TAGHeuer

PROFESSIONAL TIMING

POCKET PRO
HL400-P
PILOT

User Manual

Version 05/2016

Contents Table

1. Concept

The Pocket Pro Pilot App, Pocket Pro HL400-P, provides flight times and fuel times for pleasure and general aviation pilots.

Thanks to the 2 specific modes, the pilot can record and monitor flight time and fuel time consecutively (up to 100 flight times memorized).

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 General Aviation and Pleasure pilots, this 1/100th second handheld timepiece also encompasses standard stopwatch modes, including Split / Lap time measurement, countdown, and timing based on time of 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.

> Note:
>   Pressing the hard reset (to the right of the USB connector) resets the Lock
>   Time value to 0.01 sec (minimum)
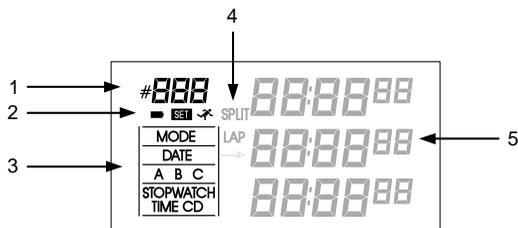
2. Standard Timing Mode

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

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Warning

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

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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. Day/Month (red digit blinking 25.03)
3. Year setting (2013)
4. Time of Day (set in menu TIME)

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

1. Number of split / Memory status
2. Running status
3. Split time
4. Lap Time
5. Running time
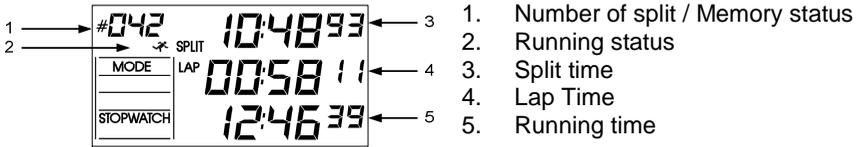
The time displayed is up to 59'59.99'' (1 hour)

SPLIT :   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**
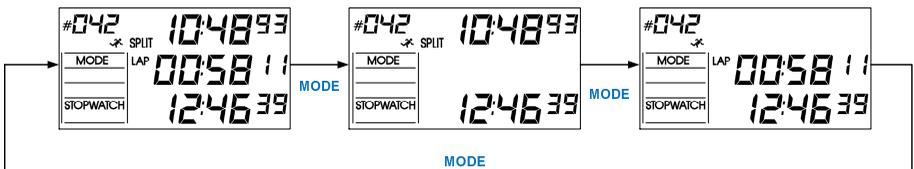
2.5. Count Down mode (CD)

This mode allows you to make a unit count down or loop count-down
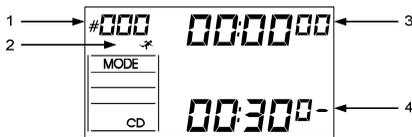
1. Number of split / Memory status
2. Running status
3. Counter
4. Count Down (max 59:59.9)

2.5.1 Set Count Down

To change the Count-Down value, the memory 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)
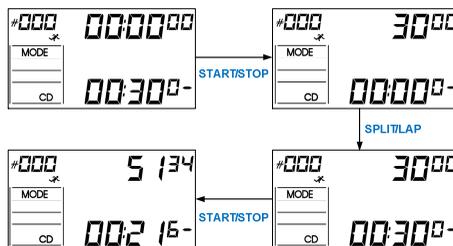The **CD** icon on the LCD will switch
In this Auto-Restart Count-Down, during the last 5 seconds, the Pocket Pro will sound a single short beep and a then long beep at 00:00
The Pocket Pro will restart automatically from the pre-defined time of the count-down
The timer will run and show the full time since the first Start
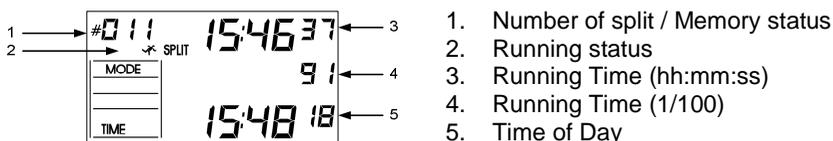To stop the sequence, you have to RESET the Pocket Pro

