



TIMECENTRE®

TimeCentre®
A-Series Time Clock
Installation and
User Guide



TimeCentre® A-Series Time Clock Installation and User Guide

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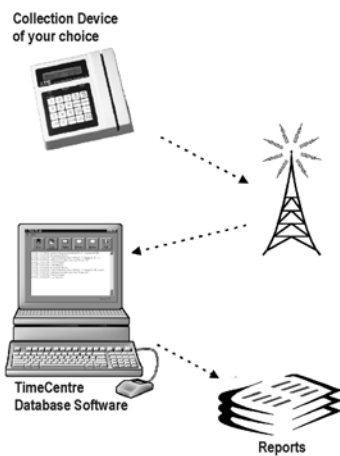
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Chapter 1: Introduction

The Process

The TimeCentre system has three main components, each of which plays an important role in collecting, storing, and processing employee labor data:



- **Time Clock:** Employees track their time and labor information at the time clock via magnetic card, bar code card, or direct input on the keypad.
- **Transfer:** The TimeCentre Communications program facilitates the transfer of employee time data from the time clock to your database via serial cable, modem, RS485 serial daisy chain connection, or TCP/IP connection.
- **Database:** TimeCentre database software allows the user to edit and process the labor data. Create labor reports by employee, department, or job. Check early/late reports and access attendance data. Run payroll and export total work hours.

All three components work together to form a complete labor tracking system. This user guide illustrates how to install and wire the A-series time clock and configure the TimeCentre communications software so that the clock communicates with your TimeCentre database.

About the A-Series Time Clock

The A-Series time clock is compact, rugged, and powerful. The display features a 2-line LCD, which is easy to read from wide viewing angles and in a variety of lighting conditions. Customizable prompts are shown in the display to guide the employee through the labor tracking transaction. The date and time appear when the time clock is not in use. A heavy-duty polycarbonate window protects the display area.

The sealed membrane keypad has .65-inch centers allowing for key input even while wearing gloves. A cast aluminum enclosure coated with epoxy resin paint protects the circuitry from environmental conditions.

Three LED indicators provide user feedback for a valid read (green), invalid read (red), and low power condition (yellow). The low power detect feature constantly monitors input power conditions. If a low power occurrence is detected, the time clock displays a message and sends an alarm to the host PC. If power cuts out, an optional backup battery engages to power the time clock for up to four hours (depending on use).

The A-Series time clock can be equipped so that labor data can be input directly on the keypad, with a magnetic stripe card, or a bar code card. CCD scanners, proximity readers, bar code wands, and other data entry devices can be purchased separately.

The time clock memory, which stores employee time records, persists for up to 96 hours in the event of a power outage. The memory requires no maintenance.

Depending on the specific model of your A-Series Time Clock, the unit can communicate with the host PC through serial cable, modem, an RS485 serial daisy chain connection, or TCP/IP network connection.

TimeCentre A-Series Time Clock Specifications

Clock Model	Punch Memory*	Validation Badges	Validation Depts	Validation Jobs	Validation Schedules
A4000	12,000	1001	701	701	301
A300	900	301	101	101	101

**Punch Memory is an approximate amount of employee time transactions a clock can store in its memory. This quantity depends on the number of data levels being tracked and the length of the tracked data codes.*

Labor Tracking Specifications

Level	Category	Format
1	Employee Badge ID	1-9 Digits
2	Department Number	1-6 Digits
3	Job Number	1-10 Alpha/Numeric
4	Work Order Number	1-20 Alpha/Numeric
5	Task Number	1-6 Alpha/Numeric
	Count or Tip	1,234.56

Time Clock Software

The TimeCentre A-Series time clocks are designed to provide efficient data collection to deliver data to your PC for processing into a full array of organized and timely reports. The time clock software provides a robust series of features that support many different labor environments, from service companies to distribution and manufacturing organizations. By changing the prompts and tracking levels, each clock in an installation can be customized to the specific requirements of the data collection task at hand.

The time clocks can be used for simple applications such as tracking time in and out. They can also be used for a job tracking environment, or to record piece counts or dollar amounts. Utilizing the custom prompt feature, the clock may be adapted for a wide range of activities.

The A-Series time clock system can collect many types of information:

- **Time In and Out** for work periods, lunches and breaks coupled with any or all of the categories of department, job, work order, task and piece count.

- **Piece Count or Tip** (or other user-defined count or dollar amount) coupled with any or all categories of department, work order, job class and task.

All of the levels of data collection can be turned on or off. Each level may also be assigned a default value, which permits a clock to be dedicated to certain activities such as a department or job.

Maintenance of Your Time Clock

The time clock is essentially a microcomputer and should be treated accordingly. Exposure to extreme heat, cold, airborne contaminants, electrically noisy environments, poor power, or other hostile conditions can reduce the device's performance and life expectancy.

The TimeCentre time clock requires very little maintenance. The case can be cleaned with a standard ammonia-based household cleaning solution if desired. Do not spray cleaner directly onto the time clock; instead, saturate a cloth and then wipe the clock.

For bar code readers: Since the design of the bar code reader allows it to operate without making contact with the bar code card, these readers require very little maintenance. Blow out the dust with compressed air quarterly, more frequently if the clock is in a dusty environment.

For magnetic card readers: The badge reader requires periodic cleaning. To clean, swipe a pre-moistened TimeCentre cleaning card through the reader several times. These specialized cleaning cards are available from your TimeCentre representative. Low usage readers should be cleaned quarterly and high usage readers should be cleaned monthly.

Bar Code Cards

Bar-code employee badges generally represent the lowest cost, most easily produced, and most flexible of the badge types. Security from duplication can be provided through the use of an opaque covering over the bar coded area. Infrared light can penetrate this covering and read the bar code. An optional IR bar code reader is available for the A-Series time clock.

A-Series time clocks read code type 3 of 9. TimeCentre provides an optional Bar Code Generator in the TimeCentre application, for creating bar codes for all existing employee ID numbers, department numbers, or job code numbers, as well as custom codes for any user defined range.

If you are using a bar code clock, be sure to test each card that you create before issuing it to an employee. The TimeCentre ½" bar codes must be placed on the ID card in such manner that the center line be ½" from the bottom of the slot. Place the bar code evenly on the card near the center bottom. We recommend that bar codes be laminated in 5-mil to 7-mil thick plastic for durability; a thicker lamination may cause problems in machine-reading of bar codes. The thickness of the time clock's standard card reader slot is 40 mils.

See Appendix A for detailed information regarding bar code badges.

Magnetic Stripe Cards

Magnetically-encoded badges look very similar to a standard bank issued credit or ATM card. The American Bank Association (ABA) track II is required for the A-Series time clocks. This technology is appealing because of security and high data density features. The cards are difficult to copy or modify, and have a large number of characters per inch.

Your TimeCentre vendor can provide TimeCentre magnetic stripe employee ID cards for any number range. Custom cards with a personalized logo are also available.

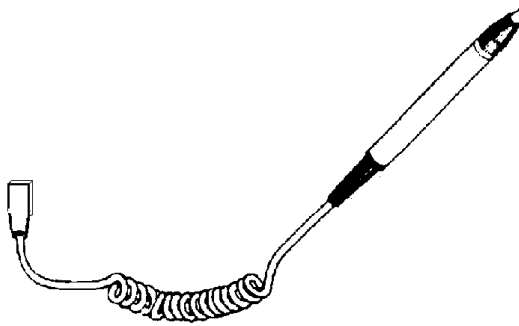
Bar Code Wands

A bar code wand is an optional addition to the A-series time clock. It offers a flexible method of entering job, work order, and task information. The bar code wand is simple to install and use.

Connecting the Bar Code Wand

To connect the bar code wand, do the following:

- Important - unplug the time clock. Using the key, remove it from the mounting bracket.
- Connect the plug on the end of the bar code wand into the jack located in the CENTER of the back of the time clock.
- Place the clock back onto the mount and plug it in.



Using the Bar Code Wand

Hold the bar code wand loosely in your fingers. It is not necessary to apply pressure. Excessive pressure can hinder a good reading. Hold the bar code wand angled at about 60-75 degrees, as you would a pencil. Start in a white zone before the bar code and run the wand across the bar code rapidly and steadily, finishing in the white zone after the bar code. The time clock will beep and display the next data prompt if it received the information. The time clock will beep, but the display prompt will not change if it was unable to read the bar code.

If the time clock did not read the bar code, make sure that the bar code is complete and flat and that you are properly positioning the wand and try again. Practice improves your success rate.

Chapter 2: Time Clock Installation Information

Placement of the Time Clock

Before you begin the installation procedure, it is important to consider environmental and electrical power conditions of your location. Follow these guidelines to ensure the utmost reliability from the TimeCentre A-Series time clock.

Environment

- Temperature range: 32 to 110 degrees F
- Humidity: 95% non-condensing, maximum.
- Electrostatic discharge: 18KV, maximum.

Location

To prevent acts of mischief, vandalism, or “buddy-punching” (when one employee punches in for another), the time clock should be placed in a well-lighted, highly visible location. In general, the closer to the supervisor office the clock is, the better. Make sure the clock is out of the way of swinging doors or any other physical hazards.

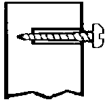
To avoid electrical noise, care should be taken in locating both the mounting and the wiring of the time clock. Some common electrical noise producing items are elevators, large electrical motors, commercial freezers, air conditioners, fluorescent lights, arc-welders, and conveyor systems. Data wiring should be isolated from these elements and the power source for the time clock should not come from a shared circuit.

When choosing a location, consider the following:

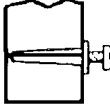
- Avoid oil, moisture, and other contaminants.
- Avoid excessive dust.
- Avoid excessive electrical noise caused by air conditioners, motors, fans, or power tools.
- Avoid direct sunlight.

Wall Mounting

The time clock should be mounted to a wall, or other vertical surface, using the mounting template that is shipped with your time clock or found in Appendix D. Unless remote power is being used, the time clock should be mounted as close as possible to an available AC outlet. To meet the provisions of the Americans with Disabilities Act, the mounted time clock should extend no more than 4" from the mounting surface, and the top edge of the clock should be at a height of no more than 48" from the floor.



If you are mounting on drywall or masonry, place the template on the wall, mark and then drill the four holes using a 3/16" drill bit for the marked locations. Insert the plastic anchors with the tap of a hammer. Place the time clock security mount over the anchors and secure the time clock mount with the screws provided.



If you are mounting onto solid wood, do not use the plastic anchors. Mark and drill the hole with a 1/8" drill bit and secure the time clock with the screws provided.

Power

The time clock can be powered locally with its own separate power supply or remotely through the communication wire (serial, daisy chain serial, and Ethernet only), thus saving the cost of situating the time clock near a 120-volt AC outlet.

The A-Series time clocks were designed to operate on an unregulated 9-18 VDC (nominal 12 VDC @ 120 mA with no time clock options). This combination of low voltage and low current is UL-, CSA-, and OSHA-compliant, and allows the user a great deal of flexibility in how power is supplied to the system (either via the data wire, or locally at the time clock site). Although concerns over the quality of the supplied AC power (hi-line, low-line, brown-outs, surges, spikes, etc.) are important, the time clock's 9-18 volt input range gives some degree of isolation from these problems.

When power and data are run in the same wire, the limiting issue is voltage loss, due to the resistivity of the wire. Resistivity losses increase with wire run length. Even though the power supply is putting out 12 VDC at the starting point, the voltage may only be 8.5 VDC several hundred feet away at the time clock. As 8.5V is below the minimum 9.0V required, the time clock would not function correctly. If a 15 VDC power supply were used instead of the 12VDC version, and the line loss remained the same 3.5 volts as in the previous example, the time clock would now see 11.5 volts ($15.0V - 3.5V = 11.5V$) and the time clock would operate without a problem.

Another way of overcoming resistivity is by increasing the diameter of the power-handling wires in the wire. By going from 24-gauge to 18-gauge, for example, one would see a greatly reduced voltage loss in the wire for a given distance.

In a multiple-data-clock environment, each time clock draws a nominal 200-350 mA. The actual current draw depends on the number of options the time clock is supporting. When supplying several time clocks from a single power source, it is important to size the power supply to fit the sum of each of the time clock's current requirements. For example, if each time clock draws 200mA, and there are 4 time clocks, $4 \times 200 = 800\text{mA}$ or more is required.

As a general guideline; when using 24-gauge wire and a 12 volt power supply, 250 feet is the maximum working distance one should comfortably expect when using remote power. All other combinations require testing at the actual installation site because AC power may not be 117 volts. If the AC power is less than 117 volts, the time clocks unregulated power supply will output proportionally less DC voltage.

Electrical Ground

The grounding of any electric signal path becomes more important with each foot of wire pulled and with each additional set of wires run. The longer the wire run, and/or the more wires you have in the cable, the higher the chances are for the introduction of electrical noise. Ideally, there will always be two ground paths in the wire - signal ground and earth ground. The signal ground must be used on every installation. The earth should be used in extremely noisy environments.

- **Signal Ground:** This ground is picked up at the computer end of the network. It is found on pin 7 of the DB25 and pin 5 of the DB9 connector. It is found on pin 6 of the terminal block and the RJ45 connector throughout the network.
- **Earth Ground:** This ground is not used in most installations. If the earth ground is used, it is usually picked up at the computer end of either an RS232 or a RS485 network. It will be found on pin 1 of the computer output DB25 or DB9 connector and will remain on pin 1 of either the terminal block or the RJ45 connector throughout the network. When using the terminal block it is important that the earth

ground wire in the wire is not attached to every terminal block in the network. It will be attached to the terminal block closest to the computer and stay in the cable for the rest of the wire run. In extremely noisy electrical environments, this allows a separate earth ground connection to be made at each time clock.

Pin 1 at the computer is often tied to some form of chassis ground rather than a true earth ground. If this is not a true earth ground, disconnect the wire coming from the RJ45 connector and going to location 1 of the first terminal block. Replace it with the wire's earth ground wire at location 1.

Power Protection

It is the responsibility of the customer to provide protective devices to prevent damage to the time clock, especially in areas susceptible to problems with lightning, surges, or other problem conditions.

The minimum power protection required is a high quality surge suppressor. Look for surge suppressors which conform to the requirements of UL1449, with a low 'suppressed voltage rating'. A lower rating means a higher degree of protection. Low cost power strips in lieu of surge protectors are ineffective. Recommended surge suppressor manufacturers are APC (American Power Conversion) and EFI, which provide not only good power protection but also additional warranties in the event of equipment failure. Surge suppressors and uninterrupted power supplies are also available from TimeCentre.

Battery Backup (optional)

A battery backup option allows the TimeCentre time clock to maintain operation during power outages. When the time clock switches to battery power, it time-stamps the action, sends a notification to the host computer, and continues collecting and storing all transactions for up to four hours, depending on usage.

