Thank you for purchasing **KOSO DB-02R speedometer**, before operating the unit, please read the instruction thoroughly and retain it for the future reference.

⚠ Notice

● THE LCD meter is apply for DC 12V
● For installation, please follow the steps described in manual. Any damage caused by wrong installation shall be imputed to the users.
● Don't break or modify the wire terminal. To avoid the short circuit, please don't pull the wire when installing.
● Do not disassemble or change any parts excluding the manual description.
● The interior examination or maintenance should be executed by our professionals.

MARK MEANING:

|	
NOTE	You could get the installation details from the information behind the mark.
⚠	Some processes must be followed to avoid the affection caused by wrong installation.
⚠ **WARNING!**	Some processes must be followed to avoid damages to yourself or the public.
⚠ **CAUTION!**	Some processes must be followed to avoid the damage to the vehicle.

Press the button one time
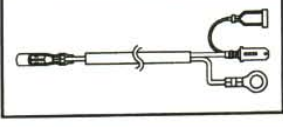
Press the button 3 seconds

1-1 Accessory

1 LCD meter X 1

2 Power wire X 1
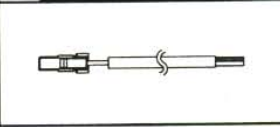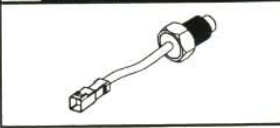
3 RPM wire set (A TYPE) X 1
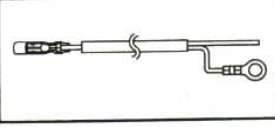
4 RPM wire set (B TYPE) X 1
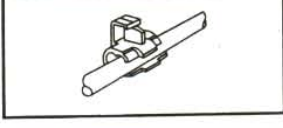
5 Temp sensor wire set X 2

6 PT 1/8 water temp sensor X 2

7 Passive speed sensor

9 Mid-way connect X 2

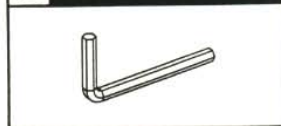**10** M8/ S type speed sensor bracket X 1

11 M10/ S type speed sensor bracket X 1

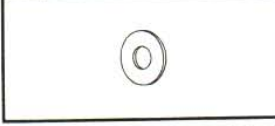**12** M5X5L Hexagon socket screw X 2

13 2.5 mm spanner X 1

14 4 mm spanner X 1

15 Meter bracket X 1

16 M5 washer X 2

17 M5 X 15L screw X 2

NOTE Please contact the local distributor if the items you open are not the same, with the above-listed one.
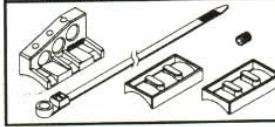
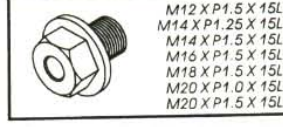## 1-2 Option accessory

1 Active speed sensor

1 Disc magnet screw

5/16-18 X 22.1L
M5 X P0.8 X 12L
M6 X P1.0 X 12.6L
M6 X P1.0 X 19.7L
M6 X P1.0 X 24L
M8 X P1.25 X 22.5L   M8 X P1.25 X 27.5L
M8 X P1.25 X 29L   M10 X P1.25 X 28.3L

3 L TYPE speed sensor backet

2 Oil temp sensor adapter

M12 X P1.5 X 15L
M14 X P1.25 X 15L
M14 X P1.5 X 15L
M16 X P1.5 X 15L
M18 X P1.5 X 15L
M20 X P1.0 X 15L
M20 X P1.5 X 15L

3 Water temp sensor adapter

M14
M16.M18
M22.M26 mm

4 Temp sensor

M10 X P1.0
M12 X P1.5
M14 X P1.25
M14 X P1.5
M16 X P1.5 / M18 X P1.5
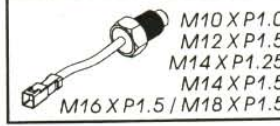
6 Temp sensor wire set (2 M)

NOTE The advantage of the active speed sensor is as following, 1. You don't need to install the magnet in the opposite position of the speed sensor. 2. You could set up the sensor signal input up to 60 points, and the speed displayed will be more accurate. Please note that the speed sensor attached in the kit is passive speed sensor, and the maximum speed signal it could read is 6 points.

NOTE Some of the option accessories may not sell. For the details, please contact the local distributor.

