



TAGHeuer

PROFESSIONAL TIMING

**POCKET PRO
HL400-DF
TRAINING DARTFISH**

User Manual

Version 07/2016



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1. Concept

The Pocket Pro Dartfish App, Pocket Pro HL400-DF, gives users access to timekeeping functions dedicated to training in athletics and swimming

The two specific modes provide the user with the ability to time and monitor activities including Sprint Training and swimming to record and analyse number of strokes, differential times and average strokes

The App “myDartfish Express” includes specific training modes in Athletic – mode A, in Swimming training – Mode B, in addition to the standard modes – Stopwatch and Count Down (Cd)

The USB connector (HL400-4) enables connection to a photocell, a manual switch or a wireless radio input (HL615, HL675).

Note:

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

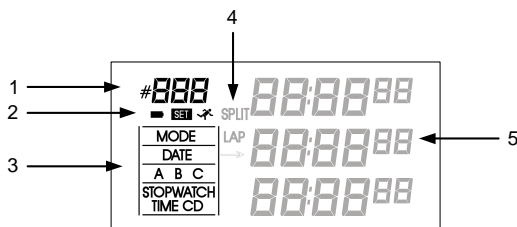
2. Standard Timing Mode

Several standard timing modes are available including:

Date / Time / Count Down / Stopwatch

More specific event orientated modes are also available, see section 3

2.1. LCD description



1. Sequence Number of athlete / Memory status
2. Battery / Mode Setting / Running status
3. Timing Mode
4. Information Split / Lap
5. Timers

2.2. General

2.2.1. How to navigate the different modes

To navigate into a different mode:

- First 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 by connecting 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 simultaneously pressing 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 stored 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 automatically overwriting the original time

The memorized 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

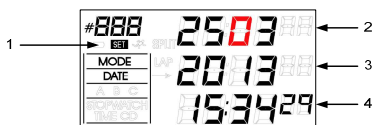
2.3. Date Mode

This mode allows you to update the date of the Pocket Pro

To set the date:

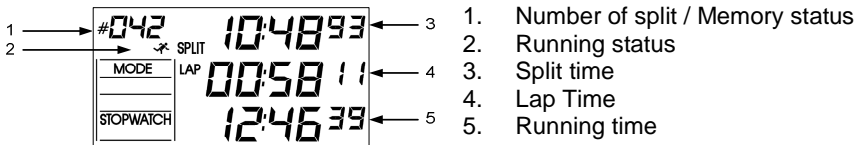
- Press the **MEMORY** button: the first digit will flash and **SET** icon is ON
- Press the **SPLIT/LAP** button to change the value
- Press the **MEMORY** button to move to the next digit

Validate your setting with the **MODE** button (**SET** icon is OFF)



2.4. STOPWATCH mode

This timing mode allows the timekeeper to make a Start/Finish, with split time (**SPLIT**) and lap time (**LAP**) with 1/100th second precision
This mode is configured for the App “myDartfish Express”



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

SPLIT : Split time, or cumulative time (**SPLIT/LAP** button)

LAP : Lap time (**SPLIT/LAP** button)

Running Time : Running time between Start and Finish

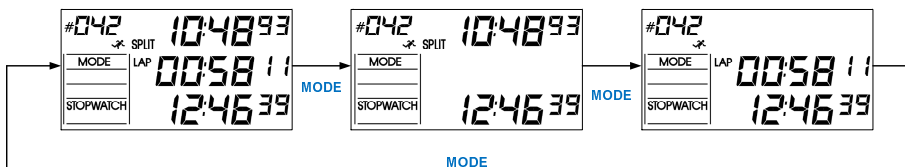
The running time always starts from **00:00:00**

- To start, press the **START/STOP** button (✓ icon is ON)
- Three times are running and displayed
- To record a Split / Lap, press **SPLIT/LAP** Button

The **SPLIT** and **LAP** time is stopped. The running time (bottom) continues to run

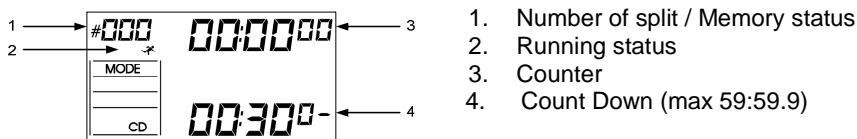
At each press of the **SPLIT/LAP** button, the memory sequence increases
It is possible to recall and view previous split and lap times during a session by pressing the **MEMORY** button

