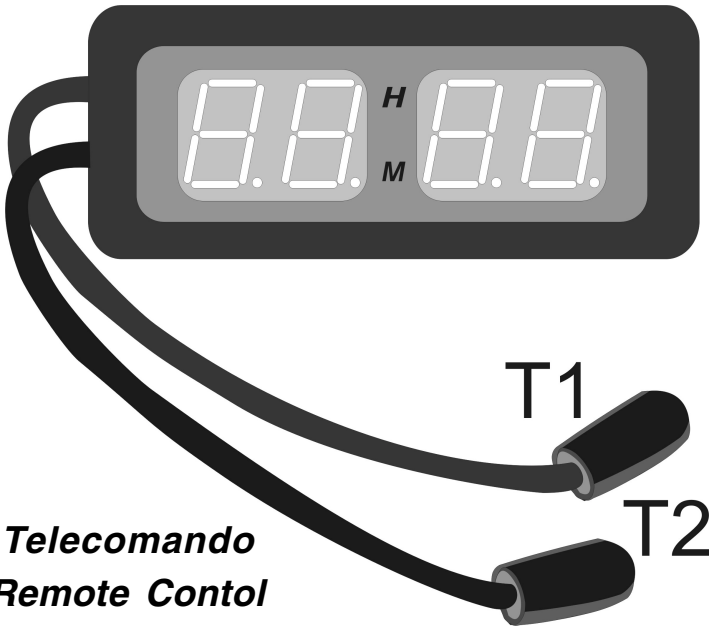
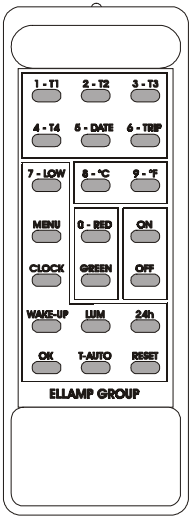
Full Clock Modular System with Infrared Remote control

Ed. 28/12/ 2003

Unità Centrale - Master





Telecomando
Remote Contol

Sonde Temperatura
Temperature Probe

Italiano/English

User's Manual

Guida per l'utente

ELLAMPGROUP
A GHE Group Company

1. INTRODUCTION

CONTENTS

1. INTRODUCTION

*The ELLAMP "**Full Clock Modular System**" is designed to meet all requirements demanded by the users when installing a system for display trip information in automotive field. The versatility of this system is enhanced because you can easily obtain Total Control by using not only the main buttons on display, but also the **Infra-red Remote Control** (21 buttons).*

English

2. SYSTEM DESCRIPTION

*The "Full Clock System" consists of a Master Unit and an Infra-red Remote Control. The Master operates indipendently and the on screen display shows the following data: Clock 12/24 hrs, date (with leap year count), automatic Trip-Timer up to 24 hrs, digital thermometer handling up to 2 temperatures. The system can store Clock and Date even in complete lack of Power Supply, **for max. 30 days**, without using internal batteries. For this reason it will never be necessary to open the case for incidental replacement of discharged batteries. The whole system can be handled by the two buttons on display, **H** (hours) and **M** (minutes). Therefore it is possible to set time and date. Besides it is possible to enter in **Configuration Menu**, which allows to completely personalize the system and to permanently save the selected functions.*

*In this way you can change as much as you like the display colour, Red or Green, continuously select display brilliance level (1 to 246 values, with Remote Control only) and save 3 favourite display brilliance levels, set display modes 12 or 24-hour-system, set or not timed automatic date, trip-timer and 2 tempertaure measuremements, in sequential way with the clock reading. Every single function can be separately included or excluded by entering Configuration Menu. The temperature can be displayed in Centigrade or Fahrenheit degrees. The system can be handled much more quickly by using the **Infra-red Remote Control 21 buttons**, which allows to set the clock alarm with signal sound (function available with the Remote Control only). A "Beep" sound will indicate the data recording (internal buzzer). At the rear side of the Master there are 2 telephone plugs for the connection **Plug&Play** of the 2 temperature probes, that are supplied as optional accessories.*

