



TAGHeuer
PROFESSIONAL TIMING

**ALPHANUMERIC
DISPLAY BOARD
HL 985**

Version 12/2007

USER'S MANUAL



Chapters

1.	Concept	2
2.	DISPLAY BOARD DESCRIPTION	3
3.	DISPLAY BOARD IDENTIFICATION	4
4.	USAGE RECOMMENDATIONS	5
5.	CARACTERISTIQUES TECHNIQUES	5
6.	DATA LINK	5
7.	CONNECTIONS	6
8.	MOUNTING	6
9.	WARRANTY	6
	TAG Heuer	8

1. Concept

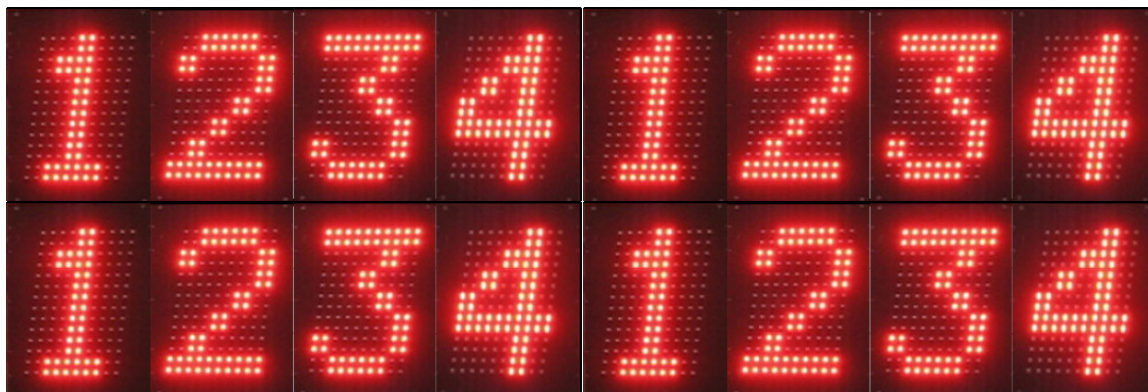
“A display board specifically designed to meet the needs of Sports Timing”. This is the phrase that sparked the development of the TAG Heuer HL 985.

The HL 985 now allows you the ability to display text messages (competitor names, country) as well as numeric data (points, running time...) all with a reaction time of less than 1/10th second.

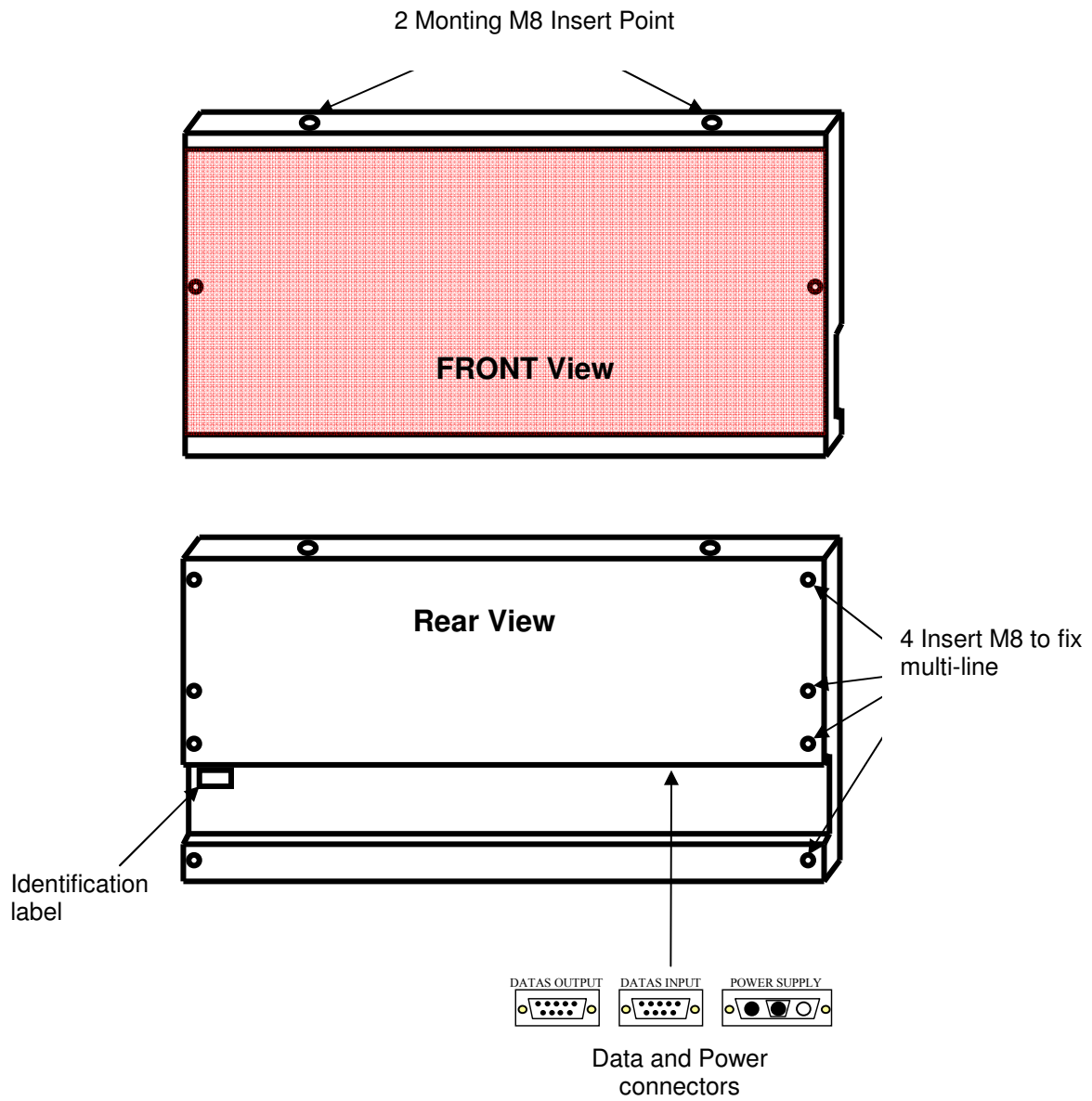
Using the most recently developed LED (Light Emitting Diode) technology for maximum visibility, the RS232 interface allows for a non-multiplexed array – meaning that every character is driven by its own microprocessor.

