employees' attendance at work, and their hours worked.

Employees “punch” when starting or ending a shift, meal, or break. Employees can punch in a variety of ways, depending on your system. The most common way to punch is by swiping a badge at a Series 4000 timeclock.

proxy server

A program that handles communications between a protected network and the Internet. This program typically verifies users and keeps a list of accesses.

quiet zone

In a bar code symbology, a quiet zone is a space that can precede the start pattern or follow the stop pattern. Quiet zones can sometimes be part of each symbol.

remote configuration

Involves using the host application to set up domains (timeclock groups), define communication channels, and configure features for each timeclock. You also use the host application to enter and download information to the timeclock (for example, employee list, labor entry list, labor account list).

security screw

Screw on the side of the timeclock used to lock and unlock the timeclock cover. You use a security screw wrench (supplied with the timeclock) to loosen and tighten the screw.

soft keys

Keys on the timeclock, located immediately to the left and right of the timeclock display. The keys are used to gain access to local configuration screens, and initiate functions and transactions at the timeclock.

subnet mask

Numbers included in the IP address that are used to route a packet through the gateways. Subnet masking allows routers to move the packets more quickly.

symbology

A bar code designed for different purposes. Each bar code adheres to a set of standards or specifications so that different devices can read the same bar codes.

Transmission Control Protocol and Internet Protocol (TCP/IP)

A two-layered communications protocol suite that connects different types of computers to various types of media, while providing data correction, security, and reliability.

Transmission Control Protocol (TCP): A protocol in the TCP/IP suite that manages the assembling of a message or file into smaller packets that are transmitted over the Internet and received by a TCP layer that reassembles the packets into the original message.

Internet Protocol (IP): A protocol that handles the address of each packet so that it gets to the right destination.

transaction

An operation employees perform at the timeclock, such as adding a punch and performing a labor account transfer. Personnel with supervisor badges can perform the same functions for one or more employees, when necessary.

Universal Product Code (UPC)

The UPC-A and UPC-E badge symbologies that have a character set consisting of the numeric characters 0 through 9 and a check digit.

Index

A

- activity transactions
 - end 2-4
 - start 2-9
- add punch transaction 3-5
- audio setting transaction 4-46

B

- badge reader
 - adjusting slot width 4-32
 - cover replacing 4-38
 - removing the reader spacers 4-32
 - troubleshooting 6-13
- badges
 - change maintenance password 4-57
 - change supervisor password 3-6
 - symbology setting transaction 4-50
 - test transaction 4-54
- bar code
 - badge test transaction 4-54
 - readers report transaction 4-53
 - symbology setting 4-50
- basic configuration
 - audio setting transaction 4-46
 - communication setting transaction 4-47
 - date/time setting transaction 4-48
 - display setting transaction 4-49
 - performing 4-20
 - symbology setting 4-50

- batteries

- lead-acid 4-7
 - lithium 4-6
 - replacing lithium battery 4-6
- beeper test transaction 4-54

C

- cancel meal deduction transaction 2-4
- care of the timeclock 4-5
- change password transactions
 - maintenance badge 4-57
 - supervisor 3-6
- communication
 - setting transaction 4-47
 - troubleshooting 6-14
- cover assembly, removing 4-11
- cross-punching 1-8

D

- data error messages 6-6
- database report transaction 4-51
- date/time setting transaction 4-48
- delete all punches transaction 4-58
- delete punch transaction 3-7
- device ID 4-20
- device status report transaction 4-51
- diagnostic tests
 - badge 4-54
 - beeper 4-54
 - display 4-55

- keypad 4-55
- LEDs 4-56
- sequential 4-56
- differences from Series 400 timeclock
 - functional A-3
 - physical A-2
- display
 - on/off premise transaction 3-8
 - setting transaction 4-49
 - test transaction 4-55
- E**
- employee
 - mode 2-2
 - transactions 2-3
 - view information transaction 3-12
- end activity transaction 2-4
- enter tips transaction 2-5
- error messages
 - data errors 6-6
 - status messages 6-8
 - transaction error conditions 6-7
 - transaction errors 6-2
- ethernet report transaction 4-52
- F**
- FACTORY DEFAULT transaction 4-57
- file system report transaction 4-52
- functional differences from Series 400 A-3
- functions
 - cross-punching 1-8
 - employee 2-2
 - maintenance 4-46
 - supervisor 3-2

- G**
- gateway 4-20
- global restriction override transactions
 - home employee 3-8
 - non-home employee 3-9
- H**
- hours
 - pay code adjustment transaction 3-10
 - pay code edit transaction 2-6
- I**
- interior diagram 4-9
- IP address 4-20
- K**
- key click 4-22
- keypad
 - problems 6-12
 - test transaction 4-55
 - using 1-12
- L**
- labor transfer transaction 2-5
- LCD failure 6-12
- lead-acid battery
 - about 4-7
 - failure 6-12
 - recharging time 4-7
- LED
 - failure 6-10, 6-11
 - test transaction 4-56
- lithium battery
 - about 4-6
 - replacing 4-6

