CT-900™
Calculating Time Recorder

User Guide

icon TIME SYSTEMS®

www.icontime.com | 1.800.847.2232

CT-900™ Calculating Time Recorder

Icon Time Systems, Inc., An Oregon Corporation.

Notice: The information contained in this document is subject to change without notice.

Icon Time Systems
15201 N.W. Greenbrier Parkway, Suite A1
Beaverton, Oregon 97006
1-800-847-2232
www.icontime.com

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Chapter 1: Overview

Thank you for purchasing the CT-900 Calculating Time Recorder!
The CT-900 is flexible and easily customizable to meet your company's needs.
This chapter gives a brief overview of the time recorder functionality, hardware, and the employee timecard.

Features

The CT-900 time recorder records and totals employee time, rounds punches, and deducts breaks based on user-defined settings. Other advanced features include:

- Adjusts for short months, leap year, and daylight saving time.
- Prints IN and OUT dates and times.
- Calculates total hours worked per day and pay period for up to 100 employees.
- Bar-coded timecards pre-numbered from 1 to 100 for easy reference.
- Rounds daily and pay period totals to the nearest quarter-hour.
- Deducts for breaks automatically.
- Highlights tardiness and early\late departures.
- Prints weekdays in English, French, or Spanish.
- Includes alarm feature to signal shift start and end, breaks, or lunches with an internal or external speaker\bell.
- Includes built-in lithium battery for accurate timekeeping even during power failures.
- Mounts to wall or table.
- Includes Job Cost Mode for tracking time spent on task, customer or job.

This guide will help you easily customize the time recorder to take advantage of these unique features.

Please read the manual carefully and keep it for future reference.

Questions?

For technical support, call 1.800.847.2232 option 1 or email support@icontime.com

In the Box

CT-900 Calculating Time Recorder	100 Bonus Timecards	User Guide	2 Keys
Ribbon	NiCad Battery Back-up (Optional Upgrade)		
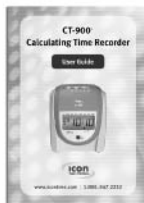
Order Accessories

To order accessories, contact our sales department at
1.800.847.2232 option 3 or email sales@icontime.com

External View

Front View

- Card Slot
- Buttons
- Cover
- LCD Display
- Lock
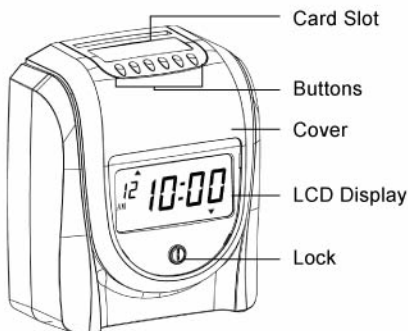
- **Card Slot** – to punch IN\OUT, insert the timecard into the card slot.

- **Buttons** – employees use the buttons to select the specific print-column on the timecard. Buttons are also used to program time recorder settings.
- **Cover** – remove to program the time recorder or change the printer ribbon.
- **LCD Display** – displays date, time and programming information.
- **Lock** – provides security to prevent unauthorized access to programming options.

Back View
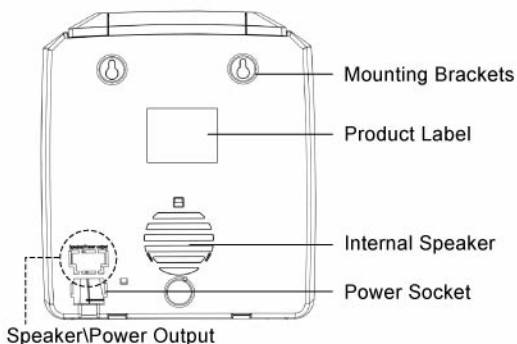
- **Mounting Brackets** – mounts the time recorder to the wall (mounting screws not included).
- **Product Label** – lists model, serial number, and voltage information.
- **Internal Speaker** – provides audio output for alarms.
- **Power Socket** – connect power here.
- **Speaker\Power Output** – provides a connection for an external speaker and\or external bell.

Button Functions

The time recorder has two operating modes, **Normal Mode** for day-to-day operations and **Programming Mode** for programming the time recorder.

Normal Mode Buttons

In normal mode, use the IN\OUT buttons to select the column where the punch is printed (punch print column). The buttons available are based on the type of pay period selected.

The CT-900 pay periods are categorized as either calculating pay periods or non-calculating pay periods.

Calculating pay periods track a running total for the day and the pay period and allow you to customize additional settings, such as rounding and break deductions. Calculating pay periods include weekly, bi-weekly and monthly pay periods.

A non-calculating pay period simply tracks the IN\OUT punches each day without day and pay period totals. The CT-900 has only one non-calculating pay period option called job cost mode. Use job cost mode to track time spent on a particular job or task.

IN OUT   IN OUT   IN OUT   *Job Cost Mode
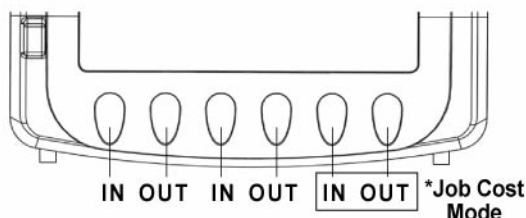
Normal Mode Buttons

- **Weekly, Bi-Weekly and Monthly (calculating pay periods)** – only the first four buttons are available to select the punch print column.
- **Job Cost Mode (non-calculating pay period)** – all six buttons can be used to select the punch print column using job cost mode because the total hours column on the timecard will not be used.

NOTE: Refer to the **Punch Procedures and Calculations** chapter on page 31 for more details.

Programming Mode Buttons

Remove the cover to enter programming mode and display the programming mode button labels.

Volume   Color   Schedule ⊖   ⊕   Enter   Reset
Adjust   Alarm
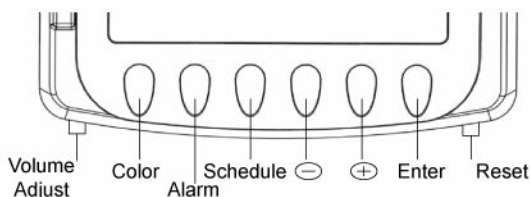
Programming Mode Buttons

- **Volume Adjust** – adjusts the speaker volume.
- **Color** – changes the punch print color to track employee tardiness and early/late departures.
- **Alarm** – schedules an alarm to indicate the beginning and end of a shift, break or lunch.
- **Schedule** – sets timecard rounding, punch totals, format, and break deductions.
- ⊕ or ⊖ – scrolls through time recorder program options.
- **Enter** – selects and saves the different program options.
- **Reset** – erases all program settings and returns the time recorder to factory default.

