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PROFESSIONAL TIMING

POCKET PRO **HL400-W** **WINTER**

User Manual

Version 09/2014

Contents Table

1. Concept

The Pocket Pro Winter App, Pocket Pro HL400-W, gives users access to timekeeping functions dedicated to the timing of winter sports.

The innovative and bespoke application makes it possible to time training sessions for winter events with individual starts and finishes, mass start and individual finishes (cross country ski) and also allows users to time several competitors racing at the same time.

All times are memorised and can be recalled and visualised for each competitor.

The Pocket Pro electronic stopwatch is the latest in TAG Heuer's Professional Timing development regime. In addition to the three exclusive timing modes dedicated to Winter sports, this 1/100th second handheld timepiece also encompasses standard stopwatch modes, including Split / Lap time measurement, countdown, and memorising of the time of the day.

Together with its integrated USB connector; free POCKET MANAGER application and Pocket-Pro 800 measurements internal memory, the device makes the downloading, analysis, printing and archiving of results extremely simple.

Results can also be viewed or printed from your laptop or pc instantly.

The USB connector (HL400-4) enables connection to a photocell, a manual switch or a wireless radio input (HL615, HL675).
Pocket Pro Manager adjusts a Lock Time for the USB Input.

Note:
   Pressing the hard reset (to the right of the USB connector) resets the Lock Time value to 0.01 sec (minium)

2. Standard Timing Mode

Several timing modes are available :
Date / **Time** / **Count Down** / **Stopwatch**.

Three specific timing modes are also available on the Pocket Pro: A, B, and C.

Mode **A**: Training
Start / Finish
Net Time + Gap with the best time (time to beat)
Mode **B**: Multi-Start:
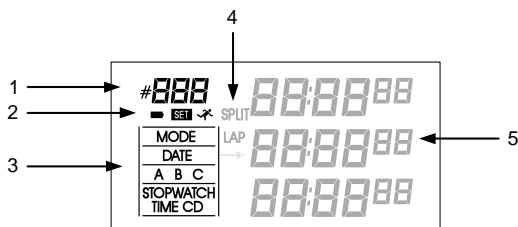Several individual Starts/Finishes
Gap with the best time
Mode **C**: Mass Start
Mass start / Individual finish

The Pocket Manager application allows the downloading, analysis, printing and archiving of results to your laptop or PC

2.1. LCD description

1. Number of competitor / Memory status
2. Battery / Mode Setting / Running status
3. Timing Mode
4. Information Split / Lap
5. Chronometers

2.2. General

2.2.1. How to navigate the different modes

To navigate into a different mode :
- The Pocket Pro has to be stopped (**STOP**)
- Reset memory (**START/STOP** + **MEMORY**)
- Pressing the **MODE** button now allows you to change the Timing Mode

Sequence :
DATE → STOPWATCH → TIME → CD → A → B → C

2.2.2. Power

The Pocket Pro functions with an internal battery. It can be recharged when it is connected to a PC (USB cable) or by a (USB – 5VDC) power supply

When not used for 36hours, the Pocket Pro will switch OFF automatically (LCD OFF)
To wake up the Pocket Pro, just press any button.

It is also possible to switch OFF manually the Pocket Pro by pressing simultaneously the **MODE** and **MEMORY** buttons for 5 seconds.

When the Pocket Pro is OFF, all the times are stored in memory.
The icon ▬ will indicate the level of the battery

During charge:	75% ON / 25% OFF blinking
Fully charged:	with USB Cable: icon ON
	Without USB cable: icon OFF
Low level	(<10% charge): blinking 50% ON & 50% OFF
	(you still have 2-3 days autonomy)

2.2.3. Time Memory

The Pocket Pro has a memory of 800 times.
The number of memorized times is shown on the 3 digits (Memory status)
When the memory reaches 90% capacity (720 times), the 3 digits will flash.

Warning

Once the memory is full (800 times), the next time recorded will be stored as 001
The previous time will be automatically deleted
The LCD will continue to flash

The memorised time can be recalled and displayed on the LCD at any time (even during a timing session).

By pressing the **MEMORY** button, the memorized time 001 will be displayed as the button is held down. The number of the memory shown is displayed on the top-left of the LCD

Press the **MEMORY** button again and the next stored time will be displayed.

