TIMECARD TABULATOR™ II

ADVANCED TIME CALCULATOR

Model 9530

Pocket Reference Guide

CALCULATED INDUSTRIES®

INTRODUCING TIMECARD TABULATOR™ II

The *TimeCard Tabulator II* calculator has been designed to simplify payroll time calculations.

- *Calculates employee hours and pay based on In and Out punch times*
- *Features automatic rounding and break periods*
- *Works with 12- and 24-hour time card recorder systems*
- *Performs time math operations and converts from one time format to another*
- *Features built-in stopwatch/timer with lap and split time functions*
- *Performs standard math functions*
- *Battery saving Auto Shut-off*
- *User definable Preference Settings.*

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KEY DEFINITIONS / FUNCTIONS

Standard Calculator Keys

On/C – On/Clear
Turns power on. Pressing once clears the display. Pressing twice clears all temporary values.

Off – Off
Turns all power off, clearing all non-permanent registers.

Rcl – Recall
Used to recall stored values.

Stor – Store
Used to store values.

Conv – Convert
Used to convert between time formats or to access second functions.

0 through 9 and •
Keys used to enter digits.

+ − × ÷ =
Basic arithmetic operation keys.

% – Percent Key
Four function (+ − × ÷) percent key.

Conv % – Delta Percent
Calculates the percentage difference between two numbers.

Time Function Keys

Hr – **Hour**
Enters/converts to decimal hours or Hour: Minute: Second (H:M:S) time formats. Repeated presses will toggle between formats.

Min – **Minute**
Enters/converts to decimal minutes or Minute: Second (M:S) time formats. Repeated presses will toggle between formats.

Sec – **Seconds**
Enters/converts to seconds.

: – **Time Unit Separator**
Used as a separator for entering times. Also switches a value to 24 hour format.

Conv **:** – **24 Hr (12/24 Hr)**
Converts time value to 24 hour (military) time format.

AM
Designates entry as AM.

PM
Designates entry as PM.

Payroll/Timecard Keys

In – **"Clock In" Key**
Enters the "clock in" time.

Out – **"Clock Out" Key**
Enters the "clock out" time.

Next – **Next Employee**

Prepares the *Time Card Tabulator II* for acceptance of new employee data.

Emp Hrs – **Employee Hours Key**

A multifunction key used to display the following:

1) Accumulated "In" and "Out" hours
2) Total employee hours
3) Gross employee pay (based on stored rate of pay).
4) Also used to directly enter the total hours for a day.

P/R Ttl – **Payroll Total Hours**

Sums and displays the total hours worked by all employees. This total is cleared when the calculator is turned off or reset.

Rate – **Rate**

Multiplies a numerical or time value by the rate or temporarily overrides a stored rate.

Note: *When entering a math string,* **Rate** *pressed after a unitless value will override the previous rate. For example, if you enter* 2 • 5 **Hr** × 1 0 **Rate**, *10 is used as rate instead of stored value.*

Stor **Rate** – **Store Rate**

Permanently stores a unitless value as a rate. You may clear the value by performing a "Clear All" (**Conv** ×) or replace it with another value.

Break – **Automatic Break**

Enters a permanent time value that is automatically subtracted from the "In" and "Out" register totals, or when a value is entered by pressing the **Emp Hrs** key. If entries are not defined as time values, an error occurs.

Rnd – **Automatic Rounding**

Permanently stores the rounding value for the accumulated day hours. Typical rounding values are 6 minutes (0.1 of an hour) and 15 minutes (0.25 of an hour). The calculator can be set to round the:

1) Actual clock "In" and "Out" times
2) Time span between the "In" and "Out" times
3) Total day hours.

See *"Preference Settings*".

Timer Function Keys

S/Lap – **Split / Lap Function**

Pauses the timer display, without stopping the timer. If the S/LP preference is set to the "Split" option, the total time elapse from the start of the timer to the moment the **S/Lap** key is pressed will be displayed. If set to the "Lap" option, the elapsed time between presses of **S/Lap** is displayed.

Timer – **Stopwatch / Timer**

Used to access the Stopwatch/Timer Function.

Memory Function Keys

Stor 0 - **Cumulative Memory**

Adds and stores diplayed value to M+.

Stor 1 - 9

Enters and stores a value in Memory registers 1 - 9. Press **Stor**, then the number key representing the Memory register in which you want the value stored.

Rcl 0 - 9

Recalls values stored in Memories 0 - 9.

0 **Stor** 1 - 9

Clears the value from Memory register coinciding with the number key (1-9) pressed.

Conv +

Clears Memory registers 0 through 9.

Conv **Stor** 0

Subtracts the displayed value from M+.

Rcl **Rcl**

Clears and displays M+.

Conv **Rcl**

Clears M+ without changing the display.

Other Function Keys

Prefs – Preference Settings

Used to access the preference settings. Repeated presses will cycle through the various preferences. Once in the preference setting mode, the ⊕ and ⊖ keys are used to change preference options.

Conv ÷ – 1/x

Finds the reciprocal of a number (e.g., 8 **Conv ÷ 0.125**).

