

UniGo 3005/5005 Laptimer  
User Guide

## Important safety instructions

### PLEASE READ THE SAFETY INSTRUCTIONS CAREFULLY

- Read the instructions.
- Keep these instructions.
- Follow all instructions.
- Be careful not to drop it on the ground.
- Do not leave it under heavy objects.
- Be careful not to cut the cable with sharp objects.
- Clean only with a dry cloth.
- Refer all servicing to approved service personnel.

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# Copyright and acknowledgements

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[www.uniproLaptimer.com](http://www.uniproLaptimer.com)

## DESIGN AND PRODUCTION

Designed and manufactured in Denmark by Unipro ApS.

The UniGo Laptimer series was designed by Palle Schultz, Denmark:  
[www.Palleschultz.dk](http://www.Palleschultz.dk)

Unipro reserves the right to make changes and improvements to any of the products described in this document without prior notice.

Part numbers:  
01-03-001 UniGo 3005 basic kit (black)  
01-03-001 UniGo 5005 basic kit (black)

## COPYRIGHT

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## ABOUT THIS USER GUIDE

This guide was produced by Unipro ApS.

UniGo 3005/5005 User Guide version 1.00

Made for UniGo firmware version 1.0x.xxx

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# Introduction

This User Guide contains all relevant information about your new UniGo Laptimer.

Get started with the UniGo in 2 minutes with the Quick Guide.  
Read all about the advanced features and functions in the Reference Guide.

Before you start, please check that your UniGo package contains the accessories described below.

## CONTENT OF PACKAGE

The UniTire package contains the following:

- UniGo Laptimer.
- RPM wire.
- Power cable.
- Battery pack for 6 x AA cells.
- This User Guide.

If any of these items are missing please contact your dealer.

Note: You should retain the packaging in case you need to transport the unit.

## UNIQUE UNIGO IDEAS

UniGo combines many new ideas not seen before in a Unipro Laptimer:

- High resolution display with gray tones. Providing more than 40000 pixels with 16 gray levels makes text and graphs easy to read.
- High-speed USB connector for fast and easy upload of data to a PC or MAC.
- Standard file system means no driver needed on the PC or MAC. Looks like a standard Flash drive.
- Very high brightness, fully programmable warning LEDs. Clearly visible in full daylight.
- The "Stealth mode" enables you to hide

the pressure values from prying competitors, only showing if your tire pressure is at, above or below target.

- The "Sequence mode" allows you to save tire pressure values in a specified order for later analysis - and do it very quickly!
- The user interface comes in many different languages. Possible for the user to add a new.

## EASY TO USE

Even with all the advanced features, the Laptimer is very easy to use.

The graphical display makes it effortless to see and analyze the lap times and data values saved in the Laptimer.

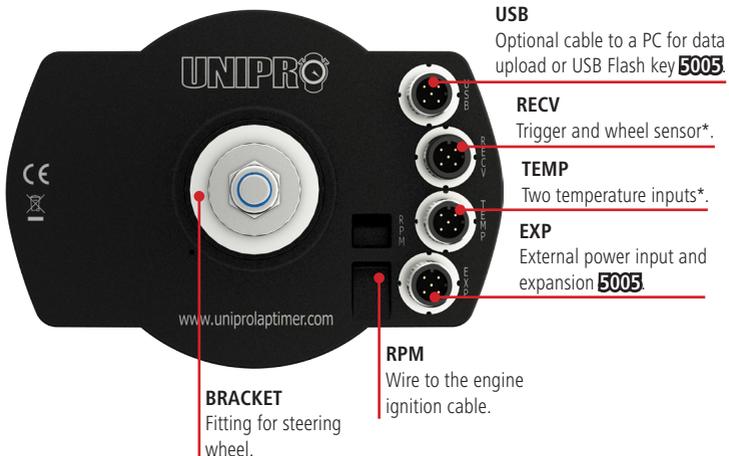
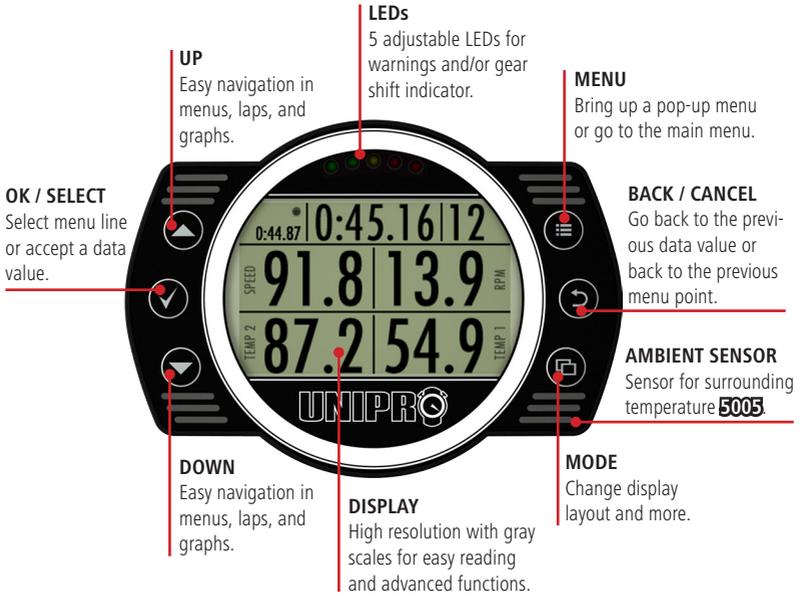
The high resolution display with 16 gray tones is easy to read, and supports different sizes of text and numbers.

The feedback we get from drivers and teams about UniGo tells us that we have succeeded in making the UniGo easy to use.

# Overview

Please note that this user guide is intended for both UniGo 3005 and UniGo 5005. It is clearly stated throughout the manual when the function is different on the two Laptimers.

To identify the function is for 3005 only, a small **3005** icon is shown and for 5005 only it is **5005**.



**Actual size**  
1:2

\* Cable splitter needed

# Specifications

<b>Lap memory</b>	200 <b>3005</b> Unlimited <b>5005</b>
<b>Log memory</b>	120 minutes <b>3005</b> Unlimited <b>5005</b>
<b>Channels logged</b>	Lap time, position, RPM, 2 x temperature, speed, gear, voltage. Max. 128 channels with expansion boxes <b>5005</b>
<b>Resolution</b>	1/1000 sec, 1 mm, 1 RPM, 0.01 °C, 0.01 km/h, 0.01 V
<b>Logging frequency</b>	10 Hz (fixed)* <b>3005</b> 1 - 60 Hz (programmable) <b>5005</b>
<b>Sensor inputs</b>	RPM, 2 x temperature**, speed**, trigger
<b>GPS</b>	No
<b>Trigger</b>	Magnet, infrared, active loop
<b>Split times</b>	Magnet <b>3005</b> Magnet, wheel sensor <b>5005</b>
<b>Real-time-clock</b>	No <b>3005</b> Yes <b>5005</b>
<b>Power supply</b>	4.5 - 18V DC***. Programmable low-battery warning
<b>Expandable</b>	No <b>3005</b> Yes <b>5005</b>
<b>Display</b>	256 x 160 pixels, 16 gray tones, top view
<b>Backlight</b>	No
<b>LED warnings</b>	5 high-brightness, fully programmable
<b>CPU</b>	32-bit low-power
<b>Data upload</b>	USB high-speed via optional USB cable or Unipro Flash key <b>5005</b>
<b>Buttons</b>	Up, down, ok, back, menu, mode
<b>Software included</b>	Basic <b>3005</b> / full <b>5005</b> edition of Off Camber Data analyze software. Both Windows and MAC version
<b>Casing</b>	Lightweight plastic
<b>Waterproof</b>	Yes
<b>Dimensions</b>	131.5 x 94.0 x 18.0 mm (5.18" x 3.70" x 0.71")
<b>Weight</b>	300 g (10.58 ounces)****

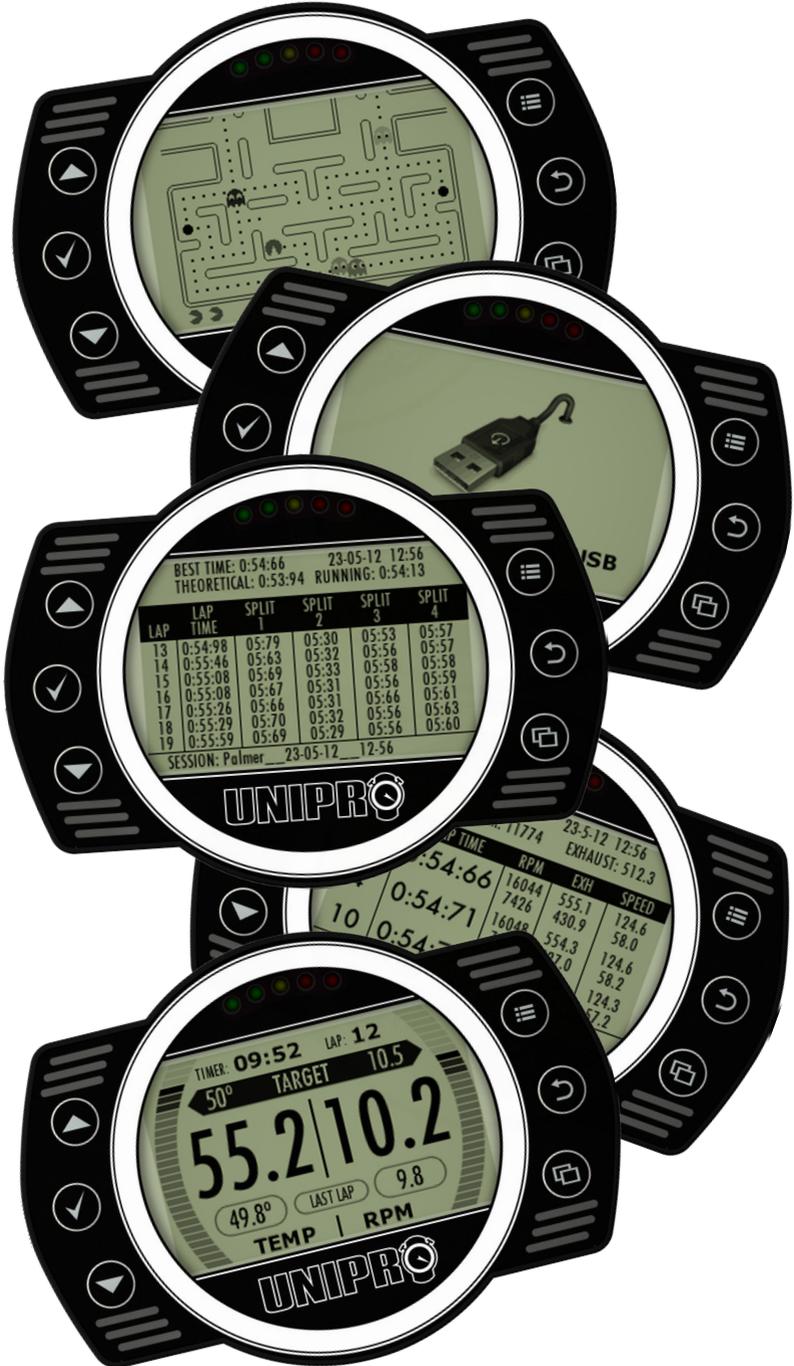
\* **Frequency:** Voltage logged at 1 Hz.