2.2.4. Delete Memory

To delete the memory, press simultaneously **START/STOP** and **MEMORY** buttons.

Warning

You will not receive a request for you to "confirm Delete Memory".
Once this step is made, all times are irretrievably deleted.
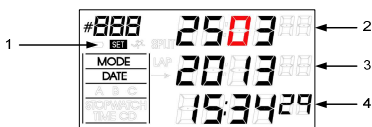

2.3. Date Mode

This mode allows you to update the date of the Pocket Pro.
To set the date:
- Press the **MEMORY** button: the first digit will flash and **SET** icon is ON
- Press the **SPLIT/LAP** button to change the value
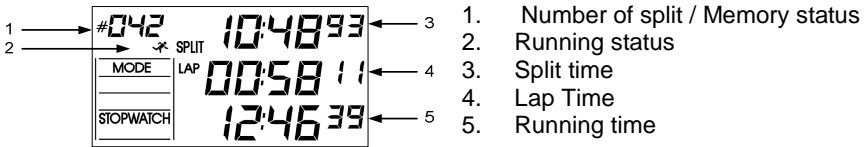- Press the **MEMORY** button to move to the next digit
Validate your setting with the **MODE** button (**SET** icon is OFF)

1. Icon Set ON = Setting
2. Date setting (in red, digit blinking) (25.03)
3. Year setting (2013)
4. Time of the Pocket Pro (setting in menu TIME)

2.4. STOPWATCH mode

This timing mode allows the timekeeper to make a Start/Finish, with intermediate time (**SPLIT**) and lap time (**LAP**) with a 1/100th of a second precision

1.   Number of split / Memory status
2.   Running status
3.   Split time
4.   Lap Time
5.   Running time

The time displayed is up to 59'59.99'' (1 hour)

SPLIT :   Intermediate time, or cumulated time taken at each time (**SPLIT/LAP** button)
             The SPLIT Time is to the top of the LCD (mm:ss.dc)

LAP :   Lap time or time difference between time taken (**SPLIT/LAP** button)
             The LAP time display is in the middle of the LCD (mm: ss.dc)

Running Time :   Running time between Start and Finish
   The running time is on the bottom of the LCD (mm:ss.dc)

The running time always starts from **00:00:00**.

- To start, press the **START/STOP** button (✗ icon is ON)
- Three times are running and displayed
- At Split / Lap, press **SPLIT/LAP** Button.
The **SPLIT** and **LAP** time is stopped. The running time (bottom) continues to run.

At each press of the **SPLIT/LAP** button, the counter store increments.
It is possible to recall and view the running time (after **SPLIT/LAP**) by pressing **MEMORY** button.

For simple viewing in this mode, it is possible to reduce the information, and display only **SPLIT** or **LAP**. For this, during the race, press the button **MODE**.
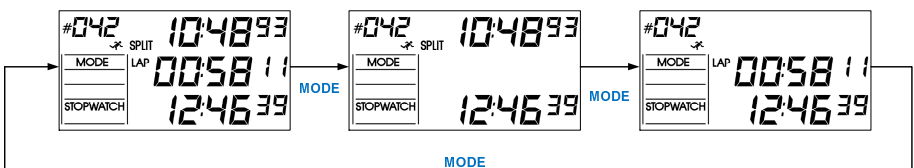
2.5. Count Down mode (CD)

This mode allows you to make a unit count down or loop count-down

1.   Number of split / Memory status
2.   Running status
3.   Counter
4.   Count Down (max 59:59.9)
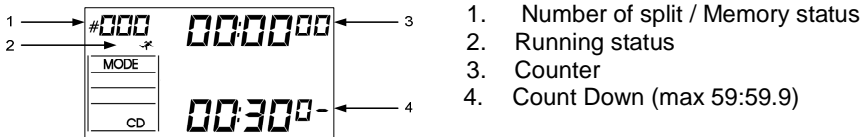
2.5.1 Set Count Down

To change the Count-Down value, the memory has to be deleted.
To set the Count-Down value:
-   Press the **MEMORY** button: the first digit will flash and **SET** icon is ON
-   Press the **SPLIT/LAP** button to change the value
-   Press again the **MEMORY** button to change to the next digit
-   Validate your setting with the **MODE** button (**SET** icon is OFF)

2.5.1. Count Down timing .

-   To start the count down, press **START/STOP** button (✗ icon is OFF)
-   The count-down value decrements (on the bottom)
-   A timer (on the top) is started (increments)

At any time it is possible to **PAUSE** and **RESTART** the count-down
A long single beep will sound at the end of the Count-Down
The count-down will stop automatically at 00:00.
To restart a new count-down, you have to reset the value by pressing **SPLIT/LAP**
button.

