This guide includes instructions for the person who installs the 400 Series Timeclock.
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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.

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**Document Revision History**

<table>
<thead>
<tr>
<th>Document Revision</th>
<th>Release Date</th>
</tr>
</thead>
<tbody>
<tr>
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<td>July 2000</td>
</tr>
</tbody>
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About This Guide

This guide describes the procedures that you must perform to ensure a complete installation of the 400 Series Timeclock. This section of the document provides the following information:

- Guide Organization
- Related Documents
Guide Organization

This guide identifies the pre-installation tasks, as well as the complete step-by-step instructions required for a successful installation of the 400 Series Timeclock. Chapters in the manual provide the following information:

- Chapter 1 provides a checklist of the installation steps.
- Chapter 2 describes the functions to be performed before installing the timeclock.
- Chapter 3 describes the hardware installation of the timeclock.
- Chapter 4 illustrates how to program basic parameters on the timeclock.
- Chapter 5 discusses communications between the timeclock and a host device.
Related Documents

Refer to the following documents for additional related information:

- **Ethernet Option Board (P/N 4701552-002)**
  Provides installation and troubleshooting instructions for the ethernet option board.

- **400 Series Timeclock Quick Reference Card (4702162-01)**
  Provides a list and brief explanation of common 400 Series Timeclock commands on a fold-out page.

- **400 Series Timeclock Configuration Guide (P/N 4702161-001)**
  Provides reference and procedural information about configuring the 400 Series Timeclocks. This guide also includes information about common host interface commands, as well as information about how to send these commands to the timeclock.

- **400 Series Timeclock Maintenance and Troubleshooting Guide (P/N 4702158-001)**
  Provides information on maintaining and troubleshooting the 400 Series Timeclocks. The guide also includes a reference of the Maintenance commands and the Field Replaceable Units.

- **Smart Converter II Installation Guide (P/N 4700855-02)**
  Provides installation instructions for the Smart Converter II.

- **Terminal Communication Network (P/N 4701469-001)**
  Provides an overview of communication methods between timeclocks and host software applications.

- **Terminal 14.4Kbps Modem Option Installation Guide (P/N 4701357-002)**
  Provides installation instructions for the ADP 14.4Kbps option that is used to establish communications over telephone lines between ADP timeclocks and the host.

- **400 Series Timeclock Host Software Interface Guide (P/N 4702159-001)**
  Provides information for users who interface 400 Series Timeclocks with a host computer that is running third-party software. The guide also contains terms and examples to help sophisticated users manage their 400 Series Timeclocks.
400 Series Timeclock Supervisor’s Reference (P/N 4702160-001)
Provides information for supervisors and others who manage the 400 Series Timeclocks.
Chapter 1

Installation of the 400 Series Timeclock

This guide contains the following series of steps to perform, in order, during the installation of your 400 Series Timeclock:

Preliminary Installation Steps

- Deciding which type of communication to use
- Deciding how to supply power to the timeclock
- Obtaining the appropriate installation tools
- Unpacking and inspecting the timeclock
- Determining a suitable location for the timeclock
- Preparing the wall for the timeclock installation

The above six steps are described in Chapter 2.

Installing the Timeclock

- Mounting the timeclock chassis on the wall
- Configuring timeclock communications
- Enabling the lithium battery
- Attaching the front cover to the timeclock
- Powering on

The above five steps are described in Chapter 3.

Programming Timeclock Parameters

- Setting basic timeclock parameters, such as password, date and time, and lithium battery life, among others

The above series of steps are described in Chapter 4.
Communicating to the Host

- Running programs to set and test communications between the timeclock and the host

The above step is described in Chapter 5.
Chapter 2

Preliminary Installation Steps

This chapter describes the following preliminary steps to perform before you install the 400 Series timeclock:

- Deciding Which Type of Communication to Use
- Type of Cable to Use
- Deciding How to Supply Power to the Timeclock
- Obtaining the Appropriate Installation Tools
- Unpacking and Inspecting the Timeclock
- Determining a Suitable Location for the Timeclock
- Preparing the Wall for the Timeclock Installation
Deciding Which Type of Communication to Use

For communication options to the timeclock, choose from the following selections:

- **RS-485**
  Use RS-485 communications in the following situations:
  - You are using a single-point timeclock and the distance between the timeclock and the host PC is greater than 50 feet (15.24 meters).
  - You are using a multi-timeclock configuration.