Trip-Timer automatically starts up when trip's beginning, stops during trip - pauses and automatically starts up again when trip restarts. When the stop is longer than 2 hours successively, the timer automatically resets. At any time the count can be manually reset. ***Plug&Play system automatically detects the probes, connected to the telephone plugs****. Therefore when probe T1 is plugged in, Temperature T1 will be automatically shown, and when probe T2 is plugged in, Temperature T2 will be automatically shown. To recognize the temperature probes, Plug&Play System gives 2 "Beep" sounds for confirmation. The whole system is illustrated in the following pages.*

3. INSTALLATION

Place the Master where desired and connect power supply to the battery (see pg. 5): ***RED*** *(Battery positive),* ***BLACK*** *(Battery negative). Connect* ***Yellow*** *cable to the Lights-on Control and* ***White*** *cable to Switchboard Control. (See " Wiring description"). Connect optional probes to telephone plugs as shown at following page. When using Remote Control, it's enough to insert batteries inside the Remote Control itself and the system will operate immediately after power supply.*

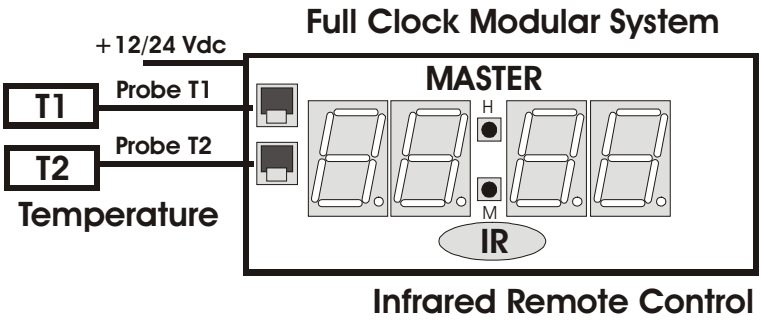
4. SYSTEM CONFIGURATION

N.B. In all following descripted Menus, "Time-out" is active when no buttons are pressed. When Time has expired, the system exits from Menu and confirms the previous setting.

*To configure the system, it is necessary to switch off the switchboard by ignition key. When display is switched off, press simultaneously both buttons H and M for a few seconds , till the "Beep" sounds and the sign oSd appears on display. Now, while pressing button H for 5 seconds and then realesing it, the Menu is paged through (see Fig. at pgs. 10,11), whereas by pressing button M for a few seconds, the displayed function will be enabled or not. At the end of Menu, the sign oSd appears on display again, and by pressing simultaneously both buttons H and M for a few seconds, the display is switched off and a "Beep" sounds for confirmation. All selected functions are permanently saved till the following Menu setup. The functions can be more quickly selected by using 21 buttons Infra-red Remote Control (see Remote Control Working table).****To set the Clock****, switch on the display (insert switchboard key). Press for long button* ***H*** *to adjust the hours, or button* ***M*** *to adjust the minutes. As soon as adjustment is up, a little dot appears at place of the digit figures and besides a beep sounds. By repeatedly pressing the same button, the count is increased. When keeping the button pressed for longer than 10 seconds, the browsing is quicker as well as the button will be released. To confirm and exit, press the opposite button: in case of selecting hours, press M – in case of selecting minutes, press H. A "Beep" sounds for confirmation.*

N.B. When no buttons are pressed within time-out, the system exits and the selected functions are confirmed.

To sequentially browse the reading *of trip-timer and date, press button H for a shorter time than during adjustment. At every push of button H, the browsing is cyclical in the following order: clock, trip-timer, date (day and month), date (year) and then clock again. When showing trip-timer, it is possible to manually reset by pressing button M for long (wait for "Beep"). When showing date, press button M for long (wait for "Beep") to enter adjustement, and button H to confirm or exit. In that case as well, when "Time-out has passed, the system automatically exits and the selected function is confirmed.* ***To sequentially display the temperatures*** *T1 and T2, press button M for a shorter time than during adjustment. At every push of button M, the browsing is cyclical in the following order: T1, T2, clock.* ***To restore factory configuration****, disconnect the input RED cable (Battery positive), press simultaneously both buttons H and M and connect power supply at the same time. When "Beep" sounds, internal memory is restored as factory configuration. The same operation can be more easily possible by using the Remote Control, without disconnecting input RED cable (see Remote Control Working Table).*



