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USER'S GUIDE - LapTimer 5001C

Congratulations on your new LapTimer 5001C

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

CONTENTS PAGE

1.Installation

The display box [1] is prepared for installation on the steering wheel. If you want to switch between reading your lap times and RPM 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.

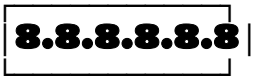
The sensor [7] should be fitted on the spark plug lead by the enclosed cable ties or adhesive tape. It is important that the sensor does not touch the cylinder head or the cylinder.

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.

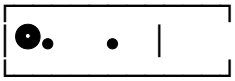
2.Operating the LapTimer before driving

Switch on the LapTimer by pressing the POWER key [5].

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

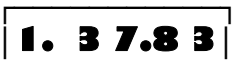


Shortly after the display will show.....
and the LapTimer is ready to receive signals from the transmitter.



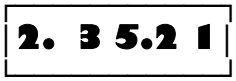
The first time you pass the transmitter the display will show....
The stop watch is now activated and the display will now show lap number **0** and time **0.00**.

The next time you pass the transmitter, the display show e.g. ..
which means that you completed lap number 1 in 37 seconds



and 83/100 of a second.

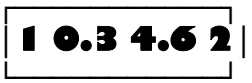
After another lap the display may show.....
Which means that you completed lap number 2 in 35 seconds and 21/100 of a second.



If the display shows .....
you have completed lap 3 in 1 minute, 3 seconds and 22/100 of a second

A maximum of 6 figures can be shown in the display. From lap 1 to 9 the display shows lap number and lap time up to 9 minutes, 59 seconds and 99 hundredths of a second. From lap 10 to 99 the display will show a two-figured lap number and the lap time in seconds and hundredths of a second but *not* the minutes.

After lap 10 the display will show e.g.....
If your first 9 laps were completed in approx. 1 minute and 35 seconds per lap, the 10th lap has then been completed in (1 minute), 34 seconds and 62/100 of a second.



From lap 100 to 500 only the two last figures of the lap number will be displayed. If you exceed 500 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 and RPM shown in the display are still correct.

3.Displaying RPM when driving

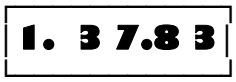
When driving the RPM rounded off to the nearest lower hundred can be seen in the display. You can switch between the lap time and the RPM by pressing the reverse key [8].

If the RPM are 17.384 the display will show .....
This means that you have been driving 9 laps. The RPM will be shown as 17.3 = 17.300 (17.384 have been rounded off to 17.300)

4.Operating the LapTimer after driving

After the race/test session you can go through your lap times and the maximum/minimum RPM per lap 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. .....
If you want to see maximum RPM of this lap, press the reverse key [8]. If you press the reverse key [8] once again the minimum RPM of this lap will be shown



With the two arrow keys [3][4] you can flip through the stored lap times/RPM. It is possible to "spool" fast by constantly pressing one of the arrow keys. When the display shows lap 1, you can jump direct to the last lap, e.g. lap 57, by pressing the arrow ⮟ key [4]. From lap 100 to 500 firstly the lap number and secondly either the corresponding lap time or maximum RPM - alternatively minimum RPM - will be shown in the display when the arrow key is released.

When you have finished going through your lap times/RPM, you switch off the LapTimer by pressing the POWER key [5].

Next time you want to start your LapTimer, you switch on the LapTimer by pressing the POWER key [5]. The LapTimer will automatically switch to the last lap stored and now the LapTimer is ready to receive further signals from the transmitter.

If you want to delete data in the memory, please follow instructions in section 5

5. The memory of the LapTimer

The LapTimer will automatically store lap times/RPM in the memory.

It is possible to print all the data stored in the memory via a DATALOGGER 5000 and a printer (additional equipment). Please see an example of printed data on page 8.

In order to delete data in the memory, the LapTimer must be switched off. Press then the arrow ⮟ [4] and hold it depressed while you press the POWER key [5]. When you release both keys (first the POWER key then the ARROW key) all stored data are deleted.

