attendance *enterprise*

Time Clocks for Employee Attendance Tracking

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Time clocks record employee attendance information including start, end, and lunch break times. This information is then shared with a time and attendance system using a variety of communication methods. Time clocks can also provide vital information to employees and allow them to perform tasks, for example, transferring jobs or reviewing schedules or benefits. Choosing the right time clock is an important part of your overall time and attendance strategy.

From the original mechanical time clock invented in 1888, employees have used time clocks to accurately record their in and out times. The first in and out punches were literally holes punched in a paper card representing time or other data. Now employees record their "punches" electronically, verifying their identities using magnetic stripe badges, barcode cards, proximity fobs, keypads, or even their own hands or fingerprints.

Today's time clocks do far more than record start and end times. They can perform a multitude of tasks, from recording departmental transfers to providing security door access. They also offer a variety of methods to communicate with software that can store this employee data and use it for time and attendance calculations.

When considering a time clock purchase, learn about the types of devices and their capabilities. This paper describes time clock technologies and features. It also provides an environment and needs survey to help you identify the time clock options that are right for you. Once you have an idea of your time clock needs, your time and attendance provider can help you to determine the technology that is right for your organization.

Ways to Punch

Employees punch in and out to indicate that they are starting work and leaving work, sometimes for lunches or breaks. Not only do punch times assist employers in paying employees correctly, but they also provide a legal record of employees' service with the company. Depending on the type of time clock, the punch can also indicate security access to a controlled area.

Some time clocks require badges or other identifying objects to be carried by the employee. Examples of these include time clocks that scan a barcode, read a magnetic stripe, or sense an encoded string of digits.

Some time clocks require employees to remember information, or present a hand or finger for scanning. PIN time clocks require employees to enter an identification number and sometimes a password. The following images show employees punching in using three different methods.

Ingersoll Rand
Recognition Systems
HandPunch **Hand Reader**

InfoTronics, Inc.
Intelligent Terminal 2100
Finger Reader

InfoTronics, Inc.
IDpunch 3
Proximity Reader

Use the following table to review the categories of time clock.

Type of Time Clock	Punch Method	Benefits	Special Considerations
Personal Identification Number (PIN)	Enter an identification number, sometimes accompanied by another number for authentication (password)	Inexpensive Provides a secondary entry method for most clock types	Easy to punch for a coworker, allows "buddy punching"
Barcode	Swipe a badge coded with a barcode through a barcode reader	Employees are familiar with the barcode concept	Barcode can be marred enough to be unreadable, allows "buddy punching" if badge is handed off
Magnetic Stripe	Swipe a badge with a magnetic stripe in a magnetic stripe reader	Employees are familiar with magnetic stripe cards	Badge can be demagnetized like a credit card, allows "buddy punching" if badge is handed off
Proximity	Wave a badge with a small transmitter near a proximity reader	Badge or fob can remain in purse or pocket; scans can be made from a distance depending on reader	Does not prevent buddy punching
Biometric Finger Reader	Press a finger on a biometric reader surface (platen)	No passwords to remember; buddy punching is eliminated	Some people's fingers cannot be read correctly; sophisticated readers with better accuracy can be expensive
Biometric Hand Reader	Press a hand on a biometric reader surface (platen)	Buddy punching is eliminated	Some people's hands cannot be read correctly; more expensive than other offerings

Punching without a Clock

Not all organizations use time clocks. If time clocks do not meet your organization's needs, alternate punching methods are available. For example, if your employees are frequently on the road, they can punch in and out using their cell phones. With telephony, employees easily punch in and out, transfer workgroups, or check benefit balances…all guided by voice prompts. If employees have access to a common area such as a break or lunch room, a central kiosk can be used. Employees with PCs can punch using their home or office computers, review their personnel information, request time off, and even perform time card edits using Employee Self Service in a web browser.

Clock Communication with Time and Attendance Software

To efficiently analyze and report on data collected from a time clock, it must be shared with time and attendance software. The time and attendance software then can display any attendance issues for supervisor intervention. Time clocks use several methods to communicate with the time and attendance software.

Popular TCP/IP clocks can use your organization's Ethernet network to connect to time and attendance software. A time clock with a modem uses the phone line to communicate, and a wireless connection can also be established. Less commonly, the time clock can be directly connected to the computer with a serial cable.