\*\* **Shared connector:** Optional cable splitter needed.

\*\*\* **Direct supply:** From kart battery through DC/DC the range is 8-14 V DC.

\*\*\*\* **Weight:** Includes Laptimer, power cable, RPM cable and fittings.

## Examples



# Installing the Laptimer

A good installation is key to get good and reliable operation of UniGo. Read this installation guide and learn how to:

Install the Laptimer, attach cables and sensors and how to mount it all on the go-kart.

**You will be ready to go in 10 minutes...**

## MOUNTING ON STEERING WHEEL

The first step of the installation is the mounting of the Laptimer on the steering wheel. The Laptimer should be mounted at the top of the steering wheel to make it easy to read during driving and to operate it in the pit.



*UniGo mounted at the top of the steering wheel for easy reading and operation.*

The Laptimer is mounted using the included bracket and you need to be carefully to mount all the hard and soft discs in the right order to avoid vibrations and to ensure the correct distance from the steering wheel.



*Start the installation with a soft disc.*



*Finish with a soft disc, hard disc, washer and the nut.*

## Installation



*UniGo mounted at the correct distance to the steering wheel.*

Before tightening the nut, make sure that all the cables can be connected without conflicting with the steering wheel or other obstacles.

### CONNECTING POWER

UniGo is supplied with a battery holder with room for six AA batteries. You can use standard AA Alkaline batteries or rechargeable types like NiMH. Make sure the battery holder is securely attached to the frame. If any of the batteries are allowed to move and loose contact, the Laptimer will not functioning properly.



*Battery holder with six AA Alkaline batteries powering UniGo. Rechargeable can be used.*

Another alternative is to power UniGo from a standard rechargeable battery pack or from the go-kart battery through the optional DC/DC converter.



*Rechargable battery pack powering UniGo.*

A rechargable battery pack will give a lot of power with a low weight. It can be recharge using the same connector as used for the go-kart's battery.

### CONNECTING RPM WIRE

The RPM wire is used to pick up the engine's revolution count by sensing the pulses on the ignition cable going from the ignition coil to the spark plug.

The ignition is a very noisy signal and extra care should be paid on installing the RPM wire. The wire can be removed from the Laptimer and attached again if needed. It is simply a wire going through two holes with a loop.



*Run the RPM wire away from other cables.*

To make the best possible installation, keep the RPM wire away from all other cables.

# Installation



RPM wire attached with cable ties.

The RPM wire needs to run all the way from the Laptimer to the engine on the back. Secure the wire all the way with cable ties.



*The RPM wire is running alone all the way to the ignition.*



*RPM wire mounted to pick up the ignition signal from the ignition wire.*

The RPM wire is attached to the ignition cable in a way that gives a good pick up of the signal. Twist the wire around the cable and make a loop at the end like shown on the picture.

## RUNNING CABLES

The installation of the Laptimer should be seen

as a permanent installation on the go-kart and the time to run the cable in a nice way is time well spend.



*Cable fixed to frame. Run RPM wire separately.*

Use plenty of cable ties and make sure to use nice soft bends on the cable. When tightening the cable ties, make sure not to tighten them too hard to avoid squeeze the cable.



*Cable fixed to the frame with cable ties.*

Running the cables from the Laptimer on the steering wheel is the biggest challenge. The cable need to be mounted in a way that the steering wheel can be moved freely.

## Installation



*Cable fixed to the frame with cable ties.*

Attach the cables together with a cable tie and attach the bundle to the steering column. Make a soft bend with a suitable length and check the steering wheel have total freedom in turning. The cables should not pull at the connectors when turning and no sharp bend should be allowed.



*Professional installation will ensure professional results.*

### SPLITTERS

Cable splitters are used to increase the number of sensor that can be connected to the Laptimer.



*Gray splitter for temperature and black for receiver and speed.*



*Two splitters mounted to increase number of sensors.*

Two different cable splitters are used. A gray version is used for temperature and a black version for everything else.



*The splitters reduce the number of cables to the steering wheel.*

The splitters reduces the number of cables to the steering wheel and is part of the permanently installation. Make sure that splitters are securely fasten to the frame.

# Installation

## MAGNET RECEIVER

The magnet receiver uses permanently magnets placed in the asphalt to trigger the Laptimer. There is typically between 1 and 3 magnets on a track. If there are more than one, the rest is used for split points.



*Magnet receiver mounted at the lowest point on the go-kart.*

The magnet receiver need to be mounted as close to the asphalt as possible, typically on the bottom plate at the front. Use the included bucket and drill a hole in the plate. The receiver need to be facing either against the front or the rear. Do not mount it facing left or right.

## IR RECEIVER

The IR receiver use infrared light to trigger the Laptimer. A Unipro IR transmitter is placed at the finish line and the infrared light goes across the track. The infrared receiver placed on the kart will receive the infrared beam and trigger the Laptimer.



*IR receiver mounter at the front, facing the right way at the finish line!*

The IR receiver is installed on the front of the kart. It should be pointing to the left or right depending on the placement of the transmitter.

## SPEED KIT FRONT

The speed kit for the front wheel is used if the kart do not use brakes at the front wheels. Start by mounting the the centering bush the bearing. This will be used to ensure a perfect centered sensor disc.



*The centering bush is placed in the bearing.*



*Sensor disc is fixed using the three screws and centered using the centering bush.*

Then place the sensor disc and fasten the three screws. Make sure to tighten them equally.

## Installation



*T-junction mounted in the cooling water*



*T-junction mounted in the cooling water hose with a temperature sensor.*

### SPEED KIT REAR

The speed kit for the rear axle is available in different sizes to match the axle used. Mount the sensor disc and tighten the screw to secure it. The sensor disc has six magnets to give a good resolution on speed and distance.



*Speed kit mounted on rear axle. Notice the nice bend on the wheel sensor cable.*

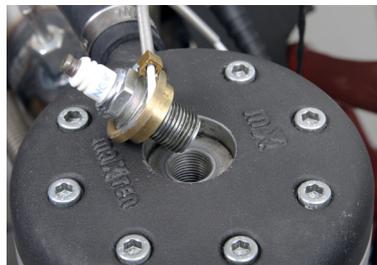
The wheel sensor is mounted using the included fitting. The important part is to get the distance between the sensor and the magnets 3 - 10 mm and to make a soft bend on the cable as seen on the picture.

### WATER TEMPERATURE

The water temperature sensor is typically mounted in the T-junction that goes into the cooling water hose. First mount the sensor in the T-junction and then mount the T-junction the hole. Make sure the hose is waterproof by tightening the clamps.

### CYLINDER TEMPERATURE

The cylinder head temperature is measured just below the spark plug. The cylinder temperature sensor is available in two different sizes and it is important to order the right one.



*Sensor mounted instead of the washer on the spark plug.*



*Cylinder head temperature sensor mounted below the spark plug.*

Before mounting the cylinder sensor, remove the washer from the spark plug.

# Installation

## EXHAUST TEMPERATURE

The exhaust sensor is mounted in the exhaust pipe. The fitting for the exhaust sensor is welded to the exhaust 12 cm (4.7 inch) from the backside of the piston. That way the sensor measures the temperature of the gas and not the flames.

Start by welding the exhaust fitting to the exhaust pipe and then drill a  $\varnothing 4.5$  mm hole through the fitting for the sensor.

**Always check if local regulation might prevent you from using an exhaust temperature sensor in the race.**



*Drill a  $\varnothing 4.5$  mm hole for the sensor through the exhaust fitting.*



*Exhaust fitting welded on the exhaust pipe.*

Place the exhaust sensor in the fitting and fasten the nut. Do not tighten it too much.



*Exhaust sensor mounted with a big soft bend on the cable.*

Make sure the cable is not touching the exhaust pipe and make a soft bend on the cable like shown on the picture.

# Installation

# Quick Guide

Read the Quick Guide and learn how to use the basic functions of the UniGo:

Turn UniGo on and off, start logging data, analyze them on UniGo and transfer them to a computer with the optional USB cable.

**You will be ready to go in 5 minutes...**

## SIX BUTTONS

For easy operation we made six buttons on UniGo. They are clearly marked with a small icon, but here is the basic description of each button.