Digital speed signal sensor (Accessory 7)

Red / Postive pole (Connect to the battery **DC 12V**)

Brown / "+"Wire connect key on **DC 12V** main power switch

Green / Ground wire connect to the vehicle body or the engine (It must be a good ground)

Power wire (Accessory2)

LCD meter (Accessory 1)

Temp sensor wire set [Accessory 5]

TH-01 PT1/8water temp sensor[Accessory 6]

White / Ground wire connect tothe vehicle body or the engine (It must be a good ground)

The type RPM wire is for fuel Injection model only. Before installing, please make sure the signal voltage peak of the coil range is between 15V~24V.If the signal voltage is lower than 15V, maybe the meter can't read the RPM signal.On the opposite side, If the voltage is higher than 24V - there is a risk that the meter could be broken due to the high voltage. In this case, please make sure the signal voltage range before it.

Main switch wiring reference:

	Power	Key on	Ground
YAMAHA	Red	Brown	Black
HONDA	Red	Red / Black	Green
SUZUKI		Black	Green
KAWASAKI	White	Brown	Black / Yellow
KYMCO	Red	Black	Green
SYM	Red	Black	Green
PGO	Red / White	Orange	Black

NOTE The color listed above may differ depending on the model.

RPM wiring reference:

YAMAHA	Yellow / Black	**BUELL**	Pink
HONDA	Yellow / Green	**CAGIVA**	Gray / Green
SUZUKI	Yellow / Blue	**DUCATI**	Gray / Green
KAWASAKI	Light Blue	**H-D**	Pink
APRILIA	Gray / Violet	**MV**	Gray / Yellow
BMW	Black	**TRIUMPH**	Red
BENELLI	Gray / Violet		

**NOTE** The color listed above may differ depending on the model.

Fuel indicator wiring reference:

YAMAHA	Green	**KYMCO**	Yellow / White
HONDA	Yellow / White	**SYM**	Yellow / White
SUZUKI	Yellow / White	**PGO**	Gray
KAWASAKI	Black / L Green		

⚠ The fuel sensor is electronic type, please don't parallel connection with the original- otherwise the fuel gauge won't display.
The wrong installation of the fuel wiring may cause the meter break.

RPM wire set-type **A** (Accessory 3)

RPM wire set-type **B** (Accessory 4)

Ignition coil positive

Ignition coil positive

RPM wire set-type **A** (Accessory 3)

Coil

Spark plug wire

Spark

Spark plug cap

D

EMS CDI

Flywheel

Ignition pulse

Tachometer

pick up

C

A3 **B** **A2** **A1** **B1** **A**

E

NOTE The temperature will disappear if you don't install & connect the temperature sensor with the meter.

NOTE When connecting the power wiring, please follow the instruction. If you connect the red & brown wiring in parallel will cause the meter work improperly.

⚠ The RPM wire installation
A. Please wrap the RPM wire at least 5 times around the spark plug.
A1. Please use tape to fix the RPM (Type **A**) wire onto the spark plug wire.
A2. Please use tape to fix the RPM wire (Type **A**) on the spark plug cap.
A3. Please use tape to fix the RPM wire (Type **A**) on the coil positive pole wire. For some models with the coil negative wire, please tape the RPM wire (Type **A**) on the negative wire to get the RPM signal. (For example, the YAMAHA V-max 1200)
B. Please connect the RPM wire (type **B**) to connect to the ignition coil positive pole.
B1. Please wrap the RPM wire (type **B**) on the spark plug wire by connecting the male and female connector.
C. Please connect the RPM wire (Type **A**) to the pick up.
D. Please parallel the RPM wire (Type **A**) with the original tachometer signal wire (This method is available only when the original speedometer comes with a tachometer on it. You could get the RPM wire information from the service manual of your bikes.)
E. For the models comes with the new ignition coil, please wrap the RPM wire (Type **A**) at least 5 times around the spark plug as the
For multi-ignition models, we will suggest you to get the signal on the first ignition.
The best signal source will be in order as D>C>B>A, we will suggest you to check different ways if you have problems to get the RPM signal.

2-2 INSTALLATION INSTRUCTIONS.
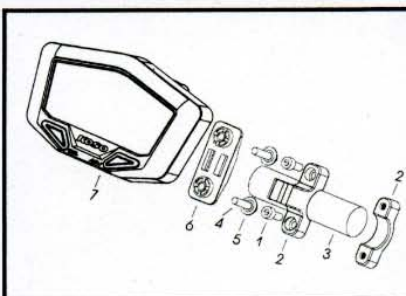
When installing, please follow the process.