Advances in clock communication make sharing information between the clock and the time and attendance software faster and easier than ever. Online polling, used with InfoTronics Attendance Enterprise® , continually shares employee data from clock to software.

A recent development is the use of HTTP clocks. HTTP clocks can communicate with web hosted (ASP) software like Attendance on Demand® directly through the Internet using hypertext protocol.

Your organization's choice of clock communication method depends on the software and clocks you choose, as well as any special environmental or networking considerations you have.

Choosing a Time Clock

The following purchasing guidelines can help you select a type of time clock for your facility.

1) Estimate the number of employees who need to punch. Time clocks use memory in order to store and prompt for information. The clock's memory limits the number employee transactions it can store. Clocks with more sophisticated functions, like hand or finger punching, can also require more memory for template storage. Because of this limitation, it is important to know how many employees need to punch using time clocks.

2) Consider the additional functions you want from a time clock. Time clocks vary greatly in functionality. Some time clocks simply allow employees to punch in and out, while other time clocks allow employees to transfer departments, enter tip amounts, access secure areas through biometric verification, or review benefit balances and schedules.

3) Assess previously existing network infrastructure. The computing infrastructure at your location can impact the communication methods you can use. For example, if Ethernet is readily available, a good choice is a TCP/IP time clock. However, if Ethernet must be newly installed, perhaps a modem or wireless connection makes more sense. Because clocks vary in the types of communication they can use, understanding the computing infrastructure can be useful in your time clock choice.

4) Think about the locations where time clocks could be placed. Time clock operation can be affected by your work environment. For example, finger reader sensors can be sensitive to dirt and moisture. Office environments are more suitable for this type of clock. Most time clocks are good choices for dry, clean workplaces. For a moist, outdoor environment, a time clock with protection from the elements is needed.

5) Consider the budget. Time clocks range in price from the low $100's to low $1000's, depending on functionality and maximum employee count. Your budget and price expectations are important to consider.

What Time Clock Should I Choose?

Time clocks are integral to the success of your time and attendance system. Whether technologically advanced or simple, they provide an easy way for employees to track their attendance at work. Employee transactions are then shared with your time and attendance software. For guidance about the right time clock for your organization, complete the attached Time Clock Needs Analysis and share it with your time and attendance professional.

For over 25 years, InfoTronics, Inc. (Farmington Hills, MI) has maintained a singular vision -- to provide businesses of all sizes cost-effective, easily deployed time and attendance solutions. The company's flagship product, Attendance Enterprise™, provides advanced features for managing labor data — calculating pay rules, scheduling employees, budgeting labor, automating benefit accrual, tracking attendance-based merit points — while meeting the scalability, reliability and security requirements of large organizations. The company's web-enabled products provide flexibility and universal access for employees. An extensive North American dealer network has helped more than 15,000 organizations use InfoTronics products to reduce labor expenses and improve decision making. www.infotronics.com

Time Clock Needs Analysis

(Courtesy of InfoTronics, Inc.)

How many employees need to punch at the time clock(s)? Circle one.	1 – 10	11 – 50	50 – 200	201 – 500	500 – 1000	Over 1000
How would you describe your work environment? Circle one.	Very Clean	Clean	Dusty	Some oil and dirt, humid	Outdoors in shelter	Outdoors in the elements
Do you want to use the time clock(s) to control or track security access? Circle one.	No			Want to track access		Want to keep unauthorized people out of certain areas

What is your budget for time clocks? Write your best estimate.

Has your organization ever used time clocks? Circle one. *If so, what type/communication style?*   **Yes / No**

Do your employees carry identification badges? Circle one. *If so, what kind?*   **Yes / No**

Next to each of the following possible time clock functions, circle whether the function is necessary, a nice-to-have, or not necessary.

Controlled security access	Must have	Nice to have	Not needed
Biometric hand reader	Must have	Nice to have	Not needed
Biometric finger reader	Must have	Nice to have	Not needed
Departmental transfer capability	Must have	Nice to have	Not needed
Employees can review information	Must have	Nice to have	Not needed
Employees can enter tips	Must have	Nice to have	Not needed

Make a note of any additional required functions: