

GIpro ATRE G2

Gear Position Indicator with Advanced Timing Retard Eliminator

User's Guide

1. Foreword

Congratulations on your purchase of a GIpro/ATRE unit.

The GIpro products from HealTech Electronics Ltd. are not only the most advanced gear position indicators on the market but also the best TRE devices available for motorcycles.

This product was designed for motorcycles which don't have an in-dash gear indicator but are equipped with Gear Position Sensor (GPS).

You may also install the unit on bikes which have in-dash gear indicator but a brighter display is desirable e.g. for track use.

The unit comes with Plug 'n Go wiring harness which makes installation quick and easy, eliminating the need to alter the bike's wiring.

2. Specifications

- Supply voltage: +8V to +24V
- Maximum supply current at 12V: 60 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 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 'n Go wiring harness, easy to mount display.

Complete installation can be done within 30 minutes on most motorcycles.

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.

Built-in Advanced TRE

With activated TRE (Timing Retard Eliminator) both throttle response and acceleration are improved in the lower gears. Also, the bike's top speed limiter is disabled on 1000+ cc bikes. TRE automatically switches off in Neutral for smooth idle operation and switches back to the selected mode when the gearbox is in gear.

If a TRE device is installed on a bike equipped with in-dash gear indicator, the bike's indicator will show the mapped gear. However, the GIpro will indicate the gear selected regardless whether the built-in TRE is activated or not.

TRE is disabled by default. To comply with local regulations, do not activate TRE mode on public roads.

Auto Learning function

The unit is pre-programmed to fit most motorcycles and it works out of the box. However, if needed, it 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. How to use the unit

Have the ignition switch ON, engine stop switch in RUN position and the side-stand in upright position. The display will indicate the actual gear selected.

If the indicated gear is not correct, start the Learning procedure under the menu.

5. Setup (menu)

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

| Sign | Function | Description | See chapter |
|------------|-------------|---|-------------|
| t | TRE mode | Reviewing and changing TRE mode | 5.1 |
| L | Learning | Learning the gear positions | 5.2 |
| F | Filtering | Adjusting the filtering (sampling period) | 5.3 |
| b | Brightness | Adjusting the sensitivity of the light sensor | 5.4 |
| u | Upside down | Flipping the display upside down | 5.5 |
| d | Defaults | Resetting all values to factory defaults | 5.6 |
| [| Code | Reading the firmware version | 5.7 |

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 gearbox is switched to a gear then accessing the menu will be disabled even if you shift back to neutral. 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

5.1. Reviewing and Changing TRE mode

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

The current TRE mode is displayed (blinking). The indication can be one of the followings:

| TRE mode | Mapping | Recommended setting for |
|----------|---------|--|
| - | 1N23456 | Bypass mode (<i>factory setting</i>) |
| 3 | 3N33333 | all Cruisers (<i>medium setting</i>) |
| 4 | 4N44444 | DL1000, B-King, all Cruisers (<i>hard setting</i>) |
| 5 | 5N55555 | GSXR1000, GSX1300R, GSF1250 |
| 6 | 6N66666 | For all bikes not listed elsewhere |
| 7 | NNNNNNN | GSX1400, ZX-10R |
| 8 | 1N23455 | GSX1300R (<i>top speed derestriction only</i>) |
| 9 | 1N23444 | Cruisers (<i>top speed derestriction only</i>) |

If you do not wish to change the current setting, exit with a *long tap*.

To cycle through the eight modes, do a *short tap* repeatedly. When the desired mode is displayed (blinking), exit with a *long tap*. The unit will work according to the TRE mode selected and the unit goes back to normal operation.

Note: We recommend to try all modes and see which works best for your bike and other mods. To comply with local regulations, do not activate TRE mode on public roads.

5.2. 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 (put 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: if the learning procedure can not be completed, check the connections and the gear position sensor in the bike.

5.3. 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 Gear Position Sensor (GPS) on the bike and it has to be replaced.

5.4. 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.

5.5. Flipping the display upside down (or vice versa)

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

The display is flipped.

5.6. 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:

- TRE mode: - (bypass mode)
- Learning: factory pre-set gear position values
- Filtering: 4
- Brightness: 4
- Upside down: normal view

5.7. 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. 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.

7. 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.