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

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

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
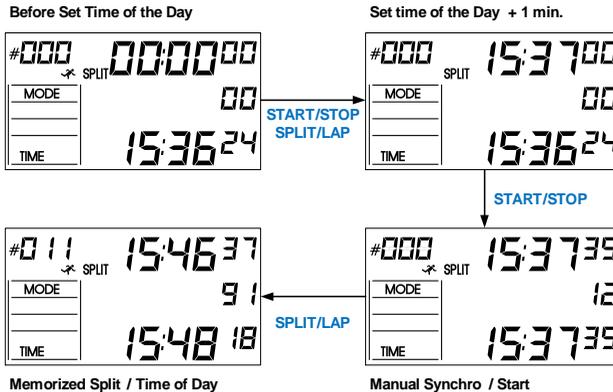The time automatically starts from zero

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

Before Set Time of the Day

```
#000      00:00:00
  ✈ SPLIT
 ┌─────┐
 │MODE │        00
 ├─────┤
 │     │
 ├─────┤
 │TIME │    15:36:24
 └─────┘
```

START/STOP
SPLIT/LAP

Set time of the Day + 1 min.

```
#000      15:37:00
       SPLIT
 ┌─────┐
 │MODE │        00
 ├─────┤
 │     │
 ├─────┤
 │TIME │    15:36:24
 └─────┘
```

START/STOP

Memorized Split / Time of Day

```
#011      15:46:37
  ✈ SPLIT
 ┌─────┐
 │MODE │        91
 ├─────┤
 │     │
 ├─────┤
 │TIME │    15:48:18
 └─────┘
```

SPLIT/LAP

Manual Synchro / Start

```
#000      15:37:39
  ✈ SPLIT
 ┌─────┐
 │MODE │        12
 ├─────┤
 │     │
 ├─────┤
 │TIME │    15:37:39
 └─────┘
```

3. Specific Pilot Timing Modes

In the Pocket Pro Pilot, 2 specific modes are available

- **A**: Flight Time
    In this mode, it is possible to record and monitor flight time with the
    date/time of take-off and date/time of landing.
    Up to 100 flights can be stored on the Pocket Pro.

- **B**: Tank operating time.
    This mode enables the Pilot to define up to 6 fuel tanks. For each of them,
    it is possible to set a count-down value, and reset them individually.

Specifics of Pocket Pro Pilot :
- Pocket Pro Pilot enables the user to use mode A and B simultaneously: It is
  also possible to switch between A and B and vice versa, to monitor either the
  fuel tank timer or flight timer as required.
- Reset Mode A or B, will erase only the time and information of the present
  mode (reset : start/stop + Memory)
- It is possible so start and Stop the two modes A and B simultaneously from
  Mode B only

3.1. Flight Timer (mode A)

In this mode, it is possible to record and monitor the time of take-off and landing for each flight. Pocket Pro Pilot stores the information of every flight (up to 100) including date/time of take-off and date/time of landing.
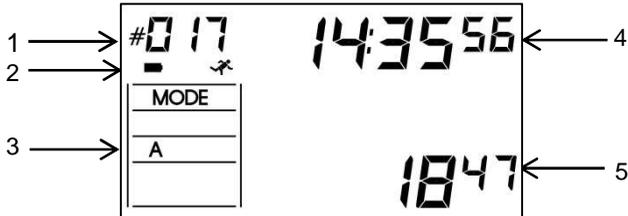
1. Flight number (consecutive number until reset)
2. Battery / Mode Setting / Running status
3. Timing Mode
4. Time of day
5. Flight Time (hh:mm:ss)

Button **Start/Stop**:   Take-off / Landing (start / finish)
Button **Split/Lap**:   Change flight number (after landing)
Button **Memory**:   Recall previous flight time history.
Button **Memory** + **Start/Stop**: Erase memory of Flight times (Mode A only)

Mode A, without flight time running, the LCD displays the date & time of day.
It is recommended to update the time of day regularly (see chapter Time and Date)

During flight, time can be paused with "fly back" function – press the button **Start/Stop**

