

NANO II S P D Speedometer

PRODUCT FEATURES

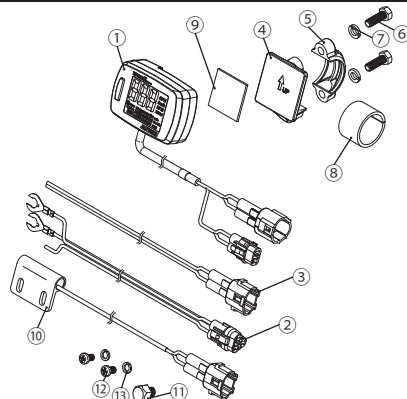
- Small ABS housing 40x60x17.5mm
- Beautiful white LED display at night
- KM/H (0-399KM/H) & MPH (0-250MPH) selectable
- Odometer: 0-999,999km (mile)
- Dual Trip Meter: 0-99,999.9km (mile)
- Max. speed memory & recall
- Selectable display-updating-speed (0.16/0.5sec)
- Ability to connect to OEM speed sensor, if the vehicle is equipped with an electrical speed sensor.
- Clock (12H)
- Magnetic sensor included
- Handle clamp (for 7/8" or 1") included
- Power DC10-16 (regular 12V), 9V with PP3 battery available
- Setting & operation can be simply done by one button.
- Accurate & reliable
- Waterproof

CAUTION

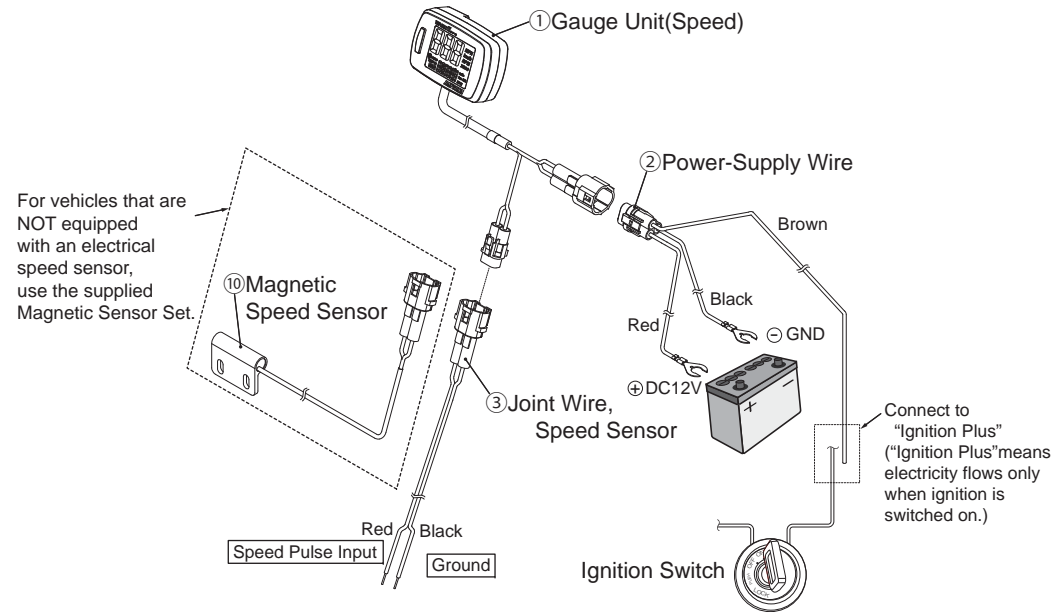
- Read all instructions before use.
- May need to purchase optional parts for some vehicles.
For vehicles that are NOT equipped with an electrical speed sensor, use the supplied Magnetic Sensor or the Proximity Speed Sensor (sold separately).
Or use a Speed Pulse Converter (sold separately) that turns mechanical speedometer cable movement into electrical pulse, if the vehicle comes with a mechanical speedometer cable.
(See the optional parts section in this manual.)
- Designed to be used on 12V system vehicle.
(NANO-II Speedometer does NOT work with a 6V system or battery-less system.)
- NANO-II Speedometer might not work normally when used together with other device that emits much noise.
- Use NANO-II Speedometer for the intended purpose of use.
- NANO-II Speedometer is for universal use, so it needs wiring for installation.
(If you are not sure about installation, consult an experienced dealer.)
- Do the wiring referring to the vehicle owner's manual.
- Do NOT disassemble NANO-II Speedometer. It may be damaged and water may come in.
- Do NOT leave NANO-II Speedometer in high heat when not used for a long time.
- Do NOT hit, drop and/or give a shock on NANO-II Speedometer. It may be damaged.
- Avoid contact with gasoline, brake fluid or other chemicals. It may be damaged.
- After installation, check to see if all the parts are correctly installed, and to see if all the screws are properly tightened.
- Inspect all installed parts after 100km driving. Periodical inspection is required every 500km(300mile). If anything unusual found while driving, pull over at a safe place to check.
- Because of the nature of LCD, display might be less-visible in some angle. Modify the mounting angle to have better view. Do not be all eyes on the less-visible display during driving, might cause serious accident.