Wire Length

Consider the distance between your host PC and time clocks when planning your installation. Distance guidelines are as follows:

- **Serial (RS232):** 250 feet when powered from the time clock side. 50 wire feet maximum from time clock to PC when powered from the host side.
- **Serial daisy chain (RS485):** 5,000 wire feet maximum; 10,000 wire feet with a signal booster.
- **TCP/IP (Ethernet):** The A-Series time clocks can be located at any point within a TCP/IP Ethernet 10baseT network, providing the single segment length from the network hub does not exceed 328 wire feet.

Chapter 3: Install TimeCentre Communications Software

Introduction

This chapter explains how to install the TimeCentre Communications software when used with the A-Series model time clock.

To install a clock with a Digi One SP attached, you must use TimeCentre Communications version 6.3.20 or later.

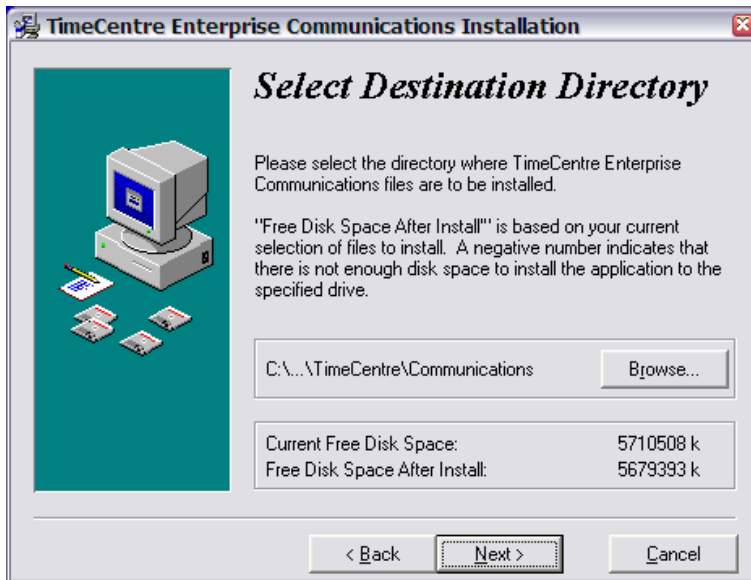
Part One: Install Communications Software

Run the Install Application

- Insert the installation CD-ROM into the optical drive of the computer and launch the 'INSTALL.EXE'.



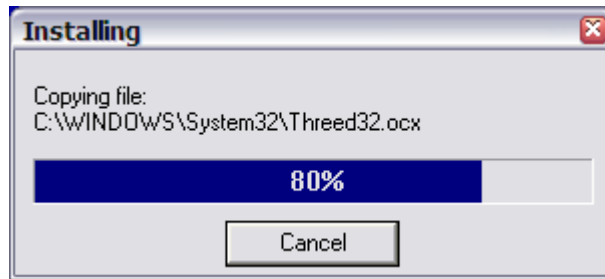
- The “Welcome” screen appears. Read through the announcement and click <Next> when ready.



- For TimeCentre Enterprise software the default installation location is the C:\Program Files\TimeCentre\Communications directory. You can use the 'Browse...' button to select a different destination if desired. For TimeCentre Desktop software the installation location is C:\TC6 and you cannot change this location. If you are installation multiple copies of TimeCentre Communications on the same computer choose a unique folder within the installation directory for each copy of the program. Click <Next> when ready.



- The installation application will begin the installation process when you click <Next>.



- The progress bar will display the status of the installation.

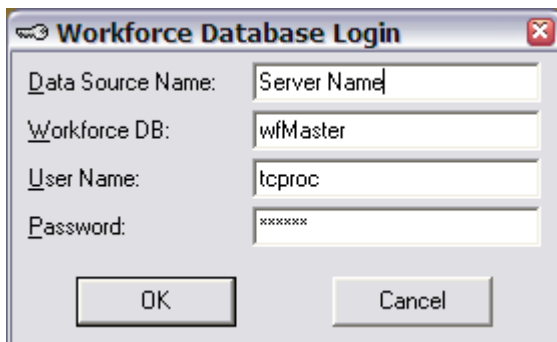


- The 'Installation Completed!' screen appears when the process has finished. Click <Finish> to exit the installation program. There are new shortcuts to TimeCentre Communications in the Start > Program Files menu. This portion of the process is now complete.

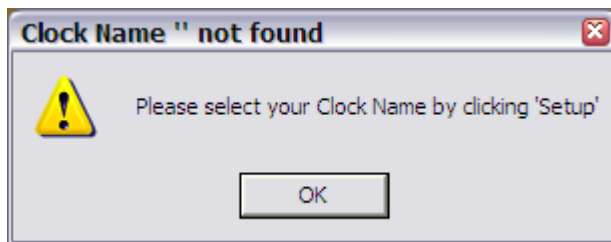
Part Two: Configure the Communications Software

TimeCentre Communications Software Configuration

- Click Start > Programs > TimeCentre Communications > TimeCentre Communications to launch the TimeCentre Communications software. The first time the software is started you will be presented with the database login screen. Once the login information is configured you will not be prompted for it again and the software will bypass this screen when launched. However, if needed, this login screen can be triggered to appear by adding “ /login” (there is a space before the forward slash) to the end of the shortcut path.



- Enter the following information then click <OK>:
 - **Data Source Name:** Enter the name of the server.
 - **Workforce DB:** Defaults to wfMaster.
 - **UserName:** Enter 'tcproc'.
 - **Password:** Enter the tcproc password.

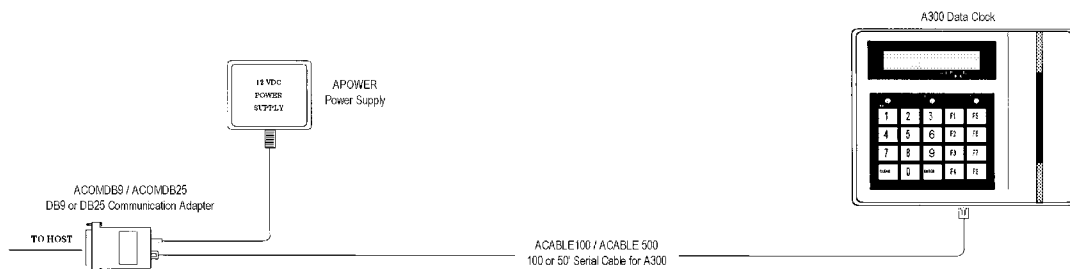


- This message reminds you to finish the configuration of your time clocks. Click <OK> at this prompt. The Communications software installation is now finished. Proceed to the next chapters that contain instructions for the configuration of the time clocks and the communications software.

Chapter 4: Serial (RS-232) Time Clock Installation and Configuration

Serial Installations

When using RS-232 time clocks, only one time clock can be connected to a serial port on the computer. The maximum length of the wire is 250 feet. If electrical power is routed through the communication cable from the computer side the maximum length is 50 feet.



There are two wiring types; modular telephone type wire and multi-conductor shielded wire. Both methods work equally well in an electrically quiet environment. In an electrically noisy environment, the recommended usage is Multi-Conductor Shielded Wire, with earth ground if appropriate.

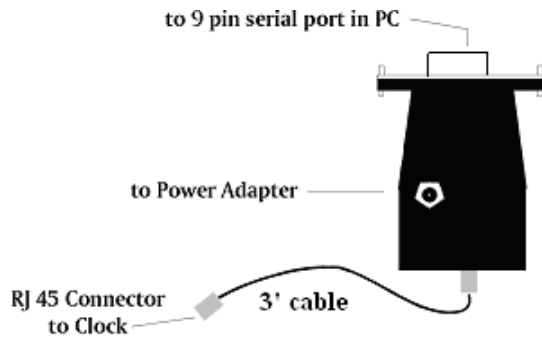
Modular Wire

This configuration uses eight (8) wire, shielded, flat telephone style wire, with RJ45 modular connectors on each end. When using the flat phone style of wire, the recommended wire is Shaxon UL300-71 or Adirondack AWC-19517. One end of the wire plugs into the back of the time clock, and the other plugs into an adapter that has a RJ45 jack on one end and a DB9 or DB25 connector on the other end. Some of the adapters have a power jack to supply power to the time clock.

Serial Time Clock Connection

To install the connection:

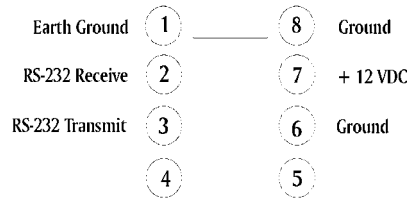
- Attach the RJ45 connector of the wire to the DB9/DB25 converter and plug the converter into the serial port of the computer. If you choose to power the time clock from the communications cable, attach the small plug of the power pack into the black converter and plug the power adapter into a surge protector. If you choose to power the time clock directly from the wall mount location, plug the small plug of the power pack directly into the back of the time clock.



Communication Adapters are available in either 9 pin or 25-pin configuration depending on your PC's serial port.

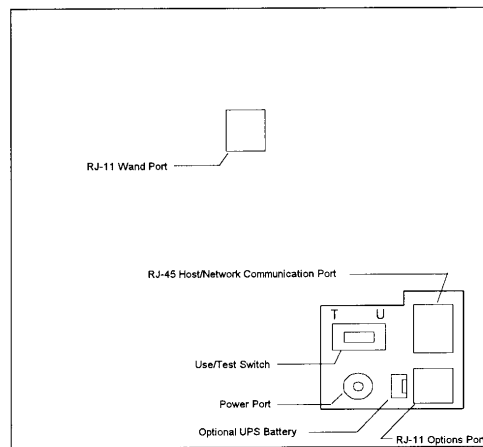
- You may use terminal wiring blocks to facilitate running the cable. This wiring scheme would require two short pigtails of wire with RJ45 connections near the PC and the time clock with a long run of wire connecting two terminal blocks on either side. The wiring scheme for the serial blocks is:

RS-232 Wiring Scheme



Pinouts are referenced to the data clock

- Mount the time clock on the wall using the templates provided in Appendix D.
- Connect the other end of the wire into the wider (RJ45) jack at the lower-right corner of the time clock (viewed from the back).



- Plug the power adapter into an outlet and the time clock. The clock will beep twice as it boots. When the test is complete, the idle prompt will appear which displays the current date and time. You are now ready to proceed to the time clock setup.

Configure the Time Clock

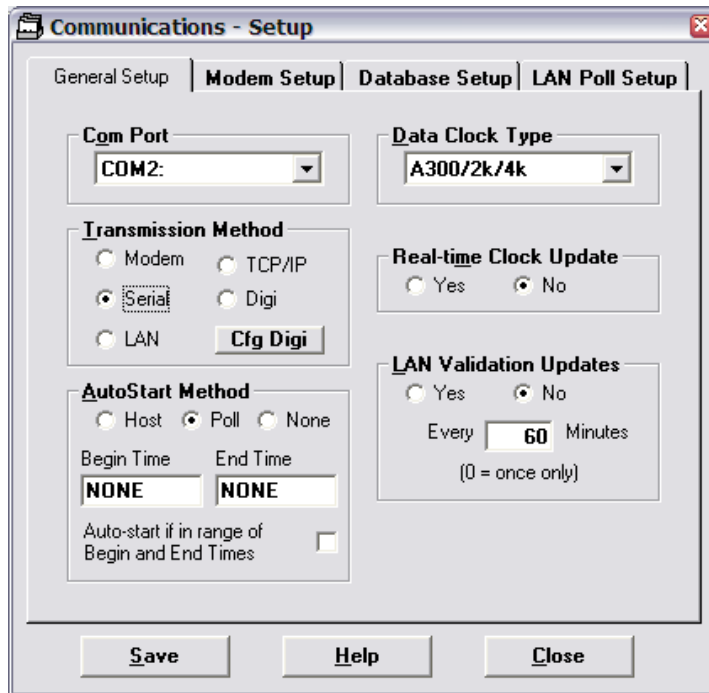
There is a sliding switch on the back of the A-Series time clock that is the TEST/USE switch. Use a combination of the ENTER and CLEAR keys to access these menus and make changes to the settings.

To access the test/setup mode:

- Locate the TEST/USE switch on the back of the time clock.
- Slide the TEST/USE switch into the “TEST” position (to the left as viewed from the back of the clock). The time clock displays the prompt ‘ATS TEST MODE’.
- Press the CLEAR key to access the following menus of the setup and test modes:
 - **Test Mode:** Tests the memory, keypad, and badge reader. Not applicable for the setup functions. Skip this menu.
 - **Setup Mode:** Configures the communications baud rate, parity, address and time clock application type. The clock should display ‘9600 ODD 01 A’. If this is correct, proceed to the next menu. If not, press ENTER to access this menu. Use the ENTER and CLEAR keys to make the following settings:
Baud Rate: 9600
Parity: ODD
Address: 01
Terminal App Type: A
 - **Network Test:** Performs a communications loop back test. Not applicable for the setup functions. Skip this menu.
 - **Battery Test:** Verifies battery backup operation. (Battery backup is optional equipment.) Not applicable for the setup functions. Skip this menu.
 - **DI-DO Test:** Checks the auxiliary port operation by performing a loop back communications test. Not applicable for the setup functions. Skip this menu.
 - **Restart Mode:** Resets the time clock, clears all data from memory, performs the power-up sequence and prepares it to accept a new program download. Use this function to reset the clock to factory default settings and clear the memory of time records.
- After these settings are configured, press CLEAR until the clock displays ‘SWITCH TEST SWITCH TO USE POSITION’ Move the TEST/USE switch to the “USE” position and press the ENTER key. The clock will boot to the idle prompt. The clock setup is now finished.

Configure TimeCentre Communications

- Run TimeCentre Communications by going to Start | Programs | TimeCentre | TimeCentre Communications. At the main window click the <Setup> button.



General Setup:

Complete the general setup as follows:

- **COM Port:** Press the drop down arrow to select the COM port that the time clock is connected to.
- **Transmission Method:** Select SERIAL.
- **AutoStart Method:** You may pre-select the host PC's communication method by clicking on POLL. Select NONE if you intend to manually initiate the communication process every time you open communications.
Begin Time / End Time: If you selected CALL you may enter a time for the communications to begin and end. If the application is running, it will open the communications link with the time clock automatically on this schedule.
- **Data Clock Type:** Select A300/2k/4k for all A-Series time clocks.
- **Real-time Clock Update:** Select YES to download the current PC time to the time clock on each communication. Be sure that the time on the host PC is accurate.
- **LAN Validation Updates:** This allows schedule and badge/labor information to be downloaded to the time clock at the start of the polling process. This setting should be made in conjunction with turning on Validation in the Data Clock Maintenance application. See chapter 7 for more information. Select Yes to perform this operation, or No to bypass. The minutes field is not applicable for serial time clocks.

