Precautions:

Keep away from fire: Exposure to fire may cause significant damage to the unit.
Do not disassemble: Refrain from dissembling the unit as doing so may result in a malfunction of the unit, personal injury, or other risks.
Keep dry: Keep dry because exposing the unit to water may cause electrocution or result in a malfunction of the unit.
If the unit emits strange odors, generates unusual heat, undergoes discoloration or deformation, or otherwise appears to be abnormal during use or while in storage, refrain from using the unit and contact us for more information.
Do not use the unit or let the unit stand in a location exposed to direct sunlight, inside a sun-heated vehicle, or in any other high-temperature location. Failure to heed this warning may result in deformation or a malfunction of the unit.
Do not press down hard on the liquid crystal display or otherwise stab or poke at the liquid crystal display with a pointed object.
When conducting an experiment, do not place the unit on an unstable or otherwise uneven surface.
Do not subject the unit to a strong impact or otherwise strike or throw the unit.
Refrain from opening the battery cover and causing the inner components to short-circuit.
Remove the batteries when storing the unit for an extended period of time.
Do not use different types or brands of batteries or use old and new batteries at the same time.
This product was designed to facilitate simple measurements when conducting scientific experiments. Do not use the unit as a toy or for purposes unrelated to experiments.
Since the unit uses infrared sensors, outdoor use is impossible due to the presence of strong sunlight. The unit should be used indoors.

◆ Names of Parts
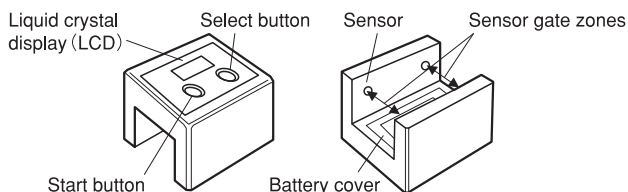
Liquid crystal display (LCD)   Select button   Sensor   Sensor gate zones

Start button   Battery cover

Specifications
Dimensions: 50×60×50(h)mm
Measurement range:
Speed 0 ～99.99km/h
　　　　0 ～99.99m/s
　　　　0 ～999.9cm/s
Lap time: 0 ～99.99sec

Batteries: 2 x AAA batteries

Start button
Switch modes
Measurement standby state

Select button
Select measurement unit
Display memory data

◆ Contents of BeeSpiν

Mode Switching

Two different modes can be used with the BeeSpiν unit. To switch from one mode to the other, hold down the Start button.
Speed-Measuring mode
Cumulative Lap Time-Measuring mode

Speed Measuring ⇕ Cumulative Lap Time
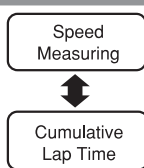
Measuring

Before measuring, hold down the Select button (1.5 seconds) and select the desired measurement unit (Speed-Measuring mode only). A flashing "sec," "km/h," "m/s," or "cm/s" display indicates that the unit is in a state of measurement standby. A steadily lit measurement unit display indicates completed measurement or an inability of the unit to measure.

m/s
↓
km/h
↓
cm/s

Memory check

Where multiple measurements have been taken, the last five measurement results can be checked by pressing the Select button.
※This function cannot be utilized when the unit is in a state of measurement standby.
Memory data can be reset by switching modes or by changing the measurement unit.
※Memory data can also be reset when the batteries are removed.

1 → 2 → 3 → 4 → 5
Most recent ――――――――→ Older
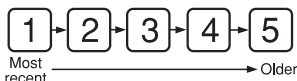
Standby state (LCD off)

The unit will enter the standby state when the Start button and the Select button are held down at the same time or after five minutes have passed without operating the unit. To reactivate the unit, press either the Start button or the Select button.
※In the standby state, electricity is consumed as the unit awaits a signal to reactivate.

## How to Operate

◆ Inserting Batteries

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 two AAA batteries (sold separately), ensuring correct polarity. Upon inserting the batteries, the liquid crystal display will indicate that the unit is in the Speed-Measuring mode (with unit m/s).　　　　　　　　　　　　　　　　(See the figure)
※The unit may not work if rechargeable batteries are used due to voltage issues.

◆ Speed Measuring ※Measurement results may differ slightly from actual speeds.

Measurement results may differ slightly from actual speeds. The unit measures the speed of an object passing through the sensor components. Measurements can be taken in one of three different units—"km/h," "m/s," or "cm/s"—which can be selected by holding down the Select button (1.5 seconds).
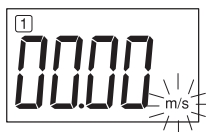
After pressing the Start button, the measurement unit will flash to indicate that the unit is in a state of measurement standby. The unit will display the speed of any object cutting across its two sensor gate zones. To measure again, press the Start button to bring the unit into a state of measurement standby.
※A speed exceeding the upper measurement limit is not measurable. If an object passes through only one sensor, the measurement will result in an error as the unit runs out of time.

Upper measurement limit   Measurement error

Memory display

The last five measurement results can be checked after finishing a measurement. Memory data can be reset by changing the measurement unit or by switching modes.
※Memory data is not reset when the unit is turned off.

◆ Cumulative Lap Time ※Measurement results may differ slightly from actual times.

The measurement process starts as an object passes through one of the sensor components. The total cumulative time since the start of the measurement process is measured each time the object then passes through the same sensor component. When in the Speed-Measuring mode, switch to the Cumulative Lap Time-Measuring mode by holding down the Start button. A flashing "sec" displayed upon pressing the Start button indicates that the unit is in a state of measurement standby. In this state, the measurement process will start when an object passes through one of the sensor gates. Thereafter, the total cumulative time since the start of the measurement process will be displayed each time the object passes through the sensor gate through which the object passed the first time. Press the Select button and then the Start button if you wish to end the measurement process.
※Memory data will be reset if you end the measurement process by pressing the Start button.
※The unit is unable to measure after the passage of 100 seconds since the start of the measurement process. At this point, the last cumulative time will be displayed in flashing values. In addition, if an object does not pass through a sensor gate again after passing through it the first time, the unit will be unable to measure when the cumulative time reaches 99.99 seconds. In this case, press the Start button to bring the unit into a state of measurement standby.

Memory display

The updated total time is displayed each time an object passes through the sensor gate during the measurement process. By pressing the Select button, you can check previous cumulative lap times. If an object passes through the sensor component while you are checking the memory data, the total time will still be recorded to memory ①.
If you end the measurement process by pressing the Start button without once having checked the memory data, the memory data will be reset.