Thanks to our TAG Heuer Software, it is possible to parameter each display board to realize a large dimension screen with several HL985 displays.

Example of configuration: 4 displays HL985 (2 x 16 characters)



2. DISPLAY BOARD DESCRIPTION



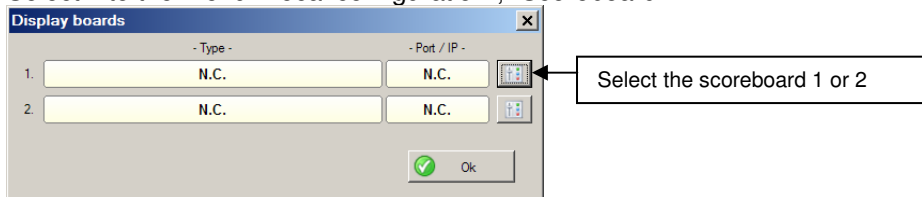
3. DISPLAY BOARD IDENTIFICATION

TAG HEUER's sport event management software (available separately) sends various timing data and event information to the display board from the RS232 serial port of your computer (PC). Each piece of information destined for a particular display is addressed with a tag number at the start of each data frame, known as the "display number".

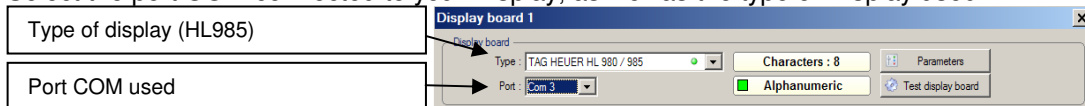
It is therefore crucial that the correct parameter to address and route data to connected display(s) be correctly set in the display itself. The shipped factory default setting for the display number is "1" characters 5 to 8. On software "PRO" a special application is available to change the HL985 setting. You can download display management software at: www.tagheuer-timing.com

Follow the procedure to change the setting

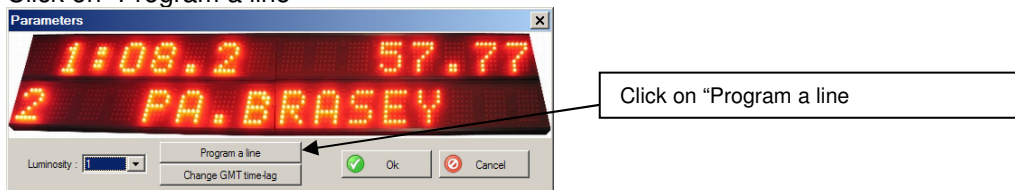
- 1 - Attach data (RS232) and power (12VDC) to the display board (use our Power supply HL960-12)
- 2 - Close all other Windows applications and launch software PRO (Ex: MSPORT PRO)
- 3 - Select into the menu "Local configuration", "Scoreboard"



- 4 - Select the port COM connected to your Display, as well as the type of Display used

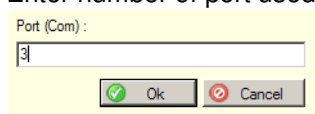


- 5 - Click on "Program a line"

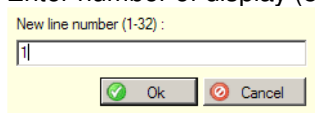


- 6 - You are asked if the Display is On (power) and connected to the data port (COM), if so, click on "Yes"

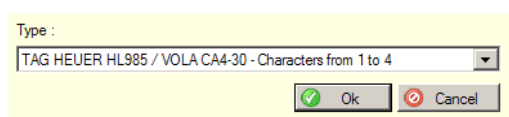
- 7 - Enter number of port used for the setting



- 8 - Enter number of display (8 characters are considerate by Display)



- 9 - Select if the Display will show the character 1 to 4 or 5 to 8, than valid.