Conv ⊗ – Clear All

Clears all values and returns all settings to their default values.

Rcl ⊟ – Paperless Tape

Accesses the Paperless Tape mode, which keeps track of your last 20 entries.

Conv ⊖ – Change Sign

Toggles the sign of the displayed value to positive or negative.

OPERATING BASICS

BASIC MATH

Your calculator uses standard chaining logic, which simply means that the calculations are made in the order entered.

KEYSTROKE	DISPLAY
3 + 2 =	5.
3 − 2 =	1.
3 × 2 =	6.
3 ÷ 2 =	1.5

Percent Calculations

The percent % key is used for finding a given percentage of a number or for working add-on, discount or division percentage calculations.

KEYSTROKE	DISPLAY
3 5 5 × 1 5 %	53.25
2 5 0 + 6 5 %	412.5
2 5 − 5 %	23.75
1 0 0 ÷ 5 0 %	200.

Delta Percent

The Δ% function finds the percent change between two values. The = key must be pressed to complete the calculation.

KEYSTROKE	DISPLAY
1 0 Conv % 1 5 =	50.
1 0 0 Conv % 2 5 =	-75.

Cumulative Memory (M+)

Stor 0 (M+) is a cumulative memory in which values of the same convention can be added. It has the following special keystrokes (in addition to those defined above):

STEPS	KEYSTROKE
Subtract from M+	Conv Stor 0
Display and Clear M+	Rcl Rcl
Clear M+ without changing the display	Conv Rcl

Using M+

KEYSTROKE	DISPLAY
3 5 5 Stor 0	M+ 355.
2 5 5 Stor 0	M+ 255.
Rcl 0	M+ 610.
7 4 5 Conv Stor 0	M+ 745.
Rcl Rcl	-135.

Memory Functions

The *TimeCard Tabulator II* can store and recall up to nine separate non-cumulative Memory values. When a value is stored in Memory, that value does not change until it is revised or the calculator is reset. Values can be stored in any format.

STEPS	KEYSTROKE
Store value in Memory	Stor 1...9
Recall value in Memory	Rcl 1...9
Clear one Memory value	0 Stor 1...9
Clear all Memory values	Conv +

Storing Values

KEYSTROKE	DISPLAY
3 5 5 Stor 1	M-1 355.
On/C	0.
Rcl 1	M-1 355.
2 5 Stor 1	M-1 25.
On/C	0.
Rcl 1	M-1 25.
0 Stor 1	M-1 0.

Preference Settings

The *TimeCard Tabulator II* includes user-selectable preference settings that allow you to customize the calculator for your specific needs or special situations. To access the preference settings, simply press the Prefs key. Repeated presses of this key will scroll through the various options which may be altered by pressing ⊕ or ⊖ keys.

Accessing Preference Settings

KEYSTROKE	DISPLAY
To set Rounding:	
Prefs (1st press of Prefs)	RND **Punch**
⊕ (plus sign)	RND **dur**
⊕	RND **dAY**
⊕ (repeats options)	RND **Punch**
To set Time format:	
Prefs (2nd press of Prefs)	FMT **0.** HR
⊕	FMT **0:00** HR MIN
⊕ (repeats options)	FMT **0.** HR

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To set Timer format:

Prefs (3rd press of Prefs) TMR **0:00:00.0** HR MIN SEC

➕ TMR **0:00:00.00** HR MIN SEC

➕ TMR **0:00:00** HR MIN SEC

➕ (repeats options) TMR **0:00:00.0** HR MIN SEC

To set Split / Lap format:

Prefs (4th press of Prefs) S/LP **SPLIt**

➕ S/LP **LAP**

➕ (repeats options) S/LP **SPLIt**

To set Timer Buzzer:

Prefs (5th press of Prefs) BUZZ **On**

➕ BUZZ **OFF**

➕ (repeats options) BUZZ **On**

To set Key Beep:

Prefs (6th press of Prefs) BEEP **OFF**

➕ BEEP **On**

➕ (repeats options) BEEP **OFF**

To set Time format:

Prefs (7th press of Prefs) RATE **0.00**

➕ RATE **0.**

➕ RATE **0.0000000**

➕ (repeats options) RATE **0.00**

To set Seconds Display:

Prefs (8th press of Prefs) SECS **OFF**

➕ SECS **On**

➕ (repeats options) SECS **OFF**

Time Conventions

When you are dealing with time, there are actually two kinds of time values that must be considered:

1. Points in Time: 9:22 AM, 5 PM
2. Time Periods: 37 Minutes, 45 Seconds

The time math rules are as follows:

Addition

Period + Period = Period

3 Hrs. + 22 Min. = 3 HR 22 MIN

Point + Period = Point

9 AM + 22 Min. = 9:22 AM

Point + Point = Error

Note: *You cannot add two points in time as the result would be meaningless.*

Subtraction

Period – Period = Period

3 Hrs. – 22 Min. = 2 HR 38 MIN

Point – Period = Point

9 AM – 22 Min. = 8:38 AM

Point – Point = Period

9 AM – 8:30 AM = 30 MIN

Period – Point = Error

Note: *When subtracting one point in time from another, it's best to enter the "later" time first, then subtract the earlier time.*

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Multiplication

Period x Period = Error
Point x Period = Error
Point x Point = Error
Period x Number = Period
9 Hrs. X 3 = 27 HR
Point x Number = Error

Division

Period ÷ Period = Number
9 Hrs. ÷ 9 Min. = 60 (9 min. segments)
Period ÷ Number = Period
9 Hrs. ÷ 60 = 9 MIN
Period ÷ Point = Error
Point ÷ Period = Error
Point ÷ Number = Error
Point ÷ Point = Error

USING THE TIMECARD TABULATOR II

Before You Continue . . .