1.M5 x 12l screw x2
2.Meter bracket for handle bar
3.Fix the bracket on handle bar (7/8 inch)
4.M5 x 18l screw x2
5.M5 washer x2
6.Meter fixed board
7.Fix the meter on the board (6) With the screw (5)
8.Fix the meter and the bracket together

NOTE Please adjust the meter to the best visible angle before tighte ning the screw

The temperature alarm A/B
● Setting range : 60~250°C (140~482°F)
● Setting unl : 1 °C (°F)
Speeding warning light
● Setting range : 30~360 km/h
  (19~225MPH)
● Setting unit : 1 km/h (MPH) 。

The tachometer bar range
● Display range : 10,000 、15,000
  、20,000 RPM 。

Volt meter (the external power)
● Display range : 0.0~18.0V
● Display unit : 0.1V
● When the external power is
  connected, it will show the voltage
  value directly. It will show 0.0V when
  the external power is disconnected.

SPEED   A   B

A   B   RPM

3 stages RPM shift lightt
● Setting range : 5,000~20,000 RPM
● Setting unit : 100 RPM

The digital tachometer
● Display range : 0~360 km/h
  (0~225 MPH)
● Display unit : 1 km/h (MPH) 。
Bar graph tachometer
● Display range : 0~20,000 RPM
● Display unit : 10 RPM 。

Odometer
● Display range : 0~99999 km (mile)
  , reset automatically after
  99999 km (mile)
● Display unit : 0.1 km (mile)
Trip A, B
● Display range : 0~999.9 km (mile),
  reset automatically after 0~999.9
  km (mile)
● Display unit : 0.1 km (mile)
Total engine hour meter
● Display range : 0-999.9 H
● Display unit : 0.1 H (6 Minutes)
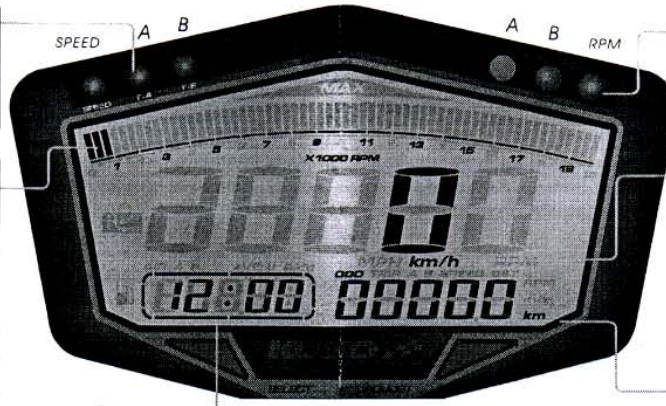
The temperature alarm A/B
● Setting range : 60~250°C (140~482°F)
● Setting unit : 1 °C (°F)

CLOCK
● Time : 24H
● When the meter is off, it will
  show the seconds.

Insufficient fuel
● Display range:0%~100%
● Display unit:
● When fuel capacity lower then 20%.
  The fuel display will showing 5%
● When fuel capacity higher then 20%.
  The fuel display on gauge will showing 10%

|	
● Speedometer	Display range : 0~360 km/h (0~225 MPH) Display unit : km/h & MPH for alternative
○ Display internal	<0.5 second
○ Odometer	Display range: 0~99999 km (mile), reset automatically after 0~99999 km (mile) Display unit: 0.1 km (mile)
○ Trip meter A.B	Display range: 0~999.9 km (mile), reset automatically after 0~999.9 km (mile) Display unit: 0.1 km (mile)
○ Speeding warning light	Setting range: 30~360 km/h (19~225 MPH) Display unit : 1 km/h (MPH)
○ Top speed record	Display range : 0~360 km/h (0~225 MPH)
○ Tire circumference	Setting range : 300~2,500 mm Display unit : 1 mm · Sensor point: 20
○ Digital tachometer	Display range : 2,000 RPM Display unit : 10 RPM
● Bar graph tachometer	Display range : 10,000 RPM 60 segment bar graph Display unit : 166 RPM for each segment Display range : 15,000 RPM 60 segment bar graph Display unit : 250 RPM for each segment Display range : 20,000 RPM 60 segment bar graph Display unit : 333 RPM for each segment
○ RPM shift light	Display range : 5,000~20,000 Display unit : 100 RPM 。
○ Pre-shift light A/B	Display range : -500~-50,000 before the shift light Display unit : 100 RPM
○ Max. RPM record	Display range : 0~20,000 RPM
○ RPM input pulse	Display range : 0.5, 1, 1.5, 2, 2.5, 3, 4, 5, 6
● Total engine hour meter	Display range: 0-999.9 H Display unit: 0.1 H (6 Minutes)
● Thermometer	Display unit : °C & °F for alternative