COMPONENTS

NO.	DESCRIPTION	REMARKS	Q'TY
①	Gauge Unit (Speed)		1
②	Power-Supply Wire	L=1200	1
③	Joint Wire, Speed sensor	L=500	1
④	Mounting Bracket(upper)		1
⑤	Mounting Bracket(lower)		1
⑥	Hex Head Screw	M5X15	2
⑦	Spring Washer	M5	2
⑧	Rubber Band	70X12X2t	1
⑨	Double-sided Tape	25X25X0.5t	1
⑩	Magnetic Speed Sensor		1
⑪	Magnet		1
⑫	Pan Head Screw	M4X7	2
⑬	Spring Washer	M4	2



WIRING



OEM Wiring Color List

	RED DC12V ⊕	BROWN IGNITION PLUS ⊕	BLACK GND ⊖	RED SPEED PULSE
HONDA	BATTERY ⊕	black/brown or pink/blue	green	pink/green
YAMAHA	BATTERY ⊕	red/white or light brown	black or black/white	white/yellow or pink
SUZUKI	BATTERY ⊕	orange/green	black/white	pink
KAWASAKI	BATTERY ⊕	brown/white	black/yellow	pink or pink/blue

※OEM Wiring Color List is only for your reference. Wiring color might be different between the model, country, or model year. Please check with the vehicle owner's manual or voltmeter.

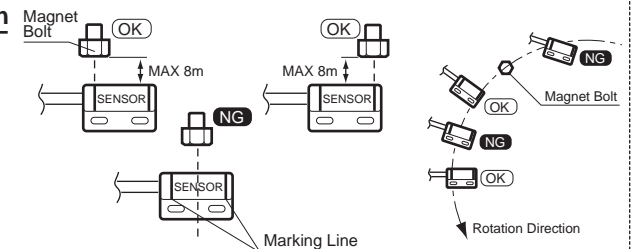
HOW TO INSTALL

- Disconnect the ground wire from the negative post of vehicle's battery before installation.
- Install ④ Mounting Bracket(Upper) & ⑤ Mounting Bracket(Lower) onto the handlebar using ⑥ Hex Head Screw & ⑦ Spring Washer. ※For 7/8" handlebars, use ⑧ Rubber Band.
- Mount ① Gauge Unit on the installed ④ Mounting Bracket(Upper) using ⑨ Double-Sided Tape.
△Degrease and clean the surface of handlebar where ⑨ Double-Sided Tape is put.
- Refer to the **WIRING** & the vehicle owner's manual and connect each wire.
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- After the wiring, refer to **How to Set** and do the setting.
- After the setting, check it works, if no problem, finish the installation.

Magnetic Speed Sensor Installation

△DO NOT have to use the supplied Magnetic Speed Sensor, if the vehicle is equipped with electrical speed sensor.

- Install ⑩ Magnet at any rotating area of the wheel.
(For example, on brake disc)
- Install ⑪ Magnetic Speed Sensor at any suitable place to meet following requirements.
※The center of the magnet must be aligned to either of marking line of the sensor.
※The gap between the magnet and the sensor must be within 8mm.

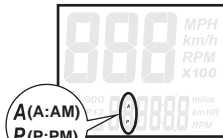


HOW TO SET

Button Icon's Definition

= Press button
 = Hold down button for 2sec.

⚠ Read all instructions of **HOW TO SET** before setting. Especially for "speed calibration", initially decide which way you will do ① Auto Calibration or ② Wheel Circumference Input. ① Auto Calibration is recommended.



to enter

Turn ignition on.
 Press button until setup mode "SET" appears.
 ※ is displayed during setup mode all the time.



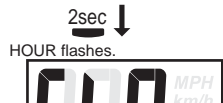
Hold down button for 2 seconds to enter the clock setup mode.

clock setup

"CLO" in the upper display and 12:00(factory default) or the preset time in the lower display appear.



Hold down button for 2 seconds for clock setting.



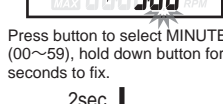
HOUR flashes.



Press button to select HOUR (1~12), hold down button for 2 seconds to fix, then MINUTE flashes.



Press button to select MINUTE (00~59), hold down button for 2 seconds to fix.



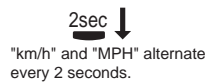
The display automatically go to the next speed unit setup mode.

speed unit setup (km/h or MPH)

"Un" and "kmh" (factory default) in the upper display and "km" in the lower display appear. (*or MPH & mile if pre-set)



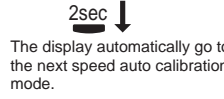
Hold down button for 2 seconds for speed unit setting.



"km/h" and "MPH" alternate every 2 seconds.



Hold down button for 2 seconds at the intended unit to decide.



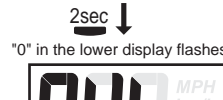
The display automatically go to the next speed auto calibration mode.

① speed calibration (Auto Calibration)

"AU" in the upper display and "0" in the lower display appear.



Start the engine, hold down button for 2 seconds for auto calibration.



"0" in the lower display flashes.