Unless otherwise stated, the examples in this manual are to be done with the calculator set to its default values. *Press* Conv ✕ *to set all values to their default settings.*

ENTERING TIME VALUES

Using *TimeCard Tabulator II*, you can easily perform time math and payroll functions. Time values are entered as you say them, with the largest time unit entered first. The examples below show the different methods used to enter time values.

KEYSTROKE	DISPLAY
1. Clear calculator:	
On/C On/C	0.
2. Enter the following time values:	
1 7 Min 3 2 Sec	17:32. MIN SEC
On/C	
4 2 3 Min	423: MIN
On/C	
3 8 • 2 5 Sec	38.25 SEC
3. *Enter the following "Time of Day" values. (Notice the different methods used.)*	
On/C	0.
8 : 0 5 AM	8:05 AM
On/C	0.
8 : 5 AM	8:05 AM
On/C	0.
8 0 5 AM	8:05 AM
On/C	0.
1 2 : 0 3 PM	12:03 PM
On/C	0.
1 2 : 3 PM	12:03 PM
On/C	0.
1 2 0 3 PM	12:03 PM

Time Conversions

One of the most useful functions of the *TimeCard Tabulator II* is its ability to convert between all time formats with the touch of just two keys: Conv and any of the time unit keys: Hr Min or Sec.

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Convert 3 hours, 30 minutes to other formats:

KEYSTROKE	DISPLAY
3 Hr 3 0 Min	**3:30: HR MIN**
Conv Hr	**3.5 HR**
Conv Min	**210. MIN**
Conv Min	**210:00 MIN SEC**
Conv Sec	**12600. SEC**

TIME MATH

Simple Addition

Add the following time values:

KEYSTROKE	DISPLAY
1 1 2 Hr +	**112:00 HR MIN**
3 3 Min 2 2 Sec +	**112:33:22 HR MIN SEC**
3 Hr 2 1 Min +	**115:54:22 HR MIN SEC**
1 4 5 Sec +	**115:56:47 HR MIN SEC**
1 7 Min 1 2 Sec +	**116:13:59 HR MIN SEC**
3 3 • 7 5 Min	**33.75 MIN**
=	**116:47:44 HR MIN SEC**

Athletics – Split Times Required_

A marathon runner wants to run a 26.2 mile marathon in 3 hrs 15 min. How fast should he run each mile?

KEYSTROKE	DISPLAY
1. Enter total time:	
3 Hr 1 5 Min	**3:15: HR MIN**

2. Divide by miles:

÷ 2 6 • 2 =

0:07:26.56 HR MIN SEC

Athletics– Split Times Projected

In the 800-meter freestyle, a swimmer has just completed 200 Meters (or 25% of the race) in 2 minutes 11.35 seconds. If his pace holds up, what will his final time be?

KEYSTROKE	DISPLAY

1. Enter time:

2 Min 1 1 • 3 5 Sec

2:11.35 MIN SEC

2. Divide by % completed:

÷ 2 5 % **8:45.40** MIN SEC

Scheduling – Time/Motion

A data entry clerk can process 17 forms in ten minutes. How long will it take to process 1,250 forms?

KEYSTROKE	DISPLAY

1. Enter Time:

1 0 Min **10:** MIN

2. Divide by number of forms:

÷ 1 7 = **0:35.29** MIN SEC

3. Multiply by 1250:

× 1 2 5 0 = **735:17.65** MIN SEC

4. Convert to H:M:S: format:

Conv Hr **12:15:17.65** HR MIN SEC

Production – Spacing

A radio advertiser wants to air 15 evenly spaced spots during the morning hours of 6 AM – 10 AM. Find the number of minutes between spots, and the times for the first few spots.

KEYSTROKE	DISPLAY
1. Enter end time:	
1 0 AM	**10:00 AM**
2. Subtract start time:	
− 6 AM =	**4:00 HR MIN**
3. Divide by number of spots:	
÷ 1 5 =	**0:16 HR MIN**
4. Store result into memory:	
Stor 1	**M-1 0:16 HR MIN**
5. Enter start time of 1st spot:	
6 AM	**6:00 AM**
6. Find start time of 2nd spot:	
+ Rcl 1 =	**6:16 AM**
7. Find start time of 3rd spot:	
=	**6:32 AM**
=	**6:48 AM**

Continue pressing = to solve for the remaining spot start times.