- ▲ The **up** button is used to move up in menus and for increasing values.
- ▼ The **down** button is used to move down in menus and for decreasing values.
- ✓ The **ok** button is used to go to the next menu, open up a setting for changing and for accepting the changes made.
- ≡ The **menu** button is used to go to the main menu and to bring up the pop-up menu.
- ↶ The **back** button is used to go back to the previous menu and to cancel any changes made.
- ⊞ The **mode** button is used to change between different modes. That could be different run mode screens, analyze screens etc.

## 2 WAYS TO PRESS BUTTONS

To use UniGo, you need to know how to press the buttons in 2 different ways:

1. A short press - ▲ ✓ ▼ ≡ ↶ ⊞
2. A long press - ▲<sup>1</sup> ✓<sup>1</sup> ▼<sup>1</sup> ≡<sup>1</sup> ↶<sup>1</sup> ⊞<sup>1</sup>

For the general use of UniGo, it is only necessary to use the short press.

When changing values, it is possible to keep pressing a button to speed up the change. After a short while, the key will start to repeat and after a little while more, it will start to accelerate in the change.

## TURN UNIGO ON

There are 2 different ways to turn UniGo on:

1. Press the **mode** button (⊞) shortly to start the Laptimer manually.
2. Start the engine and UniGo will start when it detects the RPM signal.

UniGo starts by showing the startup screen including information about firmware version number, battery voltage, memory used and the environment temperature. It will also show the temperature sensors connected and what type they are.

The startup screen will show an animated Unipro logo and the owners name. If no owner name is programmed, it will show the Laptimer's serial number.

## Quick guide



Startup screen with information about UniGo and temperature sensors.

When UniGo is starting up you can press different buttons to go directly to different screens. Pressing a button will also skip the startup screen.

- Press the **mode** button (⏏) to go directly to run mode.
- Press the **back** button (⏪) to go directly to analyze mode with the latest session selected.
- Press the **menu** button (≡) to go directly to the main menu.

If you do not press any buttons, UniGo will start up in analyze mode.

**You can add your own startup picture. Just copy a 4 bpp bitmap files called "startup.bmp" into the /Pictures folder. The size should be 135 x 160 pixels.**

### SCREENSAVER

The purpose of the screensaver is actually not to save the screen, but to tell you that UniGo has been doing nothing for quite some time. The time before the screensaver screen is shown is programmable from the UniGo setup menu. Please see "SCREENSAVER TIME" on page 32. It is however possible to enter the screensaver manually.



Start the screensaver from the popup menu.

Either press the **menu** button (≡) from the main menu and select "START SCREENSAVER" or press the **menu** button (≡) until the screensaver screen is shown.



Screensaver ready for adjusting the countdown timer value.

The screensaver provides one very useful feature. A countdown timer (and for UniGo 5005 also the clock). A small help text is displayed at the bottom of the display to remind you about this feature. Simply press the **up** button (▲) to adjust the timer. Each press will adjust the timer one minute. When finished adjusting the timer, it will start counting down to zero for every second.



Screensaver with the countdown timer activated. **3005**

## Quick guide



Screensaver with the countdown timer activated including time and date. **5005**

When the timer reach zero a alarm icon is shown in the display and the yellow LED is flashing.



Screensaver after count down to zero. The yellow LED will be flashing. **3005**

You can use this countdown timer to make sure you are in time for the next race. Just remember that the automatic power off might turn UniGo off, before the countdown timer reaches zero! To adjust the power off time see "AUTO POWER OFF TIME" on page 33.

**If you want to stop the countdown timer, use the down button (▼) to adjust it to zero.**

### TURN UNIGO OFF

There are a lot of different ways to turn UniGo off.

Press the **mode** button (⏻) and hold it down to turn UniGo off. When you see "POWER OFF" in the display, you can release the button again.



Power off screen when holding down the **mode** (⏻).

UniGo will also turn itself off if no button is pressed and no RPM, speed or trigger is detected after a preselected time. Please see "AUTO POWER OFF TIME" on page 33. You can also turn it off from the main menu by pressing the **power** icon or from the popup menu in the main menu. Or finally you can press the **menu** button (≡) to bring up the popup menu like shown here and select "POWER OFF".



Power UniGo off from the popup menu.

It is important not to turn UniGo off by removing the power. Important information might be stored when UniGo powers down.

### BUILT-IN HELP

When you move around in menus, UniGo will display one line of help text at the bottom of the display. Use this line to get familiar with the different settings in UniGo.

## Quick guide



*Example on the help text describing the current selection.*

### DRIVING

When UniGo detects a RPM signal from the engine, it will automatically go to run mode. It will automatically start to log all data from sensors and measure lap and split times. Before you can start driving there are just a few settings you need to do. If you use a magnet trigger, you need to set the following settings:

- Magnet count: See "MAGNET COUNT" on page 26
- Magnet delay: See "MAGNET DELAY" on page 26
- Wheel size: See "WHEEL SIZE" on page 27



*Typically run mode 1 when driving.*

There is not much you can do in run mode except concentrating on driving! You will be able to change between three predefined layouts. This will toggle through the different run modes. UniGo will remember the one you prefer and it will start in the same mode as the last time.

- Run mode 1 is for four data fields.
- Run mode 2 is for gear karts with two data fields and last lap data.
- Run mode 3 is for two data fields with best lap information and last lap data.

### ANALYZING

When you move around in menus, UniGo will

### TRANSFER TO A COMPUTER

It is very easy to transfer data to the Off Camber Data program. Just go to the main menu and insert the optional USB cable in the top connector.



*USB mode when connected to a computer.*

When the cable is attached, UniGo cannot be operated and the PC use the Flash drive. The Off Camber program can then transfer the data files.

**Like any other Flash drives you need to eject the drive safely before removing the cable from the computer.**

### TRANSFER TO AN OPTIONAL UNIPRO USB FLASH KEY 5005

It is very easy to transfer data to the Off Camber Data program. Just go to the main menu and insert the optional USB cable in the top connector.

## Quick guide



*UniGo USB flash key mounted in the USB connector.*

**That's how easy it is!** If you are ready for some more advanced features, then read the Reference Guide later in this manual.

Also check [www.uniprolaptimer.com](http://www.uniprolaptimer.com) for news and updates.



*USB menu when flash key is inserted.*

When the flash key is mounted, the usb menu will appear.

Simple press "COPY NEW SESSIONS" and all new sessions will copied to the USB flash key. Depending on the "AUTOCLEAR AFTER TRANSFER" on page 34 the sessions will automatically be deleted after the transfer.

# Quick guide

# Configuring the Laptimer

This chapter will learn you all about the configuration of UniGo.

Turn UniGo on and off, view current tire pressure, save the pressure values for all tires and recall them later.

**You will be ready to go in 2 minutes...**

## ENTER SETUP MODE

 You enter the Setup menu directly from the main menu.



*Entering setup mode is from the main menu.*

When entering setup you will see the setup menu as shown below. Here you will find all settings divided into different submenus. These submenus are explained in this chapter.



*The setup menu contains the icons for the different settings.*

## GENERAL SETUP FEATURES

In Setup mode you use the **up** ( $\blacktriangle$ ) and **down** ( $\blacktriangledown$ ) buttons to move around in the menu and press the **ok** button ( $\checkmark$ ) on the relevant line to change the value. To accept the changes press the **ok** button ( $\checkmark$ ) again or press **back** ( $\leftarrow$ ) to cancel the changes and revert to the original value.

If a menu line is ending with ":" it means the value can be changed directly by pressing the **ok** button ( $\checkmark$ ). If the line is ending with "..." it will go into another submenu.

All settings are stored in two different files. The first file contains all the local settings and it is called "LocalSetup.bin" located in the \Setup folder. The other file is called "GlobalSetup.bin" and located in the same folder. The global setup file can be copied from one UniGo to another. It contains all the settings that makes sense to copy from one UniGo to another.

All settings are stored and will not be cleared, even if you remove the power from UniGo.

## MOST USED MENU

$\overset{1}{\underset{2}{\underset{3}{\leftarrow}}}$  The most used menu contains all the settings you use very often. You will find the same settings in other submenus, but to make it easy, they are also located here.

## Setup mode



All settings you use all the time are located in the most used menu.

Use the **up** (▲) and **down** (▼) buttons to move around in the menu and press the **ok** button (✓) on the relevant line to change the value. To accept the changes press the **ok** button (✓) again or press **back** (⏪) to cancel the changes and revert to the original value.

### TRACK MENU

🔑 The track menu contains all the settings related to the track.



All settings related to the track are on the track menu screens. Please notice the difference between 3005 and 5005.

Use the **up** (▲) and **down** (▼) buttons to move around in the menu and press the **ok**

button (✓) on the relevant line to change the value. To accept the changes press the **ok** button (✓) again or press **back** (⏪) to cancel the changes and revert to the original value.

### TRACK NAME

It is much easier to identify data if you enter for instance the track name. The track name is simply a text used to identify the track. Enter it as described here: "ENTERING TEXT" on page 34.

### RECEIVER

The receiver is used to trigger the Laptimer at the finish line. The Laptimer can use all types of receivers. Chose between IR (infrared), Loop (AMB active loop) and magnet (magnet stripe in the track). Each receiver is a different kind of hardware and the setting need to match the physical receiver connected to the Laptimer.

**If the receiver is connected through the black cable splitter, it should be connected to input 1.**

### MAGNET COUNT

If the receiver is set to magnet, the Laptimer need to know the number of magnets on the track. This is the total number of magnets the kart will pass on one lap.

### MAGNET DELAY

This is the number of magnets you need to skip when going from the pit to the finish line. If the delay is set to 2, it means that on the out lap (or first lap) the Laptimer ignores the first two magnets and then start the Laptimer when passing the third one.