5. TECHNICAL DATA

TECHNICAL DATA

Master:

Supply voltage: 8 ÷ 35 Vdc

Master Operating Temperature: - 40 ÷ +85°C

Probes Operating Temperature: - 40 ÷ +85°C / - 40 ÷ +185°F

Display Brilliance Adjustment: 50 Levels PWM 8 kHz (up to 3 saving levels memory)

Multiplex Display Frequency: 320 Hz

***Temperature probes cable**: max. length 20 mt.*

Max. number of operating probes: 2 (T1, T2)

*Temperature reading: **Centigrade or Fahrenheit** Degrees*

Display colours: 2 (Red, Green)

***Switchboard Control and Lights Control** Detection*

***Plug&Play** System for Temperature probes, with acoustical automatic detection when connecting*

***OSD Menu (On Screen Display)**, to display configuration data*

***Internal Buzzer** to control command detection and **Wake-Up Alarm Clock** Sound*

***Automatic Trip-Timer**, up to 24 hours*

***Date** with leap year count*

Clock Mode 12 or 24-hour

Infra-red reception of Remote Control

***Permanent Configuration Data Storing** (Built in EEPROM Memory)*

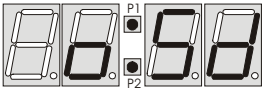
***Built in FLASH** (reprogrammable) **Microprocessor** to control the system*

***Date and Clock Back-up** with 30 days autonomy in complete lack of Power Supply. This System operates without internal battery, therefore it is not necessary to open the case for battery replacement.*

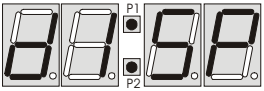
***Infra-red Remote Control 21 buttons** (2 alkaline batteries LR03 - 1,5V)*

*Operating Buttons **H** and **M**, to control without Remote Control*

Dimensions: 19,5 x 8 x 4,5 cm.

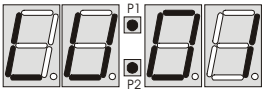


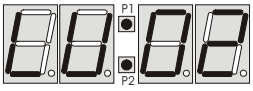
INIZIO MENU' DI CONFIGURAZIONE
CONFIGURATION MENU - START

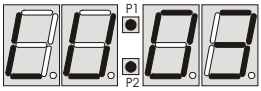


Premere M per cambiare il colore del Display
Press M to change Display colour

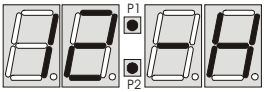
Premere M per cambiare i 3 livelli di luminosità del Display
Press M to change the 3 Display Brilliance levels

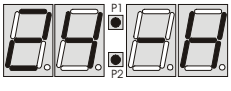


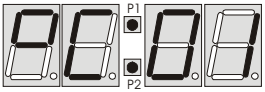


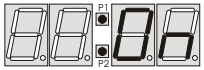


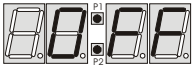
Premere M per cambiare il formato 12/24 ore
Press M to change Clock mode 12/24 hours