- **Ethernet**
  Refer to the *Ethernet Option Board* for more information and instructions.

- **Internal modem**
  Refer to the *14.4Kbps Modem Option Installation Guide* for more information and instructions.

Refer to the *Terminal Communication Network Reference Guide* for more information about communication types.
Type of Cable to Use

The following are specifications for 4-conductor Belden cables:

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Belden 4-conductor (82723)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductors:</td>
<td>4 conductors, 22 AWG stranded conductors + Drain</td>
</tr>
<tr>
<td>Insulation:</td>
<td>FEP</td>
</tr>
<tr>
<td>Shielding:</td>
<td>100% aluminum-polyester shield with drain wire</td>
</tr>
<tr>
<td>Capacitance:</td>
<td>30 pf/foot (typical, conductor to conductor)</td>
</tr>
<tr>
<td>Plenum Rating:</td>
<td>CL2P or better</td>
</tr>
</tbody>
</table>

**RS-485 Cable Specifications**

For RS-485 communications, ADP recommends the following cable:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cable Vendor</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable, RS-485 (Plenum)</td>
<td>Belden</td>
<td>82723</td>
</tr>
</tbody>
</table>

The following are cable specifications for RS-485 communications:

- Conductors: 22 AWG, 7x30 stranded copper wire
- Insulation: Teflon
- Shielding: 100% foil shield over all conductors, 22 AWG stranded tinned copper common drain wire
- Jacket: Teflon
- Nominal OD: 0.152 in.
- DC Resistance: 16 ohms/1,000’ (typical)
- Capacitance: 17 pf/foot (typical, conductor to conductor)
- Plenum Rating: NEC:725 Class 2
### Deciding How to Supply Power to the Timeclock

The timeclock receives power through an AC wall transformer. You can select from the following options when connecting the wall transformer to an AC outlet:

<table>
<thead>
<tr>
<th>Mount the timeclock over an AC outlet</th>
<th>The Timeclock chassis includes a knockout area that allows you to mount it over a standard AC wall outlet. Using this method secures the power connection inside the timeclock by eliminating the need to route a power cord outside the timeclock to an external AC outlet. Prior to mounting the timeclock, a licensed electrician must install the AC outlet in the correct location. Refer to the section “Preparing the Wall for the Timeclock Installation” for information about locating the AC outlet.</th>
</tr>
</thead>
<tbody>
<tr>
<td>External AC Outlet</td>
<td>You can use an external AC outlet to power the timeclock. Note that this method does not secure the AC power connection inside the timeclock. The external AC outlet must be located within 72 inches (182.88 centimeters) of the timeclock mounting location. Refer to Chapter 3 for information about using an external AC outlet.</td>
</tr>
</tbody>
</table>
Obtaining the Appropriate Installation Tools

In addition to the tools that are supplied with the timeclock, you need the following implements for this installation:

- Tape measure
- Three pan-head, 1 ¼ inch (3.18 centimeters) long screws
- Two #10 wall anchors
- Cutting pliers
- Flat-blade screwdriver
- Pocket level
- Power drill
- Drill bits
- Wire cutter
- Wire strippers
Unpacking and Inspecting the Timeclock

Perform these steps when you receive your timeclock package:

1. Remove the packing list from the outside of the carton. Retain it for your records.

2. Open the carton and carefully remove all contents. These contents include:
   - 400 Series Timeclock (the chassis is not secured with the cover)
   - Power transformer and cord
   - 400 Series Timeclock owner’s packet
   - Manuals
   - Security wrench
   - Security screw
   - 7-pin terminal block
   - Cable ties
   - Badges