Database Setup:

- **Version Control:** Select which TimeCentre software database product you are using; 'TimeCentre 2000' for Enterprise and 'TimeCentre Desktop' for the TimeCentre Desktop product.
- **Clock Name:** Select the database name.

LAN Poll Setup:

Enter the following information:

- **Number:** Enter 1
- **Clock Type:** Select ATS
- **Method:** Select Serial
- **Location:** Enter a descriptive label, ex. Front Door, East Office.
- **Poll:** Place a check in this box.
- **Poll Addr:** Enter 1
- **TZO:** Enter 0

Click <Save>. To communicate with the clock press the <Call> button and then the <Begin> button.

Call Screen:

To communicate with the time clock, from the main communications window click the 'Call' button. The following window will appear:

	Clock ID	Poll Address	Clock Description	Phone Number	Selected	Dial Time
	1	1	Front Door	555-5555	<input checked="" type="checkbox"/>	
*					<input type="checkbox"/>	

Navigation: 1 - Main

Buttons: **Begin**, **Cancel**

The first time you use this window to communicate with the time clock, the data fields must be filled out. After the initial entry this data will be saved for subsequent use.

- **Clock ID:** Enter 1 for the first time clock and increment this number for each additional clock.
- **Poll Address:** Enter the same number that was programmed into the time clock in the previous section labeled "Configure the Time Clock." This number should match the 'Address' of the time clock.
- **Clock Description:** Enter a descriptive label, ex. Front Door, East Office.
- **Phone Number:** Enter 555-5555. This field is applicable only for modem time clocks.
- **Selected:** Place a check in this box to poll the time clock during the communications cycle. To exclude a clock, deselect this box.
- **Dial Time:** A time must be entered into this field. This time will determine when the time clock is polled.

Chapter 5: Serial Daisy Chain (RS-485) Time Clock Installation and Configuration

Serial Daisy Chain Installations

Utilizing the RS485 communications protocol, up to 32 time clocks can be wired in a daisy chain configuration and connected to one computer. Data can be transferred real-time from the time clock to the host PC.

RS485 Wiring

When using the RS485 multi-drop network with twisted pair wire (wired straight-through), thirty-two time clocks can be daisy-chained on one wire. The RS232-to-RS485 Converter (part number, ARS485) should be used at the host computer to convert the communications signal.

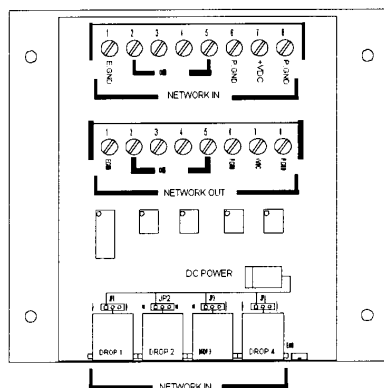
The recommended configuration is Cat 5, 8-conductor modular wire. This wire can be used in industrial environments where EMI may cause problems. Check local laws and ordinances for further information regarding installation methods and wire requirements.

Communication Adapter

This device (ACOMDB25/ACOMDB9) allows the user to plug into the back of their computer with either a DB25 connector or a DB9 connector on one end of the adapter and an RJ45 connector on the other. The adapter has been designed to allow the standard A-Series power supplies to be plugged into the adapter to provide power.

Network Junction Box

The use of a network junction box can facilitate time clock wiring. This passive device provides three 8-position barrier strips to allow network wiring to be brought in, and then out in a two directions. It has four RJ45 ports and a DC power input for multi-dropping time clocks.



Network Booster

This active device (ANETBOOST) is used to amplify signals in a second 5,000 foot segment, in an RS485 network. It provides two 8-position barrier strips for bringing in and wiring out an additional 5,000 feet of network wire, and provides four RJ45 ports for multi-dropping. A 12VDC, 500mA power supply is required to drive it.

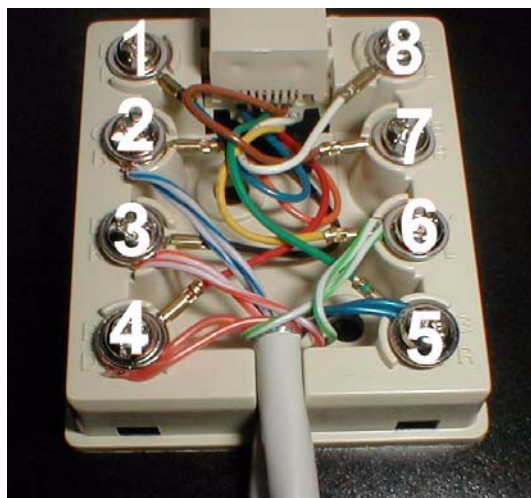
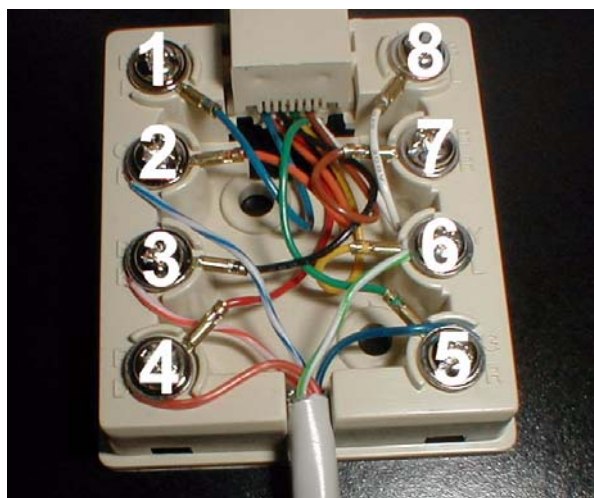
Network Terminal Block

This is a plastic, wall mounted device (ANETBLOCK) that provides 8 screw-down or spade-lug type input connections with a single RJ45 output. It is used to connect a time clock to the main network wire.

The terminal block provides an eight position phone jack and can be wired for RS485 serial daisy chain communications.

Serial Daisy Chain Time Clock Connection

TERMINAL BLOCKS (straight-through wiring)



*The positions on the terminal blocks remain the same even if your blocks have different characters and/or number schemes. Most often a blue wire leads to the number 1 position. Left image is of network block at **end** of serial daisy chain; right image is of network block in **middle** of serial daisy chain.*

Be sure to use a straight-through wiring scheme on all the network wiring. For example, if using the white with blue stripe wire on pin two (2), the white with blue stripe wire would always be on pin two (2) at all devices used: junction boxes, terminal blocks and the network booster.

If using Belden Wire, the colors may be as shown below:

PIN #	COLOR
1	Not used (except for earth ground)
2	White with Blue Stripe
5	Blue with White Stripe
3	White with Orange Stripe
4	Orange with White Stripe
6	Green with White Stripe
7	Not used (except with remote power)
8	Not used (except with remote power)

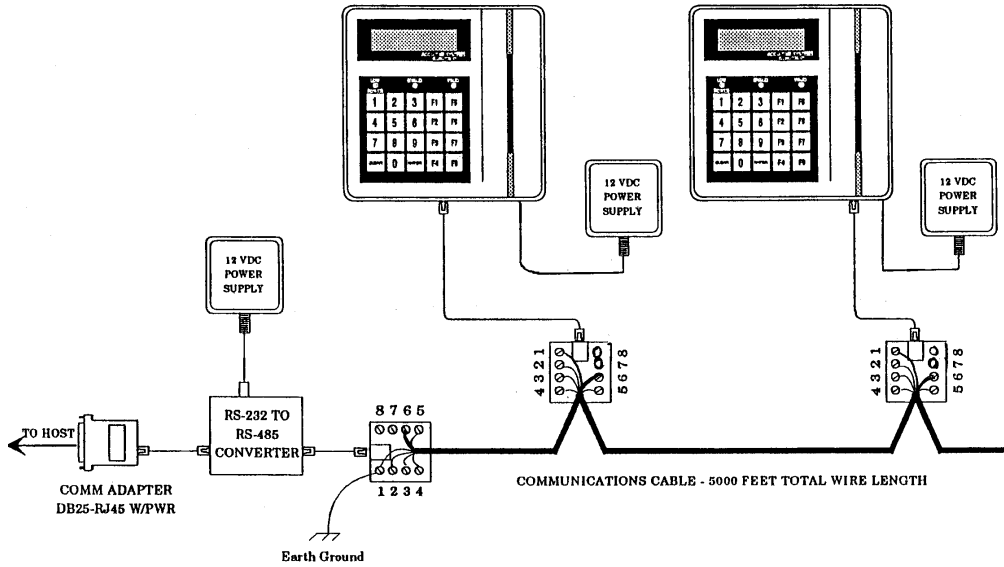
One twisted pair should be tied to pins two (2) and five (5). Another twisted pair is tied to pins three (3) and four (4), and for the common ground, pin six (6) uses one of the wires from the unused third pair. If the wire does not have three pairs the silver drain wire can be used as the ground.

Pin one (1), except in extremely noisy environments, is not used (see Grounding section on P. 8-9.) If it is assumed that the installation environment is not sufficiently noisy to justify use of the silver drain for grounding, the silver drain wire should be taped back to the wire jacket.

Pins seven (7) and eight (8) are not used for communication, but are used for remote power.

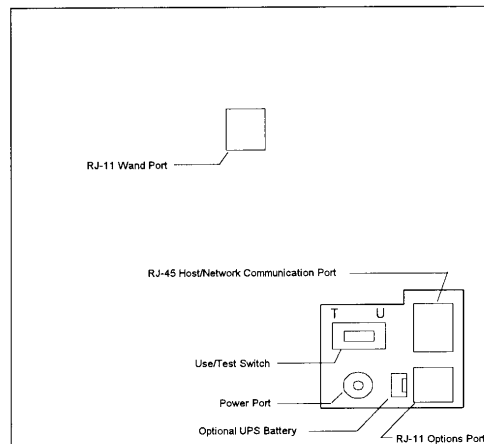
For cables that have a foil shield and/or braid shield around all the pairs or each pair, the foil and/or braid should be trimmed off so they do not touch.

Sample RS485 Installation



The ANETBLOCK could appear differently than the illustration. It is important to determine which pin is #1 and adjust accordingly.

- The pigtail wire, with an RJ45 connector on either end plugs into the jack in the lower-right of the time clock as such:



- Mount the time clock on the wall using the templates provided in Appendix D.
- Plug the power adapter into an outlet and the time clock. The clock will beep twice as it boots. When the test is complete, the idle prompt will appear which displays the current date and time. You are now ready to proceed to the time clock setup.

Configure the Time Clock

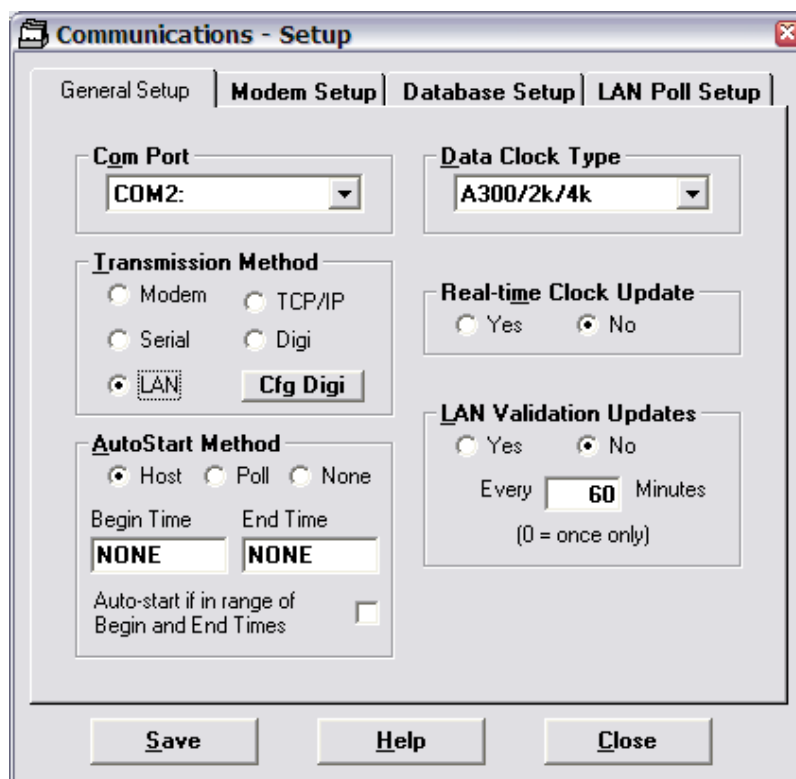
There is a sliding switch on the back of the A-Series time clock that is the TEST/USE switch. Use a combination of the ENTER and CLEAR keys to access these menus and make changes to the settings.

To access the test/setup mode:

- Locate the TEST/USE switch on the back of the time clock.
- Slide the TEST/USE switch into the “TEST” position (to the left as viewed from the back of the clock). The time clock displays the prompt ‘ATS TEST MODE’.
- Press the CLEAR key to access the following menus of the setup and test modes:
 - **Test Mode:** Tests the memory, keypad, and badge reader. Not applicable for the setup functions. Skip this menu.
 - **Setup Mode:** Configures the communications baud rate, parity, address and time clock application type. If this is correct, proceed to the next menu. Press ENTER to access this menu. Use the ENTER and CLEAR keys to make the following settings:
Baud Rate: 9600
Parity: ODD
Address: Start with number 01 and increment for each additional clock.
Terminal App Type: A
 - **Network Test:** Performs a communications loop back test. Not applicable for the setup functions. Skip this menu.
 - **Battery Test:** Verifies battery backup operation. (Battery backup is optional equipment.) Not applicable for the setup functions. Skip this menu.
 - **DI-DO Test:** Checks the auxiliary port operation by performing a loop back communications test. Not applicable for the setup functions. Skip this menu.
 - **Restart Mode:** Resets the time clock, clears all data from memory, performs the power-up sequence and prepares it to accept a new program download. Use this function to reset the clock to factory default settings and clear the memory of time records.
- After these settings are configured, press CLEAR until the clock displays ‘SWITCH TEST SWITCH TO USE POSITION’ Move the TEST/USE switch to the “USE” position and press the ENTER key. The clock will boot to the idle prompt. The clock setup is now finished.

Configure TimeCentre Communications

- Run TimeCentre Communications by going to Start | Programs | TimeCentre | TimeCentre Communications. At the main window click the <Setup> button.