LCD Display

In **Normal Mode**, the LCD displays day, date, and time.
In **Programming Mode**, the LCD displays programming information.

Normal Mode Display

- **Daylight Saving Indicator** – an arrow ▲ indicates that daylight saving time is enabled.
- **Weekday** – an arrow ▲ points to the current day.
- **Time** – displays the current time.
- **Date** – displays the current day.
- **Power Output** – an arrow ▼ appears if an alarm using the external speaker\bell is scheduled.
- **Alarm** – an arrow ▼ appears if the internal alarm is scheduled.
- **Color Printing** – an arrow ▼ indicates the current print color.

Programming Mode Display

To enter **Programming Mode**, remove the time recorder cover. The current **Menu Item** and **Program Setting** appear on the display.

Menu Item

```
0120 10
```

Program Setting

- **Menu Item** – displays the current **Menu Item** to be programmed.
- **Program Setting** – displays specific settings for each **Menu Item** such as the date, year, and time of day.

Timecard Overview

One timecard is used for all pay periods including weekly, bi-weekly, or monthly pay periods and for job cost (non-calculating pay period) mode.

- Employees are assigned to pre-numbered timecards (1 to 100). Employees can be assigned to any given timecard during a pay period.
- With calculating pay periods (weekly, bi-weekly and monthly) there is a maximum of two punch pairs per day per employee.
- With non-calculating pay periods (job cost mode) there is a maximum of three punch pairs per day per timecard.

Time card ID

072

NAME

TO REORDER CALL 1-800-847-2232

1

Side Identifier

PAYROLL ID | PAY PERIOD

TOTAL | HOURS | STANDARD | OVERTIME | WAGE | GROSS

Employee and Payroll Section

DEPARTMENT | SECTION

REMARKS:

	MORNING		AFTERNOON		TOTALS	
	IN	OUT	IN	OUT	DAY	PERIOD
	7:00	11:00	12:00	16:00	7:30 B	7:30
	7:00	11:00	12:05			
	7:05	11:00	12:00	16:00	7:25 B	14:55 W

IN\OUT Punches

Day\Period Totals

Warning

Break

Barcode

W - WARNING   B - AUTOMATIC BREAK DEDUCTION

Signature Line

SIGNATURE

FORM CTR-TC

Part Number

- **Timecard ID** – shows each employee's timecard during a pay period.
- **Employee and Payroll Section** – manually add information here.
- **IN\OUT Punches** – punches print in these columns.
- **Day\Period Totals** – day and period totals print in these columns.
- **Barcode** – used by the time recorder sensor to determine timecard ID.
- **Side Identifier** – identifies the front (side 1) or back (side 2) of the timecard. Weekly and bi-weekly pay periods only use side 1.
- **Signature Line** – employees can sign timecard to approve hours.
- **Part Number** – reference this number to order additional timecards.
- **Break** – a "B" appears next to day total if a break deduction occurrs.
- **Warning** – a "W" appears next to the period total if the day and period totals are missing from the previous day, for example, if the employee did not clock OUT on the previous day.

NOTE: Refer to **Chapter 5: Punch Procedures and Calculations**, on page 31, for details on properly using the timecard with the CT-900 to punch IN and OUT.

Installation Precautions

- The time recorder is for indoor use only.
- Keep away from heat radiators, air ducts, moisture, and mechanical shock vibration.
- Always plug the time recorder into the correct power source.
- If the machine malfunctions, is damaged in any way, or has a damaged cord or plug, do not operate.

Table Top Installation

Set the time recorder on a surface that is level, sturdy, and supports the weight of the unit (5 lbs).

Wall Mount Installation
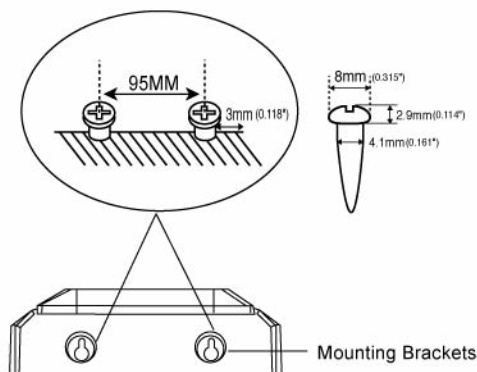
- The time recorder has two mounting brackets on the back panel.
- Mount the time recorder to the wall using the appropriate screws.
- Make sure the mounting surface supports the weight of the unit (5 lbs).

Power Connection

Plug the power adapter into an appropriate wall outlet. Connect the power cable to the time recorder power socket. The LCD display will display the date and time.

Chapter 3: Programming the Time Recorder

The CT-900 time recorder is easy to use and customize. You must program the time recorder before employees begin punching IN and OUT. Each **Menu Item** section takes you through the steps to customize your time recorder's **Program Settings**. Mandatory **Menu Items** include year, date, time, and pay period type. Optional **Menu Items** include day change time, display hours, print position, daylight saving time, punch print format, and timecard auto-detection.

Additional **Advanced Settings** are available:

- **Punch Print Color** – track tardiness and early\late departures by highlighting punches in red.
- **Scheduled Alarms** – signal beginning and ending of shifts, breaks, or lunches.
- **Punch Rounding** – round daily and pay period totals to the nearest quarter-hour.
- **Break Deductions** – deduct break time from daily totals.
- **Total Hours Print Format** – set the total hours printed on the timecard to print in standard minutes or centennial hour format.

Programming Tips

Configure each **Program Setting** through a **Menu Item** selection on the time recorder; menu items run in sequence from **01** through **10.** Go back to a specific **Menu Item** later to make additional changes.

Remove the cover from the time recorder to enter **Programming Mode**.

The current **Menu Item** and **Program Setting** appear on the display.

Menu Item

Program Setting

- The **Menu Item** number flashes and displays on the left. The **Program Setting** appears on the right.
- Use the ⊕ or ⊖ button to advance or go back to a menu item.
- Press **Enter** to select a particular menu item to customize.