   Your shipment may also contain optional equipment with its own set of information, such as:
   - +12-volt DC battery with circuit board, cables, and mounting screw
   - External universal relay

3. Inspect the carton’s contents. If anything is missing or damaged, notify your ADP representative before proceeding.

Caution

Use caution when lifting the timeclock out of the carton, as the front cover of the timeclock is not attached to the chassis.
Determining a Suitable Location for the Timeclock

As you evaluate possible locations for the timeclock, consider these factors before you install it:

**LOCATION**
The location around the timeclock must provide enough clearance so that employees can move freely near it. Ensure that you have sufficient space so that the top of the timeclock can be mounted a distance of 48 inches (121.92 centimeters) to 54 inches (137.16 centimeters) from the floor.

The required clearance may be regulated by federal, state, or municipal codes. You must also place the timeclock in a location compliant with the following specifications:

- **Temperature:** 32°- 122° F, 0°-50° C
- **Humidity:** 10% - 95% non-condensing
- **AC Power:** Grounded 120 VAC (108 - 132 VAC)

**POWER**
Locate the power supply and the communications cable with relationship to the timeclock. Since the transformer cable is 72 inches (182.88 centimeters) long, you must place the timeclock within approximately 54 inches (137.16 centimeters) of an AC outlet (non-drywall installation) or such that the timeclock’s knockout area can be aligned with the outlet’s wall plate.

If you decide to mount the timeclock over an AC outlet, plan to remove the knockout area, as illustrated in Figure 2-1.

**Caution**
Do not connect the 400 Series Timeclock’s power lines to the same circuits as electrical devices that draw large amounts of power, such as air-conditioning units, electrical motors, and compressors. Also, avoid running the communications cable near devices that interfere with data transmission.
Preparing the Wall for the Timeclock Installation

After determining the location for the timeclock, use the dimensions provided in Figure 2-2 (or Figure 2-3) to mark the wall location for the wall anchors and the #10 pan-head screws. Alternatively, you can prepare the wall by following these steps:

1. Use a level to draw an 8-inch (20.32 centimeters) level line at the mounting height.
2. Place the chassis over the line and mark the three mounting hole locations.
3. Mark the AC outlet and cable routing holes, as desired.
4. If you are installing the timeclock over an AC outlet, mark the AC outlet knockout area. (See Figure 2-1.) Have a licensed electrician install the AC outlet. If the AC outlet is already installed, align the chassis with the left edge of the outlet plate, and then mark the three mounting hole locations.

Figure 2-1: Knockout Area

Caution
The AC outlet receptacle should not protrude more than ¼ inch (.64 centimeters) from the wall. If the receptacle extends beyond that length, the DC wall supply may press against the main board and damage it.
5. Install the three wall anchors and the top two #10 pan-head screws at the locations on the wall that you marked. Leave ¼ inch (.64 centimeters) between the head of the screw and the surface.

![Figure 2-2: Dimensions for Locating the Screws and Wall Anchors (inches)](image)

**Precautions:**
- Ensure the anchors are fully inserted and secure.
- Use the correct screws for your wall material.
- Double-check the alignment before tightening the screws.

---

**400 Series Timeclock Installation Guide**

2-9
Figure 2-3: Dimensions for Locating the Screws and Wall Anchors (centimeters)
Chapter 3

Installing the Timeclock

The steps required to install the 400 Series Timeclock include:

- Mounting the Timeclock Chassis on the Wall
- Configuring Timeclock Communications
- Enabling the Lithium Battery
- Attaching the Front Cover to the Timeclock
- Powering On
Mounting the Timeclock Chassis on the Wall

You can mount the timeclock chassis on the wall using one of these methods:
- Recommended Drywall Installation (over AC outlet)
- Alternative Drywall/Non-Drywall Installation (using external AC outlet)

Recommended Drywall Installation (over AC outlet):

Prior to mounting the timeclock over an AC wall outlet, ensure that the face of the AC receptacle does not protrude more than ¼ inch (.64 centimeters) from the wall. If the receptacle extends beyond that length, the DC wall supply may press against the main board and damage it.