Production – Fixed Lengths

You have a 22 minute demonstration video which is set to automatically repeat. If the rewinding takes another 90 seconds, how many times will the tape replay in eight hours?

KEYSTROKE	DISPLAY
1. Enter Time length:	
2 2 Min	**22: MIN**
2. Add rewind time length:	
+ 9 0 Sec =	**23:30 MIN SEC**
3. Store result into Memory:	
Stor 1	**M-1 23:30 MIN SEC**
4. Enter total hours:	
8 Hr	**8: HR**
5. Divide by value stored in Memory:	
÷ Rcl 1 =	**20.425532**

Production – Logging

Find the running and final totals for the following taped scenes.

- 92 Sec.
- 1 Min. 23 Sec.
- 22 Min 5 Sec.
- 17 Sec.
- 1 Min. 44 Sec.
- 1 Min. 29 Sec.

KEYSTROKE	DISPLAY
1. Clear calculator:	
On/C On/C	**0.**
2. Enter 1st value:	
9 2 Sec	**92 SEC**
3. Add 2nd–6th values:	
+ 1 Min 2 3 Sec +	**2:55 MIN SEC**
2 2 Min 5 Sec +	**25:00 MIN SEC**
1 7 Sec +	**25:17 MIN SEC**
1 Min 4 4 Sec +	**27:01 MIN SEC**
1 Min 2 9 Sec =	**28:30 MIN SEC**

PAYROLL/TIMECARD APPLICATIONS

Setting up the Timecard Tabulator

Before you total up your first time card, there are the following items to be considered when setting up your *TimeCard Tabulator II*:

1) Time format
2) Seconds display (On of Off)
3) Rounding method
4) Rounding period
5) Automatic breaks
6) Rate of pay

Setting the Time Format

Normally, the payroll daily and total hours are shown in the decimal format (e.g., 7.75 HR, 8.25 HR, 4.5 HR). By changing the preference setting, you may change this value to H:M:S format.

Setting the Seconds Format

The *TimeCard Tabulator II* is set not to display seconds as part of the time calculation results. This can be reversed by changing the Preference setting.

Setting the Rounding Method

There are three available rounding methods that can be set by changing the Preference setting. The default for this value is “Punch.”

Setting the Rate of Pay

TimeCard Tabulator II will store a rate of pay to be used while calculating gross salary or as a price per unit time value.

To enter a rate of pay (wage), enter the per hour wage then press Stor Rate.

KEYSTROKE	DISPLAY
1. Clear calculator:	
On/C On/C	**0.**
2. Store rate of pay as $10/hour:	
1 0 Stor Rate	**RATE 10.00**
3. Verify rate value:	
Rcl Rate	**RATE 10.00**

Setting the Rounding Period

TimeCard Tabulator II arrives with no rounding period set (0 minutes). This setting may be changed by entering the time period (typically 6 min. which is 0.1 hour, or 15 min. which is 0.25 hour) then press the Rnd key. The following example demonstrates this:

KEYSTROKE	DISPLAY
1. Clear calculator:	
On/C On/C	**0.**
2. Enter 0.1 Hr. rounding:	
0 • 1 Hr Rnd	**RND 0.1 HR**

Setting Automatic Breaks

Typically breaks are a set time amount and are not considered compensated time. For example, many firms do not

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require employees to punch out for lunch breaks. To automatically deduct the amount of uncompensated time from the total hours of the day a "Break" value may be set and stored until revised or the calculator is reset. The following steps show how to enter or revise the "Break" value:

KEYSTROKE	DISPLAY
1. Clear calculator:	
On/C On/C	**0.**
2. Enter a 1 Hour break:	
1 Hr Break	**BRK 1:00 HR MIN**
3. Verify the break value:	
Rcl Break	**BRK 1:00 HR MIN**
4. Change break value to 30 minutes:	
3 0 Min Break	**BRK 30:00 MIN SEC**

Note: *If the calculator is reset (Conv ⊠), the break value returns to the default of 0.*

Using the Automatic Break and Rounding Features

An employee worked the following days and times.

Monday	8:03	In	4:10	Out
Tuesday	8:11	In	3:38	Out
Wednesday	7:53	In	4:00	Out
Thursday	8:40	In	4:04	Out

Assuming a 30 minute lunch and 15 minute rounding value, find the hours worked and the total pay at $8.50 per hour.

KEYSTROKE	DISPLAY
1. Clear calculator:	
On/C On/C	**0.**
2. Enter rounding value:	
1 5 Min Rnd	**RND 15:00 MIN SEC**
3. Enter pay rate:	
8 • 5 0 Stor Rate	**RATE 8.50**
4. Enter break time:	
3 0 Min Break	**BRK 30:00 MIN SEC**
5. Enter Monday In:	
8 0 3 In	**IN 8:00 AM**
6. Enter Monday Out:	
4 1 0 Out	**OUT 4:15 PM**
7. Find day total:	
Emp Hrs	**EMP 7.75 HR**
8. Enter Tuesday In:	
8 1 1 In	**IN 8:15 AM**
9. Enter Tuesday Out:	
3 3 8 Out	**OUT 3:45 PM**
10. Find day total:	
Emp Hrs	**EMP 7. HR**
11. Enter Wednesday In:	
7 5 3 In	**IN 8:00 AM**
12. Enter Wednesday Out:	
4 0 0 Out	**OUT 4:00 PM**
13. Find day total:	
Emp Hrs	**EMP 7.5 HR**
14. Enter Thursday In:	
8 4 0 In	**IN 8:45 AM**
15. Enter Thursday Out:	
4 0 4 Out	**OUT 4:00 PM**

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16. Find day total:

Emp Hrs — **EMP 6.75 HR**

17. Find total hours worked:

Emp Hrs — **ETTL 29. HR**

18. Find total pay:

Emp Hrs — **PAY 246.50**

Using "Punch" Rounding (Default)

Find the daily hours for the following clock times.