Program Your Time Recorder

Menu Items and default **Program Settings** are shown below. Not all **Menu Items** must be configured, just the year, date, time, and pay period type.

Menu Item	Default Value
01 Year	2010
02 Date	01:01 (January 1)
03 Time	12:00 (12pm)
04* Day Change Time	00:00 (12am)
05 Pay Period Type	00 (Job Cost Mode)
06* Display Hours	24 (Military Time)
07* Print Position	08 10 (Centered)
08* Daylight Saving Time	2010 (Disabled)
09* Punch Print Format	00 (First Row Blank)
10* Timecard Auto-Detection	00 (Enabled)

Advanced Settings	
Color*	Set the Punch Color Change
Alarm*	Set the Internal/External Alarm
Schedule*	Set Punch Calculation Options

* Optional Settings

Menu Item 01 – Set the Year

Menu Item 01 allows you to set the year on the time recorder.

1. Press **Enter** to set the Year.
2. Using ⊕ or ⊖ , select the Year.
3. Press **Enter** to confirm your selection and advance to **Menu Item 02**.

Menu Item 02 – Set the Date

Follow the instructions below to set the month and day under **Menu Item 02**.

1. Press **Enter** to set the Date.
2. Using ⊕ or ⊖, select the Month (**01-12**).
3. Press **Enter** to save your setting.
4. Using ⊕ or ⊖, select the Day (**01-31**).
5. Press **Enter** to save your settings and advance to **Menu Item 03**.

```
02 ┌─ 01:01
      Month
```

```
02 ┌─ 01:01
           Day
```

Menu Item 03 – Set the Time

Follow the instructions below to set the time for **Menu Item 03**.

1. Press **Enter** to set the Time.

> **NOTE:** The time setting displays in military format (**00-23** hours).

2. Using ⊕ or ⊖, select the Hour.
3. Press **Enter** to save your setting.
4. Using ⊕ or ⊖, select the Minute.
5. Press **Enter** to save the setting.
6. You will now need to reset the Seconds setting to zero. When ready, press the ⊖ button to reset the seconds.
7. Press **Enter** to confirm your settings and advance to **Menu Item 04**.

```
03 ┌─ 12:00
PM      Hour
```

```
03 ┌─ 12:00
PM       Minute
```

```
03      :00
PM       Seconds
```

Menu Item 04 – Set the Day Change Time

Day change time marks the time a new day starts and advances a punch to a new timecard row. Most companies begin a new day at midnight (**00:00**), which is the default setting. To alter the day change time, follow the instructions below.

⚠️ Altering the Day Change Time will affect time calculations.

1. Press **Enter** to set the Day Change Time.

> **NOTE:** The time setting displays in military format (**00-23** hours).

2. Using ⊕ or ⊖, select the Hour.
3. Press **Enter** to save your setting.

```
04 ┌─ 00:00
PM      Hour
```

4. Using ⊕ or ⊖ , select the Minute.
5. Press **Enter** to confirm your settings and advance to **Menu Item 05**.

> **NOTE:** If unsure, leave this setting unchanged.

Menu Item 05 – Set the Pay Period Type

The CT-900 time recorder supports weekly, bi-weekly, monthly (calculating pay periods) and job cost mode (non-calculating pay period). To set the pay period type, follow the instructions below.

1. Press **Enter** to set the Pay Period Type.
2. Using ⊕ or ⊖ , select the Pay Period Type:
   A. **00** = Job Cost Mode (page 16)
   B. **01** = Weekly Pay Period (page 16)
   C. **02** = Bi-Weekly Pay Period (page 18)
   D. **03** = Monthly Pay Period (page 19)
3. Press **Enter** to save the setting.
4. Skip to the appropriate pay period section listed above to complete the setup.

A. Job Cost Mode (Non-Calculating Pay Period) Setup

Select this pay period type to track time spent on a particular job or task. In job cost mode the following options are disabled: day and period totals, rounding, and break deduction.

1. Job Cost Mode requires no additional configuration.

> **NOTE:** Refer to the Six Punches per Day section on page 33 for instructions on punching IN/OUT in Job Cost Mode.

2. Skip to **Menu Item 06** on page 19.

B. Weekly Pay Period Setup

A weekly pay period ends every week. When using a weekly pay period, you must set the following three items:

- Pay Period End Day
- Day Print Format
- Language Print Format

Set the Pay Period End Day

The pay period end day is the last day of the weekly pay period. For example, if your pay period starts on a Monday, the last day of the pay period is Sunday (**07**).

1. Using ⊕ or ⊖, select the Pay Period End Day. The choices are:

Pay Period End Day

- **01** = Monday
- **02** = Tuesday
- **03** = Wednesday
- **04** = Thursday
- **05** = Friday
- **06** = Saturday
- **07** = Sunday

2. Press **Enter** to save your setting.

Set the Day Print Format

The day print format allows you to choose one of three different day formats printed on the timecard.

1. Using ⊕ or ⊖, select the desired Day Print Format. The choices are:

Day Print Format

- **00** = Day of Month (01-31) with Time

  16:03

- **01** = Day of Week Number (01-07) with Time

  16:00

- **02** = Day of Week Name (MO, TU, ...) with Time

  16:02

2. Press **Enter** to save the setting.
3. If options **00** or **01** are selected, skip to **Menu Item 06** on page 19, otherwise continue to the Language Print Format section.

Set the Language Print Format

If you choose the day print format option 02 which displays the day of the week name, then you can set it to print in one of six different languages.

1. Using ⊕ or ⊖ , select the desired Language Print Format:

Language

- **01** = English
- **02** = Spanish
- **03** = German
- **04** = French
- **05** = Italian
- **06** = Portuguese

2. Press **Enter** to save the setting.
3. Skip to **Menu Item 06** on page 19.

C. <u>Bi-Weekly Pay Period Setup</u>

A bi-weekly pay period ends every two weeks. When using a bi-weekly pay period, you must set the following two items:

- Pay Period End Day
- Pay Period Week (First Week or Second Week)

Set the Pay Period End Day

The pay period end day is the last day of the bi-weekly pay period. For example, if your pay period starts on a Monday, set a bi-weekly pay period end day of Sunday (**07**).