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
This mode is configured for the App “myDartfish Express”



2.5.1 Set Count Down

To change the Count-Down value, the memory first 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 decreases (on the bottom line)
- A timer (on the top) is started (increases)

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 the **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)

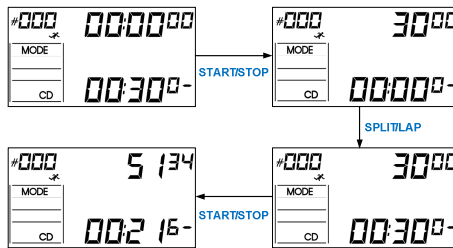
The **CD** icon on the LCD will switch

In this Auto-Restart Count-Down, during the last 5 seconds, the Pocket Pro will sound a single short beep and a then 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

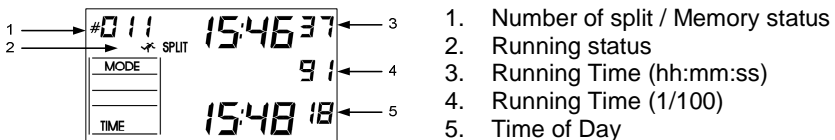


2.6. TIME Mode

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 the CP545 Chrono-Printer, Mini Timer or Start Clock

In Time mode, you have the running time on the top line of the LCD and the time of day on the bottom line of the LCD



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 time automatically starts from zero

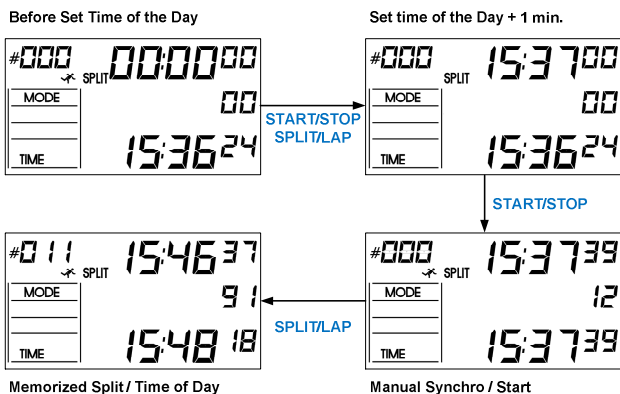
2.6.4. Timing

Once the Synchronization is made, the  icon appears

To memorize the time of day, press the **SPLIT/LAP** button

The time on the LCD will stay and the passing counter (top-left) is increased

To see the time of the day running, press the **MEMORY** button



3. Specific Dartfish Timing Modes

Pocket Pro Athletics has 3 specific modes available for athletics training sessions

A: Sprint Training with up to 4 split times

In this mode, you set the number of split times you want to time between start and finish

It is also possible to change automatically (or manually) the athlete sequence number (run session)

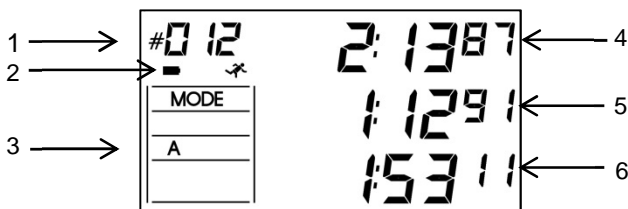
B: Training with stroke record

In this mode, you can define the length of the pool (25 or 50m), record the number of strokes by pool crossings, as well as times for every length.

At the end of each session you are able to recall on Pocket Pro LCD or download and view the number of strokes for every length, average stroke rate, total swim distance, average lengths per minute and total time.

3.1. Sprint Training with up to 4 split times (mode A)

This mode allows you to define the number of split timing points between start and finish (max 4), including the ability to automatically switch to a new session



1. Sequence Number of athlete / Memory status
2. Battery / Mode Setting / Running status
3. Timing Mode
4. Run time / Net time at Finish (mm:ss.dc)
5. Net time at split point 1 and 3 (mm:ss.dc)
6. Net time at split point 2 and 4 (mm:ss.dc)

Pre-Session Configuration

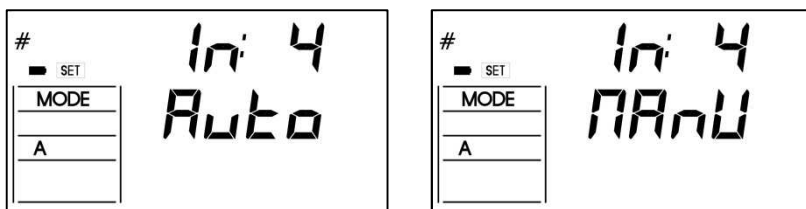
- Button **Memory**: Select the digit to set
- Button **Split/Lap**: Change value of digit
- Button **Mode**: Validate the changes