1. Align the left edge of the knockout area with the left edge of the AC outlet’s wall plate.
2. Install the timeclock base over the top 2 #10 pan-head screws and slide the chassis down so that it rests on the screws. (See Figure 3-1 for screw locations.)
3. Drive a third pan-head screw into the bottom wall anchor to secure the base.
4. Tighten all screws firmly.

5. If you purchased any timeclock options, such as battery backup, bell relay, modem board, or Ethernet board, install them at this point. Refer to the instructions included with the option for installation procedures.
Alternative Drywall/Non-Drywall Installation (using external AC outlet):

1. Remove the left conduit knockout from the bottom of the chassis using the tip of the flat-blade screwdriver, as shown in Figure 3-2.

Figure 3-2: Removing the Left Conduit
2. Route the AC power cable from the transformer through the conduit opening, as displayed in Figure 3-3.

![Figure 3-3: Routing the AC Cable Through the Conduit](image)

3. Coil the excess cable leaving 6 inches (15.24 centimeters) available, as shown in Figure 3-3.

4. If you purchased any timeclock options, such as battery backup, bell relay, modem board, or Ethernet board, install them at this point. Refer to the instructions included with the option for installation procedures.
Configuring Timeclock Communications

Once the timeclock is mounted on the wall, you can configure the timeclock’s communication, according to the choice that you made during the preliminary installation steps. (Refer to Chapter 2, “Preliminary Installation Steps”, for further information.)

Timeclock communication types include the following choices:
- RS-485
- Ethernet
- Modem

Instructions for RS-485 communication are contained in this chapter.

For instructions on the remaining communication types, refer to the appropriate manual:
- For Ethernet communications, refer to the Ethernet Option Board.
- For modem communications, refer to the 14.4Kbps Modem Option Installation Guide.

Configuration for RS-485 Communications

RS-485 communications allows multiple timeclocks to be connected to a single RS-485 cable, as shown in Figure 3-4.

Figure 3-4. An RS-485 Network Chain
At each timeclock, connect the RS-485 cable to the 7-pin terminal block connector supplied with the timeclock.

If the timeclock that you are installing is not the last device on a network segment connected to the RS-485 cable, you must:

- Cut the RS-485 cable at the timeclock location.
- Wire both ends of the cable to the terminal block connector. (See Figure 3-5, which displays five of the seven pins in the terminal block.)

![Figure 3-5: RS-485 Terminal Block Connector and Pinout information](image)

When wiring RS-485 network cable connectors, use different colors for each pin, and retain this color pattern throughout the network. For example, if you use black for pin 1, green for pin 2, and white for pin 4, follow that grouping of colored wires for each connector, both going into and coming out each device.

You must also set two switches on the Timeclock main printed-circuit board to:

- Enable RS-485 communications.
- Indicate to the timeclock if it is the last device on the RS-485 cable segment.

If you selected RS-485 communications during the preliminary installation phase, perform the steps in the next sections, “Make the cable connections,” and “Set the switches on the main printed-circuit board.”
Make the cable connections:

1. Remove 1 inch (2.54 centimeters) of insulation from one end of the RS-485 connecting cable (Belden 82723) to expose the individual wires.
2. Strip ¼ inch (.64 centimeters) of insulation from each wire.
3. Insert each wire into its designated pin in the terminal block, using the pin locations shown in the following table. (400 Series Timeclocks use a seven-position terminal block, which is provided with the timeclock.)

