



HEALTECH ELECTRONICS GPDT-E5A Gipro DS-Series G2 Gear Indicator User Manual

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HEALTECH ELECTRONICS GPDT-E5A Glpro DS-Series G2 Gear Indicator



Installation and Operation Manual

Model GPDT-E5A

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

1. Foreword

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

The Glpro 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 Glpro 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 Glpro Mount.

Quick installation

Plug 'n Go wiring harness, easy to mount display.

Complete installation can be done within 30 minutes on most compatible bike 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, and guaranteed to work
- 100% waterproof (IP68)

Installation

- Find the RED, 6-pole diagnostic connector, 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.
- Connect the Glpro plug and use the long cable tie supplied to secure the plugs together.
- 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.

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 Glpro 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 set up again.

Stand-by mode

Your motorcycle has permanent 12V in the diagnostic connector so the Glpro gets power even when the ignition key is turned off.

The Glpro goes to a stand-by mode in about one minute after the ignition key is turned off. In this mode the power consumption is very low, approx. 1.3mA (15.6mW) @ 12V.

If you do not ride your motorcycle for more than 4 weeks, we recommend disconnecting the battery and putting it on a trickle charger.

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 7.2

Sign	Function	Description	See chapter
	Code	Reading the firmware version	7.1
	Learning	Learning the gear positions	7.2
	Filtering	Adjusting the filtering (sampling period)	7.3
	Brightness	Adjusting the sensitivity of the light sensor	7.4
	Upside down	Flipping the display upside down	7.5
	Defaults	Resetting all values to factory defaults	7.6

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 (wait until the display is blank – it may take a minute).
- Turn the ignition ON and the engine stop switch to RUN position. Wait until the display completes the counting.
- 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. Turn the ignition key off and 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

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.

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 1st 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.

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.

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.

Flipping the display upside down (or vice versa)

In the menu, select the “u” sign and do a long tap. The display is flipped.

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

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.

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.

Documents / Resources

	HEALTECH ELECTRONICS GPDT-E5A Glpro DS-Series G2 Gear Indicator [pdf] User Manual GPDT-E5A Glpro DS-Series G2 Gear Indicator, GPDT-E5A, Glpro DS-Series, G2 Gear Indicator
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References

-  [HealTech Electronics - Smart Tech for your Ride!](#)
-  [Glpro DS-series G2 \(GPDT\) - HealTech Electronics Ltd.](#)