General Setup:

Complete the general setup as follows:

- **COM Port:** Press the drop down arrow to select the COM port that the time clock network is connected to.
- **Transmission Method:** Select LAN.
- **AutoStart Method:** You may pre-select the host PC's communication method by clicking on HOST. Select NONE if you intend to manually initiate the communication process every time you open communications.
Begin Time / End Time: If you selected HOST you may enter a time for the communications to begin and end. Communications will automatically initiate the communications link at the time specified if the application is running. The Communications application must be already running for this feature to be enabled.
- **Data Clock Type:** Select A300/2k/4k for all A-Series time clocks.
- **Real-time Clock Update:** Select YES to download the current PC time to the time clock on each communication. Be sure that the time on the host PC is accurate.
- **LAN Validation Updates:** This allows schedule and badge/labor information to be downloaded to the time clock at the start of the polling process. This setting should be made in conjunction with turning on Validation in the Data Clock Maintenance application. See chapter 7 for more information. Select Yes to perform this operation, or No to bypass. You can schedule this synchronization by entering the time interval in the MINUTES field.

Database Setup:

- **Version Control:** Select which TimeCentre software database product you are using; 'TimeCentre 2000' for Enterprise and 'TimeCentre Desktop' for the TimeCentre Desktop product.

- **Clock Name:** Select the database name.
-

LAN Poll Setup:

Enter the following information:

- **Number:** Enter 1 for the first time clock and increment this number for each additional time clock.
- **Clock Type:** Select ATS
- **Method:** Select LAN
- **Location:** Enter a descriptive label, ex. Front Door, East Office.
- **Poll:** Place a check in this box for those clocks that should be included in the download.
- **Poll Addr:** Enter 1 for the first time clock and increment this number for each additional time clock.
- **TZO:** Enter 0

Click <Save>. To communicate with the clocks press the <Host> button.

Chapter 6: Modem Time Clock Installation and Configuration

Modem Time Clock Installation

For situations where time clocks are located a long distance from the host PC or at a remote site, a modem option is available for the A-Series time clocks.

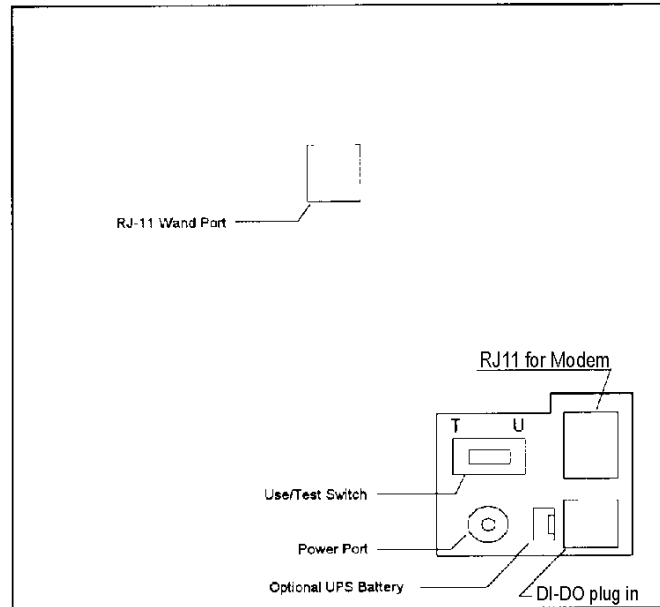
Important Note: To assure successful communication with the A-Series time clock(s), you must use an external U.S. Robotics Sportster modem at the host PC.

You can set the time clocks to call the host PC at a specific time, or you can program the host PC to initiate a call to the time clock either on a regularly scheduled basis or on demand.

Modem Time Clock Connection

To install the connection:

- Mount the time clock on the wall using the templates provided in Appendix D.
- An RJ11 jack will be present at the back of the clock. Connect a standard RJ-11 wire from your phone line into the wider jack at the top plug at the lower-right corner of the time clock (viewed from the back). Plug the small plug of the power pack directly into the back of the time clock.



- Plug the power adapter into an outlet and the time clock. The clock will beep twice as it boots. When the test is complete, the idle prompt will appear which displays the current date and time. You are now ready to proceed to the time clock setup.

Configure the Time Clock

There is a sliding switch on the back of the A-Series time clock that is the TEST/USE switch. Use a combination of the ENTER and CLEAR keys to access these menus and make changes to the settings.

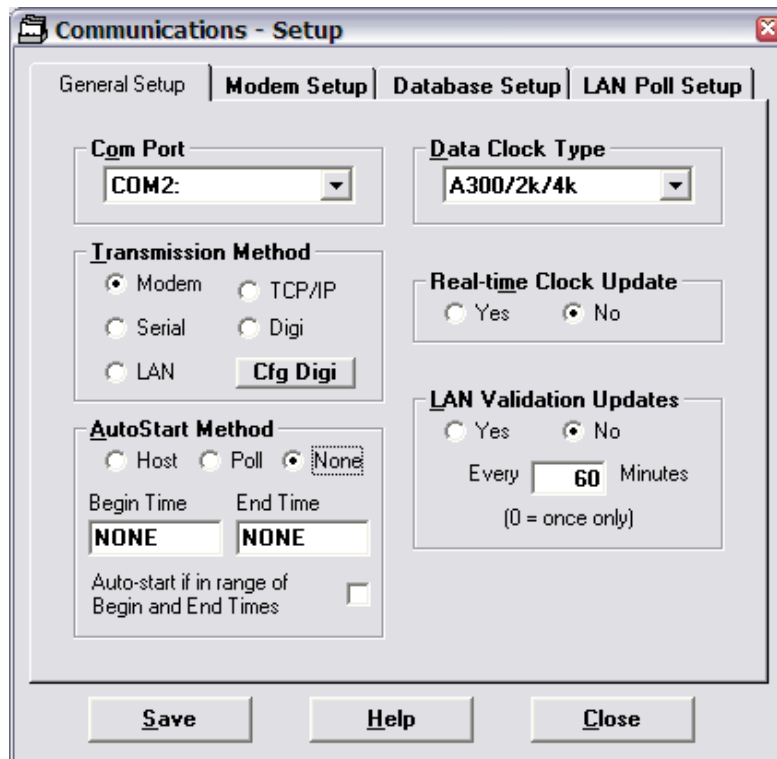
To access the test/setup mode:

- Locate the TEST/USE switch on the back of the time clock.
- Slide the TEST/USE switch into the “TEST” position (to the left as viewed from the back of the clock). The time clock displays the prompt ‘ATS TEST MODE’.
- Press the CLEAR key to access the following menus of the setup and test modes:
 - **Test Mode:** Tests the memory, keypad, and badge reader. Not applicable for the setup functions. Skip this menu.
 - **Setup Mode:** Configures the communications baud rate, parity, address and time clock application type. The clock should display ‘M2400 ODD 01 A’. If this is correct, proceed to the next menu. If not, press ENTER to access this menu. Use the ENTER and CLEAR keys to make the following settings:
 Baud Rate: M2400
 Parity: ODD
 Address: 01. If there is more than one modem time clock increment this number for each additional clock.
 Terminal App Type: A
 - **Network Test:** Performs a communications loop back test. Not applicable for the setup functions. Skip this menu.

- **Battery Test:** Verifies battery backup operation. (Battery backup is optional equipment.) Not applicable for the setup functions. Skip this menu.
- **Modem Test:** Verifies that the modem is installed correctly and operational. Press ENTER to run this test if necessary.
- **DI-DO Test:** Checks the auxiliary port operation by performing a loop back communications test. Not applicable for the setup functions. Skip this menu.
- **Restart Mode:** Resets the time clock, clears all data from memory, performs the power-up sequence and prepares it to accept a new program download. Use this function to reset the clock to factory default settings and clear the memory of time records.
- After these settings are configured, press CLEAR until the clock displays ‘SWITCH TEST SWITCH TO USE POSITION’ Move the TEST/USE switch to the “USE” position and press the ENTER key. The clock will boot to the idle prompt. The clock setup is now finished.

Configure TimeCentre Communications

- Run TimeCentre Communications by going to Start | Programs | TimeCentre | TimeCentre Communications. At the main window click the <Setup> button.



General Setup:

Complete the general setup as follows:

- **COM Port:** Select the communications port that the external US Robotics modem is connected to. The external US Robotics modem is the only model supported by TimeCentre.
- **Transmission Method:** Select MODEM.

- **AutoStart Method:** You may pre-select the host PC's communication method by clicking on CALL. Select NONE if you intend to manually initiate the communication process every time you open communications.
Begin Time / End Time: If you selected CALL you may enter a time for the communications to begin and end. If the application is running, it will open the communications link with the time clock automatically on this schedule.
- **Data Clock Type:** Select A300/2k/4k for all A-Series time clocks.
- **Real-time Clock Update:** Not available for modem time clock.
- **LAN Validation Updates:** Not available for modem time clock.

Modem Setup:

- **Modem Listing:** Select 'US Robotics w/A300 & RSI'
- **Initialization String:** Will automatically populate with the correct modem string.
- **Modem Pause Time:** Do not adjust.

Database Setup:

- **Version Control:** Select which TimeCentre software database product you are using; 'TimeCentre 2000' for Enterprise and 'TimeCentre Desktop' for the TimeCentre Desktop product.
- **Clock Name:** Select the database name.
- **Multi-Company Lookup via Modem:** Activate this feature and the name of the time clock will determine which database the time records will be sent to.

LAN Poll Setup:

Enter the following information:

- **Number:** Enter 1
- **Clock Type:** Select ATS
- **Method:** Select Modem
- **Location:** Enter a descriptive label, ex. Front Door, East Office.
- **Poll:** Place a check in this box.
- **Poll Addr:** Enter 1
- **TZO (Time Zone Offset):** Enter the number of hours difference in the time zone between the time clock and the host PC.

Click <Save>. To communicate with the clock press the <Call> button and then the <Begin> button.

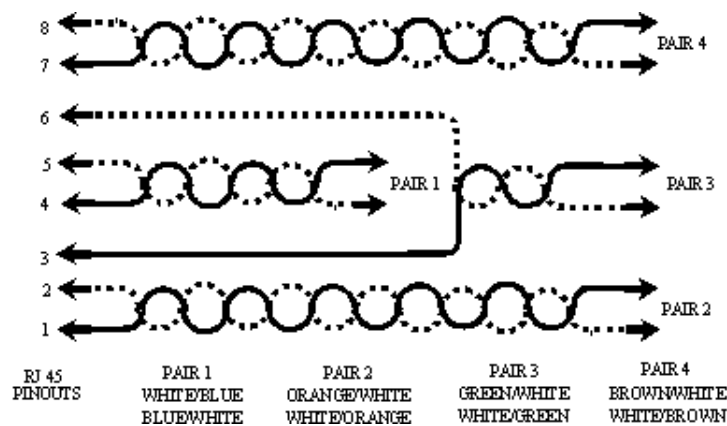
Chapter 7: TCP/IP Time Clock Installation and Configuration

TCP/IP Time Clock

TCP/IP time clocks utilize the speed, power, and convenience of Ethernet communications. If you have a 10 Mbps compatible system, clocks can be plugged into your existing hubs. The number of connections is limited to the practical limit of your network bandwidth. Always follow IEEE protocol.

TCP/IP Wiring

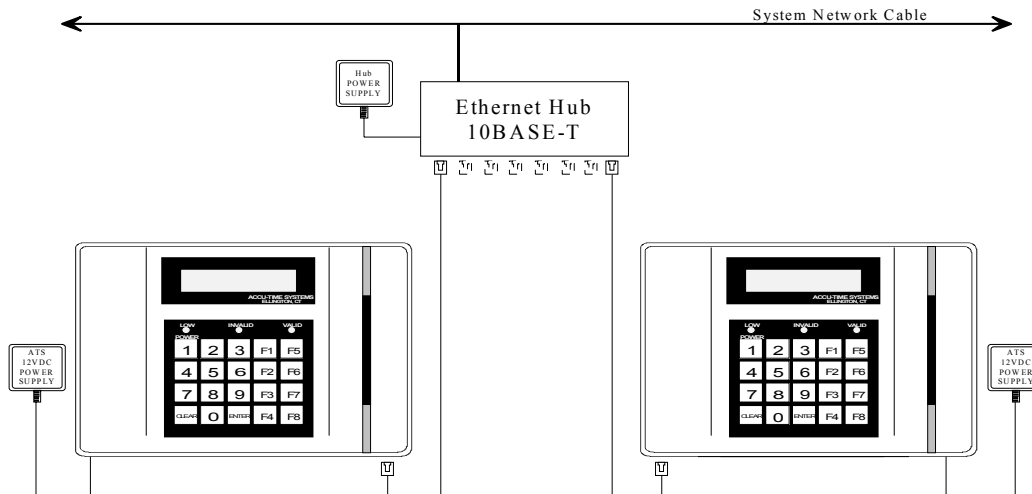
For TCP/IP communication, use a Category 5 unshielded, twisted pair high-speed data transmission wire (see illustration below). Use shielded wire in noisy environments. One end of the RJ45 terminated wire is plugged into the time clock's TCP/IP port, and the other into the network hub.



TCP/IP Time Clock Installation

The A-Series model 4000 time clock may be located at any point within a TCP/IP Ethernet 10baseT compliant network, provided the single segment length from the network hub does not exceed three hundred and twenty-eight (328) wire-feet.

- Mount the time clock on the wall using the templates provided in Appendix D.
- Connect the communications cable to the clock. The RJ-45 plug is located on the lower-right corner of the back of the time clock.



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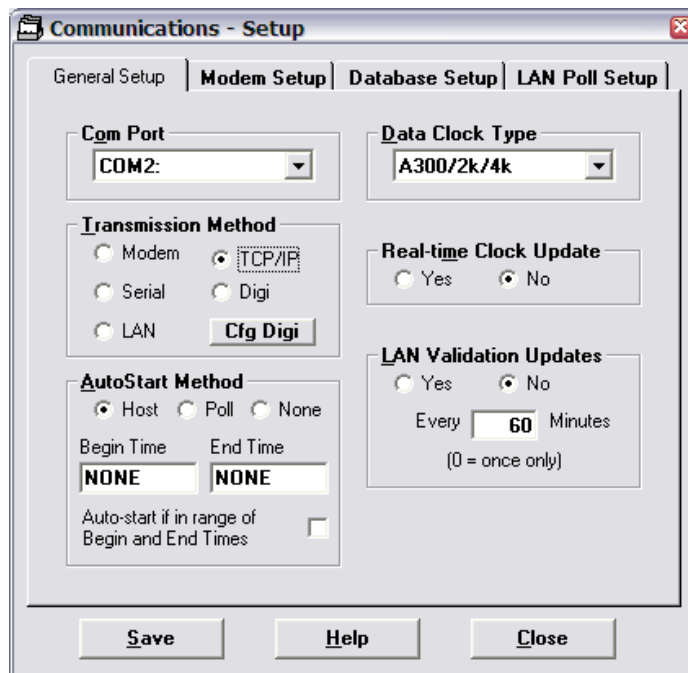
Each time clock must have a unique, static TCP/IP address. In addition, the host PC must have a static IP address as well. These IP addresses are then programmed into both the time clock and the host PC.

