

TRACEABLE® 300-MEMORY STOPWATCH INSTRUCTIONS

SPECIFICATIONS

Display: 1/4" digits, 3-line LCD display
Range: 9 hrs, 59 min, 59 sec, 99/100
Resolution: 1/100 sec
Accuracy: 0.001%
Features: Continuous Timing, Lap/Split Timing, Countdown/Count up Timing, Speed Timing, Stroke Timing, Pacer Timing, Time/Calendar display, Daily Alarm

CONTROLS

Listed below are the unit's buttons along with their function in the various stopwatch modes.

START/STOP Button

1. Stopwatch – starts and stops timer
2. Speed – starts and stops speed function
3. Stroke – starts and stops stroke function
4. Time/Calendar – advance digits when setting time of day
5. Alarm – silences alarm
6. Pacer – starts and stops pacer function
7. Timer – starts and stops timer function

RESET/LAP SPLIT Button

1. Stopwatch – with timer running records a lap/split time. With timer stopped resets display to zero
2. Speed – when in value setting mode advances through fields in order to set values
3. Stroke – resets stroke count to 2400
4. Time/Calendar – switches hourly reading from 12- or 24-hour setting
5. Alarm – enable/disable alarm
6. Pacer – sets pacer value
7. Timer – when timer is stopped, resets the timer run value to the timer set value

RECALL Button

1. Stopwatch – recalls memory data for lap/split timing
2. Speed – hold for 2 seconds to activate value setting mode
3. Stroke – n/a
4. Time/Calendar – hold for 2 seconds to activate time/date setting mode
5. Alarm – hold for 2 seconds activate daily alarm setting mode
6. Pacer – n/a
7. Timer – hold for 2 seconds to activate value setting mode

MODE Button

Advances display through the stopwatch functions.

OPERATION

Entering Timing Modes

1. Pressing the MODE button will advance the screen through the seven functions of the stopwatch.
2. Repeatedly pressing the mode button scrolls through the functions in the following order: Stopwatch (Chron), Speed, Stroke, Time/Calendar, Alarm, Pacer and Timer. With the exception of the Time/Calendar mode, an identifying screen that displays for 2 seconds precedes each of modes.

Clearing the display

The RESET / LAP SPLIT button will clear the following displays:

1. Stopwatch – resets the timer to zero
2. Speed – resets the timer to zero
3. Stroke – resets the timer value to 2400.0
4. Pacer – starts and stops pacer function
5. Timer – after timer is stopped, will reset the timer to set value

Clock Operation/Setting Time-of-Day & Date

1. Press the MODE button to cycle through the displays until Time/Calendar display is reached.
2. Hold the RECALL button for 2 seconds, a beep will sound and the AM/PM icon and hour digit will flash.
3. The RESET/LAP SPLIT button will cycle through the Time/Calendar display in the following order: hours, minutes, seconds, year, month and day.
4. While in each of the above time measurements, each press of the START/STOP button will advance one increment at a time, holding the START/STOP button down enables rapid advancement.
5. The "day of the week" feature will update automatically as the year, month and day are changed.
6. Save the set time and calendar reading by pressing RECALL. The display will stop flashing.

Daily Alarm Operations

1. Press the MODE button to cycle through the displays to the Alarm display.
2. Hold down the RECALL button for 2 seconds, a beep will sound and the AM/PM icon and hour digit of the alarm display will flash.
3. Press the START/STOP button to advance the hourly setting of the alarm. An "A" or "P" will be displayed indicating AM or PM alarm time.
4. Press RESET to advance the minute.
5. Press START/STOP to advance the digits.
6. Press RECALL to set alarm.

7. Press the RESET/LAP SPLIT button for 2 seconds to toggle the alarm icon on and off. The ((••)) icon indicates alarm is on.
8. When the alarm time is reached an audible alarm will sound for 30 seconds, or may be manually silenced by pressing the RESET/LAP SPLIT button.

Pacer Operation

1. Press the MODE button to cycle through the display modes to the Pacer display. The last value set will be displayed on the screen.
2. Pressing the RESET/LAP SPLIT button will advance through the pacer values. The Pacer timer may be set at the following values: 5, 10, 20, 30, 40, 50, 60, 80, 100, 110, 120, 140, 160, 180, 200 and 240. These values represent counts per minute (i.e., Pacer Value 20 = 20 beeps per minute)
3. Press the START/STOP button to start the pacer timer. The flashing PACER icon under the timer value indicates the timer is activated. An audible alarm will sound representing the set pacer value.
4. The pacer values can be changed while the timer is in operation. The pacer alarm will change accordingly.
5. Pressing the START/STOP button will turn off the pacer timer.