During the count-down sequence, by pressing the **MODE** button, it is possible to
change the Single Count-Down to Auto-Restart Count-down (loop mode).
The **CD** icon on the LCD will switch.
In this Auto-Restart Count-Down, during the last 5 seconds, the Pocket Pro will sound
a single short beep and a long beep at 00:00
The Pocket Pro will restart automatically from the pre-defined time of the count-down.
The timer will run and show the full time since the first Start.
To stop the sequence, you have to RESET the Pocket Pro.
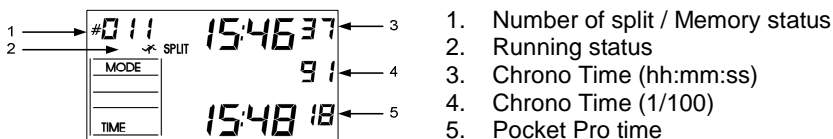
START/STOP

SPLIT/LAP

START/STOP
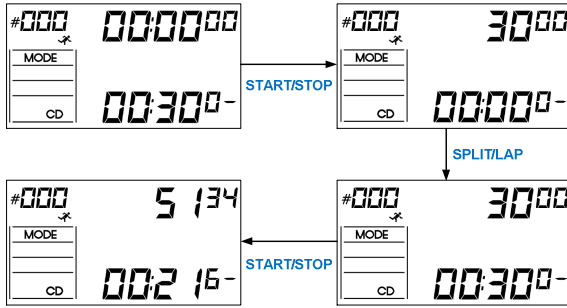
2.6. TIME Mode

This timing mode allows you to memorize the time of day at each split.

This mode is very useful as a back-up system during a timing session and functions similarly to other timing systems working at "time-of-day" such as Chrono Printer, Mini Timer or Start Clock.

In Time mode, you have on the top of the LCD the value 00:00.00 and on the bottom the time of the day of the Pocket Pro.

1. Number of split / Memory status
2. Running status
3. Chrono Time (hh:mm:ss)
4. Chrono Time (1/100)
5. Pocket Pro time

2.6.1. Internal Time of Day setting

To set the Internal Time of Day on Pocket Pro:

-   The Pocket Pro memory has to be reset (**START/STOP** + **MEMORY**)
-   Press and hold the **MEMORY** button for 5 sec: the first digit will flash and **SET** icon is ON
-   Press the **SPLIT/LAP** button to change the value
-   Press the **MEMORY** button to move to the next digit

2.6.2. Time of day synchronisation

- Press **SPLIT/LAP** and **START/STOP** buttons simultaneously.
- The time of day of the Pocket Pro will be displayed on the top of the LCD with 1 minute in advance.
- The synchro will be automatic at the end of the full minute

2.6.3. To Synchronise at Zero

- Press **START/STOP** button

The Chrono automatically starts from zero.

2.6.4. Timing

Once the Synchronization is made, the ✵ icon appear.

To memorize the time of day, press **SPLIT/LAP** button
The time on the LCD will stay and the passing counter (top-left) is incremented.
To see the time of the day running, press **MEMORY** button.

Before Set Time of the Day

Set time of the Day + 1 min.

START/STOP
SPLIT/LAP

START/STOP

Memorized Split / Time of Day

SPLIT/LAP

Manual Synchro / Start
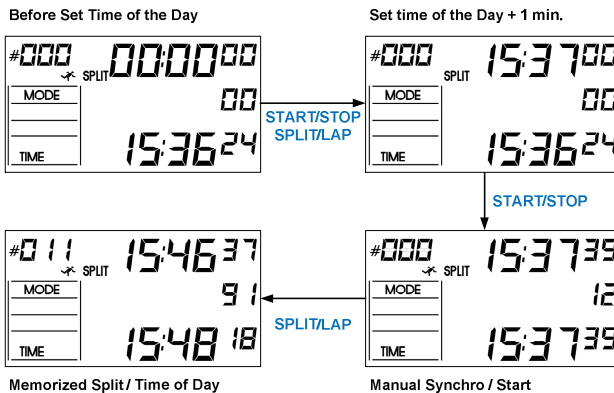
3. Specific Timing Modes