Before proceeding, you must have:

- A unique IP address for each time clock.
- The IP address for the host PC.
- The network mask address for the host PC.

Configure TimeCentre Communications

- Run TimeCentre Communications by going to Start | Programs | TimeCentre | TimeCentre Communications. At the main window click the <Setup> button.



General Setup:

Complete the general setup as follows:

- **COM Port:** Not applicable. Leave the default.
- **Transmission Method:** Select TCP/IP.
- **AutoStart Method:** You may pre-select the host PC's communication method by clicking on HOST. Select NONE if you intend to manually initiate the communication process every time you open communications.
Begin Time / End Time: If you selected HOST you may enter a time for the communications to begin and end. If the application is running, it will open the communications link with the time clock automatically on this schedule.
- **Data Clock Type:** Select A300/2k/4k for all A-Series time clocks.
- **Real-time Clock Update:** Select YES to download the current PC time to the time clock on each communication. Be sure that the time on the host PC is accurate.
- **LAN Validation Updates:** This allows schedule and badge/labor information to be downloaded to the time clock at the start of the polling process. This setting should be made in conjunction with turning on Validation in the Data Clock Maintenance application. See chapter 7 for more information. Select Yes to perform this operation, or No to bypass. If desired, this synchronization can take place on a cycle. Enter the number of minutes for the interval.

Database Setup:

- **Version Control:** Select which TimeCentre software database product you are using; 'TimeCentre 2000' for Enterprise and 'TimeCentre Desktop' for the TimeCentre Desktop product.
- **Clock Name:** Select the database name.
- **Multi-Company Lookup via TCP/IP:** Activate this feature and the name of the time clock will determine which database the time records will be sent to.

LAN Poll Setup:

Enter the following information:

- **Number:** Enter 1 for the first time clock and increment this number for any additional time clocks.
- **Clock Type:** Select ATS
- **Method:** Select TCP/IP.
- **Location:** Enter a descriptive label, ex. Front Door, East Office.
- **Poll:** Place a check in this box to poll the time records from it during the communications cycle. To exclude a clock, deselect this box.
- **Octet 1-4:** Enter the IP address of the time clock.
- **TZO (Time Zone Offset):** Enter the number of hours difference in the time zone between the time clock and the host PC.

Configure the Time Clock

There is a sliding switch on the back of the A-Series time clock that is the TEST/USE switch. Use a combination of the ENTER and CLEAR keys to access these menus and make changes to the settings.

To access the test/setup mode:

- Locate the TEST/USE switch on the back of the time clock.
- Slide the TEST/USE switch into the “TEST” position (to the left as viewed from the back of the clock). The time clock displays the prompt ‘ATS TEST MODE’.
- Press the CLEAR key to access the following menus of the setup and test modes:
 - **Test Mode:** Tests the memory, keypad, and badge reader. Not applicable for the setup functions. Skip this menu.
 - **ATS Setup Mode:** At the scrolling screen, press Enter.
 - The following message will be displayed: ‘TERMINAL IP ADDRESS ###. ###. ###. ### _ _ _’. Enter the unique numeric Terminal IP address in blocks of three, each block followed by Enter.
 - Once all four octets are entered, the following message will be displayed: ‘HOST IP ADDRESS ###. ###. ###. ### _ _ _’. Enter the unique numeric Host IP address (from your host PC) in blocks of three, each block followed by Enter.
 - Once all four octets are entered, the following message will be displayed: ‘NETWORK MASK ###. ###. ###. ### _ _ _’. This is the subnet mask of the network. Enter the unique numeric mask address in blocks of three, each followed by Enter.
 - After the fourth octet is entered and Enter is pressed, the following will appear: ‘HIT ENTER IF DEFAULT ROUTE REQUIRED’. Press Enter if a router address is required. If it is required, enter the unique router IP address in blocks of three, each followed by Enter. If no default route is needed, press Clear.
 - The following will then appear on the display: ‘HIT ENTER TO ENABLE BROADCAST RECEIVE’. Press Clear to *disable* BROADCAST RECEIVE.
 - The following will then appear: ‘HIT ENTER TO ENABLE ATS ENHANCED KEEP ALIVE’. Press Clear to *disable* ATS ENHANCED KEEP ALIVE.
 - The following will then appear: ‘HIT ENTER TO ENABLE APPLICATION ACK’. Press Enter to *enable* Application Acknowledgement, which is an electronic confirmation from the host to the clock that the host has received the last message, and which serves to enhance data integrity.

- The following will then appear on the display: 'HIT ENTER TO ENABLE TCP/IP WATCHDOG'. Press Clear to *disable* the TCP/IP Watchdog ('Disabled' is the generally recommended setting, but if the USSoftware Ethernet stack is in service in your system, we recommend that Watchdog be enabled.) Watchdog is a feature which enables the clock to continually verify it's connection with the host PC, and to reset and reconnect if the session integrity becomes questionable.
- The following then appears: 'ENETADD = XXXXXXXXXXXX. Hit Enter to connect'. Press Enter. ('XXXXXXXXXXXX' is the device's MAC address).
- The following will then appear: 'CONNECTING TO SERVER'. If the connection to the server is successful, the following message is displayed: 'CONNECTION COMPLETE'.
- If the connection to the server was NOT successful, the following message is displayed. 'CONNECTION FAILED!! HIT ENTER TO CONNECT'. Press Enter. The following message is displayed: CLOSING CONNECTION BEFORE RECONNECTION, followed by the brief initializing message and connecting message, CONNECTING TO SERVER. At this time, the time clock will either complete the connection or fail. If a connection failure occurs after numerous attempts check the IP addresses of both the host computer and the time clock. Ping both address to ensure communications.
- Return the TEST/USE switch at the back of the time clock to the USE position.
- Press Clear to reboot the clock.
- **Network Test:** Performs a communications loop back test. Not applicable for the setup functions. Skip this menu.
- **Battery Test:** Verifies battery backup operation. (Battery backup is optional equipment.) Not applicable for the setup functions. Skip this menu.
- **DI-DO Test:** Checks the auxiliary port operation by performing a loop back communications test. Not applicable for the setup functions. Skip this menu.
- **Restart Mode:** Resets the time clock, clears all data from memory, performs the power-up sequence and prepares it to accept a new program download. Use this function to reset the clock to factory default settings and clear the memory of time records.

After these settings are configured, press CLEAR until the clock displays 'SWITCH TEST SWITCH TO USE POSITION'. Move the TEST/USE switch to the "USE" position and press the ENTER key. The clock will boot to the idle prompt. The clock setup is now finished.

Click <Save>. To communicate with the clock press the <Host> button.

Chapter 8: Data Clock Maintenance

Data Clock Maintenance Overview

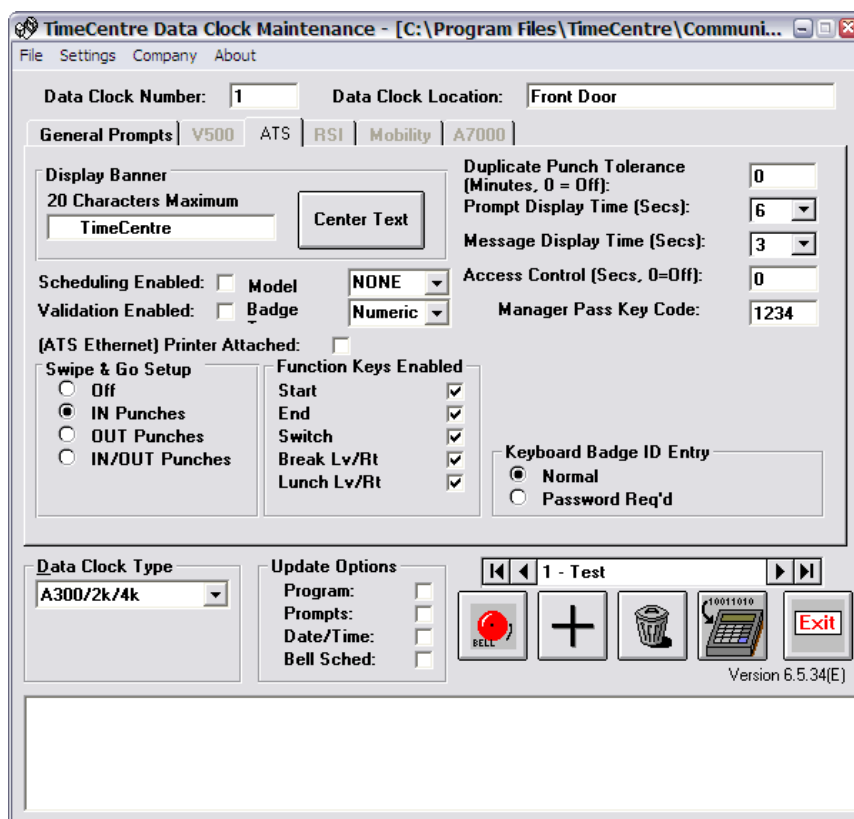
Data Clock Maintenance is a separate application, installed along with TimeCentre Communications, that is used to control various settings and features within the time clock. Data Clock Maintenance is usually used to initially configure the time clock and then only infrequently to change settings or activate other features. The TimeCentre Communications program must be configured prior to using Data Clock Maintenance. See preceding chapters for instructions on TimeCentre Communications.

When a change is made to these settings, download prompts to the clock to send this new information to the time clock (see instructions below).

Run TimeCentre Data Clock Maintenance by going to Start | Programs | TimeCentre | Data Clock Maintenance.

A-Series Time Clock Configuration Options

The Data Clock Maintenance application consists of a tabbed window. Each tab presents different types of options. Only the applicable tabs for your time clock model will be accessible along with the General Prompts tab, which is always available. The bottom portion of the application window is a status display. When communicating with the time clock, this window will display the current status of the procedure.



- **Display Banner:** The Display Banner allows you to change the top line of the time clock idle prompt to any 20-character message. This can be used for your company name or a short message, such as a holiday greeting. Type in your banner message, press the Center Text button if you want the text to be centered on the time clock display.
- **Duplicate Punch Tolerance:** This feature will prevent the same person from entering a second punch of the same type (i.e. IN, OUT, etc.) until the set number of minutes has passed. This prevents an employee from entering multiple punches in error, which would require subsequent editing within TimeCentre. If this is not a problem for your organization, leave this parameter set to the default of zero (0). If you would like to institute a duplicate punch tolerance of from two to twenty-five minutes, enter the desired number of minutes that must pass before another punch of the same type will be accepted from the same badge ID number.
- **Prompt Display Time:** This feature allows you to control the length of time, in seconds, that the prompt will remain on the clock display before returning to the idle prompt (date and time). The number of seconds selected is the time an employee has between keystrokes in an entry. If a key is not pressed within the set time, the time clock will beep twice and return to the idle prompt, indicating too much time has elapsed for data entry to continue. No data entered during that time transaction is saved. Press the down arrow to select a time from 1 to 9 seconds.
- **Message Display Time:** This setting controls the length of time in seconds that a message will remain on the time clock display. Press the down arrow to select a time from 1 to 9 seconds.
- **Access Control:** If enabled, access control allows the time clock to actuate a door solenoid relay control (if installed), to limit entry access. The time clocks can be set to trigger a relay any time a punch is accepted. You can choose the number of seconds that the relay will remain open after reading a valid badge ID number. Choose any number of seconds from .001 up to 9.99 seconds, and enter this here. If this is not required for your organization, keep the default set to zero (0).

- **Manager Pass Key Code:** The manager passkey is a code used to gain access to the time clock setup functions. This code should be kept confidential. The default manager pass key code is 1234. You can change this to any number from one to six (1-6) digits by typing the new number in the Manager Pass Key Code field. Note that this parameter can be changed at the time clock as well. Be sure to retain this pass key for your records.
- **Keyboard Badge ID Entry:** Employees may be allowed to enter their employee ID number via the time clock keypad.
 - **Normal:** Employees may enter their badge ID number directly on the keypad.
 - **Password Req'd:** Employees can only enter their badge ID numbers into the time clock with a slide of their cards. Keypad entry is permitted, but it will require a manager to enter the Manager Pass Key code before accepting the punch.
- **Function Keys Enabled:** The function keys on the time clock (Lunch, Break, etc.) can be enabled or disabled independently. Place a check the box next to the function key that should be enabled for the employees to use. Disable function keys that are not used to prevent erroneous time records.
- **Swipe & Go Option:** (Daisy chain serial and TCP/IP applications only. Not available with time clock software loads 581MD, 590MD, 690P, or 606P.) The Swipe & Go option allows an employee to enter a time transaction simply by swiping their card through the reader. This eliminates keystrokes and speeds up the time tracking process. This can be used in high volume locations, or in companies that only track the time in and out. There are four options for Swipe & Go:
 - Off:** If the Swipe & Go option is not required for your organization, keep the default, Off.
 - IN Punches:** Click in this box if you want to set the time clock to produce IN Punches only.
 - OUT Punches:** Click in this box if you want to set the time clock to produce OUT Punches only.
 - IN/OUT Punches:** Click in this box if you want to collect both IN and OUT Punches on the same time clock. When set as both, the system will always assume that the first punch is an IN punch and the following punch is an OUT punch. When using this option, it is important to set clock download times after all employees have punched out to prevent the sequence from being switched.

Swipe & Go Usage: Normally, the Swipe & Go feature alternates punch types from IN to OUT. However, it is sometimes desirable to have the software control the punch type. A setting can be made so that the TimeCentre database decides which type of punch is appropriate. Frequently, this method is more accurate. Contact TimeCentre technical support for help in creating the database setting.

The Swipe & Go option (IN/OUT Punches) will not generate an OUT punch if more than 12 hours have elapsed since the previous IN punch. Punches of over 12 hours duration will not match and will appear as Exceptions within TimeCentre.

When Swipe & Go is set at the 'IN Only' option and the database lookup function is enabled, the time clock will always display the confirmation message, "START ACCEPTED" regardless of what type of punch the employee is actually entering.
- **Scheduling Enabled:** If Scheduling Enabled is checked, the clock will accept or reject a punch depending on whether it falls within the employee's schedule. See the TimeCentre software user guide for instructions on creating and building schedules for employees. If an employee tries to clock in at a time other than within their scheduled time, the clock responds with 'Badge not scheduled – see Supervisor'. The actual employee schedules are sent when communications forms a connection to the clock and the 'Validation Updates' option in Communications | General Setups is set to YES.
- **Validation Enabled:** (Not available with time clocks load590MS.) If Validation Enabled is checked, the clock will verify that the labor data the employee enters is correct before accepting the punch. Employee badge, department, and job data can be validated. This setting is sent to the clock when prompts are downloaded; the actual Badge IDs, Departments, and Jobs are sent to the clock when communications forms a connection to the clock and Validation Updates is set to YES in the communications application. If validation is enabled and an entry at the clock does not have a match in the TimeCentre database, the entry is rejected.
- **Model:** Select your specific time clock model from the menu.