### IR OR LOOP DELAY TIME

If the receiver is set to infrared or loop, you can chose a minimum delay from one trig to the next. This is the minimum time allowed between two trigs. This is primarily used if an infrared transmitter can reach across the track

# Setup mode

and then trigger the Laptimer more than once on the same lap.

## SPLIT TYPE **5005**

The typically split type is using several magnets per lap. Sometimes it a better option to use the wheel sensor for setting your own splits.

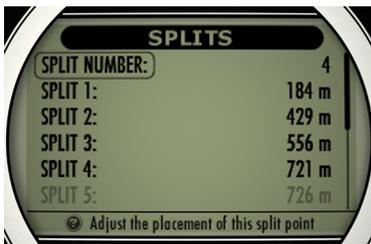
**To get reliable splits, make sure the sensor is mounted on a wheel without brakes.**

## SPLITS **5005**

The splits menu is a submenu where all the individual split points are set. It is possible to set up to 8 split points per lap. The 8 split points will give you 10 times per lap. You will get 8 split times, and then an extra time from the last split point to the finish line. And then of course the lap time.

## SPLITS MENU **5005**

The first thing to set is the number of splits per lap. This can be between 1 and 8. When the split count is changed, the correct number of split points are enabled for editing. Set each point as you like and enter the number in either meters or feet.



*Splits from wheel sensor with 4 splits programmed.*

**Notice that the split points are part of the global setup and they can easily be moved from one Laptimer to another.**

## KART MENU

 The kart menu contains all the settings related to the kart.



*All settings related to the kart are on the kart menu screen.*

Use the **up** (▲) and **down** (▼) buttons to move around in the menu and press the **ok** button (✓) on the relevant line to change the value. To accept the changes press the **ok** button (✓) again or press **back** (⏪) to cancel the changes and revert to the original value.

## WHEEL SIZE

The wheel circumference is entered in either millimeters or inches and you need to measure this quite often to keep the system accurate. The best is to use a soft tape measure and do it every time you go out from the pit. It will have influence on the speed and the tire wear counters.

**Remember to measure the wheel where the speed sensor is mounted!**

## TIRE WEAR MENU

The track menu contains all the settings related to the tire wear counters.

## Setup mode



*Tire wear menu with counter no. 2 active.*

Use the **up** (▲) and **down** (▼) buttons to move around in the menu and press

### USE COUNTER NUMBER

UniGo have five independent tire wear counters. Each counter can keep track of the distance each set of tires has driven. Only one of the wire wear counters are used at a time.

### COUNTER no

The counter number 1 - 5 menu contains each of the tire wear counters. Here you can see the counter, adjust it and reset it.

### COUNTER no MENU

There is one counter menu for each tire wear counter.



*Screen showing menu for tire wear counter number 2.*

The line with the tire wear counter is used to see the counter value and manually adjust it. If you forget to change the tire wear counter number when changing the tires, you can add the distance to the correct counter manually.

### RESET COUNTER

If the tires are changed you can reset the tire wear counter here.

### NAME / TYPE

It is possible to enter a text describing the kart or its type. Please enter the text as described under "ENTERING TEXT" on page 34.

### WHEEL MAGNETS

The standard wheel sensor disc for karting includes 6 magnets per revolution. But if you use UniGo on other racing machines, you might use less magnets per revolution. An example could be a motorbike with only one magnet mounted on the wheel. The number of magnets can be adjusted from 1 to 6.

### NUMBER OF GEARS

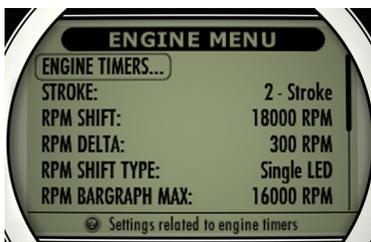
The track menu contains all the settings related to the track. Use the **up** (▲) and **down** (▼) buttons to move around in the menu and press

### LEARN GEARS MENU

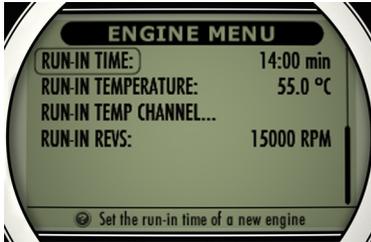
The track menu contains all the settings related to the track. Use the **up** (▲) and **down** (▼) buttons to move around in the menu and press

### ENGINE MENU

 The engine menu contains all the settings related to the engine.



## Setup mode

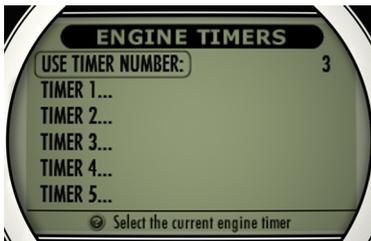


All settings related to the engine are on these two engine menu screens.

Use the **up** (▲) and **down** (▼) buttons to move around in the menu and press the **ok** button (✓) on the relevant line to change the value. To accept the changes press the **ok** button (✓) again or press **back** (⏪) to cancel the changes and revert to the original value.

### ENGINE TIMERS MENU

The engine timer menu contains all the settings related to the five engine timers.



Engine timers menu with timer no. 1 active.

Use the **up** (▲) and **down** (▼) buttons to move around in the menu and press **ok** button (✓) on the relevant line to change the value. To accept the changes press the **ok** button (✓) again or press **back** (⏪) to cancel the changes and revert to the original value.

### USE TIMER NUMBER

UniGo have five engine timers, but only one of them is active at a time. You can use one timer for each of your engines to keep track of the number of hours used. Remember to change the timer number when changing engine.

### TIMER no MENU

The timer number 1 - 5 menu contains each of the engine timers.



Engine number 3 is used for 5 hours and 26 minutes.

Here you can see the timer value, manually adjust it and reset it.

### TIMER no

The line with the engine timer is used to see the timer value and manually adjust it. If you forget to change the engine timer number when changing the engine, you can add the time to the correct timer manually.

### RESET COUNTER

If the engine is rebuild or a new engine is used, you can reset the engine timer here. Change the value to Yes and press the **ok** button (✓).

### STROKE

The engine stroke is typically only set once. Adjust it to the stroke of the engine. It can be set between 1- and 6-stroke. Please notice that some engines works differently than expected, so if you if the RPM showing incorrect values, try to adjust the stroke setting.

### RPM SHIFT

When using gears the RPM shift setting is important. The gear shift indicator is depending on two settings. The RPM shift value and the RPM delta value. The RPM shift value is set to

## Setup mode

the engine revolution you want to shift gear at. If you want to shift at 12500 RPM, you need to set this value at 12500.

All five LEDs are used for gear shift indicator, but they have higher priority than normal LED warnings. This means, that even if the warning LEDs might be turned on or are blinking, the shift lift overrules this and turn all the LEDs into a shift light indicator when needed.

### RPM DELTA

The RPM delta value is the "distance" between the LEDs when used as a shift light indicator. If you for example want to shift at 12500 RPM and set the RPM delta value to 300, the shift light will turn on at 11900, 12200, 12500, 12800 and 13100 RPM. The smaller delta value, the faster reacts the shift light.

### RPM SHIFT TYPE

The RPM shift lights always blinks in a flashy way, but with this setting you can select if the indicator uses the LEDs as single LEDs or all at once. If set to all at once, all LEDs will flash when the RPM shift point is reached and the RPM delta value will not be used.

### RPM BARGRAPH MAX

When using the RPM bargraph on the run mode 2 screen, you need to set the maximum RPM value that could be shown. The bargraph covers from 0 to 10000 RPMs. If you set the maximum value to 13000, the RPM bargraph will show values from 3000 to 13000 RPMs.

### RUN-IN TIME

When breaking in a new engine you have to set the time the driver should run before returning to the pit. In engine run-in mode, the lap time is not shown, but instead a count down timer. This value is the starting value of this counter.

### RUN-IN TEMPERATURE

The temperature is typically very important

when breaking in a new engine and here the target value is set. The target temperature is the temperature you want to aim at, and do not want to exceed too much.

### RUN-IN TEMP CHANNEL

Depending on temperature is connected to either the temp 1 or temp 2 input, you can select the temperature channel used when breaking in a new engine here.

### RUN-IN REVS

The most important parameter when breaking in a new engine is the target RPM value. Here you set the RPM value the driver should aim at, but not exceed too much.

### UNIGO MENU

 The UniGo menu contains all the settings related to the UniGo.



# Setup mode



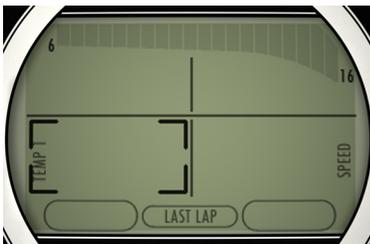
Use the **up** (▲) and **down** (▼) buttons to move around in the menu and press the **ok** button (✓) on the relevant line to change the value. To accept the changes press the **ok** button (✓) again or press **back** (⏪) to cancel the changes and revert to the original value.

## LANGUAGE

UniGo can speak several different languages. Here you can chose between the available languages. All text is changed to the new language as soon as it is selected. The name of the language is always a three letter abbreviation. Even if you select a language you cannot read, you can still see the names of the languages.

## SET UP SCREENS

The different run modes have different number of data fields. All of them are configurable. This is done from the screen setup screen.



Setup run mode screens. Run mode 2 shown here.

Move around between the different channel fields with the **up** (▲) and **down** (▼) buttons. The active channel field is clearly marked with a rectangle around it. To change

the channel, simply press the the **ok** button (✓) to bring up the channel select popup.

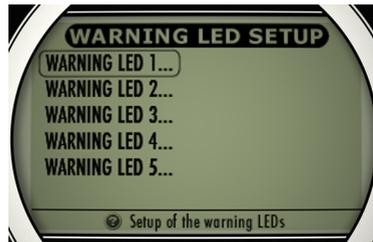


Select the channel from the popup window.