Training Session

- Button **Start/Stop**: Start, split and Finish
- Button **Split/Lap**: Change run / athlete (in Manual configuration)
- Button **Memory**: Allows you to recall and view split times 1 & 2
- Button **Mode**: To view split 3 & 4, hold down the Memory button and press once the Mode button. You can move between Split 1 & 2 / 3 & 4 by keeping the Memory button pressed and briefly pressing and releasing the Mode button

Pre-Session Configuration

Before starting a training session, it is possible to select the number of split times that you require, and select automatic or manual increment to the next session after a finish



The example above shows you how the settings are displayed

In : 4 means 4 split times

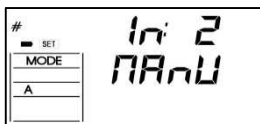
Auto-Nanu: Automatic or Manual

In Automatic, after a session is completed the net time will display for 15 sec, and will then automatically move to the next run/athlete
In Manual, you have to manually press the button SPLIT/LAP to move to the next run/athlete

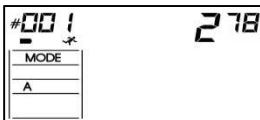
Example

Training session with Start / Finish and 2 split times

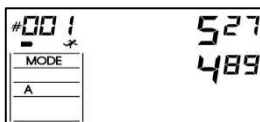
Move to next session : Manual



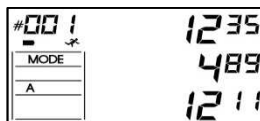
Mode A
Setting:
Splits : 2
Restart : Manual



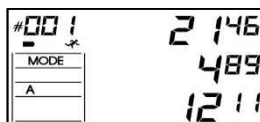
Button START/STOP
Competitor n° 001
Start training
Running time (line 1) = (2.78 sec)



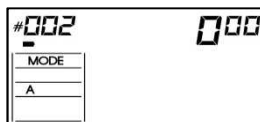
Button START/STOP
Impulse for Split time n° 1
Running time on line 1 (5.27 sec)
Split time n° 1 on line 2 (4.89)



Button START/STOP
Impulse for Split time n° 2
Running time on line 1 (12.35 sec)
Split time n° 1 on line 2 (4.89)
Split time n° 2 on line 3 (12.11 sec)



Button START/STOP -- Finish
Net time on line 1 (21.46 sec)
Split time n° 1 on line 2 (4.89)
Split time n° 2 on line 3 (12.11 sec)

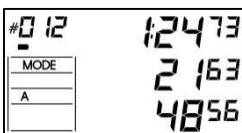


Button SPLIT/LAP
Next competitor n° 002
In Auto mode, the next competitor will be displayed automatically after 15 sec.

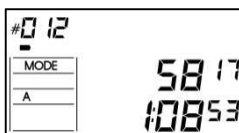
Recall / View session times (button - Memory)

Button MEMORY to move between competitor #

To display split 3 & 4 for that competitor also press Mode



Competitor n°12
Net Time - 1'24.73"
Inter 1 : 21.63"
Inter 2 : 48.56"

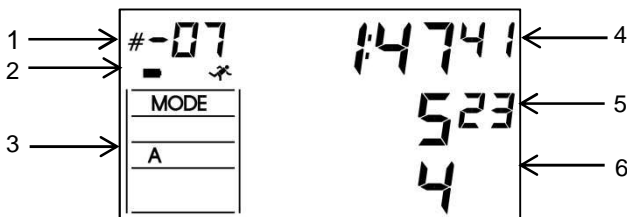


Competitor n°12
Inter 3 : 58.17"
Inter 4 : 1'08.53 "

3.2. Training with stroke record (mode B)

In this mode, you define the length of the pool (25m or 50m), record the number of strokes for each length as well as each split time.

Post session you will be able to view every length with split times, strokes and distance covered.