Day	In	Out
Monday	8:30A	11:45A
	12:30P	4:38P
Tuesday	7:30A	2:00P
Wednesday	8:00A	11:30A
	11:58A	3:37P
Friday	11:34A	6:02P

Assume a 6 minute "Punch" rounding with no automatic breaks.

KEYSTROKE	DISPLAY
1. Clear calculator:	
On/C On/C	**0.**
2. Start new employee:	
Next*	**NEXT 0.**
3. Set rounding time:	
6 Min Rnd	**RND 6:00 MIN SEC**
4. Set break to 0:	
0 Min Break	**BRK 0:00 MIN SEC**
5. Enter pay rate:	
8 • 5 0 Stor Rate	**RATE 8.50**

6. Enter Monday hours:

8 : 3 0 AM In — IN 8:30 AM
1 1 : 4 5 AM Out — OUT 11:48 AM
1 2 : 3 0 PM In — IN 12:30 PM
4 : 3 8 PM Out — OUT 4:36 PM

7. Find day total:

Emp Hrs — EMP 7.4 HR

8. Enter Tuesday hours:

7 : 3 0 AM In — IN 7:30 AM
2 PM Out — OUT 2:00 PM

9. Find day total:

Emp Hrs — EMP 6.5 HR

10. Enter Wednesday hours:

8 AM In — IN 8:00 AM
1 1 : 3 0 AM Out — OUT 11:30 AM
1 1 : 5 8 AM In — IN 12:00 PM
3 : 3 7 PM Out — IN 3:36 PM

11. Find day total:

Emp Hrs — EMP 7.1 HR

13. Enter Friday hours:

1 1 : 3 4 AM In — IN 11:36 AM
6 : 0 2 PM Out — OUT 6:00 PM

14. Find day total:

Emp Hrs — EMP 6.4 HR

15. Find total hours worked:

Emp Hrs — ETTL 27.4 HR

16. Find total pay:

Emp Hrs — PAY 232.90

*When finished entering the first employee's hours, prepare for the next employee by pressing **Next**. This clears the time entries but the settings remain unchanged.

Using the "Duration" Rounding Option

Using the same time values and settings as the previous example, find the total hours and pay using the "duration" rounding method and a wage of $10.50 per hour.

KEYSTROKE	DISPLAY
1. Clear calculator:	
On/C On/C	**0.**
2. Start next employee:	
Next	**NEXT 0.**
3. Set rounding to Dur:	
Prefs +	**RND dur**
4. Set rate:	
On/C 1 0 • 5 Stor Rate	**RATE 10.50**
5. Enter Monday hours:	
8 : 3 0 AM In	**IN 8:30 AM**
1 1 : 4 5 AM Out	**OUT 11:45 AM**
1 2 : 3 0 PM In	**IN 12:30 PM**
4 : 3 8 PM Out	**OUT 4:38 PM**
6. Find day total:	
Emp Hrs	**EMP 7.4 HR**
7. Enter Tuesday hours:	
7 : 3 0 AM In	**IN 7:30 AM**
2 PM Out	**OUT 2:00 PM**
8. Find day total:	
Emp Hrs	**EMP 6.5 HR**
9. Enter Wednesday hours:	
8 AM In	**IN 8:00 AM**
1 1 : 3 0 AM Out	**OUT 11:30 AM**
1 1 : 5 8 AM In	**IN 11:58 AM**
3 : 3 7 PM Out	**OUT 3:37 PM**

10. Find day total:

Emp Hrs — EMP **7.2** HR

11. Enter Friday hours:

1 1 : 3 4 AM In

6 : 0 2 PM Out

12. Find day total:

Emp Hrs — EMP **6.5** HR

13. Find total hours worked:

Emp Hrs — ETTL **27.6** HR

14. Find total pay:

Emp Hrs — PAY **289.80**

Using the "Day" Rounding Option

Using the same time values and settings as the previous examples, find the total hours and pay using the "day" rounding method and a salary of $12.50 per hour.