- **Badge:** Select your employee badge format from the menu.
- **(ATS Ethernet) Printer Attached:** If the time clock communicates via TCP/IP protocol, a serial printer may be attached to the unused serial port on the time clock. The printer can print a receipt of the time transaction for the employee to retain.

A-Series Labor Tracking Configuration

Data Clock Maintenance can be used to turn on or off labor tracking prompts, such as department or job. At the Data Clock Maintenance application click on the ‘General Prompts’ tab.

Track Labor

The time clock allows the tracking of up to five levels plus count or tip. You may enable or disable any prompt by clicking in the appropriate box. If you choose to use any of these levels, each employee will be prompted to enter a value for each enabled level when punching at the clock.

A **default value** for each level can be inserted into the text box in the ‘People’ column. This value will be sent with every time record and the time clock will not prompt the employee for the tracking level. This is especially convenient when every employee using the clock works in the same department or job.

The **prompt text** is the text that appears on the screen of the time clock. It can be changed by entering the new text in this box.

- **Level 1 (Badge ID Number):** The Badge ID Number prompt for the time clock should always be enabled. A default value can be used when the time clock is dedicated to a single badge ID. If you enter a

value in the Level 1 field of the People column in the Default Values section, the time clock will not display any prompt requesting an entry for badge ID, but will use the default value for each entry.

- **Level 2 (Department):** If this level is enabled, the time clock will prompt for a department number. Every employee will be prompted to enter a department number after swiping their badge, or keying in their ID number.
- **Level 3 (Job):** If this level is enabled, the time clock will prompt for a job code. Every employee will be prompted to enter a job code after swiping their badge or keying in their ID number.
- **Level 4 (Work Order):** You may prompt for a work order number for each punch. Every employee will be prompted to enter a work order number after swiping their badge or keying in their ID number.
- **Level 5 (Task):** You may prompt for a task number for each punch. If this level is enabled, the time clock will prompt for a task number. Every employee will be prompted to enter a task number after swiping their badge or keying in their ID number.

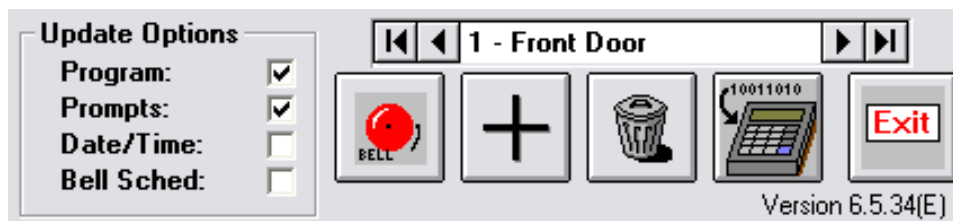
Track Count

- **Count:** The Count prompt allows the user to track quantities. Count records quantities up to 9,999.99 and can be used for fractional quantities, weights, measurements and currency. The count function is associated with the “9” key on the time clock, and allows employees to enter a count amount without affecting the Start/End time of the employee. The count function records the date and time the count was entered, but is independent of other entries. Count is utilized by pressing the Count key (with the number 9 on it). Count is also automatically prompted for at the employee’s END time transaction.
- **Tips:** Tips can be tracked instead of count. Tips are entered in the same manner as count, by using the ‘9’ key on the time clock. The TimeCentre database software will instead format the value as currency. There is a database setting that controls whether the value originating from the time clock is formatted as count or as a tip. See the database user guide for detailed information.

The other columns that appear on this form, labeled Machine, Count, and Inventory and in place for future enhancement to the application.

Download Setups to Time Clock

After making any adjustments to the aforementioned settings - in the general prompts tab or the ATS tab - you must download prompts to the clock. This procedure will synchronize your settings with the clock. Follow these instructions to download prompts to the time clock:



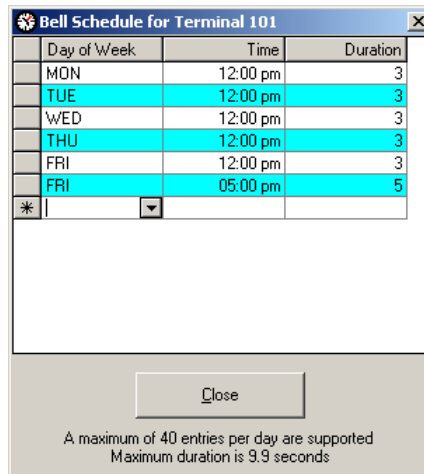
- **Time Clock Number:** For installations with multiple clocks, use the left and right arrows to find the target time clock.
- **Update Options:** Anytime you set up a feature or make a change to the Time Clock Maintenance screen, be sure the appropriate update category is checked. A check in these boxes will send all changes to the time clock when you press the download icon.
Program: Check Program only if you need to update the time clock software. This is needed when the clock has lost its program, or when a software update or upgrade is required.

Important - downloading a new program to a time clock will erase all time records. Be sure to use TimeCentre Communications to poll the clock and empty its memory before downloading a new program to the clock.

- **Prompts:** Once you have completed your selections, be sure to check Prompts under the General Prompts tab.

Date/Time: Check Date/Time to update the time clock date and time to match the PC system date and time. Ensure your PC system's date and time are correct before checking this box. Generally, the time in the time clock is more accurate than in any PC.

Bell Schedule: (Not available with time clock software loads 581MD, 590MD, 690P, or 606P.) Check Bell Schedule if you want to update the bell schedule. With this feature, you can program the time clock to send a signal to an external device that will ring at a specified time. This is an optional feature for TimeCentre A-Series time clocks used in environments where bells are sounded to signify breaks, lunch, machine or other activity changes. A bell schedule should first be defined by clicking on the bell button and entering the times:



Day of Week	Time	Duration
MON	12:00 pm	3
TUE	12:00 pm	3
WED	12:00 pm	3
THU	12:00 pm	3
FRI	12:00 pm	3
FRI	05:00 pm	5
*		

Close

A maximum of 40 entries per day are supported
Maximum duration is 9.9 seconds

The Bell Schedule Editor screen is shown above. You can choose the day, time and duration of the bell ring for the time clock selected, as described below. You may choose up to 40 bell rings per day.

Day of Week: Select the day of week by clicking on the drop down in the first cell. Click on the desired day of week.

Time: Enter the time in 24-hour format, or append 'PM' to the end of the time. For example, for a ring at 5:00PM, enter 17:00 or 5:00PM.

Duration: Enter the length of time you want the bell to ring in seconds, to a hundredth of a second. The maximum duration is 9.9 seconds.

- Click the download icon to commence the synchronization. A progress bar will appear to notify you of the status.



Add New Time Clocks to the System

Each time clock should have it's own record in Data Clock Maintenance. If each time clock is the same model, save time by using the duplicate button.

To enter a new clock to the system:

- Press the Plus icon and enter a unique time clock number from 1 to 127. Enter a description for the time clock.

To duplicate an existing time clock:

- You can duplicate the existing time clock settings by following the previous instructions and placing a check in the 'Make a copy of the current record' box.

Press the OK button when complete and this time clock will be added.

In multi-clock systems, select alternate clocks in the system by clicking on the right arrow in the lower right-hand corner of the Data Clock Maintenance application window to scroll to the next clock. The far right arrow will scroll to the last time clock in the system. Scroll back one clock at a time by clicking on the left arrow. The far left arrow scrolls back to the first time clock in the system.



Repeat the Time Clock Setup process for each time clock in your installation.

Delete Time Clocks from the System

To delete a time clock record from the system, select the appropriate clock number from the record selector above this icon and press the Delete icon. Click on the Yes button to delete, or the No button to cancel. When the time clock record is deleted, the physical time clock will still have its current setup in memory. However, the setup record has been deleted from the clock setup program on the PC.



Chapter 9: Management Functions

Management Functions

The management functions area of the time clock interface serves two purposes; additional setup parameters, and manager override controls.

Manager controls allow the manager to enter time records directly into the time clock. This is convenient to enter missed employee punches or enter sick time entries.

The additional setup controls are used to adjust additional parameters of the time clock. Frequently these will need no adjustment. The settings can be adjusted in case of additional time clocks being added to the system or when there is a change to the destination database.

Manager Pass Key

To limit access to this section of the time clock interface, the management functions are accessible only with a manager pass key code. The pass key should be guarded and given out to supervisors or administrators only. The pass key can be programmed or changed with the Data Clock Maintenance application. The default manager pass key is 1234. You may change this to any number, from one to six digits in length.

To Adjust the Time Clock Setup Parameters

Following are the settings that can be adjusted within the manager setup:

- Correct the date or time.
- Change the time clock name.
- Change the time clock number.
- Change the manager pass key.
- Turn on or off schedule validation.
- Turn on or off employee data validation.

There is a default prompt display time of 6 seconds. That means that if a prompt is not answered within 6 seconds, the time clock will beep and return to the idle display. If this time out length can be adjusted using the Data Clock Maintenance application.

- At the idle prompt, press the MANAGER OVERRIDE key. The clock will display 'ENTER MGR PASS KEY'.
- Enter your manager pass key code and press the ENTER key. If you have not changed the pass key, the default is 1234.
- The clock will display, 'SELECT OPTION 1 = OVERRIDE 2 = SETUP'.

- Press the 2 key to access the setup functions. The clock will display 'ENTER DATE MMDDYY'.
- Enter the date in MMDDYY format and press the ENTER key. If the date is correct, press the ENTER key to skip this prompt.
- The next prompt is 'ENTER 24 HR. TIME HHMM'. Enter the correct time in 4-digit format on the keypad and press the ENTER key. For example, for 8:00 A.M., type in 0800 and press the ENTER key. Press ENTER to skip this prompt without adjusting the time.
- The next prompt is 'TERMINAL NAME TIMECNTR'. Enter the time clock name. This will be an eight-character alphanumeric name for the time clock. For TimeCentre Desktop or when using the multi-company lookup feature, this name needs to match the name of the database. To enter alpha characters, press the corresponding number followed by the ALPHA key to change it to the letters appearing on the same button. Press ENTER to skip this prompt without adjusting the name.
- The next prompt is 'TERMINAL NUMBER 101'. The time clock number is a three digit number used to uniquely identify each time clock during data downloads. Start with number 101 and increment for each additional time clock. The current value is shown below the prompt. Press ENTER to skip this prompt without adjusting the time clock number.
- The next prompt is 'ENTER NEW PASS KEY' Enter a new manager passkey, from one to six digits. The default is 1234; if you don't want to change it, press the Enter key. Note that if the pass key is changed at the time clock, there will be no record of this new pass key so be sure to document it for safekeeping.
- The next prompt is 'SCHEDULING? 1=YES 0=NO'. Enter the scheduling enable value: 1=yes, 0=no. This setting is also controlled through the Data Clock Maintenance application. The current value is shown below the prompt. Press ENTER to skip this prompt without adjusting the value.
- The next prompt is 'VALIDATION? 1=YES 0=NO'. Enter the validation enable value: 1=yes, 0=no. The current value is shown below the prompt. This setting is also controlled through the Data Clock Maintenance application. Press ENTER to skip this prompt without adjusting the value.
- The next prompt is 'PRINTER? 1=YES 0=NO'. If you are using a TCP/IP connection a serial printer may be connected to the unused serial port on the time clock. Enter: 1=yes, 0=no to tell the time clock if a printer is attached. The current value is shown below the prompt. Press ENTER to skip this prompt without adjusting the value.
- Time clocks that communicate via TCP/IP will return to the idle prompt. Other time clock models continue as follows.
- The next prompt is 'MODEM DIALOUT 1=YES 0=NO'. The current value is shown below the prompt. For modem time clocks, this option turns on the modem dial out feature where the modem will initiate the communications download. Press the Enter key if you do not want this modem dialout feature enabled and the time clock will return to the idle prompt.
If you want to schedule a time clock dial out, press the 1 key. The time clock will display 'ENTER 24 HOUR DIAL TIME HHMM'. Enter the time you want the time clock to dial in 24 hour HHMM format. If you want, for example, to schedule a 2:00AM download, enter 0200 and press the ENTER key. The time clock will then prompt for 'PHONE # TO DIAL 9,5551212'. Enter the telephone number for the clock to dial. If the clock should dial a "9" to reach an outside line, enter 9 then a comma (0. then the ALPHA), and then the telephone number. The comma adds a 2 second pause to wait for a dial tone. The number can be up to 20 characters.
- The setup is completed and you are returned to the idle prompt.

Time Clock Test Mode

The test mode tests the time clock memory, keypad and badge reader.

- Unlock the time clock from the security mount. Locate the TEST/USE switch on the back of the time clock. Slide the TEST/USE switch into the “TEST” position (to the left as viewed from the back of the clock). The time clock displays the prompt ‘ATS TEST MODE’.
- Press the CLEAR key to advance through the menus. To enter the test mode, press the Enter key when ‘ATS TEST MODE’ appears on the display. The test mode display is followed by two numbers. The first number is the amount of memory in kilobytes. The second number increments the time in seconds (0-59):
ATS TEST MODE 64 04
- The user can now test the keypad. Each key pressed will beep and its value will appear in the display. Press the Enter key to show ‘KEY INPUT ACCEPTED’ and clear the display.
- Test mode also accepts input from the badge reader. To test the reader, swipe a badge. The time clock beeps for a valid read and displays the badge data. This test does not leave a record in the clock memory.

To Add Time Records

In addition to correcting any employee time records in the TimeCentre software, a manager is able to add missed punches and sick time directly into the A-Series time clock. These punches will append to the TimeCentre database and be accessible from within the application along with the other time records originating from the time clock. If an employee comes into work and forgets to punch in, the manager can manually enter the proper punch type, date, and punch time, along with any other tracking levels that have been enabled in the time clock.

Note: This is not an editing function. Once data has been entered into the time clock, it may be edited only from within TimeCentre.