<table>
<thead>
<tr>
<th>RS-485 cable wires</th>
<th>Pin locations on the terminal block</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data A (DA)</td>
<td>1</td>
</tr>
<tr>
<td>Data B (DB)</td>
<td>2</td>
</tr>
<tr>
<td>Not used</td>
<td>3</td>
</tr>
<tr>
<td>Ground (GND)</td>
<td>4</td>
</tr>
<tr>
<td>Shield/Drain</td>
<td>5</td>
</tr>
<tr>
<td>Not used</td>
<td>6</td>
</tr>
<tr>
<td>Not used</td>
<td>7</td>
</tr>
</tbody>
</table>

4. Tighten the screw on the connector so that the wire is held in place. Make sure that you achieve good electrical contact between the wire and connector. (During the “Powering On” phase of the installation, you can plug this end of the cable into the main printed-circuit board.)

5. Connect the other end of the cable to one of the following RS-485 devices:
   - RS-485 Smart Converter II (Refer to the Smart Converter II Installation Guide for more information.)
   - RS-485 Communications Hub
   - RS-485 Comm/Key II

Set the switches on the main printed-circuit board:

To make the appropriate switch settings for RS-485 communication, locate the two blue switches on the main printed-circuit board, just above and to the right of the 7-position connector marked TB2.
Make sure that the larger of these two switches (SW2) is in the **Down** position (see Figure 3-6) for timeclocks other than the last timeclock on a segment in the network. For example, for timeclocks that have two wires per pin, set this switch to **Down**.

Make sure that the larger of these two switches (SW2) is in the **Middle** position for the last timeclock on a segment in the network (that is, for timeclocks that have one wire per pin). See Figure 3-7.

![Figure 3-6: RS-485 - Two Wires per Pin](image_url)
Figure 3-7: RS-485 - One Wire per Pin

**Caution**

*Never* set these switches in the *Up* position for this configuration.
Enabling the Lithium Battery

To enable the lithium battery, remove the factory-installed mylar plastic tab, as shown in Figure 3-8. If no mylar tab exists, you do not have a new battery. Contact your ADP representative before proceeding with the installation.

![Lithium Battery Tab](image)

Figure 3-8: Lithium Battery Tab

**Warning**

Lithium batteries can explode if improperly replaced, handled, or stored. To avoid this hazard, replace them with the same type of battery or equivalent. Discard used lithium batteries according to the manufacturer’s instructions.
Attaching the Front Cover to the Timeclock

To attach the front cover to the timeclock, perform these steps:

1. Hold the front cover assembly vertically with the two hinges pointed toward the timeclock base, as shown in Figure 3-9.

2. Slide the hinges completely into the receptacles of the base.

3. Close the cover to ensure that the hinges have been properly installed.

---

Caution

Do not attempt to swing open the unit more than 90 degrees.
Powering On

To power on the timeclock, perform these steps:

1. With the timeclock cover open, connect the communication cable to connector TB2 on the timeclock’s main printed-circuit board. See Figure 3-10. (Refer to the section “Configuring Timeclock Communications” for more information about communication cables.)

![Figure 3-10: TB2 Connector](image)

2. Route and connect any additional cables to the timeclock, for example, Ethernet or modem cables.

3. Connect the AC 3-pin DIN connector of the power supply plug to location J3 on the timeclock’s main printed-circuit board.
   - If the timeclock is mounted over an AC outlet or is using the internal AC outlet, the timeclock is powered on now. The yellow LED indicate light on the right side of the timeclock displays.

4. Push the cover firmly into the base to ensure the hinges are properly seated.

5. Install the security screw into the left side of the timeclock using the security allen wrench supplied with the timeclock.
   - If you are using an external AC outlet, turn on the timeclock by plugging it into an AC outlet. The yellow LED indicate light on the right side of the timeclock displays.
Chapter 4

Programming Timeclock Parameters

To communicate from the timeclock to the host computer, you must set some basic parameters using the keypad on the timeclock. These parameters are described in the following sections:

- Setting the Timeclock’s Password
- Setting the Date and Time
- Specifying Data Transmission and Other Options
- Setting the Lithium Battery Life
Setting the Timeclock’s Password

At this point of the installation, you have turned the timeclock’s power on for the first time. The timeclock “boots up” in Maintenance mode and displays its version numbers, as represented by KOS.XXXX on the screen.

