



# TAGHeuer

PROFESSIONAL TIMING

## MODULO DISPLAY HL950

### User's Manual

Version 10/2015



## 1. General

---

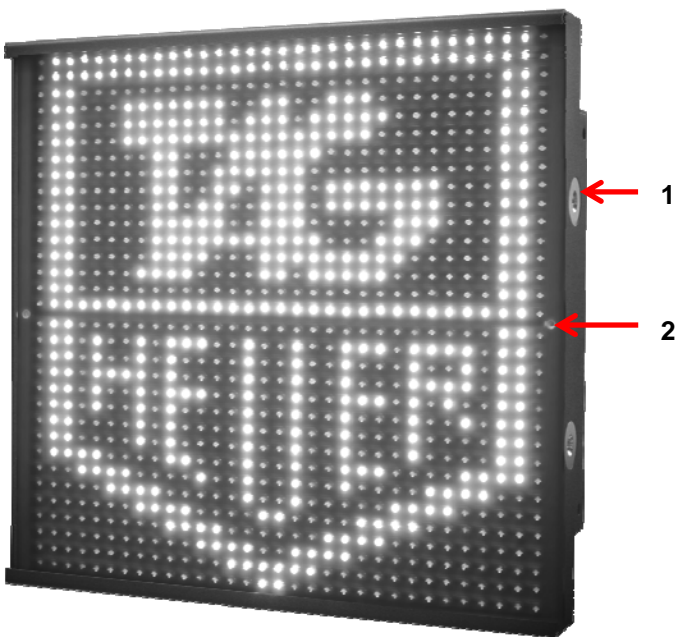
This new LED display developed by TAG Heuer Timing is the definitive solution to every timing requests for displays and scoreboards.

- Thanks to its **modular concept**, it is possible to select up to 8 different sizes of digits, and to design your own display configurations, with white or coloured digits, accordingly to your needs.
- Its **low weight** and its **limited size** make all logistic concerns easier for every users
- Its **competitive price** offers a definitive good value for money
- Its variable brightness is ideal for any environment both outdoors in direct sunlight, and indoors in any lighting conditions.

The communication protocol used is the standard TAG Heuer Timing structure and requires no software modification.

## 2. Descriptions

---



1. Magnetic connection to assist alignment
2. Fixation screws for removing the plexiglas front



3 buttons for display configuration

Red : function « Enter »

Black : Up / Down menu selection



Connexion (type 4mm banana) to link the Modulo's

Yellow / White : RS485 communication

Red and Black: Power Supply

### 3. Menu

---

The Modulo is developed with the TAG Heuer Timing Standard protocol THDIS08, with a data frame of 8 digits by line.

Four menus are available when pressing the "ENTER" button (red)

#### 3.1. Menu MODE

This menu allows to the user to choose up to 8 sizes of digits.

- 4x4 : 4 lines of 4 digits (height of 6 cm / reading distance : 30 meters / 98 feet)
  - 3x4 : 3 lines of 4 digits (height of 8 cm / reading distance : 40 meters / 131 feet)
  - 3x3 : 3 lines of 3 digits (height of 8 cm / reading distance : 40 meters / 131 feet)
  - 2x3 : 2 lines of 3 digits (height of 13 cm / reading distance : 65 meters / 213 feet)
  - 2x2 : 2 lines of 2 digits (height of 13 cm / reading distance : 65 meters / 213 feet)
  - 1x2 : 1 line of 2 digits (height of 19 cm / reading distance : 95 meters / 331 feet)
  - 1x1 : 1 line of 1 digits (height 28 cm / reading distance : 140 meters / 460 feet)
  - 1/2 : 1 half digits (height of 44 cm / reading distance : 220 meters / 720 feet)
- This last setting is divided in 2 : ½ upper digits and ½ lower digits

#### 3.2. Menu OFFSET

This menu allows the user to change the offset of the 8 digits lines

- Example: mode 3x4 (3 lines of 4 digits)  
Offset could be « 1 2 3 4 » or « 5 6 7 8 »
- Mode 2x2 (2 lines of 2 digits)  
Offset could be « 1 2 », « 3 4 », « 5 6 » or « 7 8 »

#### 3.3. Menu LINE

This menu allows the user to change the line address

The line address depends on the mode used. The first line has to be set and automatically, the following line on a same Modulo will be increased

- Example: mode 3x4 (3 lines of 4 digits)  
Line could be « 1, 2, 3 », « 4, 5, 6 », « 7, 8, 9 » etc.
- Mode 2x2 (2 lines of 2 digits)  
Line could be « 1,2 », « 3, 4 », « 5, 6 », etc.

