

# NEWTON METER GN-1 User's Manual

Thank you very much for purchasing this product.  
Newton Meter GN-1 is digital equipment that can measure force and weight using strain sensor. Please use this product after carefully reading this user's manual.

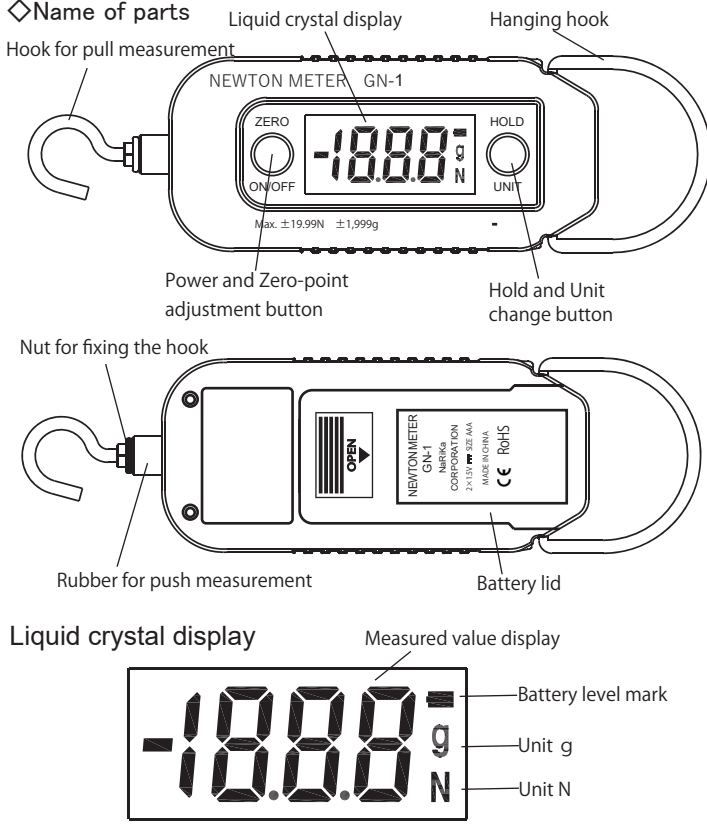
## Caution

- No open flame: high risk of serious damage to the main unit.
- No disassembly: disassembling might cause breakdown or injury, therefore do not disassemble the product.
- Keep dry: If the product get wet there is a risk of electric shock or breakdown, therefore do not expose to water.
- If during use or storage you notice abnormal smell, the product get warm, change of the products color, deformation and other abnormalities, do not use the product and contact us.
- Do not leave or store the product on places with high temperatures like under blazing sun inside a car or under strong direct sunlight. It might cause deformation or breakdown of the product.
- Do not apply strong pressure on the liquid crystal display, especially with sharp objects.
- When conducting experiment, place it on rigid, level surface only.
- Do not expose to strong shocks or do not throw with it.
- Do not open the battery lid and short circuit the inside parts.
- If stored for long time, remove batteries and store separately.
- Conduct measurement only within the measurement range. Using a weight of more than 2kg might cause damage to the equipment.
- Do not apply sudden force or strong impact to the sensor part.
- Do not use if product case, sensor or other parts are damaged.
- Do not attach anything other than the Hook for pull measurement to the sensor part.
- Instantaneous force such as collision cannot be measured.
- Be careful not to lose the Hook for pull measurement.
- This product is developed for simple measurement during science experiments at schools. Use for different purposes is not supported.
- This is not a toy. Not intended for children 12 years and younger.

## Specification

Size	: 157 × 45 × 24 mm
Weight	: 75g (without batteries)
Measurement Range	: ±19.99 N, ±1,999 g
Resolution	: 0.01 N, 1 g
Direction of force	: + pull direction, - push direction
Function	: Auto power off
Electrical power	: 2pcs of AAA batteries (sold separately)
Accessories	: Instruction Manual

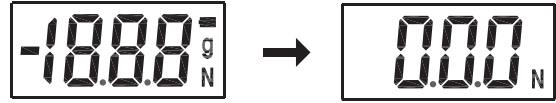
## ◇Name of parts



## Operation instructions

### ◇Inserting battery

Slide the battery cover in the direction indicated by the arrow pointing to OPEN as printed on the cover to remove the cover before inserting 2pcs of AAA type batteries, ensuring correct polarity. When you press the power button for a while, Liquid crystal display will turn on.



To turn off the power, press the Power button for a while.



### ◇Measurement

When you switch the power on, the unit displayed will be N (Newton). If you want to measure force, please use it as it is. To measure weight, switch the unit to g (grams).

#### ○Unit change

The measurement range can be switched by long-pressing of the Hold and unit change button. Furthermore, when you switch the power on, the measurement range is set to N.



Press the Hold and Unit change button to change the unit.

#### ○Zero point adjustment

Before starting measurement, shortly press the Power and Zero-point adjustment button. At that time, the measured value will be zero.

※Zero point adjustment by pressing the button cannot be done while the value is changing.

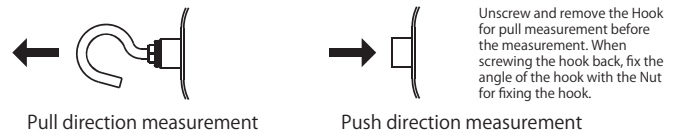
#### ○Hold function

Measured value can be hold on the screen by shortly pressing the Hold and Unit change button (the value will be blinking on the screen). Also, this can be canceled by shortly pressing the Hold and Unit change button again.



#### ○Push and pull measurement

When the hook for pull measurement is used and a force is applied in pulling direction, + (positive) value will show on the display. When force is applied, after removing the hook, in pushing direction on rubber for push measurement, - (negative) value will show on the display.



### ◇Auto power off

With the power on, the product will turn itself off automatically after 20 minutes (automatic switch off in case of forgetting). Please be careful when doing experiments for long time.

### ◇Battery replacement

When replacing battery is necessary, the Battery level mark on Liquid crystal display will start to blink slowly. Please replace the battery accordingly.