Timer - Countdown/Count up Mode

1. Press to MODE button to cycle through the display modes to the Timer display.
2. Hold down the RESET/LAP SPLIT button for 2 seconds, a beep will sound and the timer will toggle between countdown/countup mode (TIMER) and repeat countdown mode (TIMER).
3. To set countdown/countup mode, toggle to the TIMER icon.
4. The top line of the 2-line display represents the time set value. The maximum setting for this mode is 9 hours, 59 minutes and 59 seconds.
5. To set the time value hold the RECALL button for 2 seconds. A beep will sound and the hourly time increment will flash. Pressing the RESET/ LAP SPLIT button will scroll through each time increment in the following order: hours, minutes and seconds.
6. Each press of the START/STOP button will advance one increment at a time, holding down the START/STOP button enables rapid advancement.
7. Press the RECALL button to lock in the countdown value.
8. Press the START/STOP button, timing will begin and the timer icon will show an arrow pointing down indicating countdown mode.
9. If a pause in the timing operation is required press the START/STOP button to "freeze" the display at the current reading (time-out). To resume time at the point it was stopped, press the START/STOP button again (time-in). An unlimited number of timeouts may be taken.
10. When the set countdown time value has been reached, a 30-second alarm will sound. The alarm and timer can be manually stopped by pressing the START/STOP button. Pressing the RECALL or RESET/LAP SPLIT will silence the alarm and allow continued timing.
11. The TIMER icon will display indicating the count up mode. The timer will show time passed since alarm time and will continue timing to 9 hours, 59 minutes and 59 seconds.

Timer - Repeat Countdown Mode

1. With the display in timer mode, hold down the RESET/LAP SPLIT button for 2 seconds. A beep will sound and the Repeat Counter display (00) will appear in the upper left corner of the display. The TIMER icon at the bottom of the screen indicates repeat countdown mode.
2. To set the time value hold the RECALL button for 2 seconds. A beep will sound and the hourly time increment will flash. Pressing the RESET/ LAP SPLIT button will scroll through each time increment in the following order: hours, minutes and seconds.
3. Each press of the START/STOP button will advance one increment at a time. Holding down the START/STOP button enables rapid advancement.
4. Press the RECALL button to lock in the countdown value.
5. Pressing the START/STOP button will begin the countdown. To stop the countdown, press the START/STOP button and the STOP icon will appear to the left of the countdown line.
6. If a pause in the timing operation is required, press the START/STOP button to "freeze" the display at the current reading (time-out). To resume time at the point it was stopped, press the START/STOP button again (time-in). An unlimited number of timeouts may be taken.
7. An alarm will sound for 3 seconds when the set timer value has been reached and the display will return to the set time value.
8. The repeat mode allows continuous timing of the set timer value. The repeat counter will show the number of times that the set timer value has been reached. The counter can record up to 99 laps.

Single Action Timing

1. Press the MODE button to advance the display to the stopwatch mode indicated by the CHRON screen.

NOTE: If there is a measured time event showing on the SPEED display, the CHRON stopwatch mode will not be displayed. The SPEED display must be reset to zero to use the stopwatch functions.

2. This CHRON screen consists of a 3-line display indicating split timing on the top line, lap timing on the middle line, and stopwatch timing on the bottom line.
3. Press RESET to set the counter to zero.
4. The START/STOP button will begin stopwatch timing.

5. If a pause in the countdown or countup timing operation is required press the START/STOP button to "freeze" the display at the current reading (time-out). To resume time at the point it was stopped, press the START/STOP button again. An unlimited number of timeouts may be taken.

Cumulative and Lap/Split

Cumulative split time measures partial times while the stopwatch continues to measure total elapsed time. Lap/Split time measures each round of timing (noncumulative).

1. Timing operation

- i. Hold the RESET button for 2 seconds, a beep will sound and all 3 lines on display will reset to zero.
- ii. Press the START/STOP button to start timing. The bottom line on display will begin timer operation.
- iii. Press the LAP/SPLIT button to record Lap 1 on the stopwatch. (001) will display at the upper left of the screen. The cumulative time will show on the top line of the display. The time length of Lap 1 will show on the middle line of the display. The bottom line of the display will continue normal timing operations.
- iv. Each press of the LAP/SPLIT button will record and display the next succession of laps. A total of 300 lap/split times can be entered into the stopwatch memory.
- v. Press the START/STOP button when the timing event is completed.