M

- maintenance
 - functions 4-46
 - mode 4-43
 - preventive 4-5
 - replacement parts 4-4
 - required tools 4-2
 - safety considerations 4-3
 - servicing the timeclock 4-8
 - transactions 4-44
- maintenance functions
 - diagnostic tests 4-44
 - miscellaneous 4-44
 - reports 4-44
 - settings 4-44
- maintenance mode
 - accessing 4-45
 - example 4-43
 - exiting 4-45
- meals, cancel deduction transaction 2-4
- memory report transaction 4-53
- messages, view all transaction 2-9
- modes
 - employee 2-2
 - maintenance 4-43
 - supervisor 3-2

P

- part numbers 4-4
- password transactions
 - changing maintenance 4-57
 - changing supervisors 3-6
- pay code
 - hours adjustment transaction 3-10
 - hours edit transaction 2-6
 - money edit transaction 2-7
- pay code hours adjustment transaction 3-10
- physical differences from Series 400 A-2
- power-up failures 6-11

- preventive maintenance
 - about the lead acid battery 4-7
 - about the lithium battery 4-6
 - cleaning the badge reader 4-5
 - cleaning the case and keyboard 4-5
 - cleaning the timeclock 4-5
- punches
 - add punch transaction 3-5
 - cross-punching 1-8
 - delete punch transaction 3-7
 - review punches transaction 2-8
 - simple punch transaction 2-8
 - view punch status transaction 2-11

R

- readers
 - removing the spacers 4-32
 - report transaction 4-53
- replacement parts, obtaining 4-4
- reports
 - database transaction 4-51
 - device status transaction 4-51
 - ethernet transaction 4-52
 - file system transaction 4-52
 - memory transaction 4-53
 - readers transaction 4-53
- restart function transaction 4-58
- restriction override transaction
 - global home employee 3-8
 - global non-home employee 3-9
 - single home employee 3-11
 - single non-home employee 3-12
- review punches transaction 2-8

S

- safety considerations 4-3
- schedule
 - view current transaction 2-10
 - view future transaction 2-10
- security screw, loosening 4-11

- sequential test transaction 4-56
 - Series 400
 - functional differences from A-3
 - physical differences from A-2
 - settings
 - audio transaction 4-46
 - communications transaction 4-47
 - date/time transactions 4-48
 - display transaction 4-49
 - symbology transaction 4-50
 - simple punch transaction 2-8
 - single restriction override transaction
 - home employee 3-11
 - non-home employee 3-12
 - spacers, removing from timeclock 4-32
 - specifications A-1
 - start activity transaction 2-9
 - status messages 6-8
 - subnet mask 4-20
 - supervisor
 - functions 3-2
 - transactions 3-3
 - supervisor mode
 - accessing 3-4
 - example 3-2
 - exiting 3-4
 - symbology setting transaction 4-50
- T**
- test transactions
 - badges 4-54
 - beeper 4-54
 - display 4-55
 - keypad 4-55
 - LED 4-56
 - sequential 4-56
 - timeclock
 - interior diagram 4-9
 - restart function 4-58
 - safety considerations 4-3
 - servicing 4-8
 - timeclock care
 - cleaning the badge reader 4-5
 - cleaning the case 4-5
 - cleaning the keyboard 4-5
 - timeclock cover, locking/unlocking 4-11
 - timeclock keypad, using 1-12
 - timeclock service 4-8
 - adjusting width of badge reader slot 4-32
 - handling static-sensitive components 4-3
 - obtaining replacement parts 4-4
 - performing basic configuration 4-20
 - removing cover assembly 4-11
 - removing the reader spacers 4-32
 - replacing AC power supply 4-40
 - replacing backup battery charger board 4-24
 - replacing badge reader cover 4-38
 - replacing lithium battery 4-6
 - replacing transformer 4-40
 - returning cover assembly 4-10, 4-14
 - transaction error
 - conditions 6-7
 - messages 6-2
 - transactions
 - employee 2-3
 - maintenance 4-44
 - supervisor 3-3
 - transfer transactions, labor 2-5
 - troubleshooting
 - badge-read problems 6-13
 - communication problems 6-14
 - data error messages 6-6

- display failure 6-10
- FACTORY DEFAULT transaction 4-57
- hardware/operational problems 6-10 to 6-14
- keypad problems 6-12
- LCD failure 6-10, 6-12
- lead-acid battery failure 6-12
- LED failure 6-10, 6-11
- power-up failures 6-11
- status messages 6-8
- transaction error conditions 6-7
- transaction error messages 6-2

V

- view
 - current schedule transaction 2-10
 - future schedule transaction 2-10
 - totals transaction 2-11
- view all messages transaction 2-9