In the Pocket Pro Winter, 3 specifics modes are available:

- **A**: Training
  - Start / Finish
  - Net Time + Gap with the best time (time to beat)
- **B**: Multi-Start:
  - Several individual Starts/Finishes
  - Gap with the best time
- **C**: Mass Start
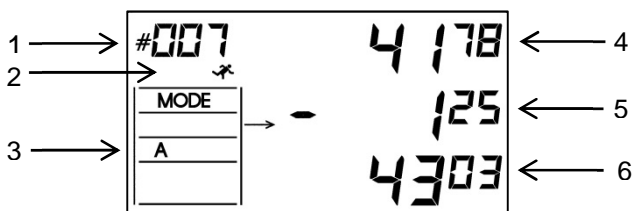 - Mass start / Individual finish
  - Net time up to 36 hours

3.1. Training (mode A)

This mode allows you to time individual competitors, with a start, finish, and gap with the best time (time to beat)

Each competitor is identified with the Pocket Pro sequential number (chronological list and not by a bib number)

Maximum time for each competitor: 60 minutes

1. Number of competitor / Memory status
2. Battery / Mode Setting / Running status
3. Timing Mode
4. Net time of the arrival competitor (mm.ss.dc)
5. Gap with the best time (mm.ss.dc)
6. Best Time (time to beat) (mm.ss.dc)

|	
Button **Start/Stop** :	Start and Finish for each competitor
	Pause available with the same button
Button **Split/Lap** :	Intermediate time (1x) during race
	Next competitor (after a stop)
	Press for 5 sec during run time to disqualify the competitor (time = 0)
Button **Memory** :	Recall / display the memorized times.
	Re-calculate all gap times

After each finish, it is necessary to validate the time and record it by pressing the button **Split/Lap** : the running time will be reset for the next competitor.
This also automatically recalculates the new time to beat.

Pressing the **Split/Lap** button during the running time will also pause the time. To restart, press the **Start/Stop** button

3.2. Multi-Start (mode B)

This mode allows several competitors in a race at the same time, and calculates each competitors net time individually, as well as the gap with the Time to Beat.
Time maximum: 60 minutes.
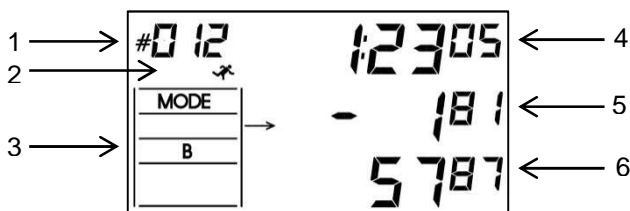
1. Number of competitor / Memory status
2. Battery / Mode Setting / Running status
3. Timing Mode
4. Net Time of arrived competitor (mm.ss.dc)
5. Gap with the best time (mm.ss.dc)
6. Running time of next competitor (mm.ss.dc)

Button **Start/Stop**   Competitor Start
Button **Split/Lap**   Competitor Finish
                          Press for 5 sec: Disqualify competitor : time = 0

Button **Memory** :   Recall / display the memorized times.
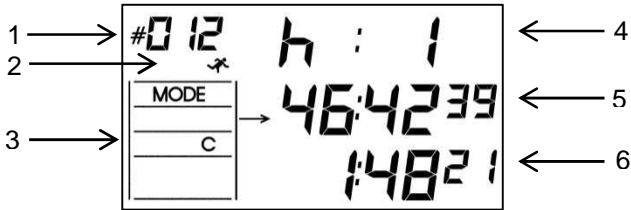   Re-calculate all the gap times

Symbol � switching, means you have more than 1 competitor in the race

3.3. Mass Start (mode C)

This mode allows you to start a group of competitors (start at Zero)
At each arrival, the net time is displayed.
Maximum Time allowed: 36 hours

1. Number of competitor / Memory status
2. Battery / Mode Setting / Running status
3. Timing Mode
4. Net Time of arrived competitor (hours)
5. Net Time of arrived competitor (mm.ss.dc)
6. Running time of race

Button **Start/Stop**   Start race (mass start at zero)
Button **Split/Lap**   Individual finish.
Button **Memory** :   Recall / display the memorized times (in sequential)

It is not possible to start another race until you have reset all times memorized
(**Start/Stop** + **Memory**)

4. Recommendations

Although the Pocket Pro can be used indoors and outdoors, optimal viewing and protection is best when the display is in the shade or covered from direct sunlight and rain.