1. Using ⊕ or ⊖, select the Pay Period End Day. The choices are:

```
05  01  02
```
Pay Period End Day

- **01** = Monday
- **02** = Tuesday
- **03** = Wednesday
- **04** = Thursday
- **05** = Friday
- **06** = Saturday
- **07** = Sunday

2. Press **Enter** to save the changes.

Set the Pay Period Week (First Week or Second Week)

The pay period week is the current week of your bi-weekly pay period.

1. Using ⊕ or ⊖, select week of the pay period that you are currently in. The choices are:

```
05  01  02
```
Pay Period Week

- **01** = First Week of Pay Period
- **02** = Second Week of Pay Period

2. Press **Enter** to save the setting.
3. Skip to **Menu Item 06** on page 19.

D. <u>Monthly Pay Period Setup</u>

A monthly pay period requires no additional configuration.
Press **Enter** to save this setting and advance to **Menu Item 06**.

Menu Item 06 – Set the Display Hours Format

The time recorder can display time in 24-hour (military) format or 12-hour (standard) format.

1. Press **Enter** to set the Display Hours Format.
2. Using ⊕ or ⊖, select the format

Display Hours
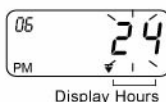
- **24** = 24-hour or military time format (i.e.: 13:30pm = 1:30pm)
- **12** = 12-hour format (i.e.: 1:30pm)

3. Press **Enter** to save the setting and advance to **Menu Item 07**.

Menu Item 07 – Adjust the Print Position

Print Position adjustments are used to adjust the punch position in a column on the timecard. Punches can be moved up or down and left or right on the timecard.

 Do a couple of test punches before adjusting the print position. Only adjust the print position if punches are not centered properly.

To skip this section, use ⊕ to advance to **Menu Item 08** to set the daylight saving time rules.

1. Press **Enter** to set the Print Position.
2. Using ⊕ or ⊖, select the Vertical Print Position. This will move the punch up or down.

   - **Vertical Print Position** - values range from (**00-15**). Select a higher number to move the print position up, or a lower number to move the print position down.

Vertical

3. Press **Enter** to save your setting.
4. Using ⊕ or ⊖, select the Horizontal Print Position. This will move the punch left or right on the timecard.

- **Horizontal Print Position** – values range from (**00 to 30**). Select a higher number to move the print position to the right, or a lower number to move the print position to the left.

```
07  08:10
PM
        Horizontal
```

5. Press **Enter** to save your setting and advance to **Menu Item 08**.

Menu Item 08 – Set Daylight Saving Time

The daylight saving time start date ("spring forward") and the end date ("fall back") <u>must be programmed each year</u> to adjust for daylight saving time.

If you do not want to set the time recorder to automatically adjust for daylight saving time, skip to **Menu Item 09** to set the punch print format

Daylight Saving Time Chart		
Year	Start Date	End Date
2011	March 13	November 06
2012	March 11	November 04
2013	March 10	November 03
2014	March 09	November 02
2015	March 08	November 01

Daylight Saving Start Date (Spring Forward)
Refer to the chart above and set the start date of daylight saving time.

1. Press **Enter** to set the daylight saving time start date.
2. Using ⊕ or ⊖, select the year.
3. Press **Enter** to save your setting.
4. Using ⊕ or ⊖, select the month (**01-12**) that daylight saving time starts.
5. Press **Enter** to save the setting.
6. Using ⊕ or ⊖, select the day (**01-31**) that daylight saving time starts.
7. Press **Enter** to save your setting.

```
08  2010
PM
        Year
```

```
08  00:00
PM
        Month
```

```
08  03:14
PM
        Day
```

Daylight Saving Time End Date (Fall Back)
Refer to the chart above and set the end date of daylight saving time.

1. Press **Enter** to set the year.
2. Using ⊕ or ⊖, select the year.
3. Press **Enter** to save your setting.

```
08  2010
PM
        Year
```

4. Using ⊕ or ⊖, select the month (**01-12**) that daylight saving time ends.
5. Press **Enter** to save the setting.
6. Using ⊕ or ⊖, select the day (**01-31**) that daylight saving time ends.
7. Press **Enter** to save your setting and advance to **Menu Item 09**.

Menu Item 09 – Set the Punch Print Format

The time recorder can print the punch time in 24-hour (military) or 12-hour (standard) format on the timecard. Choose the option below that best suits your company.

1. Press **Enter** to set the Punch Print format.
2. Using ⊕ or ⊖, select the desired format.

- **00** = 24-hour (Military time at 1/60 hour)
  i.e.: 13:30 = 1:30pm

- **01** = 12-hour (1/60 hour)
  i.e.: 1:30 = 1:30pm

> **NOTE:** When you select a 12-hour format, the time stamp prints on the timecard with an underline beneath the hour for "pm" and no underline for "am".

3. Press **Enter** to save your setting and advance to **Menu Item 10**.

Menu Item 10 – Set Timecard Auto-Detection

Timecard auto-detection ensures that the timecard is inserted into the card slot correctly. The error code **E:01** displays if a timecard is inserted with the wrong side forward. It is recommended to leave auto-detection enabled.

- **Weekly and Bi-Weekly Pay Periods** – uses Side 1 only
- **Monthly Pay Periods and Job Cost Mode** – use Side 1 and Side 2

1. Press **Enter** to set the Timecard Auto-Detection.
2. Press ⊕ or ⊖, select the detection mode.
   - **00** = Enable Auto-Detection of Timecard
   - **01** = Disable Auto-Detection of Timecard
3. Press **Enter** to save your setting.

4. The **Menu Item** will automatically advance to **Menu Item 01**.
5. Replace the Cover on the time recorder when finished.

> **NOTE:** Timecard Auto-detection must be turned off when Job Cost Mode is in use.

Chapter 4: Advanced Program Settings

This chapter discusses customizing the CT-900 Calculating Time Recorder advanced features.

Advanced Program Settings include:

- Change the punch color printed on the timecard to red, to track tardiness and early\late arrivals.
- Schedule an alarm to signal the start and end of breaks, lunches, and shifts.
- Round quarter-hours to make day and period total calculations easier.
- Print day and period totals in minutes (1/60) or centennial (1/100) format.
- Schedule automatic break deductions.

Advanced Setting – Set the Punch Color Change

The timecard punch print color can change from black to red and back again based on the daily color change schedule. This is typically used to track tardiness or early/late departures.