KEYSTROKE	DISPLAY
1. Clear calculator:	
On/C On/C	**0.**
2. Start next employee:	
Next	NEXT **0.**
3. Set rounding to Dur:	
Prefs +	RND **dAY**
4. Set rate:	
On/C 1 2 • 5 Stor Rate	RATE **12.50**
5. Enter Monday hours:	
8 : 3 0 AM In	IN **8:30** AM
1 1 : 4 5 AM Out	OUT **11:45** AM
1 2 : 3 0 PM In	IN **12:30** PM
4 : 3 8 PM Out	OUT **4:38** PM

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5. Find day total:

Emp Hrs — EMP **7.4** HR

6. Enter Tuesday hours:

7 : 3 0 AM In — IN **7:30** AM

2 PM Out — OUT **2:00** PM

7. Find day total:

Emp Hrs — EMP **6.5** HR

8. Enter Wednesday hours:

8 AM In — IN **8:00** AM

1 1 : 3 0 AM Out — OUT **11:30** AM

1 1 : 5 8 AM In — IN **11:58** AM

3 : 3 7 PM Out — OUT **3:37** PM

9. Find day total:

Emp Hrs — EMP **7.2** HR

10. Enter Friday hours:

1 1 : 3 4 AM In — IN **11:34** AM

6 : 0 2 PM Out — OUT **6:02** PM

11. Find day total:

Emp Hrs — EMP **6.5** HR

12. Find total hours worked:

Emp Hrs — ETTL **27.6** HR MIN

13. Find total pay:

Emp Hrs — PAY **345.00**

Payroll Total Hours

The P/R Ttl key can be used to calculate the total hours worked by all entered employees (the Next key must be pressed before entering each new employee's hours).

Find the total hours worked by all employees entered in the previous four examples (starting page 19).

KEYSTROKE	DISPLAY
1. Find the total hours worked by all employees:	
P/R Ttl	TTL 111:36 HR MIN
2. Convert total to decimal hours (hundredths):	
Conv Hr	111.6 HR

Rate Function

The Rate function is used to multiply a numerical or time value by a per-unit rate where the results are displayed as a unitless value.

Stor Rate

Permanently stores a unitless value as a rate. You may clear the value by performing a "Clear All" (Conv ⊠) or replace it with another value.

Rate

Multiplies a numerical or time value by the rate or temporarily overrides a stored rate.

When entering a math string, Rate pressed after a unitless value will override the previous rate. For example, if you enter 2 • 5 Hr ⊠ 1 0 Rate, 10 is used as the rate instead of the stored value.

Note: *Trying to enter a time value into the rate key causes an error.*

Scheduling – Assembly

An assembly line can produce 4.7 widgets per minute. How many can it produce in a week if it runs three 40-hour shifts per week?

KEYSTROKE	DISPLAY
1. Clear calculator:	
On/C On/C	**0.**
2. Enter hourly rate:	
4 • 7 × 6 0 =	**282.**
3. Store as rate:	
Stor Rate	**RATE 282.00**
4. Find total hours:	
4 0 Hr × 3 =	**120:00 HR MIN**
5. Find total rate:	
Rate	**RATE 33840.00**

Billing

A consultant who bills at a rate of $125 per hour has the following billing times for the month:

- 2 Hr. 20 Min.
- 1 Hr. 15 Min.
- 35 Min.
- 4 Hr. 35 Min.

Find the total hours and total bill using a temporary rate value.

Note: *Entering a time defined value into the rate register generates an error condition.*

KEYSTROKE	DISPLAY
1. Clear calculator:	
On/C On/C	**0.**
2. Enter 1st value:	
2 Hr 2 0 Min +	**2:20 HR MIN**

3. Add 2nd value:

3 5 Min + **2:55 HR MIN**

4. Add 3rd value:

1 Hr 1 5 Min + **4:10 HR MIN**

5. Add 4th value:

4 Hr 3 5 Min = **8:45 HR MIN**

6. Multiply by temporary rate:

× 1 2 5 Rate **RATE 1093.75**

Scheduling – Payroll

Your part–time office assistant's time card reads as follows:

Day	In	Out
Monday	3:30 PM	5:30 PM
Tuesday	3:15 PM	7:00 PM
Wednesday	3:30 PM	4:45 PM

If he earns $6.50 per hour, find the total hours worked and total gross pay:

KEYSTROKE **DISPLAY**

1. Clear calculator:

On/C On/C **0.**

2. Enter Monday in and out times:

3 : 3 0 PM In **IN 3:30 PM**

5 : 3 0 PM Out **OUT 5:30 PM**

3. Find hours worked:

Emp Hrs **EMP 2. HR**

4. Enter Tuesday in and out times:

3 : 1 5 PM In **IN 3:15 PM**

7 PM Out **OUT 7:00 PM**

5. Find hours worked:

Emp Hrs **EMP 3.75 HR**

(Cont'd)

(Cont'd)

6. Enter Wednesday in and out times:

3 : 3 0 PM In	IN **3:30 PM**
4 : 4 5 PM Out	OUT **4:45 PM**

7. Find hours worked:

Emp Hrs	EMP **1.25** HR

8. Find total hours worked:

Emp Hrs	ETTL **7.** HR

9. Multiply by the rate:

× 6 • 5 0 Rate	RATE **45.50**

Using the Timer

The *TimeCard Tabulator II* includes a full function stopwatch/timer with buzzer and split/lap functions.