Refer to the protocol THDIS08

#### 3.4. Menu BRIGHT

This menu allows the user to change the brightness of the LED

Four levels are available:

High, Medium, Low, Ext

Ext level (external) from firmware release V1.1.07  
Intensity managed by PC

## 4. Consumption

---

Because of the modularity, the standard consumption could change  
The following values are measured with maximum of brightness / intensity (High)

Mode	Current / Power
Logo	6.6 A / 80W max
4x4	
4x3	
3x3	5.2 A / 62W max
3x2	
2x2	3.8 A / 46W max
1x1	
1/2	

## 5. Recommendation

---

- The Modulo is suitable for outdoor and indoor use ( IP42 protection rate )
- It is strongly recommended that you sheltered from the weather (rain and snow)
- Warning: in case of sun exposure, the display could be warm. It is recommended to sheltered

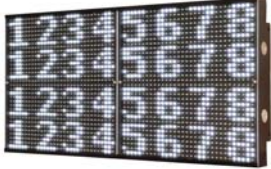
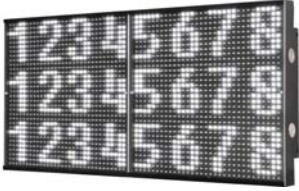
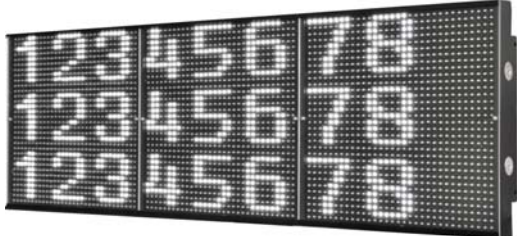
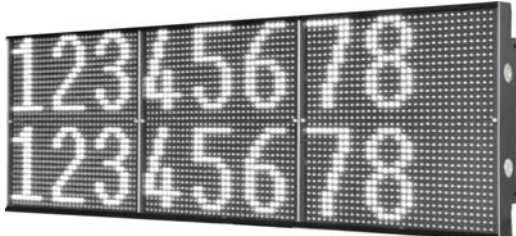




## 6. Options

---

Several options are available :

- PC Communication plug :
  - HL950-USB: connector USB
  - HL950-RS232: connector Sub D type RS232
- Support :
  - HL950-T: tripod adapter for 2 Modulo's
- Transport bag :
  - HI970-11 ( for 3 Modulo maximum )
  -
- Colored plexiglas front panel – multiple colors available
- Colored adhesive tapes

## 7. Configurations

<p>2 displays  <b>Setting: 4x4 digits</b>  <b>Height : 60mm / 2.3"</b>  <b>Reading distance : 30 m</b></p> 	
<p>2 displays  <b>Setting: 3x4 digits</b>  <b>Height: 80mm / 3.15"</b>  <b>Reading distance : 40 m</b></p> 	<p>3 displays  <b>Setting: 3x3 digits</b>  <b>Height : 80mm / 3.15"</b>  <b>Reading distance : 40 m</b></p> 
<p>3 displays  <b>Setting: 2x3 digits</b>  <b>Height: 130mm / 5.12"</b>  <b>Reading distance : 65 m</b></p> 	<p>3 displays  <b>Setting: 2x2 digits</b>  <b>Height: 130mm / 5.12"</b>  <b>Reading distance : 65 m</b></p> 
<p>3 displays  <b>Setting: 1x2 digits</b>  <b>Height: 190mm / 5.12"</b>  <b>Reading distance : 95 m</b></p> 	<p>3 displays  <b>Setting: 1x1 digit</b>  <b>Height: 190mm / 11"</b>  <b>Reading distance : 95 m</b></p> 
<p>6 displays  <b>Setting: ½ digit</b>  <b>Height: 440mm / 17.32"</b>  <b>Reading distance : 220 m</b></p> 	

## 8. Technical specifications

---

Size	340 x 340 x 52.5mm
Weight	3,5 kg
LED / matrix	32 x 32 / White
Pixel pitch	10 mm
Data Connection	RS485
Power	8 to 36 Vdc
Current : Nominal	3A at 12 Vdc (40% LED's ON)
Max	8A at 12 Vdc (100% LED's ON)
Size of Modulo characters	½ digits, height – total 440 mm / 17.32” 1 x1 digits, height - 280 mm / 11” 1 x 2 digits, height - 190 mm / 7.48” 2 x 2 digits, height - 130 mm / 5.12” 2 x 3 digits, height -130 mm / 5.12” 3 x 3 digits, height - 80 mm / 3.15” 3 x 4 digits, height - 80 mm / 3.15” 4 x 4 digits, height - 60 mm / 2.36”
Communication protocol	THDIS08
Protection rating	IP42
Frame structure	STX NLXXXXXXXX LF
Special link connection	RS485 / Power 12V
Special PC connection	RS232 + Power / USB + Power
Fixation	M8 on top and bottom M8 on rear
Option	Coloured plexi – multiple colours available Tripod adapter for 2 Modulo's BAG HL 970-11 ( 3 HL950 max.)
Max Modulo connected	6x per single Power Supply 16x for Data RS485
Using condition	Outdoor / Indoors (IP42)

### Warranty:



2 years from purchase date

#### **Warranty is not valid when:**

- Excessive water ingress
- Poor maintenance and obvious damage
- Inputs, Output damaged by incorrect connection

## 9. Notes

---





# TAGHeuer

PROFESSIONAL TIMING

**TAG Heuer**  
**PROFESSIONAL TIMING**

6A Louis-Joseph Chevrolet  
2300 la Chaux-de-Fonds  
Switzerland  
Tel : 032 919 8000  
Fax : 032 919 9026

E-mail: [info@tagheuer-timing.com](mailto:info@tagheuer-timing.com)

**[Http: //www.tagheuer-timing.com](http://www.tagheuer-timing.com)**