Each schedule has a start time when the punch color changes from black to red, and an end time when the punch color changes from red to black.

Tracking Tardiness

To track employee tardiness you must set a time range (start and end time) for the color change schedule. Employees punching IN within that time range would be tardy and their timecard punches would print in red.

> **Example:** An employee's shift is from 8am to 5pm. The employee is tardy if he/she clocks IN between 10 to 30 minutes after the shift starts.
>
> You would set the color change schedule to start at 8:10am and end at 8:30am. Any IN punches within that period would print in red, indicating the employee was tardy.

Tracking Late Departure

When tracking late departures you must set a time range (start and end time) for the color change schedule. Employees punching OUT within the time range have departed late and their punches will print in red.

> **Example:** An employee's shift is from 8am to 5pm every day. The employee has a late departure if he or she leaves between 5 minutes and 2 hours after the end of a shift.
>
> You would set the color change schedule to start at 5:05pm and end at 7:00pm. Any OUT punch occurring within that period would print in red, indicating the employee departed work late.

Advanced Menu Item 01 - Set the Punch Color Schedule

Configure the following items to set each start and end time of an individual color change schedule.

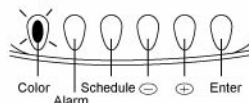- Punch Color Change Time
- Color
- Weekly Schedule

> **NOTE:** Once a start time is set when a punch changes from black to red, you must set an end time to complete the color change schedule.
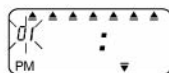
Set the Punch Color Change Start-time (Red)

Follow the instructions to set the time for the punch color to change to red.

1. Remove the time recorder Cover to enter **Programming Mode**.

2. Press the **Color** button on the top of the time recorder.

3. **Advanced Menu Item 1** will flash on the time recorder display. Press **Enter** to set the time of the color change.

4. Using ⊕ or ⊖, select the hour for the punch color change, in military time (0-23 hours).
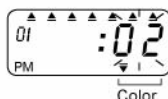
5. Press **Enter** to confirm your setting.

6. Using ⊕ or ⊖, select the minute.

7. Press **Enter** to confirm your setting. Follow the instructions below to set the color.

Set the Print Color to Red

Select the punch color to print on the timecard.

1. Using ⊕ or ⊖, select option **02 Red Print** to change the punch color red for the particular time set. The choices are:

   • **01** = Black Print
   • **02** = Red Print

2. Press **Enter** to save your setting and continue.

Set the Weekly Schedule

By default, the color change schedule includes all days of the week. To remove a day from the schedule (for example, weekends), follow the instructions below, or press **Enter** to skip this step.

1. The arrow ▲ on the top of display flashes and points to Sunday.
2. Use ⊕ or ⊖ to select a particular day to remove.
3. Press the **Color** button once and the arrow ▲ pointing to that day will disappear removing the day from the schedule.
4. Repeat steps 2-3 until all desired days have been removed.
5. Press **Enter** to save your setting.
6. After pressing **Enter** the menu item on the display will change to **Advanced Menu Item 2**. Follow the instructions below to set the punch color back to black at a scheduled time.
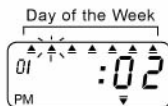
Set the Punch Color End-time (Black)

If you set the punch color to red, you <u>must</u> set an additional time to turn the punch color back to black.

1. From Advanced Menu Item 1, repeat the steps on page 23 to complete the color change schedule and set the punch color back to black.
2. Repeat the steps beginning on page 23 to set additional Punch Color Change times. A maximum of 24 Punch Color Change Start-times and End-times can be set on the clock.

> **NOTE:** The Menu Item on the left of the display will change in sequence for each Color Change schedule set.

Advanced Setting - Set the Internal\External Alarm

The time recorder can output a scheduled alarm through a built-in internal speaker, external speaker, and\or bell.

Advanced Menu Item 01 - Set the Alarm

Configure the following items to schedule an alarm:
- Alarm Time
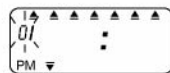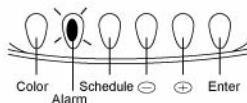- Alarm Type (Speaker, Bell, or Both)
- Alarm Duration
- Day of the Week

Set the Alarm Time

In order to schedule an alarm, first program a time for the alarm to signal.

1. Remove the Cover from the time recorder to enter **Programming Mode**.
2. Press the **Alarm** button on the top of the time recorder. This button will light up and blink.
3. **Advanced Menu Item 1** will flash on the time recorder display. Press **Enter** to set the Alarm Time.
4. Using ⊕ or ⊖, select the hour that the alarm will signal.

> **NOTE:** The time setting displays in military format (**00-23** hours).
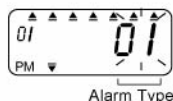
5. Press **Enter** to confirm your setting.
6. Using ⊕ or ⊖, select the minute that the alarm will signal.
7. Press **Enter** to confirm your setting and continue to the next section.

Set Alarm Type (Speaker, Bell, or Both)

Next you must program the method used to signal the scheduled alarm.

1. Using ⊕ or ⊖, select the Alarm Type.

   Alarm Type

   - **01** = Internal Speaker
   - **02** = External Bell
   - **03** = Internal\External Speaker and External Bell

   > **NOTE:** For External Speaker and Bell installation, refer to the instructions on page 27.

2. Press **Enter** to confirm your setting and continue.

Set the Alarm Duration

Each alarm can signal for up to 59 seconds. Follow the instructions below to set the alarm duration.

1. Press **Enter** to set the Alarm Duration. The default Alarm Duration is 22 seconds.

   Alarm Duration

2. Using ⊕ or ⊖, increase or decrease the Alarm Duration.
3. Press **Enter** to confirm your setting and continue.

Set the Day of the Week

By default, the alarm will signal on each day of the week. To remove a day from the schedule (for example weekends), follow the instructions below, or press **Enter** to skip this step.

1. Use ⊕ or ⊖ to select a particular day to remove from the schedule.

   Day of the Week

2. Press the **Alarm** button once and the arrow ▲ pointing to that day will disappear removing the day from the schedule.
3. Repeat steps 2-3 until all desired days have been removed.
4. Press **Enter** to confirm your setting and continue to the next section. The next **Advanced Menu Item** flashes on the left of the display. This is the next scheduled Alarm event.
5. To add additional Alarm schedules repeat the steps in the Set the Alarm Time, Set Alarm Type, Set the Alarm Duration, and the Set the Day of the Week section. A maximum of 24 schedule alarms can be set on the clock.
6. Replace the Cover on the time recorder when finished.