The timer can count up from zero or count down from an entered time. The display counts in whole seconds, one decimal place, or two decimal places by setting the timer preference (using the Prefs key).

Press the Off key while the timer is running and the timer will be displayed. The calculator will beep to let you know the timer is still active. The second press of the Off key will turn the calculator off.

KEYSTROKE	DISPLAY
1. Access timer and count up from zero:	
Timer	TMR **0:00:00.0** HR MIN SEC
Timer	GO **0:00:02.4** HR MIN SEC

2. Stop and clear the timer:

Timer	STOP **0:00:07.1** HR MIN SEC
On/C	TMR **0:00:00.0** HR MIN SEC

3. Enter time and start countdown:

2 0 0 Timer	GO **0:02:00.0** HR MIN SEC

4.Stop countdown and exit the timer:

Timer	STOP **0:01:55.0** HR MIN SEC
On/C On/C	**0.**

While the timer is counting, you will see the clock symbol flashing on the bottom left of the display.

Storing Time Values

KEYSTROKE	DISPLAY

1. Access and start timer:

Timer	TMR **0:00:00.0** HR MIN SEC
Timer	GO **0:00:01.6** HR MIN SEC

2. Freeze timer display:

S/Lap	SPLT **0:00:05.1** HR MIN SEC
Stor 1	M-1 **0:00:05.1** HR MIN SEC

3. Clear display and recall value in Memory:

On/C	**0.**
Rcl 1	M-1 **0:00:05.1** HR MIN SEC

4. Exit timer and clear display:

Timer Timer On/C On/C	**0.**

The example below uses the value stored in the previous example. If you have not already done that example, go back and complete it before performing the next example.

KEYSTROKE	DISPLAY
1. Recall timer value and add ten minutes:	
Rcl 1	M-1 **0:00:05.1** HR MIN SEC
+ 1 0 Min =	**0:10:05.1** HR MIN SEC
Stor 1	M-1 **0:10:05.1** HR MIN SEC
On/C	**0.**
2. Recall timer value and subtract four minutes:	
Rcl 1	M-1 **0:10:05.1** HR MIN SEC
− 4 Min =	**0:06:05.1** HR MIN SEC
Stor 1	M-1 **0:06:05.1** HR MIN SEC
On/C	**0.**
3. Recall timer value and multiply by five:	
Rcl 1	M-1 **0:06:05.1** HR MIN SEC
× 5 =	**0:30:25.50** HR MIN SEC
Stor 1	M-1 **0:30:25.50** HR MIN SEC
On/C	**0.**
4. Recall timer value and divide by three:	
Rcl 1	M-1 **0:30:25.50** HR MIN SEC
÷ 3 Min =	**10:141667**
5. Clear Memory and display:	
Conv + On/C	**0.**

Split / Lap Function

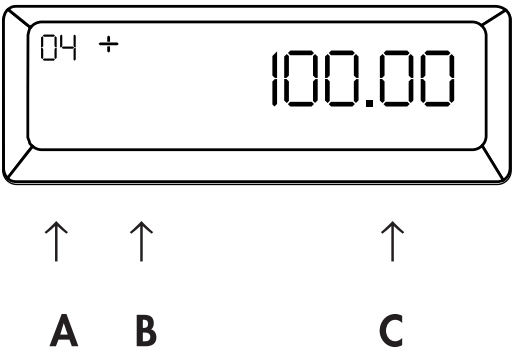
You can select whether the S/Lap key acts like a split function or a lap function through the preference settings.

Set to the SPLIT function (default). When you press the S/Lap key, the calculator will pause the timer display, and show the amount of time elapsed from the start of the timer to the time the key was pressed. The second press returns to the counter, the third press stops it again, etc.

Set to the LAP function and press the S/Lap key. Display will show the amount of time elapsed from the start of the timer, to the press of the S/Lap key. Further presses of the S/Lap key will return the counter or show the time between presses.

PAPERLESS TAPE FUNCTION

The “Paperless Tape” feature allows the user to display the last twenty entries. While in the Paperless Tape mode, the display will look similar to this:



A = Sequential number of entry (01–1st entry, 02–2nd entry, etc.)

B = Math operator (+, –, x, ÷, %)

C = Entered or calculated value

How to use the tape

KEYSTROKE	DISPLAY
1. Clear calculator and enter a string of numbers:	
On/C On/C	**0.**
4 Hr +	**4:00 HR MIN**
5 Hr +	**9:00 HR MIN**
6 Hr +	**15:00 HR MIN**
7 Hr −	**22:00 HR MIN**
2. Access the tape feature:	
Rcl −	**TTL = 22:00 HR MIN**
3. Scroll from first value to total using the + key:	
+	**01 4:00 HR MIN**
+	**02+ 5:00 HR MIN**

⊕ 03+ 6:00 HR MIN
⊕ 04+ 7:00 HR MIN
⊕ TTL= 22:00 HR MIN

4. Scroll back to the last two values using the ⊖ key:

⊖ 04+ 7:00 HR MIN
⊖ 03+ 6:00 HR MIN

5. Exit the Paperless tape and add to the string:

⊜ TTL= 22:00 HR MIN
⊕ 2 Hr ⊜ 24:00 HR MIN

Note: *To exit the tape mode, you can press any key besides* Off, ⊕ *or* ⊖.