7. Nb of training session / number of pool lengths covered
8. Battery / Mode Setting / Running status
9. Timing Mode
10. Total Running time (mm:ss.dc)
11. Running time of current length (mm:ss.dc)
12. Number of strokes recorded on current length

Training setting

Button **Split/Lap**: Select the pool size (25m or 50m)

Training session

Button **Start/Stop**: Start, Stop after each pool crossing (maximum 60)
Hold down for 5 seconds : stops the training session

Button **Split/Lap**: Increase the number of strokes

End of training session

Button **Split/Lap**: Proceed to next training session (maximum 6)

Button **Memory**: Select the training session to recall data (1 to 6)

Button **Split/Lap**: Hold down with together with the Memory button:
View mode of selected training session

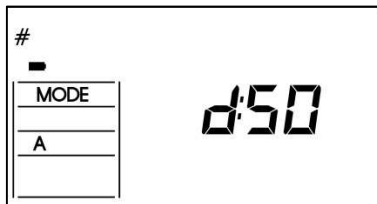
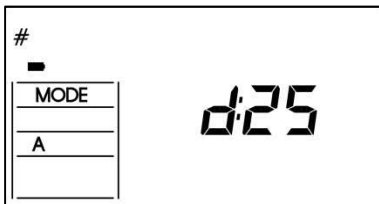
Button **Split/Lap** (in view mode)
Next page

Button **Mode** (in view mode)
Previous Page

Button **Memory** (in view mode)
Back to timing mode

Set parameters before a training session

Before a training session, it is possible to select the size of the pool (25m or 50m)
Press **Split/Lap** to select pool size
By pressing the button **Start/Stop**, you validate the pool size and start the first training session

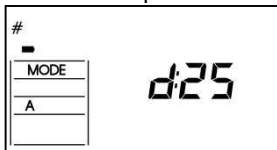


Maximum lengths to time is 60

This allows a training session of 1500m (with a pool length of 25m) and 3000 (with a pool length of 50m)

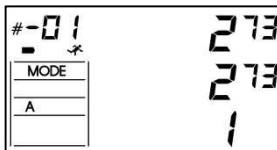
Example

4 lengths with 25m pool



Mode A

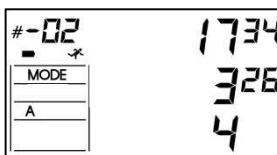
Set the pool length of 25m (**Split/Lap**)



Button **Start/Stop**

Start training session

Each press of **Split/Lap** button: increases the number of strokes

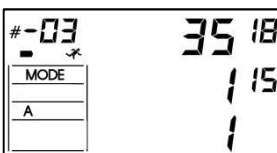


Button **Start/Stop**

End of length n° 1

Start new length (n° 2)

Stroke counter : Button **Split / Lap**

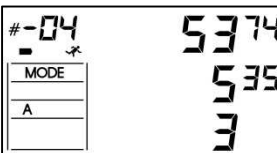


Button **Start/Stop**

End of length n° 2

Start new length (n° 3)

Stroke counter : Button **Split / Lap**



Button **Start/Stop**

End of length n° 3

Start new length (n° 4)

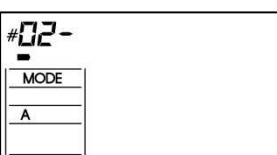
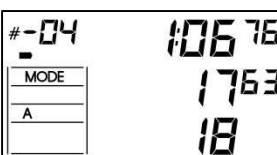
Stroke counter : Button **Split / Lap**



Button **Start/Stop** (push and hold down 5 sec)

End of training session

Length Counter returns back to n°4



Button **Split / Lap** to move to the next training session (maximum 6)

View (button Memory)

Using the **Memory** button, it is possible to scroll and view all the training sessions (from 1 to 6).

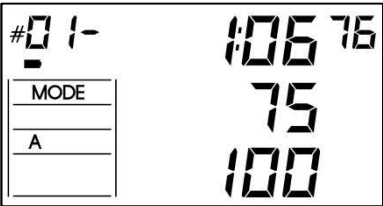
To select the training session you want to view, hold down the Memory button and press the button Split/Lap button

Next page: button **Split/Lap**

Previous page: button **Mode**

The first 3 pages (1 to 3) display global results of the training session.