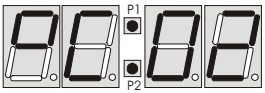


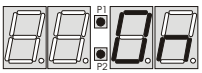


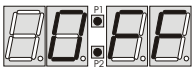


Premere M
Press M

Attiva o Disattiva la sonda T1
Activate or Deactivate Probe T1

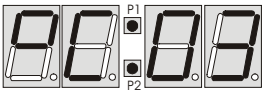


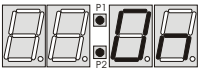


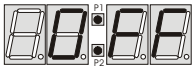


Premere M
Press M

Attiva o Disattiva la sonda T2
Activate or Deactivate Probe T2

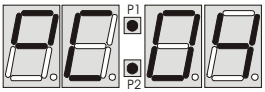


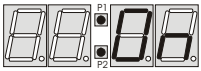


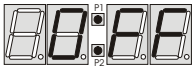


Premere M
Press M

Non Disponibile - Not Available





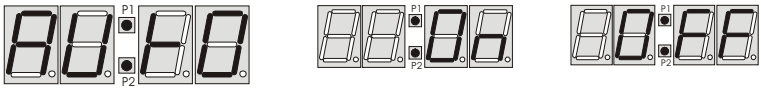


Premere M
Press M

Non Disponibile - Not Available

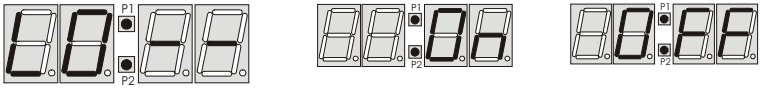
Premere M - Attiva o Disattiva il Timer di Viaggio Automatico

Press M - Activate or Deactivate Automatic Trip Timer

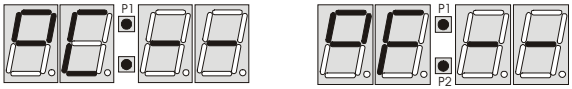


Premere M - Attiva o Disattiva il controllo luci accese

Press M - Activate or Deactivate Lights on Control

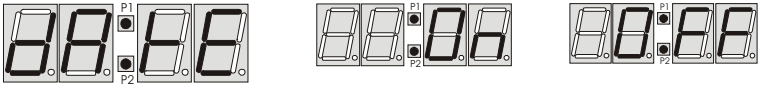


Premere M - Attiva °C o °F / Press M - Activate or Deactivate°C o °F



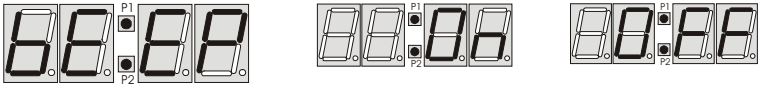
Premere M-Attiva/Disattiva la visualizzazione delle temperature impostate
Press M - Activate or Deactivate Automatic display of set up temperature

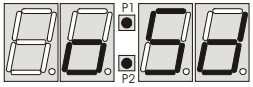
Premere M-Attiva/Disattiva la visualizzazione automatica del calendario
Press M - Activate or Deactivate Automatic display of Date



Premere M per Attivare / Disattivare la suoneria della sveglia

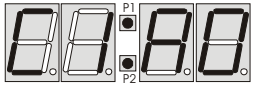
Press M - Activate or Deactivate Alarm Clock Sound





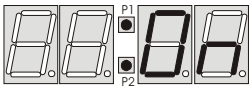
FINE MENU' DI CONFIGURAZIONE

CONFIGURATION MENU - END



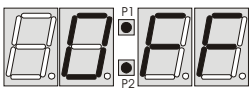
Messagio di Sistema Alimentato

Supplied System Message



Scritta di attivazione scelta visualizzata

Displayed selected Activation Message



Scritta di disattivazione scelta visualizzata
Displayed selected Deactivation Message

MENU VISUALIZZAZIONE TEMPORANEA / TEMPORARY DISPLAY MENU		
TASTO DA PREMERE FINCHÈ VIENE EMESSO UN BEEP BUTTON TO BE PRESSED TILL A BEEP SOUNDS	VISUALIZZAZIONE TEMPORANEA IMMEDIATA IMMEDIATE TEMPORARY DISPLAY	OPZIONI OPTIONS
T1	*VISUALIZZA TEMPERATURA SONDA T1* *TEMPERATURE PROBE T1 DISPLAY*	-----
T2	*VISUALIZZA TEMPERATURA SONDA T2* *TEMPERATURE PROBE T2 DISPLAY*	-----
T3	*NON ATTIVO* *NO OPERATING*	-----
T4	*NON ATTIVO* *NO OPERATING*	-----
DATE	*VISUALIZZA DATA,GIORNO,MESE ANNO* *DAY,MONTH,YEAR DISPLAY*	-----
TRIP	*VISUALIZZA TIMER DI VIAGGIO* *TRIP-TIMER DISPLAY*	-----
TRIP	*AZZERA TIMER DI VIAGGIO* *TRIP-TIMER RESET*	RESET
WAKE-UP	*VISUALIZZA ORA SVEGLIA* *ALARM CLOCK DISPLAY*	