Drive exactly one(1) kilometer/mile. (While driving, the lower display counts number of pulse obtained from sensor.)



After driving one(1) kilometer/mile, stop the vehicle and hold down button for 2 seconds to finish the calibration. The display automatically go to the next wheel circumference input mode.



② speed calibration (Wheel Circumference Input)

※ Either ① or ② must be done, if you did ①, skip here by pressing button to go to the next display update setup mode.

In this ② Wheel Circumference Input setting, wheel circumference (including tire) must be input in millimeter. Tire Diameter (in inch) x 3.14 x 25.4 = circumference (in mm)

"Cl" in the upper display and "1277" in lower display appear.



Hold down button for 2 seconds for wheel circumference input.



Thousands digit of "1277" flashes.



Press button to modify the flashing number.

Hold down button for 2 seconds to fix and go to the next digit setting.



Continue this operation until the last digit is input. When the last digit is input, the display automatically goes to the next display update setup mode.

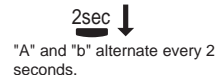
display update setup (A or b)

※ Display-updating-speed for current speed can be selected from 0.16sec or 0.5sec. If 0.16sec is too fast for your eyes, change to 0.5sec.

"dIS" in the upper display and "A" or if pre-set "b" in the lower display appear.



Hold down button for 2 seconds for display update setting.



"A" and "b" alternate every 2 seconds.



Hold down button for 2 seconds at the intended one to decide. (A=0.16sec, b=0.5sec)

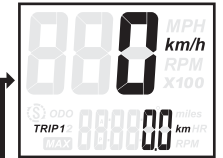
The display automatically goes back to the normal operation mode.



NORMAL OPERATION

current speed & tripmeter 1

Current speed in the upper display and resettable tripmeter with icon "TRIP1" in the lower display appear.



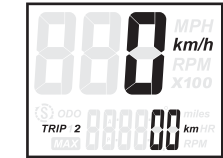
To reset tripmeter, hold down button for 2 seconds.



The lower display shows "0.0".

current speed & tripmeter 2

Current speed in the upper display and resettable tripmeter with icon "TRIP2" in the lower display appear.



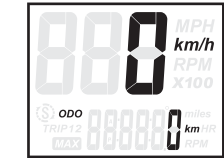
To reset tripmeter, hold down button for 2 seconds.



The lower display shows "0.0".

current speed & odometer

Current speed in the upper display and odometer with icon "ODO" in the lower display appear.



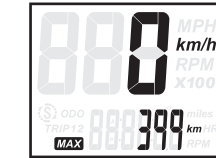
current speed & clock

Current speed in the upper display and clock in the lower display appear.



current speed & Max. speed

Current speed in the upper display and Max. speed with icon "MAX" in the lower display appear.



To reset Max. speed, hold down button for 2 seconds.



The lower display shows "0".

current speed & setup mode

Current speed in the upper display and "SET" in the lower display appear.



Press button to go back to current speed & tripmeter 1.



TROUBLESHOOTING

NANO-II is NOT turned on

Check each wiring & each connector. Check if 12V battery flows.

Speed is NOT displayed

Wire connection of the speed sensor may be incorrect. Check vehicle owner's manual to see if the wires are connected correctly.
 * By detaching the vehicle's original speedometer, the power-supply to the speed sensor may be cut-off on some vehicles. In that case, the BROWN wire from the ② power-supply wire is to be connected with the positive(+) wire of the speed sensor in order to activate it. Be sure the speed calibration is correctly done.

Unstable/wrong speed is displayed

Be sure the speed calibration is correctly done.

LCD display is Black

The LCD display becomes black when exposed to direct sunlight while not riding. This is because of the nature of LCD, and is NOT a defect. Avoid the exposure of the main unit to direct sunlight when not riding.

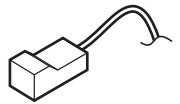
Frozen Display

In case the display becomes frozen, disconnect the 3-P connector of the main unit for a few seconds and connect it again to restart. Or disconnect the negative wire of the battery to cut the power supply for a seconds, and the connect it again to restart.

OPTIONAL PARTS

If the vehicle is NOT equipped with electrical speed sensor, and if the supplied Magnetic Speed Sensor could NOT be installed on the vehicle for some reason, use the Proximity Speed Sensor. The Proximity Speed Sensor works with any kind of metal and DOES NOT require mounting a magnet on the vehicle. It sends electrical pulse as a metal comes close and goes away.

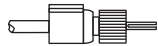
PROXIMITY SPEED SENSOR
 <PART#85005>



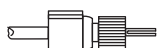
If the vehicle is equipped with mechanical speedometer cable, use a speed pulse converter from the following options. The converter turns mechanical movement to electrical pulse.

SPEED PULSE CONVERTER

A1 type <#61118>
 M11 Female Thread



B1 type <#61120>
 M12 Female Thread



G2 type <#61122>
 Φ15 Insert



A2 type <#61124>
 M12 Female Thread



H type <#61130>
 Φ10 Insert



X1 type <#61128>
 Speedometer cable mount