The next page (4 to 63) display results for each individual length

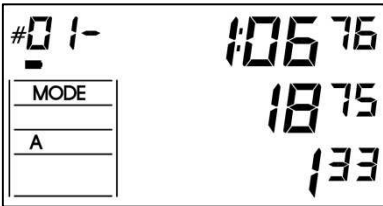


Page 1 :

Total time of training (1'06.76")

Total number of strokes (75)

Total distance covered (100m)

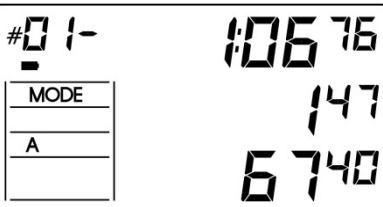


Page 2 :

Total time of training (1'06.76")

Average strokes per length (18.75)

Average distance per stroke (1.33m)

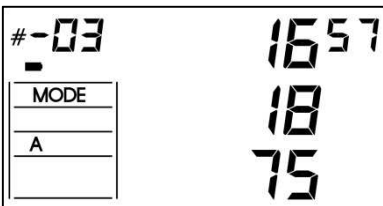


Page 3 :

Total time of training (1'06.76")

Average Speed (m/min) : (1.47 metres/min)

Number of strokes / min : (67.40)



Page 4 - 63: (60 pool lengths maximum)

Length n° 3 (-03)

Time of Length (16.57 sec)

Number of strokes (18)

Total distance from start (75)

4. Connection with App « myDartfish Express »

With the Bluetooth (Low Energy), it is possible to :

- Synchronize video frame time between App « myDartfish Express » and the Pocket Pro
- Start video capture from the Pocket Pro
- Display on the App, the timing information from Pocket Pro

Only the following modes can be used with the App « myDartfish Express »

- STOPWATCH
- Count Down (CD)
- Mode A (Athletic training)
- Mode B (Swimming training)

4.1. Connection and synchronization

The Pocket Pro should be ON and ready to time

Important

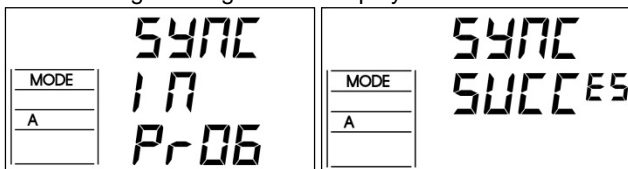
Each time you change mode the connection in between Pocket Pro and App should be re-established

The small button at the bottom of the App allows you to connect and synchronize with Pocket Pro



Once the Pocket Pro is selected (if more than one Pocket Pro available), the Pocket Pro will be in connection mode, and will automatically synchronize with your Smart phone / device

The following message will be displayed on the Pocket Pro



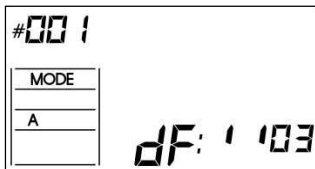
4.2. Start Video capture with Pocket Pro

It is possible to start the video capture from the Pocket Pro

For that, simultaneously press buttons "Split/Lap" and "Start/Finish"

On the App, a running time will be display to inform you how many seconds the video has been in capture mode

On the Pocket Pro, the same time will be display as follows



When timing « DF » will disappear and the normal timing mode will be displayed

Important

The Video capture could be done directly from the App, or will start automatically at the timing session

4.3. Information on the App

Each time the Pocket Pro has an action (Split – Lap etc) the time frame will be sent to the App

We will display on the App

- Intermediate time (Mode A, B)
- Split / Lap (Mode Stopwatch)
- Number of stroke (Mode B)

During the replay of the video, the same information will be also displayed



5. 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

IMPORTANT

A slightly damp cloth is recommended for cleaning the Pocket Pro

6. 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 and hold the reset button on Pocket Pro and release when prompted
- As soon as the upgrade is downloaded into the HL400, validate the software with OK
- The HL400 is ready to use

7. Technical specification

7.1. 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
-	Communication distance	2-3 meters (Bluetooth Low Energy)

7.2. USB Connector

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

8. 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, split, Finish

Button: Split/Lap: Next athlete

Button: Memory: Display memorized times

Button: Mode: Display split time 3 & 4

Mode B

Configuration

Button: Split/Lap: Set the pool size (25m or 50m)

Timing

Button: Start/Stop: Mass start

Finish for each length

Hold down for 5 sec to finish the training session

Record the strokes (one press for each stroke)

Button: Split/Lap:

At Finish

Button : Split/Lap

Press and hold for 5 sec to move to the next session

Viewing

Button: Memory:

Choose the training session (1 to 6)

Button Memory + Split/Lap

Select the training session to view

Button Split/Lap

Next page

Button: Mode

Previous page

Button Memory

Back to timing mode

9. Notes



TAGHeuer
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