

# GIpro DS-series G2

## Installation and Operation Manual

### Model GPDT-H01, GPDT-H02

Before installing this product, please make sure you got the right part for your bike. See the part number on the packaging and use the **Product Advisor** on our website to check compatibility.

These instructions are applicable to a wide range of motorcycles and describe the main install steps needed for a successful installation. You may find motorcycle specific Supplementary Manuals on our website. Please visit:

**[www.healtech-electronics.com/GPDT](http://www.healtech-electronics.com/GPDT)**

## 1. Foreword

Congratulations on your purchase of a GIpro DS gear position indicator.

The GIpro products from HealTech Electronics Ltd. are the most advanced gear position indicators on the market today.

This product connects to the self-diagnosis connector. It makes the installation very simple. Due to the advanced microprocessor and sophisticated firmware, the GIpro DS offers faster and more reliable readings than competing products.

The unit is also the smallest, most compact gear indicator available, making it easy to mount at the instrument cluster.

## 2. Specifications

- Supply voltage: +8V to +24V
- Maximum supply current at 12V: 80 mA
- Reverse polarity and transient protection on all leads
- Unit size: 20 x 30 x 13 mm (0.7 x 1.2 x 0.5 inches)
- Operating temp: -40C to +80C (-40F to +176F)
- Waterproof (IP68)

## 3. Features

### Fast and accurate

Instant and accurate indication of the selected gear (right after the clutch is released) for added control and safety. The sampling period can be adjusted to make the response quicker or slower, depending on shift speed and signal conditions.

### Touch control

All settings can be done via the touch sensor so there's no opening on the housing, it is completely sealed and encapsulated in epoxy.

The touch sensitive area is on the TOP of the unit. However, after programming, the unit can be mounted even with the top side stuck to the dashboard (via the sticky pads supplied) and will function properly. It can also be used with the optional GIpro Mount.

### **Quick installation**

Plug in Go wiring harness, easy to mount display.

Complete installation can be done within 30 minutes on most Honda models.

### **Bright and effective display**

Extra bright LED display, housed in a compact box. Available in 5 colors.

### **Auto brightness control**

The brightness of the display is adjusted automatically according to the ambient light intensity. The sensitivity of the sensor can be fine-tuned in the menu.

### **Auto Learning function**

The unit learns the gear positions automatically, just start the learning function via the menu.

### **Compatibility**

Compatible with all HealTech and most aftermarket products, including quick shifters.

### **Robust design**

- Full SMT-design, encapsulated in epoxy
- Flash memory to store user settings even with the battery disconnected
- Only inspected, high quality components are built in
- Each unit is extensively tested prior to shipping, guaranteed to work
- 100% waterproof (IP68)

## **4. Installation**

- Find the **RED, 4-pole diagnostic connector** (also called as DLC), usually near the ECU module. Normally it has a removable cap or "dummy" plug (without wires) attached to it. The connector may be partially covered by black tape.
- Detach the cover (cap) from the plug and connect the GIpro plug.
- Route the cable to the mounting location along the frame.
- Peel the green plastic off from the back of the unit, and mount the display.
- Secure the cable with the cable ties supplied.

## **5. Operation**

The unit must be programmed (going through the gears) after installation.

After programming, the unit will show the actual gear position while riding.

Your motorcycle is not equipped with Gear Position Sensor, therefore determining and displaying the gear in use is only possible when the engine is running and the clutch is fully released. At other times (clutch pulled-in, engine not running, bike stopped) the display will show a "--" sign.

While riding, the GIpro will NOT show an incorrect gear in any circumstances, except for a split second when the clutch is released slowly (slipping) during a back shift.

*Note:* If you notice that the unit no longer shows the gear positions correctly, Reset the unit and Setup again. Normally this is necessary when the clutch switch is bypassed or failing, or after installing a *SpeedoHealer* speedometer calibrator.

For best performance ensure that the clutch switch functions correctly, even if you replace the clutch lever. If you must bypass the clutch switch, the unit will learn the new signal conditions when you execute the Learning function.

## 6. Setup (menu)

There are several parameters which can be changed or fine-tuned under the menu.