All available channels are listed including the not so typical ones like "engine timer" and "none". Accept the new channel by pressing the **ok** button (✓).

## WARNING LED SETUP

The 5 LEDs are all programmable. This is done from the warning LED setup menu. There are one menu for each warning LED.



Warning LED menu. LED blinking at the same time.

When moving around in the setup menu, the corresponding LED will blink to make it easy to identify each LED. When selecting a LED you will get to the submenu with all the settings for that specific LED.

## Setup mode



*Simple setup of one warning LED.*

The setup of a warning LED consist of several settings. Here is a short explanation of each setting.

**Channel:** The channel is the most important setting. A popup lets you select the channel you want.

**Max:** The maximum value of the channel before the warning LED is active. When the channel gets above this value, it will warn you.

**Min:** The minimum value of the channel before the warning LED is active. When the channels gets below this value, it will warn you.

**Ignore under:** If the minimum value is set, the ignore under value can be used too. To avoid a constant warning when the channel value is below the minimum warning, this setting will ignore the warning below a certain value. This is typically used for engine water temperature warning.

**Blink type:** The blink types are "constant", "slow" and "fast". Fast is typically used by the shift light, so if that is enabled, try to avoid it for the warnings.



*Example on a more complex warning LED setup. Here all the settings are used.*

In the example above, all the settings are used for the temperature 1 channel. Here we can see that this channel is used for the cylinder temperature. Programmeng the warning like this will give the following warning. The LED will blink slowly when the temperature is between 45 and 70 °C and then again if the temperature is above 85 °C.

**Please notice that the same channel can be used for more warnings.**

### LCD CONTRAST

Here you can set the screen contrast - that is the contrast between the screen and the text / numbers on the screen.

The contrast can be set to a value between -15 and +15. You will see the contrast change at the same time.

### LED BRIGHTNESS

The LEDs' brightness can be adjusted from 0% to 100%.

The LEDs are very powerful and running them at high brightness can be dangerous for your eyes. Always keep them at the lowest brightness level, but still visible at full sunlight. Do never look directly into them!

### SCREENSAVER TIME

When UniGo is not used for a certain time it will enter in the screensaver mode. This time can be set from 1 minute to 30 minutes in steps of 1 minute.

# Setup mode

## AUTO POWER OFF TIME

When no buttons are pressed and the Laptimer is not detecting any signals from RPM, speed and the trigger it will automatically power off to save the battery. This time can be set between "always on" and 30 minutes in steps of 30 seconds. If set to "always on" it will never turn off.

## TEMPERATURE

UniGo might be used with temperature displayed in either Celsius or Fahrenheit. With this setting you can chose between the two.

## UNIT

When using UniGo in different countries, it might be necessary to change the different units between Metric and Imperial. Metric will set speed to kmh, length to meters, sizes to mm. Imperial set speed to mph, length to yards and sizes to inches.

## LAST LAP DATA

When the finish line is passed, the Laptimer can show different information on the last lap. The different settings are "Off", "Max. values", "Delta time", and "Both". Here is a short explanation on what the settings does.

**Off:** No special data values are shown when passing the finish line. Everything working like normal.

**Max. values:** The maximum values from the previous lap are shown when passing the finish line. Please notice that not all channels have maximum values. An example is the gear channel.

**Delta time:** When passing the finish line the delta time is shown. That is the time from the lap just finished to the best lap time.

**Both:** Both "max. values" and "delta time" is shown when passing the finish line.

## FREEZE TIME

When the last lap data is used, the display will show the selected values for a certain time. This time can be set from 3 to 20 seconds.

## SPLIT OPTION

When splits are being used the Laptimer can do different things when passing a split point. The options are "None", "Light", "Display", and "Light + display". Here is a short explanation on what the settings does.

**None:** Nothing special is done when passing a split point.

**Light:** When a split point is passed, the split time is compared to the best split time and if the new split is better, the green LED is turned on, otherwise the red LED is turned on. The LED is only turned on for 2 seconds.

**Display:** When a split point is passed, the split time and the split number is shown in the display. The time and number is shown until the next trigger is passed. When passing the finish line, the Laptimer will show the lap time and lap number instead.

**Light + display:** Both split light and split display is active when passing split points.

## BATTERY WARNING

Typically UniGo is powered from a battery. To show a low battery warning in the display you need to set the battery warning to the right value. It totally depends on the battery used. The value set is the value when the battery is considered empty. The first warnings displayed in the display is like this:

**100%:** battery warning value + 0.60 V

**75%:** battery warning value + 0.45 V

**50%:** battery warning value + 0.30 V

**25%:** battery warning value + 0.15 V

**0%:** battery warning value

## Setup mode

The battery warning can be set between 4.0 and 18 volts in steps of 0.1 V. If you never want any low battery warnings, set the value to 4.0 V.

### AUTOCLEAR AFTER TRANSFER

When sessions are uploaded to a computer the Off Camber Data program can clear the archive bit on the sessions. When the USB cable is removed from the Laptimer, it can automatically delete the transferred files. If you want that, set this setting to "Yes".

**5005** On UniGo 5005 the setting is also used to delete the sessions after they have been transferred to the optional Unipro Flash key.

**Be careful with this setting. Deleted sessions cannot be restored again!**

### USB PASSWORD

When the USB cable is connected, the computer is normally connected to the Laptimer right away. But if you want to protect the data you can set a password that needs to be entered before the USB connection is established. The password can be set between "off" and 999.

### RESTORE FACTORY SETTINGS

If you want to go back to the default settings select "Yes" and accept the warning popup by selecting "Yes" again. This will set all the settings back to the default factory settings.

### DRIVER MENU

 The driver menu contains all the settings related to the driver.



*Entire timers menu with timer no. 1 active.*

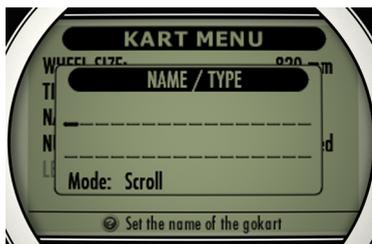
Use the **up** (▲) and **down** (▼) buttons to move around in the menu and press the **ok** button (✓) on the relevant line to change the value. To accept the changes press the **ok** button (✓) again or press **back** (↩) to cancel the changes and revert to the original value.

### NAME

To ease the identification of the files it is a very good idea to enter the driver's name. Please enter the name as a normal text like described next.

### ENTERING TEXT

You always use the same way to enter text in UniGo. When starting, it is in "scroll" mode. Use the **up** (▲) and **down** (▼) buttons to move around in the text.



*Entering text starts in scroll mode. Press OK to start entering text.*

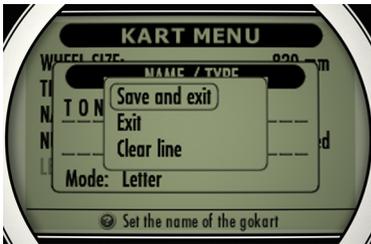
When pressing the **mode** button (Ⓜ) the mode is changed to "letter". This mode is used to change each character at the cursor. Use the **up** (▲) and **down** (▼) buttons to change the character. You will be able to select both lower

## Setup mode

case and upper case, numbers and a lot of special characters.



Enter text using the UP and DOWN button in letter mode.



When finished with the text, press the **menu** button (≡) to save it.

When you are finished editing the text press the **menu** button (≡) to save the new text and exit the text entry screen. It is also possible to exit without saying the text or clearing the line.

# Setup mode

# Reference Guide

In the reference guide you can find detailed information about all features and functions of the UniGo.

**To get the most from your UniGo, we recommend that you read this guide in full.**

The UniGo is optimized for ease of use, while also incorporating many useful, advanced features.

## • BASIC INFORMATION

### Batteries

UniTire uses two standard AAA cell batteries. The software is optimized to be energy-efficient for long battery life (typically more than 100 hours).

Please help us in our effort to protect the environment:

1. Do not change the batteries before UniTire tells you to do so.
2. Always turn in your used batteries for recycling.

### Low battery symbol

When the batteries reach 2.2 V, the low battery symbol will be shown at the bottom of the display:

**2.2 V:**  **1.7 V:** 

You can continue to use the UniTire until the last of the 4 'cells' in the battery symbol has disappeared. At 1.5 V UniTire will turn off automatically.

### Pressure handle

The pressure handle is equipped with two air valve buttons. Use one of the buttons to let out air, or both buttons to let out more air.

### Communication and power cable

The cable which connects the pressure handle with the pressure gauge carries the power and communication between the gauge and the handle.

The cable is very flexible and durable, but be careful not to cut or squeeze the cable with sharp or heavy objects.

### Display, casing and buttons

The UniTire has a custom made, 128 x 128 pixel graphical display with 4 gray tones and adjustable contrast.

The casing is made of high quality aluminum and the buttons of stainless steel.

To maximize the lifetime of your UniTire:

- Do not put it directly in your tool box.
- Be careful not to drop it on the ground.
- Do not put it under heavy objects.
- Do not use it in rain.

# Operating UniGo

## SIX BUTTONS

For easy operation we made six buttons on UniGo. They are clearly marked with a small icon, but here is the basic description of each button.

▲ The **up** button is used to move up in menus and for increasing values.

▼ The **down** button is used to move down in menus and for decreasing values.

✓ The **ok** button is used to go to the next menu, open up a setting for changing and for accepting the changes made.

≡ The **menu** button is used to go to the main menu and to bring up the pop-up menu.

↶ The **back** button is used to go back to the previous menu and to cancel any changes made.

⊞ The **mode** button is used to change between different modes. That could be different run mode screens, analyse screens etc.