When you press a key to exit the tape, the calculator will display the last value entered into the tape. If the value was ⊜ the display will show the total (**TTL =**). If there were more than one ⊜ during the string, the last ⊜ pressed will show as the total, and all others will be designated as subtotals (**SUB =**). The next press will begin a new tape function.

Clearing the Paperless Tape:

The Paperless Tape is cleared upon:

1) a double press of On/C;
2) a Clear All (Conv ⊠);
3) the start of a new string of equations after exiting the tape function (starting with a number, not an operator); or
4) turning the unit off.

APPENDIX

Display Accuracy

TimeCard Tabulator has a 10-digit internal accuracy with a 5/4 rounding technique for an accurate 8-digit display.

Errors

When you make an incorrect entry, or the answer is beyond the range of the calculator, it will display the word "Error." To clear an error condition you must hit the On/C button. At this point you must determine what caused the error and rekey the problem. An error will also occur if you enter a mathematical impossibility such as division by zero.

Automatic Shut-off

If left on more than eight minutes without activity, the Auto Shut-off feature shuts the calculator off. When this occurs, all values shown on the display are cleared. An activated Timer/Stopwatch disables the Automatic Shut-off.

Full Reset/Clear All

Your calculator is programmed with a special two-key sequence, Conv ⊠. This key sequence clears all Memory registers and resets the calculator to its default state.

Manual Reset

If your calculator should ever freeze or "lock up," press **Reset** - a small hole located on the back of the calculator. It is recommended that you use a straightened paperclip.

Battery Information

Your calculator is powered by a single 3 volt Lithium CR-2032 battery. This should last upwards of 800 hours of actual use (1 year plus for most people). Should the display become dim or erratic, replace the battery.

WARNING

Because the batteries contain hazardous chemicals, please use caution when disposing of old batteries. Keep them away from animals and young children.

Warranty, Repair and Return Information

Return Guidelines

1. Please read the ***Warranty*** in this User's Guide to determine if your Calculated Industries product remains under warranty ***before*** calling or returning any device for evaluation or repairs.

2. If your calculator won't turn on, check the batteries as outlined in the User's Guide.

3. If you need more assistance, please go to our website listed below.

4. If you believe you need to return your product, please call a Calculated Industries representative between the hours of 8:00am to 4:00pm Pacific Time for additional information and a Return Merchandise Authorization (RMA).

Call Toll Free: 1-800-854-8075

Outside USA: 1-775-885-4900

www.calculated.com/warranty

Warranty

Calculated Industries ("CI") warrants this product against defects in materials and workmanship for a period of **one (1) year from the date of original consumer purchase in the U.S.** If a defect exists during the warranty period, CI at its option will either repair (using new or remanufactured parts) or replace (with a new or remanufactured calculator) the product at no charge.

THE WARRANTY WILL NOT APPLY TO THE PRODUCT IF IT HAS BEEN DAMAGED BY MISUSE, ALTERATION, ACCIDENT, IMPROPER HANDLING OR OPERATION, OR IF UNAUTHORIZED REPAIRS ARE ATTEMPTED OR MADE. SOME EXAMPLES OF DAMAGES NOT COVERED BY WARRANTY INCLUDE, BUT ARE NOT LIMITED TO, BATTERY LEAKAGE, BENDING, A BLACK "INK SPOT" OR VISIBLE CRACKING OF THE LCD, WHICH ARE PRESUMED TO BE DAMAGES RESULTING FROM MISUSE OR ABUSE.

Warranty Repair Service – U.S.A.

To obtain warranty service in the U.S., please go to the website.

A repaired or replacement product assumes the remaining warranty of the original product or 90 days, whichever is longer.

Non-Warranty Repair Service – U.S.A.

Non-warranty repair covers service beyond the warranty period, or service requested due to damage resulting from misuse or abuse.

Contact Calculated Industries at the number listed above to obtain current product repair information and charges. Repairs are guaranteed for 90 days.

Repair Service – Outside U.S.A.

To obtain warranty or non-warranty repair service for goods purchased outside the U.S., contact the dealer through which you initially purchased the product. If you cannot reasonably have the product repaired in your area, you may contact CI to obtain current product repair information and charges, including freight and duties.

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FCC Class B

This equipment has been certified to comply with the limits for a Class B calculating device, pursuant to Subpart J of Part 15 of FCC rules.

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Calculated Industries, a leading manufacturer of special-function calculators and digital measuring instruments, is always looking for new product ideas in these areas.

If you have an idea, or a suggestion for improving this product or User's Guide, please submit your comments online at www.calculated.com under “Contact Us,” “Product Idea Submittal Agreement”. Thank you.

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4840 Hytech Drive
Carson City, NV 89706 U.S.A.
1-800-854-8075 • Fax: 1-775-885-4949
E-mail: info@calculated.com
www.calculated.com

Designed in the U.S.A.
Printed in China

8/07

PRG9530E-C