A manager may add a punch by proceeding as follows:

- At the idle prompt, press the Manager Override key. The time clock will display ‘ENTER PASS KEY’. Enter the pass key. The default value is 1234.
- The time clock will display ‘SELECT OPTION 1 = OVERRIDE 2=SETUP’. Enter 1.
- The time clock will display ‘PRESS FUNCTION TO OVERRIDE’. Press the button of the time transaction type you would like to add, i.e. Start, End, Break Leave, etc.
- The time clock will display ‘ENTER BADGE’. Enter the employee badge ID number or swipe a badge and press the ENTER key.
- The time clock will display ‘ENTER DATE MMDDYY’. Enter the date for the time transaction as a 6-digit MMDDYY number and press the ENTER key. For example, enter 121505 for December 15, 2005.
- The time clock will display ‘ENTER 24 HOUR TIME HHMM’. Enter the time as a 4-digit HHMM number in 24-hour format and press the ENTER key. For example, to enter 8:15AM, press 0815. For 3:15PM, enter 1515.
- The time clock will prompt for any additional levels of labor tracking data such as department or job. Enter these values as necessary followed by the ENTER key to finish the time transaction. The time clock will display ‘ENTRY ACCEPTED’.

Chapter 10: Employee Usage

Keypad Functions

Although swiping a magnetic stripe or bar code-encoded card through the time clock is usually the fastest and most accurate method of creating a time transaction, employees can also enter punches directly on the keypad of the clock. However, it is important to be attentive when using the keypad in order to avoid making a mistake.

The following keys can be used at any time:

- **CLEAR:** The CLEAR key will cancel the current time entry and return the clock back to the idle prompt. The current transaction will be aborted and not entered.
- **ENTER:** The ENTER key will save the entry. This is used to move from one prompt to the next and to finish the time transaction. The time clock will respond to this input by displaying the next prompt or the confirmation message.
- **ALPHA:** The alpha key is used to enter alpha data into the time clock. When pressed, it will change a number that has been entered into a letter of the alphabet. For example, use the keypad to enter the number 2 and then press the ALPHA key twice and the result will be the letter 'E'. Press the ALPHA key three times and the number 2 will change into the letter 'F'.
- **COUNT:** Count data can be used to track piece count, parts processed, or any other type of productivity information that is needed. A count transaction is created independently from a time transaction and does not affect the employee's work time, but the date and time of the count transaction is recorded. Press the COUNT key and follow the prompts to enter the data.
- **TIPS:** The function of the COUNT button can be changed to track tips instead. This modification is controlled by a database setting and requires that you contact TimeCentre technical support for assistance. Tips entered in the time clock can be a monetary amount of up to six digits, with the last two appearing after the decimal point (\$1234.56). The date and time of the tip transaction is recorded, but it does not affect the employee's work time.

A time-out happens when the prompt appears on the time clock for too long without the employee responding. The time clock will beep and return to the idle prompt. No data from the time transaction is saved, regardless of how much data had been entered during the transaction process. The time-out, or waiting, period can be adjusted with the 'Prompt Display Time' setting in the Data Clock Maintenance application.

To Create a Time Transaction

The following time clock functions are used for tracking employee labor data. This section describes the technical details of each transaction.

Appendix B contains employee instruction tables. These tables can be photocopied or printed in order to post near the time clock. Having an easy reference at the clock will aid the employees and result in faster, more accurate usage. If you

track different types of data, or require instructions in different languages, the tables in Appendix B can be used as a template to create your own specialized instructions.

START

The START transaction marks the beginning of the employee's work time. The time clock will create a start punch that contains the date, time, employee ID number, and any tracking levels such as department or job.

To create a START time transaction:

- Check the display for the idle prompt. It should display the current date and time.
- Press the START key. The clock will display 'ENTER BADGE ID'.
- Slide the badge ID card through the reader, or enter the badge ID number on the keypad and press the ENTER key. Use of the ENTER key is only necessary when entering the data via the keypad.
- The clock will prompt for any additional levels of data that are being tracked. If this data is input on the keypad press the ENTER key after entering each value. After the last prompt the clock will display 'START ACCEPTED' and return to the idle prompt.

END

The END transaction closes the employee's work time. The time clock will create an end punch that contains the date, time, and employee ID number.

To create an end time transaction:

- Check the display for the idle prompt. It should display the current date and time.
- Press the End key. The clock will display 'ENTER BADGE ID'.
- Slide the badge ID card through the reader, or enter the badge ID number on the keypad and press the ENTER key. Use of the ENTER key is only necessary when entering the data via the keypad.
- If the count or tips functions have been enabled, the clock will prompt for this information now. Enter the value and the time clock will automatically format the last two digits after the decimal point. Example: 1234 will be formatted as 12.34. After the last prompt the clock will display 'END ACCEPTED' and return to the idle prompt.

SWITCH

The Switch function is used by the employee during a work shift to change a department, job, or other labor tracking category. The benefit of using the switch function is that there is no need to end a work shift and then immediately begin a new one that contains the new labor information. Instead the switch simply asks the employee for the new labor information and creates a contiguous time transaction automatically.

When the employee uses the switch function the time clock actually creates two punches; an 'END' time transaction to finish the previous work shift and a 'START' transaction to begin a new work shift that contains the new labor information that the employee entered.

To use the switch function:

- Check the display for the idle prompt. It should display the current date and time.
- Press the SWITCH key. The clock will display 'ENTER BADGE ID'.
- Slide the badge ID card through the reader, or enter the badge ID number on the keypad and press the ENTER key. Use of the ENTER key is only necessary when entering the data via the keypad.
- The clock will prompt for any additional levels of data that are being tracked. If this data is input on the keypad press the ENTER key after entering each value. After the last prompt the clock will display 'SWITCH ACCEPTED' and return to the idle prompt.

BREAK LEAVE / BREAK RETURN

Break time can be tracked at the time clock. The TimeCentre application treats break time as paid time. In fact, the break punches do not interrupt a work shift, instead they “float” on top of the current work shift time. The department, job, or other labor information that they employee is working on will continue to be credited time during the employee’s break.

To leave for break:

- Check the display for the idle prompt. It should display the current date and time.
- Press the BREAK LEAVE key. The time clock will display ‘ENTER BADGE ID’.
- Slide the badge ID card through the reader, or enter the badge ID number on the keypad and press the ENTER key. Use of the ENTER key is only necessary when entering the data via the keypad. The clock will display ‘BREAK LV ACCEPTED’.

To return from break:

- Check the display for the idle prompt. It should display the current date and time.
- Press the BREAK RETURN key. The time clock will display ‘ENTER BADGE ID’.
- Slide the badge ID card through the reader, or enter the badge ID number on the keypad and press the ENTER key. Use of the ENTER key is only necessary when entering the data via the keypad. The clock will display ‘BREAK RT ACCEPTED’.

LUNCH LEAVE / LUNCH RETURN

Lunch transactions serve two purposes; they stop, or interrupt, the employee’s paid work time, and they serve to track the amount of lunch time the employee takes. When an employee creates a lunch leave or a lunch return time transaction, the time clock actually produces two punches for each action. When an employee uses the LUNCH LEAVE key the time clock creates an END time transaction to finish the employee’s work shift, and it creates a “lunch in” punch that begins their lunch time. When an employee uses the LUNCH RETURN key the time clock creates a “lunch out” punch that completes their lunch time, and a START transaction to begin their paid work time.

To leave for lunch:

- Check the display for the idle prompt. It should display the current date and time.
- Press the LUNCH LEAVE key. The time clock will display ‘ENTER BADGE ID’.
- Slide the badge ID card through the reader, or enter the badge ID number on the keypad and press the ENTER key. Use of the ENTER key is only necessary when entering the data via the keypad. The clock will display ‘LUNCH LV ACCEPTED’.

To return from lunch:

- Check the display for the idle prompt. It should display the current date and time.
- Press the LUNCH RETURN key. The time clock will display ‘ENTER BADGE ID’.
- Slide the badge ID card through the reader, or enter the badge ID number on the keypad and press the ENTER key. Use of the ENTER key is only necessary when entering the data via the keypad. The clock will prompt for any additional levels of data that are being tracked. If this data is input on the keypad press the ENTER key after entering each value. After the last prompt the clock will display ‘LUNCH RT ACCEPTED’.

Additional Time Clock Features

WTD Hours Display (Week-to-Date, or Pay-Period-to-Date)

The A-Series time clock can display an employee's cumulative work hours. For TimeCentre Desktop the hourly total is week-to-date (from the previous Sunday forward), and for TimeCentre Enterprise, it is pay-period-to-date. There are certain requirements for this feature:

- TCP/IP or LAN communication only.
- Validation must be enabled. See the section regarding validation in the Data Clock Maintenance chapter for instructions to configure the validation feature.
- TimeCentre Desktop software only: The hourly total is only updated when a user opens the application and either runs a labor report or performs the regenerate totals command. Therefore, one of these processes should be undertaken frequently in order to provide accurate and timely totals to the employee. The frequency of updating the time data within the TimeCentre application depends on your company's policies and the schedules of your employees, however, it should be run a minimum of at least once daily.

To retrieve week to date hours at the time clock:

- Press the 1 key. The time clock will display 'ENTER BADGE FOR HRS THIS WEEK'.
- Slide the badge ID card through the reader, or enter the badge ID number on the keypad and press the ENTER key. Use of the ENTER key is only necessary when entering the data via the keypad.
- The total work hours for the pertinent period will appear on the display.

Employee's Last Punch

Employees can always obtain the last punch information on the A-Series time clock. In multi-clock environments, the last punch information is available from the same clock only.

To retrieve last punch information:

- Press the "2" key. The clock will display 'ENTER BADGE FOR LAST PUNCH'.
- Slide your badge ID card or enter your badge ID number on the keypad and press the ENTER key.
- The last punch recorded for the employee will appear on the clock display.

Appendix A: Bar Code Information

Bar Code Overview

Scanning a bar code is a means of gathering information quickly and accurately. Many of the TimeCentre data collection devices have the ability to read bar codes. Many time clocks have integrated readers and TimeCentre offers add-on bar code wands to attach to other devices. The A-Series time clocks feature both a built-in bar code reader option as well as available external bar code wands.

Using bar codes is oftentimes easier for the employee, since they don't have to memorize code numbers, and increases data accuracy, since there is no manual entry the code number is always read correctly. Bar codes can be used for any labor tracking level, from Employee to Level 5.

Bar codes are simple to create and easy to print. They are often used for job tracking, since new labels can be printed when new jobs are created, and they take advantage of the convenience and accuracy of the bar code reader.

Bar codes can be printed directly on a sheet of paper for scanning with a wand. They can be printed on sticky labels to affix to badges. They can also be printed directly on badges by using a special badge printer.

Bar Code Specifications

- The bar code is a 3 of 9 bar code with no Modulus 43 checksum.
- 24 point font size is recommended. The bar code must be no smaller than 24 point size.
- A bar code reader needs to see a quiet zone of white space .25" on each side of the bar code.
- When printing bar code cards, or applying bar code labels to cards, the bar code should be located so that it is parallel to one side of the card and the midline of the code is .35" from the edge.

Bar Code Printer Requirements

- Ideally, you should use a laser printer to print bar codes, as they print with the highest clarity and resolution, and produce bar codes that will last longer. Most modern laser printers have sufficient resolution to print legible bar codes. Inkjet printers may suffice but should be tested in your particular environment and with your time clock. Inkjet printers are not recommended.

Bar Code Printing Tips

- Bar codes printed on plain copy paper are often marginal for readability. Improve the readability by using high quality laser paper stock. If you intend to use the bar code for repeated reading, it is recommended that you laminate the paper or place the sheet in a protective transparent sleeve to prevent wear.
- Consider the data capture device tolerances before determining the maximum thickness of any bar code card lamination.
- A bar code reader needs to see a quiet zone of white space .25" on each side of the bar code.

- For color printers, bar codes should be printed in true black.

Bar Code Font Installation

If you do not have the TimeCentre bar code font file, contact TimeCentre technical support.

Before the bar codes can be printed, the bar code font must be installed in your operating system. Depending on the version of the operating system, these instruction may differ:






- Click Start | Settings | Control Panel.
- Click the Fonts icon.
- From the File menu at the top of the window select Install New Font.
- Navigate to the font file. Select the font C39P24DmTt and click on OK.
- Exit the Control Panel when the process has finished.

Generating Bar Codes in Microsoft Word

You can create bar codes with most word processor and spreadsheet applications such as Microsoft Word or Excel. The font named C39P24DmTt can be used to format the standard numbers that you see on your screen into the stripes that make up a bar code.

In some versions of Word, surrounding text by asterisks (*ABC123*) is a **bold** format shortcut. To disable this option go to Tools > AutoCorrect > AutoFormat As You Type. Deselect the “*Bold* and _italic_ with real formatting” option. Alternately, you can use the keyboard shortcut ‘control-Z’ after typing the code and Word will undo the bold formatting.

The following chart illustrates bar codes printed for each of the five labor tracking levels

Description	Bar Code Font
Employee	*123456* 
Department	*123456* 
Job	*123456ABC* 
Level 4 (Work Order)	*12345code* 
Level 5 (Task)	*123ABC* 

- Bar Code Font: C39P24DmTt (or ‘3 of 9’ Bar code symbology)

- Font Size: 24 point

The 'Bar Code Font' column in the chart contains the data in a standard font and the same data formatted in 24 point bar code font appearing below it.

When configuring the bar code information for printing, it is often the easiest method to enter the information in a legible, standard font so that the numbers are clear to read. When you're done entering the information in the document, highlight all of the numbers and format them into the bar code font.

Appendix B: Employee Instructions

The following tables provide basic usage instructions for employees that are designed to be printed or photocopied in color and posted next to the time clock for reference. Usage instructions posted near the time clock increase employee cooperation and punch accuracy.

Start punch using keypad input.

To start a work shift.	
START	Press the START key.
ENTER BADGE	Enter your ID number on the keypad.
Enter	Press the Enter key.
PUNCH ACCEPTED	The punch is complete.

Start punch using a swipe card.

To start a work shift.	
START	Press the START key.
ENTER BADGE	Swipe your badge through the reader.
PUNCH ACCEPTED	The punch is complete.

End punch using keypad input.

To end a work shift.	
END	Press the END key.
ENTER BADGE	Enter your ID number on the keypad.
ENTER	Press the ENTER key.
PUNCH ACCEPTED	The punch is complete.

End punch using a swipe card.

To end a work shift.	
END	Press the END key.
ENTER BADGE	Swipe your badge through the reader.
PUNCH ACCEPTED	The punch is complete.

Switch department or job using keypad input.

To switch department/job.	
SWITCH	Press the SWITCH key.
ENTER BADGE	Enter your ID number on the keypad.
ENTER DEPT/JOB	Follow the prompts and enter your new dept or job.
ENTER	Press the ENTER key.
PUNCH ACCEPTED	The punch is complete.

Switch department or job using a swipe card.

To switch department/job.	
SWITCH	Press the SWITCH key.
ENTER BADGE	Swipe your badge through the reader.
ENTER DEPT/JOB	Follow the prompts and enter your new dept or job.
ENTER	Press the ENTER key.
PUNCH ACCEPTED	The punch is complete.