## 2 WAYS TO PRESS BUTTONS

To use UniGo, you need to know how to press the buttons in 2 different ways:

1. A short press - ▲ ✓ ▼ ≡ ↶ ⊞
2. A long press - ▲<sup>1</sup> ✓<sup>1</sup> ▼<sup>1</sup> ≡<sup>1</sup> ↶<sup>1</sup> ⊞<sup>1</sup>

For the general use of UniGo, it is only necessary to use the short press.

When changing values, it is possible to keep pressing a button to speed up the change.

After a short while, the key will start to repeat and after a little while more, it will start to accelerate in the change.

## TURN UNIGO ON

There are 2 different ways to turn UniGo on:

1. Press the **mode** button (⊞) shortly to start the Laptimer manually.

2. Start the engine and UniGo will start when it detects the RPM signal.

UniGo starts by showing the startup screen including information about firmware version number, battery voltage, memory used and the environment temperature. It will also show the temperature sensors connected and what type they are.

The startup screen will show an animated Unipro logo and the owners name. It is possible to add your own logo instead of the Unipro version.



Startup screen with information about UniGo and temperature sensors.

When UniGo is starting up you can press different buttons to go directly to different screens. Pressing a button will also skip the startup screen.

- Press the **mode** button (⊞) to go directly to run mode.
- Press the **back** button (↶) to go directly to analyse mode with the latest session selected.
- Press ⊞ directly to the main menu.

**You can add your own startup picture. Just copy a 4 bpp bitmap files called "startup.bmp" into the /Pictures folder. The size should be 135 x 160 pixels.**

## TURN UNIGO OFF

⏻ Press the **mode** button (⊞) and hold it down to turn UniGo off. When you see "POWER OFF" in the display, you can release

# Operating UniGo

the button again.



Power off screen when holding down the **mode** button (⏻).

UniGo will also turn itself off if no button is pressed and no RPM, speed or trigger is detected after a preselected time. Please see "AUTO POWER OFF TIME" on page 33.

## BUILT-IN HELP

When you move around in menus, UniGo will display one line of help text at the bottom of the display. Use this line to get familiar with the different settings in UniGo.



Example on the help text describing the current selection.

## MAIN MENU

The regular tire pressure gauge simply shows the current tire pressure and continuously updates when air is released by pressing one or both of the valves on the pressure handle.



Main menu with icons for all functions.

Keep pressing the **right** button (→) at startup to go directly to Pressure mode.

## SHIFT LIGHT

UniGo can use the five LEDs as gear shift light. Even if warning lights are active, the shift light have priority and will take control of the LEDs.

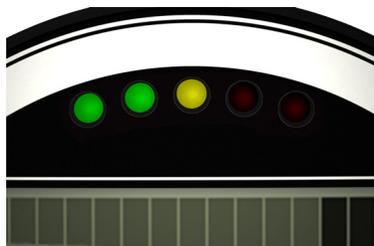


First LED turned on in the shift light.

If RPM Shift Type is set to "single LED" (see "RPM SHIFT TYPE" on page 30) each LED will turn on individually. Two different settings are needed. The first is the optimal engine revolution at which gear should be shifted. This will be indicated with the yellow LED. The second is the distance between the LEDs. If you set the RPM shift point at 12000 RPM, and the RPM delta value to 200 RPM, the first LED will turn on at 11600 RPM. Then 11800 RPM, 12000 RPM etc.

Please see "RPM SHIFT" on page 29 and "RPM DELTA" on page 30 for more information.

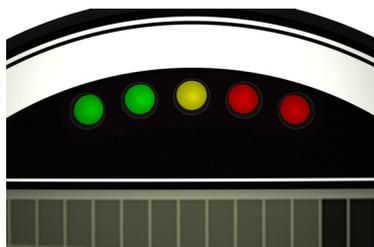
# Operating UniGo



Yellow LED means optimal gear shift point.



Warning LEDs 1 and 5 are active.



Shift light when all LEDs are flashing.

If “RPM SHIFT TYPE” on page 30 is set to “All LEDs”, all five LEDs will flash rapidly when the RPM shift point is exceeded. The RPM delta value will not be used.

**WARNING. Do not look directly into the LEDs when they are set to high brightness. They are very bright!**

## WARNING LEDs

The warning LEDs are an important features of the Laptimer. A total of five LEDs are located at the top, and the idea is to warn the driver about something that needs attention. Each LED is totally programmable and flexible. Please see how to do it under “WARNING LED SETUP” on page 31.

The LEDs can either be constant on, blink slowly or blink fast. If the RPM shift light is used, it will use the fast blink, and the warning LEDs should use constant or slow to avoid any confusions. The warning LEDs do have the lowest priority and if shift lights are used, the warnings are not active until gear is shifted.

showing which buttons to press to use the different functions.

**WARNING. Do not look directly into the LEDs when they are set to high brightness. They are very bright!**

## LOW BATTERY

When the battery voltage get too low, a warning icon will be show in the headline and in the help text. The icon in the headline is showing how close to empty the battery is. To see more about the warning levels, please look at “BATTERY WARNING” on page 33.



Low battery warning in headline and in the help text.

## RUN MODE

UniGo logs data into sessions. Each session contains all the information about the race and each time the engine is started, a new session is made.

A session can be automatically deleted. That happens if the sessions is less than 2 minutes long. This is to prevent a lot of sessions being

# Operating UniGo

generated if the go-kart is warmed up on the pit trolley.

## RUN MODE 1

UniTire has a built-in help feature, with pages



Update screen when new firmware is found.

showing which buttons to press to use the different functions.

## RUN MODE 2

UniTire has a built-in help feature, with pages



Update screen when new firmware is found.

showing which buttons to press to use the different functions.

## RUN MODE 3

UniTire has a built-in help feature, with pages



showing which buttons to press to use the different functions.

## ANALYSE MODE

UniTire has a built-in help feature, with pages



Analyse menu for looking at sessions, times, data values and graphs.

showing which buttons to press to use the different functions.

## SESSION SELECT

UniGo logs data into sessions. Each session contains all the information about the race and each time the engine is started, a new session is made.

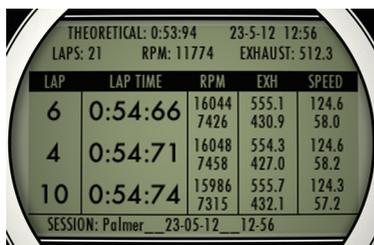
## TIME ANALYSIS

Several screens can be used to analyse the timing of the race. These screen are listed in the following section. To change between the different screen, simply press the **mode** button (⏏) until you get to the screen you want. Press the **back** button (⏪) to go back to the analyse menu again.

# Operating UniGo

## OVERVIEW

When starting analysing a new session, the overview screen is the place to start. This screen will show the three best laps including the minimum and maximum of three data channels. It also provides information about the theoretical best lap time, number of laps and the average RPM for the whole session. On an UniGo 5005, the starting time and date is also shown.

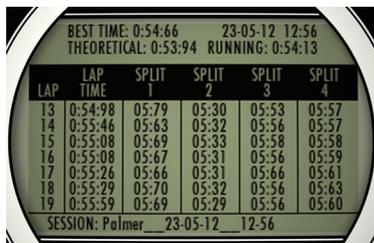


Overview screen with the most important information for the 3 best laps. 5005 version shown.

Use the **mode** button (⏏) to change to the next analyze screen.

## LAP AND SPLIT TIMES

The lap and split times screen will provide all the details about the lap and split times including the theoretical best lap time and the best running lap time.



Lap and split times screen. Including theoretical best lap and best running lap.

Use the **up** (▲) and **down** (▼) buttons to change the laps visible on the screen.

Use the **mode** button (⏏) to change to the next analyze screen.

## RUN MODE VIEW

If you want to analyse the data on a screen that looks like run mode 1, this is the way to do it. This screen will show the same channels as shown in run mode 1 and you can see either the minimum or maximum values for that lap. To toggle between minimum and maximum values, just press the **menu** button (≡). The text at the top left corner will toggle between MIN and MAX to indicate the selection. The delta time compared to the best lap time will be shown all the time.



Analyse data with a screen like run mode.

Run mode view will automatically start with the best lap selected.

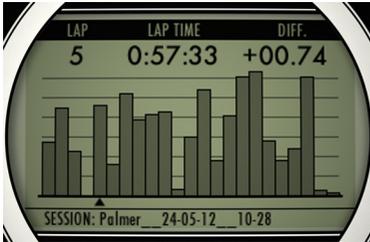
Use the **up** (▲) and **down** (▼) buttons to change the lap shown on the screen.

Use the **mode** button (⏏) to change to the next analyze screen.

## LAP TIME GRAPH

To get a graphic overview of the lap times, the lap time graph can be used. It will show the lap times as bars with the height indicating the difference compared to the best lap. The best lap time will not show any bars. The graph do automatically scale so very slow laps will have a bar that is cut off at the top.

# Operating UniGo



Lap time graph with all lap times shown graphically.

The lap number, the lap time and the difference to the best lap time is clearly shown at the top of the screen.

Use the **up** (▲) and **down** (▼) buttons to change the lap highlighted on the screen with the small triangle below it.

Use the **mode** button (⏏) to change back to the first analyze screen.

## MIN/MAX ANALYSIS

UniTire has a built-in help feature, with pages showing which buttons to press to use the different functions.

The screen shows 'BEST TIME: 1:26.47' at the top. Below is a table with 5 rows and 7 columns. The columns are labeled 'LAP', 'LAP TIME', 'MIN. RPM', 'MIN. SPEED', 'MIN. TEMP1', 'MIN. TEMP2', and 'MIN. ENV.'. The data for each lap is as follows:

LAP	LAP TIME	MIN. RPM	MIN. SPEED	MIN. TEMP1	MIN. TEMP2	MIN. ENV.
1	1:35.46	3024	25.2	20.5	131	12.2
2	1:37.66	5217	35.8	44.9	397	12.0
3	1:28.66	5532	38.1	45.2	428	11.9
4	1:34.05	5384	39.4	45.0	441	11.8
5	1:26.47	5458	41.7	45.1	433	11.7

At the bottom, it says 'SESSION: 00009\_000001003'.