External Speaker and Bell Installation

The external speaker and bell connections are on the back of the time recorder in the lower left corner. Carefully follow the wiring diagram below.
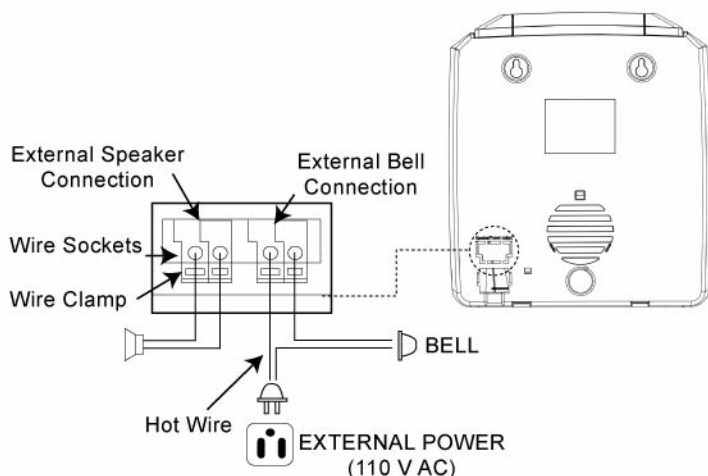
Speaker / Bell Connection Diagram

External Speaker Connection – the two green wire sockets on the left are for an external speaker.

1. Two wires must be connected to the time recorder wire sockets. Press the small orange, plastic rectangular wire clamp button inward on the first wire socket.
2. Insert the wire into the green wire socket, and release the clamp to secure the first wire.
3. Repeat the steps to insert the second wire into the next Wire Socket.

External Bell Connection – the two green wire sockets on the right connect to an internal, dry contact relay that activates an external bell.

1. Two wires must be connected to the time recorder wire sockets. Press the small orange, plastic rectangular wire clamp button inward on the first wire socket.
2. Insert the wire into the green wire socket, and release the clamp to secure the first wire.
3. Repeat the steps to insert the second wire into the next wire socket.

⚠ **Use extreme caution when connecting External Power to the alarm circuit.**

Advanced Setting - Set Punch Calculation Options

The CT-900 Time Recorder provides the following optional features to make timecard calculations simpler and payroll processing easier:

- Punch Rounding
- Totals Print Format
- Break Deduction

Advanced Menu Item 01 - Punch Rounding

The optional rounding feature simplifies day and period calculations to make them easier to read. The actual IN and OUT punch time appears on the timecard, but the day and period totals are rounded to the nearest 1/4 hour.

> **Example:** An employee punches IN at 7:07am and OUT at 14:55 (2:55pm).

MORNING		AFTERNOON		TOTALS	
IN	OUT	IN	OUT	DAY	PERIOD
7:07			14:55	8:00	8:00

> The Day Total calculates as 8 hours. The actual IN\OUT punch times appear on the timecard.

> **Example:** In general, using 8:00am, an employee's arrival and departure times are rounded to the nearest quarter-hour.

- An arrival\departure at 8:07am calculates from 8:00am
- An arrival\departure at 8:08am calculates from 8:15am
- An arrival\departure at 8:23am calculates from 8:30am
- An arrival\departure at 8:38am calculates from 8:45am
- An arrival\departure at 8:53am calculates from 9:00am

1. Remove the Cover from the time recorder to enter **Programming Mode**.
2. Press the **Schedule** button on the top of the time recorder, it will light up and blink.
3. Press **Enter** to set Rounding.
4. Using ⊕ or ⊖, select the Rounding option:

   - **00** = Disable Quarter-Hour Rounding
   - **01** = Enable Quarter-Hour Rounding

5. Press **Enter** to save your setting and continue to **Advanced Menu Item 2.**
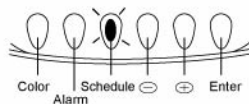
Advanced Menu Item 02 - Set the Totals Print Format

The Day and Period Totals can print in either minutes (1/60) or centennial (1/100) format on the timecard.

1. Press **Enter** to set the Totals Print Format.
2. Using ⊕ or ⊖, select the Totals Print Format:

    02 Ó Ó

    Print Format

    - **00** = Display Minutes in Hour (1/60) Format
      (i.e. 8:30 = 8 hrs and 30 min)
    - **01** = Display Minutes in Centennial (1/100) Format
      (i.e. 8:50 = 8 hrs 30 min)

3. Press **Enter** to save and continue to **Advanced Menu Item 3**.

Break Deduction

The optional Break Deduction feature deducts a set amount of time for break or lunch. Employees are not required to punch IN or OUT for a deduction to occur. Two **Menu Items** must be configured when using the Break Deduction feature:

- Break Amount
- Break Deduction Rule

Advanced Menu Item 03 - Set the Break Amount

This is the amount of time that will be deducted from the Day Total on the timecard. Follow the instructions below to set the Break Amount.

> **NOTE:** To disable Break Deduction, leave the Break Amount at **"0:00"**.

1. Press **Enter** to set the Break Amount.
2. Using ⊕ or ⊖, select the number of hours to deduct. Leave the setting at "0" if the deduction is less than one hour.

    03 0:00

    Hour

3. Press **Enter** to save the setting.
4. Using ⊕ or ⊖, select the number of minutes to deduct (**01-59**).
   Example: For 30 minutes enter 0:"30"

    03 0:00

    Minutes

5. Press **Enter** to save your setting and continue to **Advanced Menu Item 04**.

Advanced Menu Item 04 - Set the Break Deduction Rule

The employee is required to work a set amount of time for the Break Deduction to occur.

Example:
The Break Amount is set to 30 minutes and the Break Deduction Rule is set to 7 hours and 30 minutes. If a single punch pair equals or exceeds 7 hours and 30 minutes, the Break Amount of 30 minutes will be deducted from the Day Total. The letter "B" for Break is printed on the timecard.