Leave for lunch using keypad input.

To leave for lunch.	
LUNCH LEAVE	Press the LUNCH LEAVE key.
ENTER BADGE	Enter your ID number on the keypad.
ENTER	Press the ENTER key.
PUNCH ACCEPTED	The punch is complete.

Leave for lunch using a swipe card.

To leave for lunch.	
LUNCH LEAVE	Press the LUNCH LEAVE key.
ENTER BADGE	Swipe your ID card through the reader.
PUNCH ACCEPTED	The punch is complete.

Return from lunch using keypad input.

To return from lunch.	
LUNCH RETURN	Press the LUNCH RETURN key.
ENTER BADGE	Enter your ID number on the keypad.
ENTER	Press the ENTER key.
PUNCH ACCEPTED	The punch is complete.

Return from lunch using a swipe card.

To return from lunch.	
LUNCH RETURN	Press the LUNCH RETURN key.
ENTER BADGE	Swipe your ID card through the reader.
PUNCH ACCEPTED	The punch is complete.

Leave for break using keypad input.

To leave for break.	
BREAK LEAVE	Press the BREAK LEAVE key.
ENTER BADGE	Enter your ID number on the keypad.
ENTER	Press the ENTER key.
PUNCH ACCEPTED	The punch is complete.

Leave for break using a swipe card.

To leave for break.	
BREAK LEAVE	Press the BREAK LEAVE key.
ENTER BADGE	Swipe your ID card through the reader.
PUNCH ACCEPTED	The punch is complete.

Return from break using keypad input.

To return from break.	
BREAK RETURN	Press the BREAK RETURN key.
ENTER BADGE	Enter your ID number on the keypad.
ENTER	Press the ENTER key.
PUNCH ACCEPTED	The punch is complete.

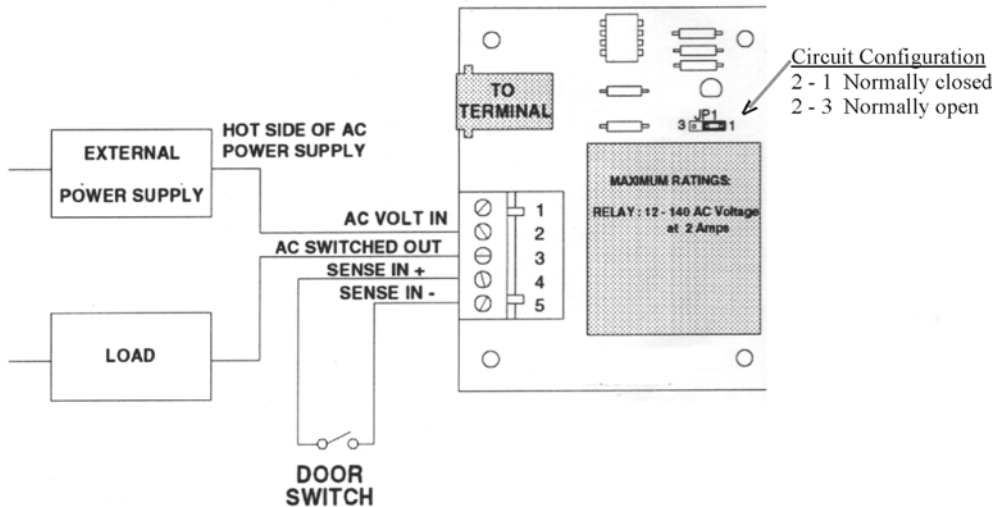
Return from break using a swipe card.

To return from break.	
BREAK RETURN	Press the BREAK RETURN key.
ENTER BADGE	Swipe your ID card through the reader.
PUNCH ACCEPTED	The punch is complete.

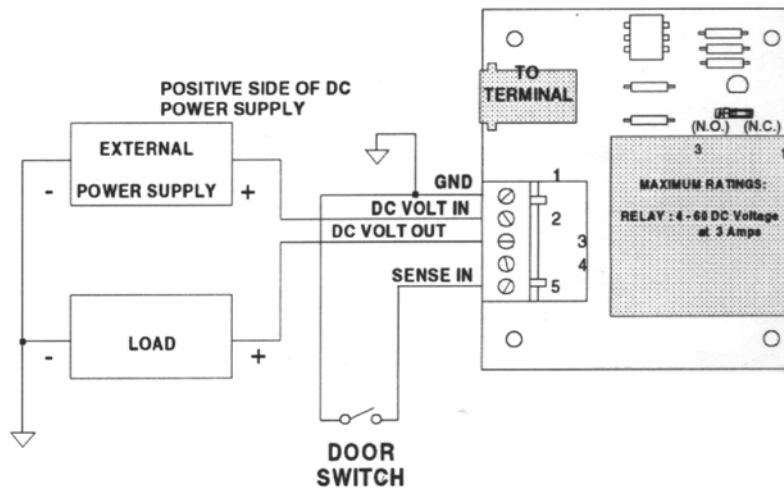
Appendix C: DI-DO / Relay Schematics

AC and DC DI-DO Installation

"AC" DI-DO RELAY BOARD INSTALLATION EXAMPLE



"DC" DI-DO RELAY BOARD INSTALLATION EXAMPLE

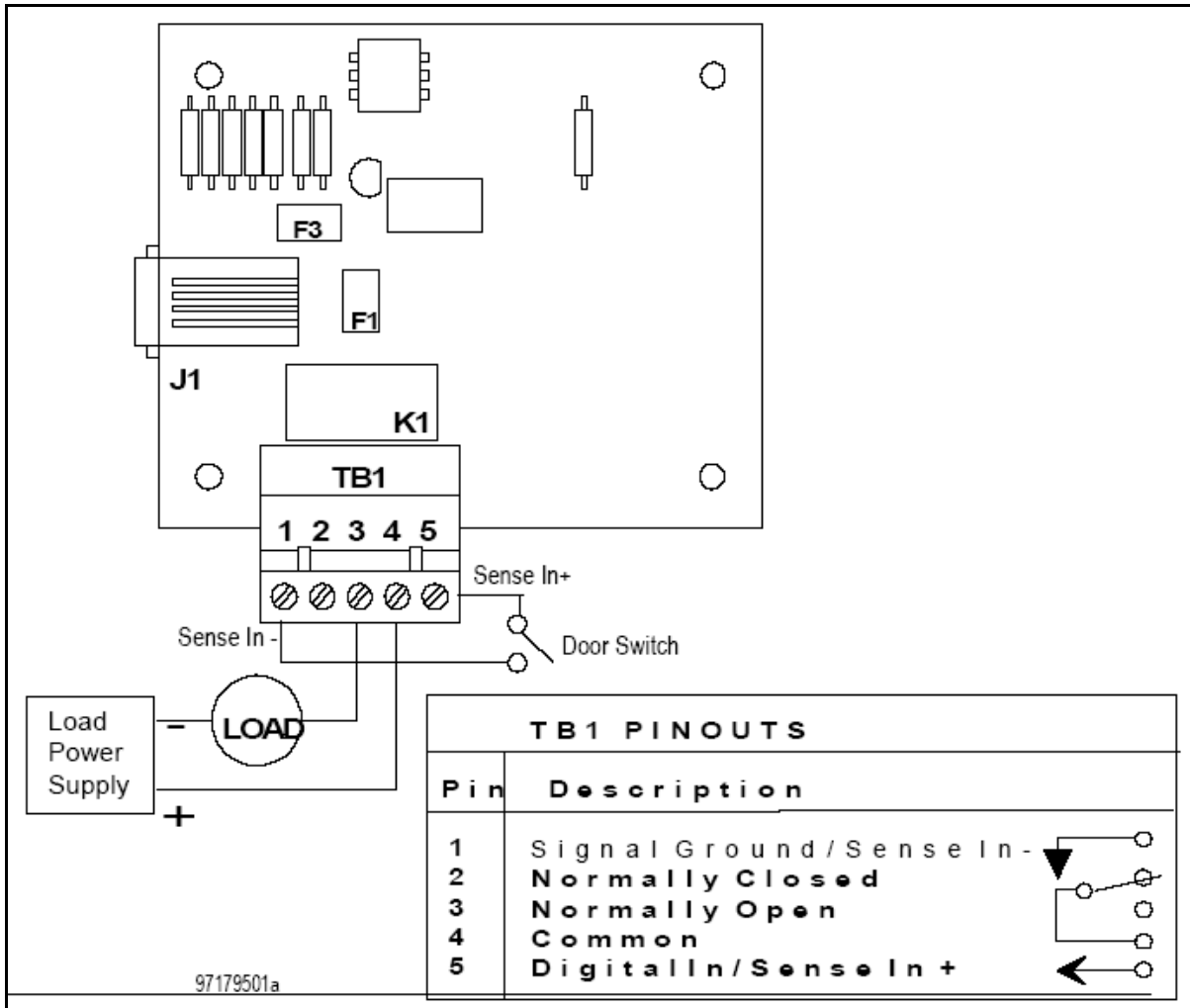


The A-Series time clocks can be used to perform door access control or to trigger a device, such as a bell, on a schedule. The schedule can be set in the Data Clock Maintenance application.

The Digital In/Digital Out (DI-DO) is a solid-state relay controller card that accepts a digital input and responds with a digital output. The Form C relay is another type of controller that can be mounted in the time clock. Consult a TimeCentre representative to see which controller card fits your specific needs.

Due to the wide array of devices that can be connected to the DI-DO, and the variability of these devices, TimeCentre is unable to provide support on the device that is connected to the DI-DO. It is recommended that a licensed electrician perform any work involving device installation or wiring.

Form C Relay



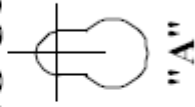
Form C Relay Specifications

- Physical Dimensions: 3.00" L X 2.65" W X 0.70"H (6.35cm x 7.62cm x 1.78cm)
- Environmental Operating Temp: 32 to 110 F* (0 to 45 C*)
- Relative Humidity: 20-90%, Non-condensing
- Power: Draws power from the time clock. 80 mA when energized.

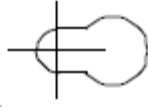
Appendix D: Wall Mount Templates

Photocopy the template for your time clock model and use it to mark the wall prior to time clock installation. Templates for both A4000 and A300 time clock models are included.

4000 SERIES MOUNTING TEMPLATE

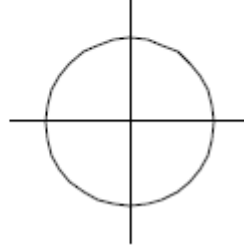


"A"

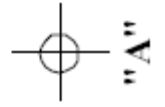


"A"

"B"

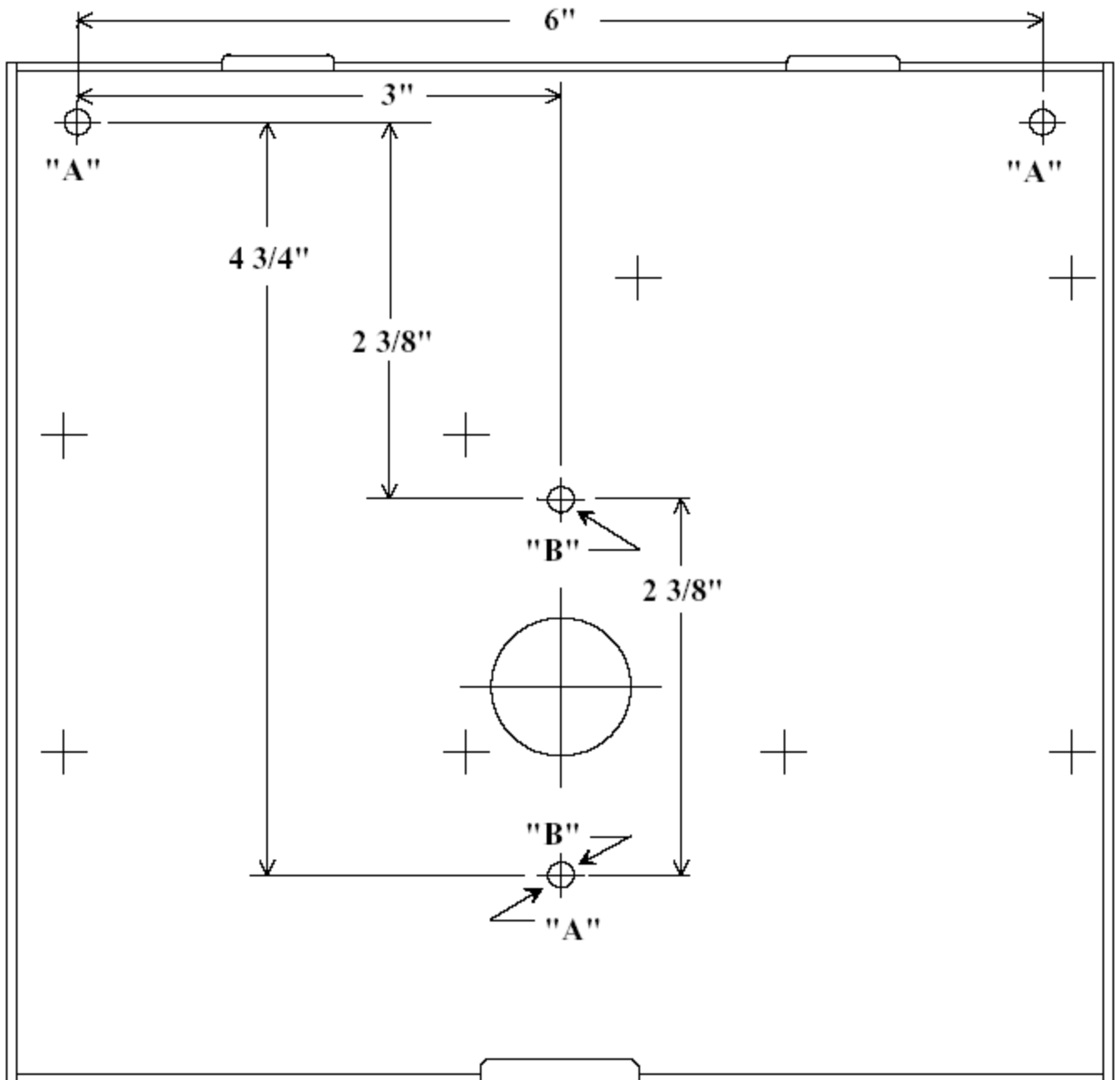


- When securing to a flat wall, use the mounting-hole pattern, labeled "A".
- The hole pattern labeled "B" may accommodate power and communication wiring.



"A"

A300 Mounting Template



- When securing to a flat wall, use the mounting-hole pattern, labeled "A".
- When securing to a standard 4" electrical box, use the mounting-hole pattern labeled "B".

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