If there are no gear positions stored in the unit, it automatically starts the Learning function after power-up as per chapter 6.2

Sign	Function	Description	See chapter
<i>C</i>	Code	Reading the firmware version	6.1
<i>L</i>	Learning	Learning the gear positions	6.2
<i>F</i>	Filtering	Adjusting the filtering (sampling period)	6.3
<i>b</i>	Brightness	Adjusting the sensitivity of the light sensor	6.4
<i>u</i>	Upside down	Flipping the display upside down	6.5
<i>d</i>	Defaults	Resetting all values to factory defaults	6.6

**To access the menu**, follow these steps, in this order:

- The TOP side of the housing is the touch sensitive area so it must be kept free, away from all objects. If the unit is in a mount, remove it first.
- Have the gearbox in Neutral.
- Have the ignition OFF (the display must be blank).
- Turn the ignition ON and the engine stop switch to RUN position (the display should count up and then show "0"). Wait at least 2 seconds.
- With your index finger (without gloves) tap the top side of the unit and hold your finger until the first menu sign shows up. Remove your finger now.

*Note:* If the engine is started then accessing the menu will be disabled even if you come to a stop. Cycle the ignition key to start over.

**To review or change a parameter**, use the following controls:

- *Short tap* (tap and release the touch sensor): next menu item / increasing the value
- *Long tap* (hold your finger on the touch sensor until the display changes): select / ok

### 6.1. Reading the firmware version

In the menu, select the "**C**" sign and do a *long tap*.

After this command, the firmware version number is shown (5 digits) repeatedly. If you contact us for support please let us know this number.

To exit, do a *long tap* again or turn the ignition key off.

### 6.2. Learning the gear positions

If the unit does not indicate the gears correctly, start the Auto-Learning procedure. Perform the steps either in the garage with the engine running (safely secure the bike on a rear stand) or while riding normally.

In the menu, select the "**L**" sign and do a *long tap*.

1. When you see the "**1**" sign flashing, select 1<sup>st</sup> gear.  
The "**1**" sign starts flashing faster, indicating that the learning is in progress.
2. When you see the "**n**" (next) sign, select the next gear. The gear number starts flashing faster when the unit is learning the new gear position.  
Repeat this step until all gears have been taught.  
*Note:* If you'd like to cancel or start over the process, turn the ignition key off.
3. Keep riding in top gear until the "**U**" (update) sign starts flashing (if your bike has 5 gears only, it takes longer, about 15s). The unit is now programmed and should indicate all gears correctly.

*Note:* On power-up, the unit will count up from 1 to the number of gears programmed. If the learning procedure can not be completed, check the connections.

### 6.3. Adjusting the filtering

In the menu, select the "F" sign and do a *long tap*.

The filtering (sampling period) can be adjusted to make the response quicker or slower during a gear change. It can be adjusted in 10 steps (from 0 to 9).

The factory default value is **4**. Before changing this parameter, be sure to run the Learning procedure first.

- If the shift speed is quick (e.g. a quick shifter is used) and the indicated gears are always correct then DECREASE the value for faster response.
- If you notice that sometimes wrong gear is indicated momentarily during a gearshift or under hard acceleration, INCREASE the value for slower response.

*Note:* if wrong gear is displayed even with the filtering set to 9, there's a problem with the speed or RPM signals or the clutch is slipping.

### 6.4. Adjusting the sensitivity of the light sensor

In the menu, select the "b" sign and do a *long tap*.

The ambient light sensor sensitivity can be adjusted in 10 steps (from 0 to 9).

The factory default value is **4**. DECREASE the value if you'd prefer less brightness. INCREASE the value if more brightness is desired.

*Note:* If you set the value to 9, the brightness will be always at maximum, regardless of the ambient light intensity.

### 6.5. Flipping the display upside down (or vice versa)

In the menu, select the "u" sign and do a *long tap*.

The display is flipped.

### 6.6. Resetting all values to factory defaults

In the menu, select the "d" sign and do a *long tap*.

This command will restore the factory defaults:

- Learning: gear positions get cleared, Learning function starts
- Filtering: 4
- Brightness: 4
- Upside down: normal view

## 7. Cleaning the display

Clean the display with wet sponge. Use pure water only, without any detergents.

Do not clean with dry cloth as it may scratch the front face. Do not spray high pressure water directly on the display.

## 8. Warranty

The unit is completely sealed and epoxy encapsulated, which gives extreme protection for the internal parts from shocks, vibrations and water.

To ensure trouble-free operation from the start, all units have been extensively tested prior to shipment.

Our dealers are offering a 30-day money-back guarantee on HealTech products, thus you will get your money back if the product does not fulfill your expectations. (All parts must be returned in original condition for full refund.)

Furthermore the product is covered by our 2-year replacement warranty from the date of purchase.