MORNING		AFTERNOON		TOTALS	
IN	OUT	IN	OUT	DAY	PERIOD
6:00			01:30	7:00B	7:00
7:00			01:30	6:30	13:30

Break Deduction Occurred

1. Press **Enter** to set the Break Deduction Rule.
2. Using ⊕ or ⊖, select the number of hours that employees must work before the Break Deduction occurs.

04 `0:00`
Hour

3. Press **Enter** to save the setting.
4. Using ⊕ or ⊖, select the minutes employees must work before the Break Deduction occurs.

04 `0:00`
Minutes

5. Press **Enter** to save your setting.

Employees can begin punching IN\OUT once the time recorder is programmed and placed in **Normal Mode** by using the following methods:

- **Two Punches per Day** – used if employees are not punching OUT for breaks or lunches. Break Deductions, Day and Period Totals, and Rounding may be implemented with this method.
- **Four Punches per Day** – used if employees are clocking OUT for lunch. Break Deductions, Day and Period Totals, and Rounding may be implemented with this method.
- **Six Punches per Day (Job Cost Mode Only)** - used for Job Cost tracking or recording three IN\OUT punch pairs per day. Break Deductions, Day and Period Totals, and Rounding are not available with this method.

> **NOTE:** The punch print automatically advances to the next row based on the **Day Change Time** described on page 15.

Two Punches per Day

1. Press the first IN button on the top left of the time recorder and make sure it is lit. Simply insert the timecard into the Card Slot to punch IN. The IN punch will print in the first column of the timecard.

2. To punch OUT, simply insert the timecard into the Card Slot again. The OUT punch will print in the fourth column of the timecard. Do not press any other buttons.
3. Day and Period Totals are automatically calculated and printed in the Totals section (columns 5 and 6) of the timecard.
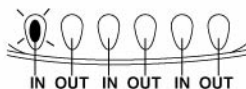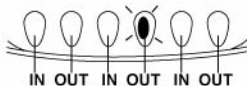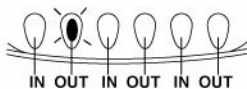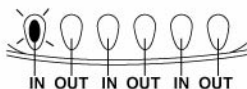
	1	2	3	4	5	6
	MORNING		AFTERNOON		TOTALS	
	IN	OUT	IN	OUT	DAY	PERIOD
16	6:53			15:08	8:00	56:06
17	7:52			7:53	0:15	56:21
18	7:52			15:08	7:30	63:51

Sample Timecard (2 Punches Per Day)

Four Punches per Day

Employees must select one of the four IN or OUT buttons on the top of the time recorder. This method can be used if employees are punching OUT for a non-paid lunch during the day.

1. Press the first IN button on the top left of the time recorder. Simply insert the timecard into the Card Slot to punch IN. The IN punch will print in the first column.

2. To punch OUT, press the second button labeled (OUT). This button will light up. Insert the timecard into the Card Slot to punch OUT.

3. After returning from break or lunch, press the third button labeled (IN). This button will light up. Insert the timecard into the Card Slot to punch IN.

4. At the end of the day, press the fourth button labeled (OUT). This button will light up. Insert the timecard into the Card Slot to punch OUT for the day.

5. Day and Period Totals are automatically calculated and printed in the Totals section (columns 5 and 6) of the timecard.

| | 1 | 2 | 3 | 4 | 5 | 6 |
	MORNING		AFTERNOON		TOTALS	
	IN	OUT	IN	OUT	DAY	PERIOD
16	7:20	11:31	11:57	15:37	7:21	11:51
17	7:18	11:33	11:57	15:33	7:21	19:12
18	7:22	11:28	11:56	15:31	7:11	26:23

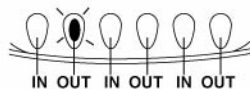**Sample Timecard (4 Punches-Per-Day with Totals)**

Six Punches per Day (Job Cost Mode Only)

Employees must manually select the IN or OUT buttons on the top of the time recorder in sequence from left to right. The punch prints in the corresponding column of the timecard. Follow the steps below.

1. Press the first IN button on the top left of the time recorder and make sure it is lit. Simply insert the timecard into the Card Slot to punch IN. The IN punch will print in the first column.
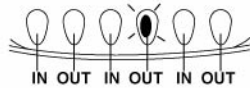

IN OUT IN OUT IN OUT
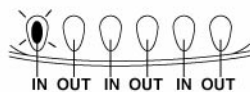
2. To punch OUT, press the second button labeled (OUT). This button will light up. Insert the timecard into the Card Slot to punch OUT.

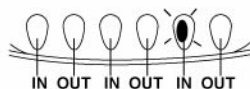IN OUT IN OUT IN OUT

3. To punch IN again, press the third button labeled (IN). This button will light up. Insert the timecard into the Card Slot to punch IN.

IN OUT IN OUT IN OUT

4. To punch OUT again, press the fourth button labeled (OUT). This button will light up. Insert the timecard into the Card Slot to punch OUT.

IN OUT IN OUT IN OUT

5. To punch IN again, press the fifth button labeled (IN). This button will light up. Insert the timecard into the Card Slot to punch IN.

IN OUT IN OUT IN OUT

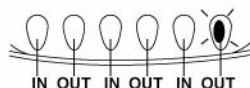6. To punch OUT again, press the sixth button labeled (OUT). This button will light up. Insert the timecard into the Card Slot to punch OUT.

IN OUT IN OUT IN OUT

> **NOTE:** Day and Period Totals are disabled in Job Cost Mode. In this case, the Day and Period Total columns are used for an additional punch pair.

1	2	3	4	5	6
MORNING		AFTERNOON		TOTALS	
IN	OUT	IN	OUT	DAY	PERIOD
8:00	12:00	01:01	03:00	04:00	06:00
7:00	11:30	12:30	03:00	04:00	06:00
7:59	12:00	01:00	04:00	04:15	06:59

Sample Timecard (6 Punches-Per-Day)

Chapter 6: Maintenance and Troubleshooting

Follow the instructions in this chapter to properly maintain your CT-900 time recorder. A troubleshooting section is provided to help with technical issues that might occur.
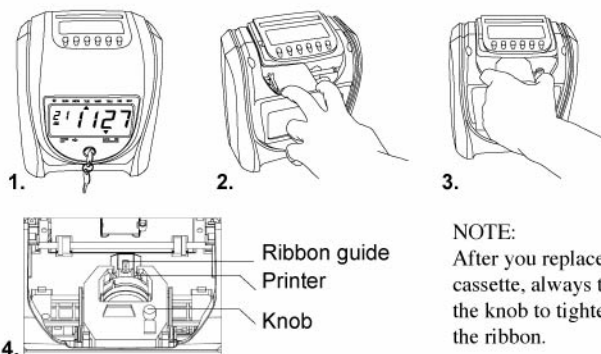
Cleaning

Unplug the power before attempting any cleaning or maintenance. Avoid the use of any volatile chemicals to clean the unit.