While you are in Maintenance mode, perform the following steps to set the timeclock’s password:

1. Press * to enter Command mode.

   **Note**
   If you exited Maintenance mode and want to re-enter, swipe a Maintenance badge at the timeclock to enter Command mode.

2. The timeclock displays ENTER COMMAND NUMBER. Type 90, and press ENTER. The PROCEDURE prompt appears.

3. Type 30, and press ENTER. PROCEDURE 30 STEP 01 appears on the display.

4. Press ENTER, and the timeclock displays PROCEDURE 30 STEP 01 (PASSWORD).

5. Type a unique six-digit number for each timeclock, and press ENTER. For example, type 000001 as the password for the first timeclock and press ENTER.

   **Note**
   You must define the same password in the host application, or else the timeclock cannot communicate with the host.

6. Press * and then press ENTER to return to the PROCEDURE prompt.

7. Continue the programming process with information from the next section, “Setting the Date and Time.”
Setting the Date and Time

After setting the timeclock’s password, perform the following steps to set the date and time.

**Note**
If you exited Maintenance mode and want to re-enter, swipe a Maintenance badge at the timeclock. The timeclock displays **ENTER COMMAND NUMBER**. Type 90, and press ENTER. The **PROCEDURE** prompt appears.

1. At the **PROCEDURE** prompt, type 83, and press ENTER. The timeclock asks you to specify the **DATE**.
2. Type today’s date in the DD/MM/YY format, and press ENTER. For example, type 050198 to represent January 5, 1998, and press ENTER. The timeclock then prompts you for the **TIME**.
3. Type the current time in 24-hour format, and press ENTER. For example, type 14:25 to represent 2:25 pm, and press ENTER. The **PROCEDURE** prompt appears.

**Note**
You can set the time in either a 12- or 24-hour format. Refer to the *400 Series Timeclock Configuration Guide* for more information about setting the time on the timeclock.

4. Continue the programming process with information from the next section, “Specifying Data Transmission and Other Options.”
Specifying Data Transmission and Other Options

After setting the date and time during the initial power-up procedure, perform the following steps to specify data transmission options.

Note
If you exited Maintenance mode and want to re-enter, swipe a Maintenance badge at the timeclock.
The timeclock displays ENTER COMMAND NUMBER.
Type 90, and press ENTER. The PROCEDURE prompt appears.

1. Type 10, and press ENTER at the PROCEDURE prompt. The timeclock displays PROCEDURE 10 STEP 01.
2. Press ENTER. The timeclock displays BAUD [+/-].
3. Press + or - to scroll through a list of valid baud rates.
The timeclock supports data transmission using the following baud rates:

<table>
<thead>
<tr>
<th>300</th>
<th>600</th>
<th>1200</th>
<th>2400</th>
</tr>
</thead>
<tbody>
<tr>
<td>4800</td>
<td>9600</td>
<td>14400</td>
<td>19200</td>
</tr>
<tr>
<td>28800</td>
<td>38400</td>
<td>57600</td>
<td>115200</td>
</tr>
</tbody>
</table>

4. Select the value that applies to your timeclock, and press ENTER. PROCEDURE 10 STEP 02 appears on the timeclock.

Note
The baud rate that you select must match the baud rate that you specify when you set up communications on the PC.