NOTE:

When the display is correctly programmed and the display number has been changed to a new value, a message of: "Lx" (x=new number of the display) will be shown on your PC screen. If this does not happen, power off the display, check you data connections and retry to process again.

4. USAGE RECOMMENDATIONS

Installation:

HL 985 displays use LED technology and thus are considered as “lights”. The best visibility is achieved by placing the display in a shadowed position or out of direct sunlight. The display should also be protected from overheating in the same manner and by making sure the ventilation ducts are not blocked.

The display is designed to withstand some rain and water spray, but is never to be immersed.

Important:

A display board set in direct sunlight for a few hours can become very hot. We recommend handling precautions such as gloves at all times.

5. CARACTERISTIQUES TECHNIQUES

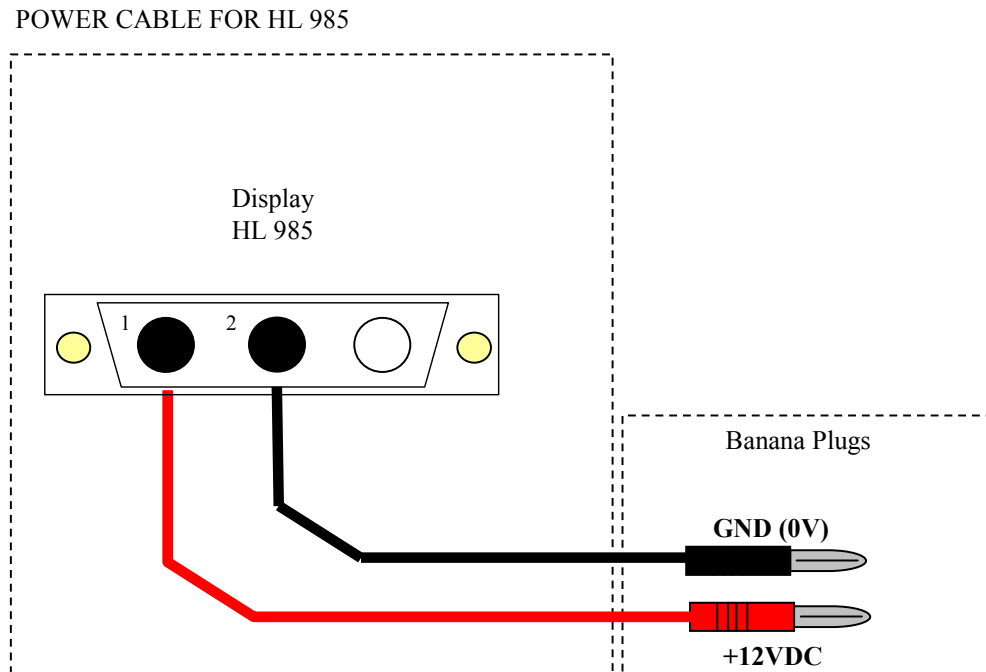
- Power Requirements: External 12 VDC (battery) @ 9 Amperes
- Voltage/Current protection: 8A internal fuse
- Power consumption: Standby : 100mA (no characters displayed)
9A with all characters on at max. intensity (T_{amb}= 20 °C)
- Temperature Range: -20 °C to +60 °C
- Weight: 8.1 Kg (without box)
- Dimensions : 1140 x 45 x 468 mm

6. DATA LINK

- Data Protocol: Protocol RS232 / 9600 Baud / 8 Data bits / 1 Stop bit / No Parity
- Data Frame Structure: <STX>NLXXXXXXXX<LF>
 - <STX> : Start of text (code <02>)
 - N : Display number / 1 to 9
 - L : Intensity / 1 to 3
 - X : Character to display
 - <LF> :End of Frame (code <0A>)
- Character List: ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890/\ () ' : . *
- + abcdefghijklmnopqrstuvwxyz

7. CONNECTIONS

- Connections to data and power should be done in a non-powered state
- Power polarity must be strictly respected:
 - Red +12VDC**
 - Black GND (0 Volts)**



Recommendation: Use a minimum of 1.5mm² cable wires to power the Display HL985

8. MOUNTING

The display is delivered with 2 mounting type M8 rings. There are 4 insert locations located on the top and bottom for these rings. If displays are to be joined together, 8 insert points are situated at each end of the display

9. WARRANTY

Our TAG Heuer Display line HL985 has one year from date of purchase. Transport charges are charged to the customer. Warranty is valid for "Normal" use. Damage caused by physical shock, over voltage, inverted polarity of power connections, etc. is excluded.

Note



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