

## TAG-Heuer HL995 Spectator Display User Manual

(For use with CP502 505 Chronoprinter)

### 1.0 General

The HL995 Spectator Display for Chronoprinter 502 will show time information just as it appears on your CP502's LCD screen and printer.

As the CP502 registers a time, the data is sent via RS232 (computer port) to the display. The Display will show the time indefinitely, until it is updated with a new time reading.

Included with the display is a data cable for connection to the Chronoprinter.

### 2.0 Operation

Follow these basic steps for set up and operation of the Display:

1. Mount the display on a flat surface (eg: shelf, table top), or suspend from a beam using the eye-bolts.
2. Plug in the larger 1/4" plug on the data cable into the jack on the side of the display labelled "DATA IN."
3. Plug in the smaller 1/8" plug on the data cable into the Chronoprinter jack labelled "COMPUTER."
4. Connect the AC adapter into the display. If using an external battery, make all connections to the battery first - RESPECT POLARITY !!! - then plug the DC connector into the display.
5. If all times want to be displayed keep all Dip Switches open.

If only NET TIMES from input 2 are desired, Close Dip Switch # 6. See Dip Switch map for other functions including display durations.

6. Turn the power switch on the display to the ON position. In a few moments, the letters "heuer" will appear on the display. This signifies that the display is ready to receive data from the TAG Heuer timer.
7. Turn the CP502 on and initialize it (refer to user manual for CP501 / 502).
8. Test the unit by registering start and a finish time on the Chronoprinter.

### 3.0 Batteries and Charging.

Read carefully only if you have purchased internal batteries:

The internal batteries will provide at least 5 hours of operation when fully charged. You will notice that your battery is getting low when the digits move sluggishly, or do not form legible numbers. At this time, you can:

1. Plug in the external power supply/charger and continue operation from a 120VAC source, or,
2. Turn off the display and charge the battery using the external power supply/charger.

DO NOT LEAVE THE DISPLAY ON FOR EXTENDED PERIODS. DO NOT COMPLETELY DISCHARGE THE BATTERIES. DOING SO MAY CAUSE DAMAGE!

A low battery will require 4 hours of charge time. Do not to exceed 8 hours on a charge. Doing so you may damage the batteries. You may operate the display from the external power supply/charger for an indefinite period of time.

### 4.0 Maintenance

Although the display is designed to operate under a wide range of temperatures and moisture conditions, it is advised that you protect the unit from direct moisture and intense heat or cold. Since this is an electronic instrument, we suggest that you treat it as you would any computer or electronic instrument by protecting it from rough handling and other hazardous conditions. Should the unit be exposed to water or chemicals, wipe it down immediately using paper towel or cloth.

### 5.0 Warranty

Your display is warranted against manufacturing defects for a period of 1 year. Should a problem occur with your unit, contact:

## 6.0 Specifications

Display method: 6" high florescent electro-mechanical bi-polar digits.

Time base: 2.45760 mhz crystal, + 20 ppm from -40 - +70 C.

CPU: Z80 CMOS microprocessor.

Memory: 4K x 8 Eprom, 2K x 8 RAM

Data in: 2400 baud, no parity, 8 bit, 1 stop. Optically isolated.

Power: 12 VDC @ 1.2 Amps

Consumption: .25 amps standby, 1.0 amps peak.

Operating temperature: -20 to +70 C.

Dimensions: 44" x 6" x 8" (LxWxH)

Weight: 27 lbs.

Contruction: baked enamel, aluminum chassis, Lexan face.

Thank you for purchasing the Smartdisplay from Reliable Racing Supply. Your comments regarding products and service are always welcome. We look forward to fulfilling all your sports timing needs in the future!

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HL996 SMARTDISPLAY

12/28/98

DIP-SWITCH FUNCTION MAP functions must be selected before turning power on

UNIVERSAL STAND-ALONE (UNVH6)

"C" = CLOSED DIP SWITCH

Data cable must be unplugged to access stand-alone functions.

DIP SWITCH #

1 2 3 4 5 6 7

							CLOCK MODE All OPEN
C							C DIGIT TEST
					C		DUAL SEQUENTIAL, MANUAL RESET
C						C	DUAL SEQUENTIAL, AUTO RESET
C							DUAL DIFFERENTIAL
		C					CARVING COUNTDOWN MODE

UNIVERSAL CHRONOPRINTER SLAVE (5XCH6)

"Slave mode" is accessed by plugging in DATA CABLE.

1	2	3	4	5	6	7	
C							10 SECOND DISPLAY DURATION
	C						20 SECOND DISPLAY DURATION
C	C						30 SECOND DISPLAY DURATION
		C					EXTENDED DIGIT PULSE
			C				1.00 SEC. PRECISION LOCK
				C			.01 SEC. PRECISION LOCK
RRS MODEL 2S SLAVE (2SCH6)					C		NET TIME FROM INPUT 2 ONLY
					C		BLUE COURSE ONLY
	C						RED COURSE ONLY

"TOP" SECOND CHRONOPRINTER SLAVE (5T2H6)

TOP -second mode available only with Delimiter plug-in board adapter to main PC.

1	2	3	4	5	6	7	
			C				10 SECOND DISPLAY DURATION
						C	5 SECOND DISPLAY DURATION
			C			C	15 SECOND DISPLAY DURATION

CP705, SKI\*WARE, ALGE S4 (GAZH6)

1	2	3	4	5	6	7	
							RED BIB/PLACE
			C				RED TIME
					C		BLUE BIB/PLACE
			C		C		BLUE TIME

STAND-ALONE FUNCTION MAP (UNVH6 FUNCTIONS)

USED FOR JUNCTION BOX WIRING

WIRING			DUAL SEQ	DUAL SEQ	DUAL DIFF
PIN	DIP	CLOCK MODE	(MANUAL)	(AUTO)	
CARVING		COLORS			
1	2	LAP	FINISH BLUE	FINISH BLUE	FINISH BLUE STOP
BLUE					
2	7	SET HOURS	FINISH RED	FINISH RED	FINISH RED
		YELLOW			
3	3	COUNT DOWN / STOP	START RED	START RED	
ORANGE					
4	6	COUNT UP / SPLIT	START BLUE	START BLUE	
		START	PURPLE		
5	-	COMMON/GROUND	COM/GND	COM/GND	COM/GND
COM/GND		BROWN			
6	4	1.00 PRECISION LOCK			
GREEN					
7	5	.01 PRECISION LOCK	DNF RESET	DNF RESET	RESET
RESET		RED			
8	1	SET SECONDS	AUTO ON		SET
TIME		BLACK			
9	-	N/C			
WHITE					