2. Lap/Split Memory Function

After the timer has been stopped and the event is complete, various memory functions can be recalled.

- i. Press the RECALL button, the word RECALL will appear under the lap counter at the upper left of the display.
- ii. With each press of the RECALL button various stored data will be displayed and the data information named under the timer counter.
- iii. The various memory functions are listed below in the sequence they appear:

Fastest Timed Lap - FAST appears under the lap counter, the number of the fastest lap appears in the counter, the lap time shows on the middle line of display and the top line shows the cumulative time of the lap.

Slowest Timed Lap - SLOW appears under the lap counter, and as stated above, the display shows the recorded time of the slowest lap – lap number, lap time and cumulative time.

Averaged Timed Lap - AVG appears under the lap counter, the lap counter will display the number of laps recorded in the Recorded Lap/Split Times.

Recorded Lap/Split Times –(001), (002), etc.

Each lap time data will be shown in the order in which they were recorded. The lap counter will show the lap number, top line displays the cumulative time and the middle line shows the lap time.

3. To clear the memory press the MODE button, Recall will no longer be displayed, then press RESET.

Speed Mode

1. Press the MODE button to advance the display to the speed mode.
NOTE: The unit is "per hour" therefore speed = set distance x 3600 seconds. The maximum display of speed is 9999.999, if any calculated speed is over this value, Error will show in the middle row and speed value will not be stored into memory.
2. Press and hold the RECALL button for 2 seconds until Km is flashing.
3. Press the RESET button to move to the top line of the display, which is distance. Continuing to press moves the blinking digit.
4. Press the START/STOP button to advance digits to the correct distance. Press RECALL to confirm the entry.
5. Press the START/STOP to begin timing.
6. Press the LAP/SPLIT for the laps.
7. Recalling memory in speed mode:
 - i. When the stopwatch is stopped; the following will show with each press of the RECALL button. (top row = LAP, middle row = SPEED, bottom row = TOTAL TIME). Fastest speed/lap, slowest speed/lap, average speed/lap and then each speed/lap stored in memory.
 - ii. When the stopwatch is running; the same is displayed except that the time continues to run on the bottom row.

Stroke/Frequency Measuring Mode

This mode calculates frequency by taking 3 strokes (cycles) within a time period and then calculating the expected number of cycles if that action is continued for 1 minute.

1. Press MODE button to show the Stroke /Frequency Measuring Display.
2. Start the measurement by pressing the START/ STOP button. Then press the START/STOP button after the third stroke is made. The number of strokes per minute will be displayed on the lower row, while the measurement time will show on the upper row.

NOTES

1. Pressing the START/STOP button faster than 1/8 second (0.125 sec) will cause an Error to display indicating the overflow of the showable value.
2. Pressing the START/STOP button longer than 18 seconds will cause an Error to display which indicates the time period is too long.
3. Pressing the RESET button while the measurement is stopped or while an Error is shown, causes the digits to be reset to 2400.

ALL OPERATIONAL DIFFICULTIES

If this unit does not function properly for any reason, replace the battery with a new high-quality battery (see "Battery Replacement" section). Low battery power can occasionally cause any number of "apparent" operational difficulties. Replacing the battery with a new fresh battery will solve most difficulties.

BATTERY REPLACEMENT

An indication that the battery must be replaced would be erratic readings, a faint display, no display, or if all icons/digits of the display are highlighted. Remove the screws on the back of the unit and remove the back cover. Remove the screw holding the battery bracket in place. Remove the exhausted battery and replace with a new battery. Secure the battery bracket into place, replace the back of the unit and replace and tighten screws. Replacement battery Cat. No. 1005

WARRANTY, SERVICE, OR RECALIBRATION

For warranty, service, or recalibration, contact:

CONTROL COMPANY

4455 Rex Road •

Friendswood, Texas 77546 • USA

Ph. 281 482-1714 •

Fax 281 482-9448

www.control3.com • sales@control3.com

Control Company is ISO 9001 Quality-Certified by DNV and ISO 17025 accredited as a Calibration Laboratory by A2LA.

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