- Use a damp cloth moistened with a mild cleaner or water to clean the exterior of the time recorder.
- Use a can of compressed air to gently remove dust from the interior of the unit.

Ribbon Replacement

1.
2.
3.

4.

Ribbon guide
Printer
Knob

NOTE:
After you replace the cassette, always turn the knob to tighten the ribbon.

1. Remove the Cover.
2. Pull on the two white plastic hinges on either side of the cartridge.
3. The cartridge will unlock. Remove the cartridge by lifting the back end and pulling it out of the front opening.
4. Insert the new cartridge. Make sure the ribbon goes over the white ribbon guide bar in the back of the time recorder.

   - Pull on the two white plastic hinges near the front of the clock and lock the cartridge back into place.
   - Turn the knob to tighten the ribbon.

5. Replace the Cover.

Resetting the Time Recorder to Factory Defaults

- Remove the time recorder Cover.
- Underneath the top panel on the far right, locate the small red reset button.
- Press the **Reset** button. The time recorder will chime briefly and reset all settings back to factory default.

Resetting a Menu Item

- Remove the Cover to enter **Programming Mode**.
- Use the ⊕ or ⊖ buttons to select the **Menu Item**.
- Press ⊕ and **Enter** simultaneously for 3 seconds to delete that **Menu Item**. The **Menu Item** will reset to the factory default value.

Chapter 7: Troubleshooting

Below is a list of error codes that may appear on the LCD Display of the time recorder when a timecard is inserted.

Error Codes

- **E:01 (Wrong Side Of Timecard Inserted)** – flip the timecard to the other side and reinsert the timecard.
- **E:02 (Print Head Motor Issue)** – remove the Cover and check for foreign objects blocking the print head from moving. Power cycle the clock to reinitialize the print head position.
- **E:03 (Card Feed Motor Issue)** – remove the Cover and check for foreign objects blocking the Card Slot. Check for jammed timecards. Power cycle the clock to reinitialize the print head position.
- **E:04 (Button Issue)** – a button on the top panel of the time recorder may be stuck or is not functioning properly. Try testing all of the buttons on the panel. Power cycle the clock to reinitialize the time recorder
- **E:50 (Timecard\Timecard Barcode Issue)** – a timecard with an incompatible format was inserted into the Card Slot or a valid timecard with an unreadable barcode was used. Try a different compatible timecard.
- **E:51 (Punch Sequence Issue)** – an OUT punch is within one minute of the IN punch. The punch print exceeds 6 in a day. This is not allowed.

If problems persist, call technical support at 1.800.847.2232 option 1 or email **support@icontime.com.**

Specifications

Power Rating:	110-120V ac
	(Refer to the label of each machine)
Amps:	.22 Amps
Dimension:	10.5 x 19 x 22.5 cm (D x W x H)
	4.2 x 7.5 x 8.9 in (D x W x H)
Weight:	5 lbs. (2.0kg)
Temperature Range:	32 F-104 F (0 C-40 C)
Condition:	10-80% RH
Standard Timecard:	86mm x 189mm (WxL)

Warranty

ICON TIME SYSTEMS, INC., An Oregon Corporation

Notice: The information contained in this document is subject to change without notice.

ICON TIME SYSTEMS MAKES NO WARRANTY OF ANY KIND WITH REGARD TO THIS MATERIAL, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

ONE-YEAR LIMITED WARRANTY
ICON TIME SYSTEMS, INC. offers the original purchaser a warranty for **One (1) Year on Parts and Labor.**

ICON TIME SYSTEMS will repair and exchange parts for your unit free of charge in the USA in the event of a defect in materials or workmanship, as follows:

PARTS
New or comparable rebuilt parts in exchange for defective parts for one (1) year beginning on the date of delivery.

LABOR
Mail-in service for One (1) year beginning on the date of delivery.

SERVICE
If adjustments or repair are required, purchaser must contact our customer service department within the warranty period detailing the request. The

purchaser must provide model, serial number, and a copy of original purchase.

If ICON TIME SYSTEMS decides a product requires service, ICON TIME SYSTEMS will issue a Return Material Authorization Number (RMA). Products may be shipped to ICON TIME SYSTEMS adequately insured, in their original packaging or equivalent, with shipping charges prepaid. Risk of loss or damage during shipping to ICON TIME SYSTEMS is the sender's responsibility. Once we receive the equipment, it will be inspected, repaired as needed, tested, and returned via standard ground shipping to the purchaser. Return shipping costs of the repaired or replaced unit will be paid by ICON TIME SYSTEMS.

This warranty is extended only to the original purchaser. <u>A purchase receipt or other proof of date of original purchase will be required before warranty work is rendered.</u>

This warranty only covers failures due to defects in materials or workmanship that occur during normal use. It does not cover failures due to damage which occurs in shipment, or failures which are caused by products not supplied by ICON TIME SYSTEMS, or failures which result from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, modification or service by anyone other than a factory service center, or damage that is attributable to acts of God.

No warranty is given for damages caused by external wiring indicating improper connection to power supply or line wiring, or for damages caused by spikes, power surges, brown outs, lightning, static electricity, or radio waves. Surge protectors are readily available to enhance and protect equipment performance following initial installation.

ICON TIME SYSTEMS SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. DURATION OF IMPLIED WARRANTIES, IF ANY, IS LIMITED TO ONE (1)YEAR. Some states do not allow the exclusion of limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

If a problem with your ICON TIME SYSTEMS unit develops during the warranty period, contact ICON TIME SYSTEMS SERVICE DIVISION, 15201 NW Greenbrier Parkway, Suite A1, Beaverton, Oregon 97006
There are no other express warranties except as listed above.

Icon Time Systems
15201 N.W. Greenbrier Parkway, Suite A1
Beaverton, Oregon 97006

icon
TIME SYSTEMS.

www.icontime.com | 1.800. 847.2232