

<p><b>Produced by:</b> UNIPRO RACING SYSTEMS ApS VIBORG HOVEDVEJ 24 DK-7100 VEJLE, DENMARK TEL. +45 7585 1182 FAX +45 7585 1782</p>
<p><b>USER'S GUIDE - LapTimer 4001A</b></p>

## **Congratulations on your new LapTimer 4001A**

Please read before use to gain maximum benefit from your new LapTimer.

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# 1.Installation

The display box [1] is prepared for installation on the steering wheel. If you want to read your lap times during the race, this is the best possible place for the display.

You must ensure that there are no sharp bends on the cable when you install the LapTimer. Furthermore do not cut and re-assemble the cable. In both cases this will lead to a destruction of the shield inside the cable which may lead to electronic disturbances in the LapTimer. It is recommended to fix the cable with adhesive tape or wide cable ties.

## **Especially regarding a go-cart**

The receiver [6] should be mounted with a bracket on the left side of the cart in a horizontal position. The lens should be between 120 mm and 300 mm above ground level and should be mounted at right angles on the cart. To insulate the receiver from the bracket, the enclosed PVC material - or another insulating material - *must* be placed between these two parts.

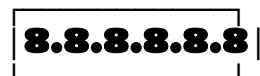
## **Especially regarding a MC**

The receiver [6] should be mounted on the left side of the rear seat cover tale in a horizontal position. The lens should be between 800-900 mm above the ground level and mounted at right angles. Be careful that no wires are jammed between the seat and the tank.

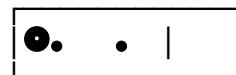
# 2.Operating the LapTimer before driving

Switch on the LapTimer by pressing the POWER key [5]. Please also see section 5.

When the POWER key is released the display will show.....



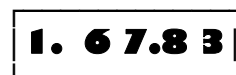
Shortly after the display will show.....  
and the LapTimer is ready to receive signals from the transmitter.



The first time you pass the transmitter the display will show ....  
The stop watch is now activated and the display will now show lap number 0 and time 0.00.



The LapTimer shows the time in seconds. If your first lap is 1 minute 7 seconds and 83/100 of a second, the display will show.....



After another lap the display may show.....  
Which means that you completed lap number 2 in 35 seconds  
and 21/100 of a second.

<b>2. 35.21</b>
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From lap 1 to 9 the display shows lap number and lap time up to 999 seconds and 99 hundredths of a second. From lap 10 to 40 the display shows a twofigured lap number and the lap time up to 99 seconds and 99 hundredths of a second.

If you exceed 40 laps without deleting data in the memory, the lap number will be replaced by -- in the display. This means that data from these laps will not be stored in the memory, but the lap times shown in the display are still correct.

### 3. Operating the LapTimer after driving

After the race/test session you can go through your lap times once again by pressing the MODE key [2]. *The LapTimer is now in PIT-MODE.*

The display will show lap 1 and the lap time, e.g. ....

<b>1. 67.83</b>
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With the two arrow keys [3][4] you can flip through the stored lap times. It is possible to "spool" fast by constantly pressing one of the arrow keys.

To increase battery life the LapTimer will automatically be switched off when the LapTimer is in PIT-MODE and no key is activated for 1½ minutes. The information will remain in the memory - even after several weeks. Therefore: *Always leave the LapTimer in PIT-MODE when you are in the pit or go home after driving.* Next time you want to switch on the LapTimer do as described in section 5.

### 4. The memory of the LapTimer

If you wish to retain the lap times in the memory, the LapTimer should be set to PIT-MODE as described in section 3 in which mode the LapTimer will switch off automatically.

You can delete all the data in the memory in any of the following ways.

A The LapTimer is in PIT-MODE and the display is still on. Press the POWER key [5] once.

B The LapTimer is in PIT-MODE but the display is turned off. Press the POWER key [5] twice.

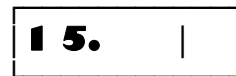
## **5. Operating the LapTimer after a pit-stop**

When you start driving again after a pit-stop - brief or long - the further operating of the LapTimer is subject to the state in which the LapTimer is:

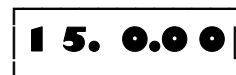
### **A. The LapTimer is in PIT-MODE and the display is still switched on**

If you wish to retain the data in the memory, you should flip to the number of laps that you want to retain, e.g. lap number 15. Use one of the arrow keys [3][4].

When the display shows the wanted lap number, press the MODE key [2] and the display will show.....  
The LapTimer is now ready to receive signals from the transmitter again.



The first time you pass the transmitter, the display will show...



### **B. The LapTimer is in PIT-MODE but the display is turned off**

To switch on the display press the POWER key [5] **once**. Then proceed as described above in section A, i.e. go to the number of laps that you want to retain in the memory by pressing the arrow ▲ key [3]. Then press the MODE key [2] so that only the lap number is shown in the display when you start driving again. The LapTimer is now ready to receive further signals from the transmitter.

*If you want to retain the data in the memory, do not press the POWER key when figures are shown in the display as this will delete the data in the memory.*

### **C. The LapTimer has been switched off by the POWER key**

All data in the memory have been deleted and you start the LapTimer as described in section 2.

## 6.Inserting/changing battery

A 9V battery type 6LF22 or the like should be used. It is recommended to use alkaline batteries which have a working time of 20-25 hours or re-chargeable batteries.

Take off the back plate of the display box [1]. Connect the battery to the battery clip. It may be necessary to bend the ends slightly in order to ensure perfect contact. Insert the battery and re-assemble the box. Take care that no cables are jammed. To avoid oxidation it is recommended to add a drop of acid-free oil to each of the four screws.

The LapTimer has a built-in low battery warning, i.e. "**LO BAT**" will flash in the display when the LapTimer is in PIT-MODE. If so, change the battery to ensure that the LapTimer functions correctly.

It is recommended to remove the battery if the LapTimer is not to be used for some time as the battery might leak and cause damage.

## 7.Maintenance

The LapTimer can be used in all weathers. However, if you have been driving in rainy weather, the LapTimer should be dismantled after driving. Remove the back plate of the display box [1] and the receiver [6] and place all parts in a warm place for 24 hours. Then all parts can be re-assembled and re-installed. If the joint surfaces are oxidized they should be cleaned with a piece of emery cloth or the like, but make sure that these surfaces *are absolutely free from oil*.

## **8.Fault-finding**

**If the LapTimer is switched on but receives no signals, check the following:**

- A. Is the transmitter switched on?
- B. Is the receiver [6] placed horizontally and at the correct height - see section 1.
- C. Is the distance between the transmitter and the receiver too short - should minimum be 2-3 metres.
- D. Is the battery power sufficient - see section 6.
- E. The connection between the battery and the battery clip - see section 6.
- F. Is there moisture inside the receiver [6] and the display box [1] - see section 7
- G. Receiver [6] and transmitter lenses - dirt on the lenses may cause problems.
- H. Does the sun shine direct into the receiver [6]. If so the receiver will automatically turn down the receipt power which could mean that signals are not registered.

**If the LapTimer receives more signals during one lap, check the following:**

- A. Is there more than one transmitter on the track.
- B. Are other types of infra-red transmitters being used.
- C. Do the transmitter and the receiver [6] "see" each other more than once during a lap.

**Does the LapTimer use too much power:**

The reason for this is often that the MODE key [2] is pressed after examination of the lap times during a pit-stop. This turns the LapTimer into DRIVING-MODE and the power is switched on. The LapTimer should instead stay in PIT-MODE and should not be switched on until you are about to drive again - see sections 4 and 6.