6.Setting the trig-time

The trig-time is the time that as a minimum must be between two signals sent to the LapTimer. Setting the trig-time is primarily important on tracks where more than one transmitter are placed or on tracks where the transmitter and the receiver can "see" each other more than once during a lap. In order to avoid incorrect signals, it can be advantageous to set the trig-time at approx. 2 seconds below the approx. time that a lap takes. Example: If the approx. time for a lap is 40 seconds, set the trig-time at 38 seconds. (*The LapTimer is delivered with the trig-time set to one second)*.

The LapTimer must be switched off to set the trig-time. Press the MODE key [2] and keep this key depressed while pressing as well the POWER key [5]. Release first the POWER key and then the MODE key. You can now set the trig-time by pressing the arrow ⮝ key [3]. The trig-time will remain stored until you choose to set a new trig-time.

7.Inserting/changing battery

A 9V battery type 6LF22 or the like should be used. It is recommended to use alcaline 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.

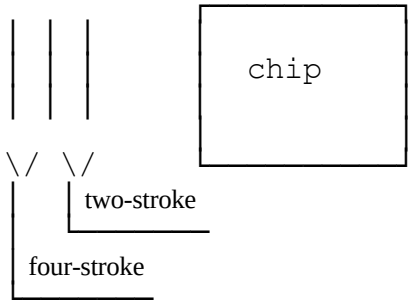
When the LapTimer is in PIT-MODE and the figures in the display begin flashing, this indicates that the battery power is low. The battery must be changed in order to ensure that the LapTimer functions correctly.

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.

8.Changing from two-stroke to four-stroke engine

The LapTimer can be used for two-stroke as well as four-stroke engines. The LapTimer is delivered set up for a two-stroke engine.

It you want to use the LapTimer on a cart with a four-stroke engine, remove the back plate of the display box [1]. Then move the white jumper to the left and the center pins. See illustration below



When the LapTimer is set to a four-stroke engine, RPM will be shown in the display rounded down to the nearest 200, i.e. 14.743 RPM will be shown as 14.6

9.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.*

10.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 7.
E.The connection between the battery and the battery clip - see section 7.
F.Is there moisture inside the receiver [6] and the display box [1] - see section 9.
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.
I.The LapTimer receives a singal only every second time you pass the transmitter. Check if the trig-time has been set too high - see section 6.

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.

The solution to above 3 problems is to set the trig-time - see section 6.

11.Example of printed data

In only 4 seconds all stored data can be transferred (wireless) to the DATALOGGER 5000 and afterwards printed out on a printer. We recommend a Seiko DPU-201-GS as this printer is of absolutely high quality, battery-driven and easily connected to the DATALOGGER. On the print the fastest lap time is marked with a *.

If your Datalogger 5000 was bought before 31.12.95 it needs to be updated, otherwise it does not function with the LapTimer 5001C version. This update can be made at a price of DKK 300,00 excl. of VAT/freight (= 1996 price).

Please contact your UNIPRO LapTimer dealer for further details.

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  UNIPRO RACING LAPTIMER
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DATE:      .....
TRACK:     .....
WEATHER:           .....-
.....
ENG.NO.:   .....
CARB.NO.:          .....-
.....
GEAR R.:   .....

          WHEEL SETUP:
FL:                FR:
RL:                RP:

.....
          TYPE PRESSURE:
FL:                FR:
RL:                RP:
.....
.....
.....
.....

              MAX     MIN
Lap 001     1.04.62  17100    6500
Lap 002     1.04.11  17100    6500
Lap 003     1.03.84  17100    6800
Lap 004     1.03.88  17300    6900
Lap 005     1.03.84  17100    6500
Lap 006     1.03.38  17100    6800
Lap 007     1.04.20  17100    6700
Lap 008     1.03.22  17200    6500
Lap 009     1.03.51  16900    7000
Lap 010     1.04.72  17200    7000
Lap 011     1.03.29  17100    6900
Lap 012     1.03.02  17200    6800
Lap 013     1.03.38  17100    6900
Lap 014     1.02.75* 16900    7000
Lap 015     1.03.53  17100    6500
Lap 016     1.05.56  17100    6600
```

Lap 017	1.02.98	17000	6800
Lap 018	1.05.74	16800	7000