## COUNTERS AND TIMERS

The counters and timers do include information about the engine timer, tire wear counters, and the lap lengths.

### ENGINE TIMERS

All the engine timers are shown on one single screen. This is an overview of all the timers's

value and the current selected engine timer. Please notice that this is for analyze only. The engine timers cannot be changed from here. To change the timers, please see "ENGINE TIMERS MENU" on page 29.

The screen is titled 'ENGINE TIMERS' and shows the following values:

ENGINE TIMER 1:	31:43
ENGINE TIMER 2:	11:36
ENGINE TIMER 3:	0:00
ENGINE TIMER 4:	5:04
ENGINE TIMER 5:	0:00
CURRENT TIMER:	2

At the bottom, it says 'Shows engine timers in hours:minutes'.

A list of all engine timer values.

Use the **mode** button (⏏) to change to the next analyze screen.

### TIRE WEAR COUNTERS

All the tire wear counters are shown on one single screen. This is an overview of all the counters's value and the current selected tire wear counter.

Please notice that this is for analyze only. The tire wear counters cannot be changed from here. To change the counters, please see "TIRE WEAR MENU" on page 27.

The screen is titled 'TIRE WEAR' and shows the following values:

COUNTER 1:	216 km
COUNTER 2:	0 km
COUNTER 3:	83 km
COUNTER 4:	0 km
COUNTER 5:	0 km
CURRENT COUNTER:	1

At the bottom, it says 'Shows tire wear counters in kilometers or miles'.

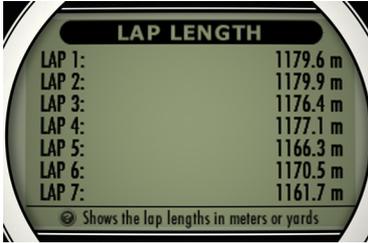
A list of all tire wear counter values.

Use the **mode** button (⏏) to change to the next analyze screen.

### LAP LENGTH

UniTire has a built-in help feature, with pages

# Operating UniGo



*A list of the lap length for each lap.*

showing which buttons to press to use the different functions.

## GRAPHS

UniTire has a built-in help feature, with pages showing which buttons to press to use the different functions.

## USB MODE (CABLE)

UniGo is using a high-speed USB connection to either a PC or a MAC computer. The good thing is, that you do **not** need to install any driver to communicate with UniGo. When the USB cable is connected, UniGo will show the following screen.



*USB screen when the USB cable is connected.*

**When UniGo is connected with USB, it cannot be operated anymore.**

**USB mode is only enabled when UniGo is in the main menu.**

To leave USB mode again, just unplug the USB

cable. Please remember to safely eject UniGo on the computer before removing the cable like any other USB flash drives. This will prevent the flash from being corrupted. The Off Camber Data program do have an eject button to make this easy.

## USB MENU (FLASH KEY) 5005

UniGo is using a high-speed USB connection to either a PC or a MAC computer. The good t



*USB menu when flash key is inserted.*

to either a PC or a MAC computer. The good thing is, that you do **not** need to install any

## COPY NEW SESSIONS 5005

UniTire has a built-in help feature, with pages

## STORE GLOBAL SETUP 5005

All the sessions related to the track is stored in a separate setup file. If several karts in a team is used on the same track, they will often use the same setup to enable easy comparison later. This will copy the current setup from UniGo to the Unipro flash key, The flash key can then be used to transfer the setting to another UniGo.

## RESTORE GLOBAL SETUP 5005

If you want to restore a setting from the Unipro flash key, use the this. The global setting file will be read and the global setting in the Laptimer will be overwritten.

# Operating UniGo

## FIRMWARE UPDATE 5005

If a firmware file is found on the Unipro flash key, it can be copied to the Laptimer from here. To update the firmware, please see "FIRMWARE UPDATE" on page 46.

## USB PASSWORD

With UniGo it is possible to protect the data with a password. If this password is used, the USB connection to either a PC with the USB cable or to a Unipro USB flash key (5005) will not be possible before the correct USB password is entered. The password is set in the UniGo setup menu, see "USB PASSWORD" on page 34.



*USB password screen when 2nd number is being entered.*

The password is entered one digit at a time. Use the **up** (▲) and **down** (▼) buttons to change the digit shown. When the digit is correct, press the **ok** button (✓). Only the active digit is visible to avoid others from seeing your password. If the password is entered correctly, the USB will be enabled.

## ENGINE RUN-IN MODE

 UniTire has a built-in help feature, with pages



*Engine run-in screen. No lap times, but other useful information.*

showing which buttons to press to use the different functions.

## MEMORY MENU

 UniTire has a built-in help feature, with



*Memory menu. Used to clear laps etc.*

## DELETE LAST SESSION

UniGo is using a high-speed USB connection to either a PC or a MAC computer. The good thing is, that you do **not** need to install any driver to communicate with UniGo.

## DELETE ALL SESSIONS

UniGo is using a high-speed USB connection to either a PC or a MAC computer. The good thing is, that you do **not** need to install any driver to communicate with UniGo.

## DELETE DOWNLOADED SESSIONS

UniGo is using a high-speed USB connection

# Operating UniGo

to either a PC or a MAC computer. The good thing is, that you do **not** need to install any driver to communicate with UniGo.

## MEMORY STATUS

UniGo is using a high-speed USB connection to either a PC or a MAC computer. The good thing is, that you do **not** need to install any driver to communicate with UniGo.



*Memory status screen with information on the sessions and memory. 3005 shown.*

### NEW SESSIONS

The build date for the software is shown on this line. It makes it easy to see in plan text when Unipro made this firmware release.

### OLD SESSIONS

The build date for the software is shown on this line. It makes it easy to see in plan text when Unipro made this firmware release.

### LAPS USED 3005

The build date for the software is shown on this line. It makes it easy to see in plan text when Unipro made this firmware release.

### LAPS FREE 3005

The build date for the software is shown on this line. It makes it easy to see in plan text when Unipro made this firmware release.

### MINUTES USED 3005

The build date for the software is shown on this line. It makes it easy to see in plan text when Unipro made this firmware release.

### MINUTES FREE 3005

The build date for the software is shown on this line. It makes it easy to see in plan text when Unipro made this firmware release.

### MEMORY USED 5005

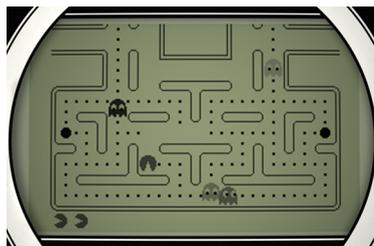
The build date for the software is shown on this line. It makes it easy to see in plan text when Unipro made this firmware release.

### MEMORY FREE 5005

The build date for the software is shown on this line. It makes it easy to see in plan text when Unipro made this firmware release.

## UNIMAN GAME

 The Recall mode is where you view



*UniMan in action. Just a small game for fun.*

the tire pressure values you have saved in Sequence mode / Stealth mode.

## FIRMWARE UPDATE

Updating the firmware is very easy on UniGo. You will not need any special software except the new firmware file from our homepage.

The firmware file is called something similar to "Update\_UniGo\_3005\_XXXXXX.bin" where the XXXXXX is the version number of the firmware. Simply copy this file into the folder called "Firmware" on UniGo when it is attached to the computer and it will start the update process when you unplug the cable again. When UniGo detects this file in the firmware folder, it will show the following screen.

# Operating UniGo



Update screen when new firmware is found.

If you want to upgrade (or downgrade) the firmware to the version shown on the screen, simply press the **ok** button (✓). If you want to keep the current firmware, press any other button will skip the firmware update process. This screen will only be shown for 20 seconds. If you do not push any buttons it will skip the update automatically.

If you chose to upgrade the firmware, UniGo will check the file and unpack all the files. When this is done the update of the firmware itself starts. When it is done UniGo turns off.



Update screen when new firmware is being programmed into the flash.

The next time you turn it on, you should see the new firmware version displayed on the startup screen.

**Please do not disconnect the power to UniGo while the update is in progress.**

## INFO MENU

 For more information about your UniGo, press the information ikon on the main menu. This will bring the information screens shown next.



Info screens showing all information about this UniGo. Please notice the difference between 3005 and 5005 explained next.

The information is divided into two different screens. This is a short description on each line of information.

### UNIGO MODEL

In the UniGo series, there are four different models. This number will be on the top edge of the box too.

### SERIAL NUMBER

The serial number is an important piece of information. It is unique for each UniGo and it will be used to identify sessions and for licensing of PC software.

### SOFTWARE VERSION

The software version is also shown at the

# Operating UniGo

startup screen. The number is build up like this: major.minor.build. The example shows a version number of V1.00.000.

## SOFTWARE RELEASED

The build date for the software is shown on this line. It makes it easy to see in plan text when Unipro made this firmware release.

## FLASH USED 5005

UniGo 5005 is limited to minimum 120 minutes of data. This line shows the logging space used out of the 120 minutes. Even if it shows 119 / 120 you are still able to make a new session with another 60 minutes of data! Only when all 120 or more minutes are used, the memory is full.

## LAPS USED 3005

UniGo 3005 is limited to minimum 200 laps. On this line you can see the number of laps used out of the 200 laps in total. Please notice, that eventhough it might shown 198 / 200 you will still be able to log the next session, even if it might have 50 laps! Only when it shows 200 or more laps, the memory is full.

## MINUTES USED 3005

UniGo 3005 is limited to minimum 120 minutes of data. This line shows the logging space used out of the 120 minutes. Even if it shows 119 / 120 you are still able to make a new session with another 60 minutes of data! Only when all 120 or more minutes are used, the memory is full.