5. Press ENTER.
6. Press ENTER to accept the default value of 132.
7. Press * to return to the PROCEDURE prompt.
## Other Options

Depending upon your communication configuration, the programming process resumes with one of the following options:

<table>
<thead>
<tr>
<th>RS-485</th>
<th>Internal Modem</th>
<th>Ethernet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continue the configuration with the next section, “Setting the Lithium Battery Life.”</td>
<td>Perform PROCEDURE 9, STEP 01. Set the value to a number other than 0. Refer to the 14.4Kbps Modem Option Installation Guide for configuration instructions. Continue the configuration with the next section, “Setting the Lithium Battery Life.”</td>
<td>Perform these steps: From the PROCEDURE prompt, type 30 and press ENTER. PROCEDURE 30 STEP 01 appears. Press NEXT. PROCEDURE 30 STEP 02 appears. Press ENTER. Specify an IP address and Press ENTER. Continue the configuration with the next section, “Setting the Lithium Battery Life.”</td>
</tr>
</tbody>
</table>
Setting the Lithium Battery Life

From the PROCEDURE prompt, press *, then press ENTER.

The timeclock displays the lithium battery life (in days). One of the following values appears to reflect the size of your timeclock’s RAM:

- 128K - 90 days
- 256K - 60 days
- 512K - 30 days
- 1024K - 15 days

Press ENTER to view the PROCEDURE prompt. The timeclock pauses to process data. Press *, and then press ENTER twice.

The timeclock displays the date, time, and timeclock type (represented by 4XX), and is now operational.

Note
The lithium battery display appears when you exit from Procedure mode during the initial power-up procedure. To view the lithium battery life at a time other than the initial power-up, enter Maintenance mode and perform COMMAND 141.
Chapter 5

Communications to the Host

Communications between the timeclocks and the host occur after their network connections have been established. To verify that communications exist, use the timeclock communication utility provided with your host software application.

For Windows applications, utility programs include:
- Terminal Service Utilities
- Data Collection Manager

For DOS applications, utility programs include:
- SETCOMM
- TRYIT

In the Windows environment, use the Terminal Service Utilities to set and test communications. The steps required to check communications are listed in the sections, “Configuring Communications,” and “Testing Communications.”
Chapter 5 Communications to the Host

Configuring Communications

To configure communications, perform these steps:

1. From the host PC run the Terminal Service Utility Program by selecting the following menu choices from within Windows 95:
   a. Start <ENTER>
   b. Programs <ENTER>
   c. Terminal Service
   d. Terminal Service Utility

2. From the TOOLS menu select SETCOMM.

3. Define the Primary Serial Port (direct connect serial). For example, select COM1, COM2, COM3, or COM4.

4. Define the Secondary Serial Port (modem communications) if necessary.

5. If you are using modems to communicate to a device, define the Modem Initialization string in the Command window. For example, you can use &FC1D1 as an initialization string.
   Skip to step 6 if modems are not being used.

6. Select SAVE and save your selections in a specified directory.

7. Select OK to exit this window and return to the Terminal Service Utility main window.
Testing Communications

To test communications, perform these steps:

1. From the TOOLS menu select TRYIT.

2. For the address field, enter the unique password or IP address of the timeclock to be tested. For example, use 000001 as the password for the first clock; 000002 as the password for the second clock, and so forth.

3. If you are communicating via a modem to a timeclock, insert the telephone number of the timeclock in the Phone window, or leave it blank for direct connect serial timeclocks.

4. Select TEST.

5. If the timeclock communicates successfully with the PC, the message, SUCCESS ..CLOCK <NNNNNN> is a NNN.NNNN appears to confirm communications.
   <NNNNNN> refers to the password of the timeclock for which you are testing communications.
   NNN.NNNN refers to the firmware being run on the timeclock being tested.

6. Select FILE > EXIT to exit the Terminal Service Utility program.
Communications Success/What Is Next

If your communications session was successful, you can take further steps:

- Fully configure the timeclock to your specifications. Refer to the 400 Series Timeclock Configuration Guide for information.
- Program options as necessary. Consult the documentation included with the option(s) for more information.
- Install any other optional products, if you have not already done so.
Communications Failure/What Is Next

If your communications session was not successful, check the following:

- Connections between the timeclock and the PC
- Compatibility of the timeclock and the PC’s baud rates
- Configuration of the timeclock

Refer to the 400 Series Timeclock Maintenance and Troubleshooting Guide for more information.
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