Flight time will be stored only when the next flight is incremented (button **Split/Lap**).
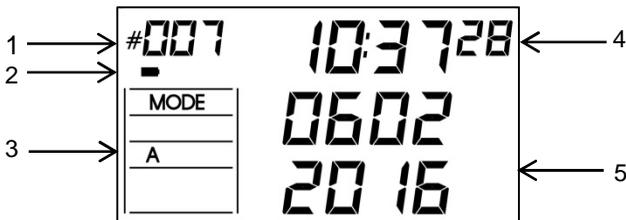
1. Flight Number
2. Battery / Mode Setting / Running status
3. Timing Mode
4. Time of day
5. Date (06/02) – 6 February, Year (2016)

Memory Recall Button

Thanks to the **Memory** button, it is possible to see the latest flight time memorized
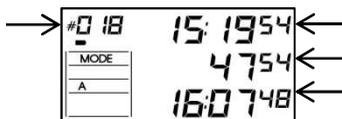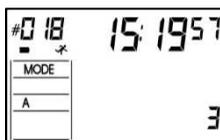

1. Flight Number
2. Take-Off time
3. Flight time (hh:mm.ss)
4. Landing Time

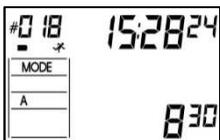Using the Pocket Pro manager software utility will also provide date of all flights.
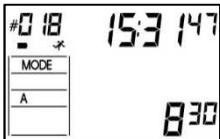
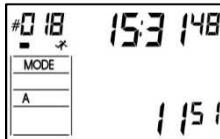Example

   Mode A
Time of day (15 :18 :35)
Date : 24.10.2015

   Button **Start/Stop** – Take off and Landing
Sequence Number of the flight : 018
Time of day (15 :19 :57)
Flight time (3 sec)

   Button **Start/Stop** – Stop of flight time
Time of day : 15 :28 :24
Stop time at 8'30''

   Time of day : 15 :31 :47
Flight time : 8'30'' (frozen)

   Button **Start/Stop** – Restart
Time of day : 15 :31 :48
Flight time : 11'51 '' (fly back function)

   Button **Start/Stop** – Landing
Time of Landing : 16 :07 :48
Button **Split/Lap** (memorization)
Time of day (16:07:48)
Date : 24.10.2015

3.2. Fuel Timer (mode B)

The Fuel Timer mode gives the ability to define up to 6 individual tanks.
For each of the tanks, it is possible to define the maximum time (count-down value), and reset them individually
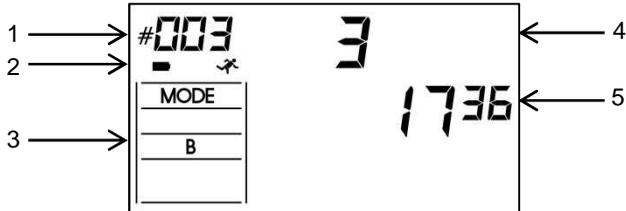
1. Fuel Tank in process
2. Battery / Mode Setting / Running status
3. Timing Mode
4. Number of the tank display on LCD
5. Count down value of the tank

Functions

Button **Start/Stop** : Start / Stop count-down of the selected fuel tank

Button Start/Stop: Press and hold for a minimum of 5 sec, allows to start or stop simultaneously mode A (flight Time) and B (Tank)

Button **Split/Lap** : Select tank number

Button **Memory** : Press and hold for 5 sec
Reset the select count-down and set menu

Setting of a count-down value
When the mode B is totally reset (button **Start/Stop** + **Memory**), **all the values will be deleted on the Mode B,** it is possible to set up to a 6 tank count down. With the Pocket Pro stopped, it is possible to change individually the settings of each count down.

Button **Memory** : To change the digit
Button **Split/Lap** : To change the value

Thanks to the Pocket Pro Manager, it is possible to easily define each count-down value for each tank.

Start/Stop simultaneously: Mode A and B

From the mode B (tank), it is possible to simultaneously start / stop the flight time fuel timer.

Press the **Start/Stop** during 5 sec mini from Mode B only.
The message "Start" will be displayed on the LCD.

To stop simultaneously the mode A and B, press the Start/Stop button for 5 seconds.
The message "stop" will be displayed on the LCD.