## BATTERY VOLTAGE

This is the input voltage the Laptimer sees. If you are running on a rechargeable battery, you can use this to see what the current voltage is and the decide if it is time to charge it.

## INTERNAL TEMP 5005

This is the input voltage the Laptimer sees. If you are running on a rechargeable battery, you can use this to see what the current voltage is and the decide if it is time to charge it.

## USB ACCESSORY 5005

This is the input voltage the Laptimer sees. If you are running on a rechargeable battery, you can use this to see what the current voltage is and the decide if it is time to charge it.

## EXTERNAL BOXES ATTACHED 5005

This is the input voltage the Laptimer sees. If you are running on a rechargeable battery, you can use this to see what the current voltage is and the decide if it is time to charge it.

## BOX SW VERSIONS 5005

This is the input voltage the Laptimer sees. If you are running on a rechargeable battery, you can use this to see what the current voltage is and the decide if it is time to charge it.

## OWNER

The ownername is not the same as the drivers name. The owner name could for instance be the team name. You change this name, you need to make a new text file on UniGo called "ownername.txt". Just write the name on a single line in the file and save it. When the USB cable is removed, the name is programmed into UniGo.

## MANUFACTURE DATE

This is the date this UniGo was manufactured at the Unipro production.

## TOTAL LAPS

UniGo counts all the laps driven. This number is never cleared so the number is the total number of laps measured since the Laptimer was bought.

## TOTAL HOURS

UniGo measures the total time when data is being logged to memory. This number is never cleared so the time is the total since the Laptimer was bought.

# Operating UniGo

# Operating UniGo

# Troubleshooting

We expect a smooth and pleasurable experience when using UniGo.

If you have any problems, either with the setup or with daily use, please check the following pages for suggested solutions.

If you don't find the answer to the problem here, please contact your Unipor dealer for further assistance.

## Weak and hard to read text

The contrast is set too low.

- Adjust the contrast to a higher value.

## I want to hide the pressure values

Sequence mode can either work with visible values or hidden values.

- Set Stealth mode to **On** in Setup mode to hide values.

**NOTE!** You can't hide pressure values in Pressure mode, but you can offset the value.

## Water entered the box

The two buttons are not water tight.

- Unscrew the two screws and remove the rear part of the box. Place it with the opening facing upwards to dry.

## The gauge was dropped and a button is bent

The two buttons are made from stainless steel, but can still be damaged.

- Contact your dealer to order a new button as a spare part.

## The value is not zero after power on

UniTire calibrates the pressure after power on.

- Make sure no pressure is applied when turning UniTire on. You can power off and on again to re-calibrate.

## Pressure value is showing "---"

The handle is not detected.

- Make sure the handle is correctly attached.
- Turn UniTire off and on again.

## UniTire is not turning on

Batteries might be empty.

- Press and hold the **right** button (➔) for at least 5 seconds. Then try to turn UniTire on again.
- Or change the batteries.

## Some of the scale is missing in analog mode

It is supposed to be this way in Stealth mode with analog gauge view.

- Change to normal Sequence mode by setting Stealth mode to **off**.

## Pressure value is showing "?" without pressure or the value does not look correct

A Stealth offset is programmed.

- Adjust the Stealth offset to zero in Setup mode.
- Change to normal Sequence mode by setting Stealth mode to **off**.

# Maintenance

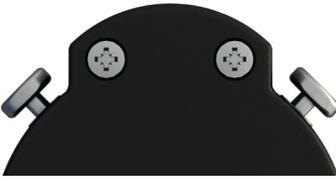
## Battery change

### To replace batteries

When the batteries reach 2.2 V, the low battery symbol will be shown at the bottom of the display:



You can continue to use the UniTire until the last of the 4 'cells' in the battery symbol has disappeared.



The batteries are located inside the box. Put UniTire on the table with the rear side up.

Unscrew the two screws and remove the rear part of the box by lifting the end with the two screws. Here you will see a battery holder with two standard Alkaline 1.5 V AAA batteries.

**Please replace them with two new ones of high quality.**

**Please properly dispose of the used batteries.**

Insert batteries with the right polarity. If you should by accident put them in the opposite direction, you will not hurt UniTire or the batteries.

When assembling UniTire again, slide the rear part into the front part and center it before closing it.

## Cleaning

### To clean the case, display, and buttons

The exterior surfaces of UniGo products are made from plastic box with a plastic overlay.

They are designed to be easily wiped clean with a dry, lint free cloth.

Greasy marks should be removed by light rubbing with a slightly damp cloth and a trace of proprietary glass cleaner.

**Do not use any other solvent or abrasive based cleaners.**

**Ensure that no liquid enters the box and that the product is completely dry before reuse.**

# Service and guarantee

## Service

The UniGo Laptimer gauge has been carefully designed to give you many years of untroubled use. There are no parts inside the case which need service, nor do the units require any form of maintenance besides cleaning.

In the unlikely event that your product fails to function correctly, it should be returned in its original packaging to your Unipro dealer.

You can always find the updated list of worldwide dealers on [www.uniproLaptimer.com](http://www.uniproLaptimer.com).

**No responsibility can be accepted for the product whilst in transport to the factory or dealer. Customers are therefore advised to insure the unit during transport.**

When seeking service under guarantee, proof of the date of purchase will be required.

## Guarantee

The product is guaranteed against defects in material and workmanship for two years from the date of purchase.

The guarantee is void if the product has been subject to misuse, accident, or negligence, or has been tampered with or modified in any way without the written authorisation of Unipro ApS.

Attempted servicing by unauthorized people may also invalidate this guarantee. Labor and carriage charges are not covered unless by local agreement.

Outside Denmark, local warranty liability is restricted to equipment purchased within the territory.

Our agents outside Denmark are only under contractual obligation to service under guarantee equipment sold through them.

Our agents are entitled to make a non-refundable charge for any service carried out on other equipment.

This guarantee does not limit your statutory rights within the country of purchase.

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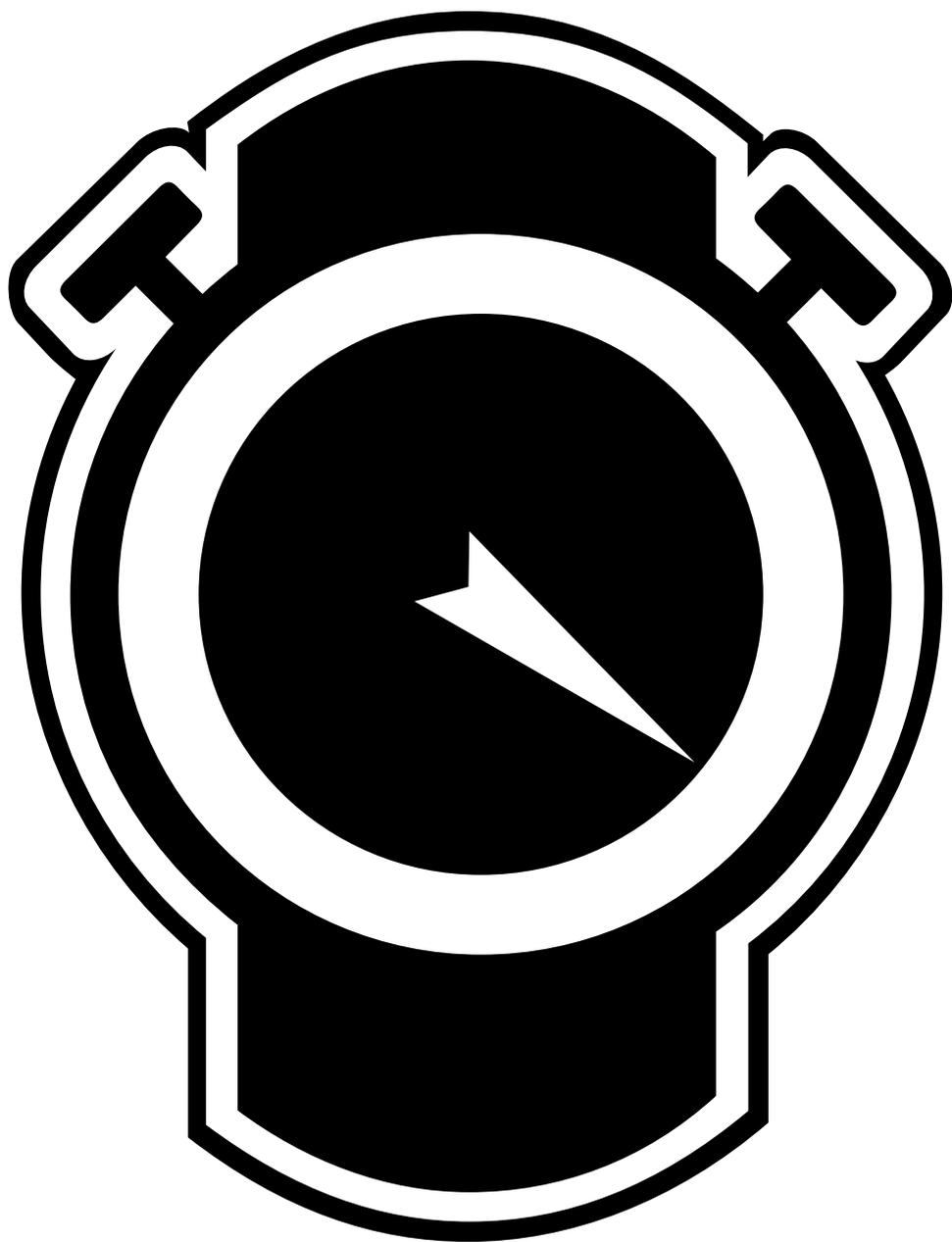
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