Never immerse the Pocket Pro in water.

The Pocket Pro is developed to endure light rain.
The USB socket is protected by the black rubber, and prevents any water ingress.

It is very important and recommended to keep the rubber in place at all times when not using the USB connection.

The optimal visibility of LCD is when the Pocket Pro is protected from direct sunlight

The Pocket Pro can overheat in excessive direct sunlight.

The LCD plexiglas is fragile. It is not recommended to clean it with a solvent or alcohol

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IMPORTANT
A slightly damp cloth is recommended for cleaning the Pocket Pro

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5. Download a new version of Firmware

Program downloads and new releases of the TAG Heuer firmware "up loader" are available free of charge on our website www.tagheuer-timing.com.

For this operation, you need to have:
- Mini-USB cable HL545-3
- The software «TAGHeuerFirmmanager.exe » version minimum V10.0

Procedure
- Copy the software «TAGHeuerFirmManager.exe » onto your hard disk drive
- Connect the Mini-USB cable (HL545-3) to the PC and to the Pocket Pro
- Run the software « TAGHeuerFirmManager.exe »
- Select the COM Port
- Select the file: Update (HL400_xxx.dat)
- Press START on the software.
- Press reset on Pocket Pro
- As soon as the upgrade is downloaded into the HL400, validate the software with OK.
- The HL400 is ready to use.

6. Technical specification

6.1. Pocket Pro characteristics

-	Power	5 VDC (rechargeable with USB cable)
-	Internal battery	600mAh / 3.7V
-	Autonomy	35 days (in use) after full charge
-	Shell	Aluminium – PVD surface treatment
-	Weight	160 g
-	Precision	+/- 2 sec / month
		Calibration available
-	Display	LCD 3 lines of 6 characters
		Battery level / Timing Mode
-	Size of characters	7mm height
-	Accuracy	$1/100^{th}$ second
-	Memory	800 stored times
-	Temperature range	–20°C to +60°C

6.2. USB Connector

Pin	Description
1	5V
2	D-
3	D+
4	TAG Heuer Photocell
5	GND

7. Quick Guide

Reset memory
> Buttons: Start/Stop + Memory

Change mode:
> Clear Memory (Start/Stop + Memory)
> Button: Mode

Power off
> Buttons: Memory + Mode (hold down together for 5 seconds)

Recall recorded times
> Button: Memory

Setting (Date / Time / CD)
> Button: Memory to select the digit
> Button: Split/Lap to change value
> Button: Mode to validate the selection

Stopwatch
> Button: Start/Stop: start or stop counter
> Button: Split/Lap: memorize Split/Lap
> Button: Mode: select display Split or LAP or both
> Button: Memory: recall split/lap memorized

Count Down
> Button: Start/Stop: Start or Stop counter
> Button: Split/Lap: reset the preselected Count Down
> Button: Memory: countdown setting
> Button: Mode: Select single Count Down or Multi Count Down (CD blinking)

Time (function manual back-up with Time-of-Day)
> Button: Start/Stop + Split/Lap: Set Time-of-Day (+ 1 minutes)
> Button: Start/Stop: Synchro + Start
> Button: Split/Lap: Memorize Time-of-Day
> Button: Memory: recall/view memorized time

Mode A

  Button: Start/Stop: Start / Finish / Restart after pause
  Button: Split/Lap (during run): Intermediate
  Button: Split/Lap (after stop): Next competitor
  Button: Split/Lap (5 sec): Disqualify
  Button: Memory: recall / view memorized time

Mode B

  Button: Start/Stop: Start,
  Button: Split/Lap : Finish
  Button: Split/Lap (5 sec): Disqualify
  Button: Memory: recall / view memorized time

Mode C

  Button: Start/Stop: Start (mass start)
  Button: Split/Lap : Finish (individual Finish)
  Button: Memory: recall / view memorized time

8. Notes

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