Some caution for Start / Stop simultaneously
- Can only be from mode B (tank), to manage before the tank number which is engaged
- After a stop simultaneously, Mode A will remain in «fly back » mode. The flight is not memorized and request a manual operation from mode A (button **Split/Lap**)
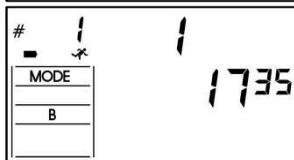
How to change tanks
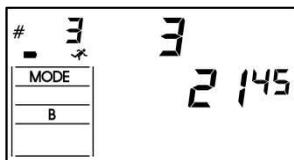
Tank #3 is running
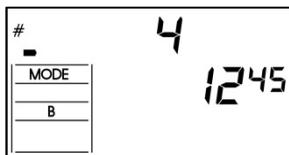Visualization of the tank 3
Count-down value: 21'45''
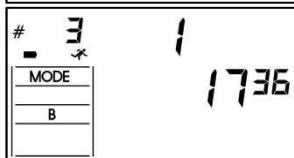
Button **Split/Lap**
Visualization of tank n° 1
Value : 17'36''

Button **Start/Stop**
Stop count-down of the tank n° 3
Start count-down of the tank n° 1

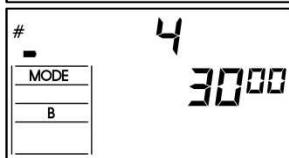**How to reset (default value) of each individual tank**
The Pocket Pro has be stopped.

The Pocket Pro has to be stopped (# without number)
Button: **Split/Lap** to select tank : n° 4
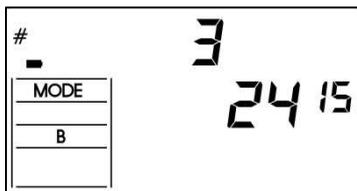Count-down value: 12'45''

Holding 5 sec the **Memory**
The default value of the count-down is displaying (30')
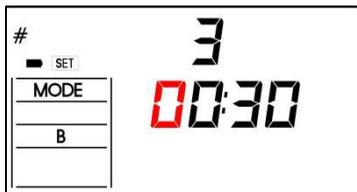It is possible with button Memory and Split/Lap to
change the setting
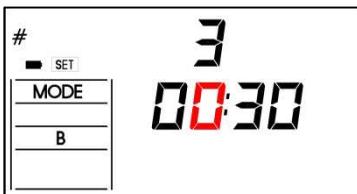
Change the default value for each tank
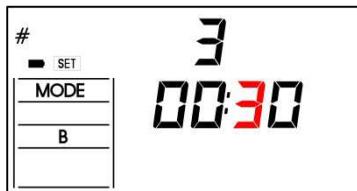The Pocket Pro has to be stopped

The Pocket Pro has to be stopped (# empty)
Button **Memory**
Selection of the tank (n°3)

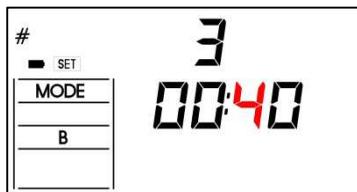Hold 5 sec the button **Memory**
Change the mode in setting
The value comes back to original (as reset) (30')
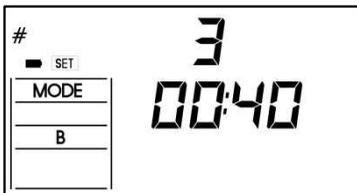The first digit is flashing (in red on this document)
Release all buttons

Button **Memory**
Change the digit (in red on this document)

Button **Memory**
Change the digit (in red on this document)

Button **Split/Lap**
Change the value of digit

Button **Mode**
Validate your new selection (40')

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 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

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:	Take-Off and landing (Start/Finish)
Button Split/Lap:	Change flight number (next flight, after landing)
Button Mode :	Switch Mode (A → B)

Mode B
Button Start/Stop	Count-down start of the selected tank
Button Start/Stop	Hold during 5 sec: Start and Stop simultaneously Mode A and B
Button Split/Lap	Change selection of the tank
Button Memory	Press and Hold for 5 sec: reset / setting

In setting mode (Memory hold down for 5 sec)
Button Memory	Change digit
Button Split/Lap	Change digit Value

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http: //www.tagheuer-timing.com