|	
● Thermometer A 、B	Display range : 0~250°C (32~482°F) Display unit : 0.1°C (°F)
○ Display internal	<0.5 second
○ Temperature alarm A 、B	Display range : 60~250°C (140~482°F) Display unit : 1°C (°F)
○ TOP temperature record	Setting range : 0~250°C (32~482°F)
● Fuel meter	Display range : 0~100% Setting range: 100 Ω, 510 Ω, no display
○ insufficient fuel warning	Setting range : 10~50 % Setting unit : 10 %
● Volt meter	Display range : DC 0~18.0 V Display unit : DC 0.1 V
● Target speed timer	Setting range: 30~360 km/h (20~225 MPH) Setting unit: 5 km/h (MPH)
● Target distance timer	Setting range: 1/32~30/32 mile (50~1,500 M) Setting unit: 1/32 mile (50 M)
● Top speed timer	The record including, 1.Speed: 0~360 km/h (0~225 MPH) 2.Distance: 0~999 M (0~3,280 feet) 3.RPM: 0~20,000 4.Timer: 0~9'59"99 second.
● Back light	DC 12V
● Effective temperature range	-10~+60°C
● Meter standard	JIS D 0203 S2
● Meter size	100 X 60 X 20 mm
● Meter weight	Around 200 g
● Telltales	● Speeding (RED) ○ RPM shift light A (Yellow) ● RPM Shift light (RED) ○ Temperature alarm A/B (RED) ○ RPM shift light B (Orange)

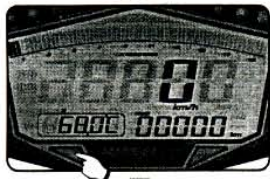**NOTE** Design and specification are subject to change without notice!
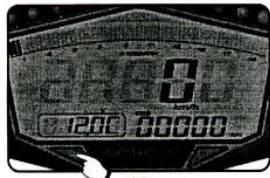
●**4-1-1 Select button function instruction**
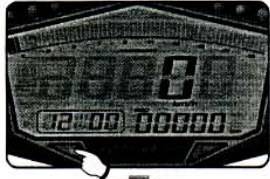
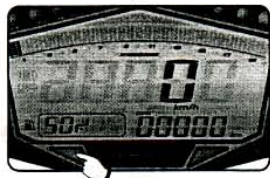●In main screen,Press the **Select button** once to switch function from clock to temp A.
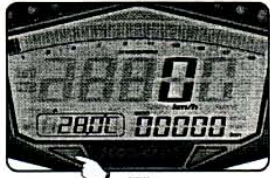
●In temp A screen, press the **Select button** once to switch from Temp A to Temp B

●In temp B screen, press the **Select button** once to switch from Temp B to volt .

●In volt screen, press the **Select button** once to switch from volt to fuel meter.

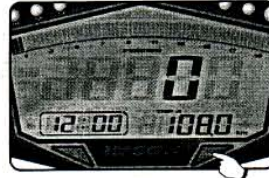●In fuel screen, press the **Select button** once to switch from the fuel function to the main screen.

●The main screen.

●**4-1-2 Adjustbutton function instruction**

●In main screen, press the **Adjust button** once to switch the function from odo meter to trip A.
●In main screen, you could press down the **Adjust button** for 3 seconds to change the speed unit.

●In trip A screen, press the **Adjust button** to swtich from trip A to trip B.
●Press down the **Adjust button** for 3 seconds to reset the trip A.

●In trip B screen, press the **Adjust button** to swtich from trip B to total engine hour screen.
●Press down the **Adjust button** for 3 seconds to reset the trip B.

●In total engine hour meter screen, press the **Adjust button** to swtich from total engine hour meter to Max record.
●Press down the **Adjust button** for 3 seconds to reset the total engine hour meter.

●In Max record screen, press the **Adjust button** once to switch from Max record to the main screen.
●Press the Select button once to switch the max record screen from Temp A to Temp B.

●Press down the **Adjust button** for 3 seconds to reset the MAX record.

●The main screen.

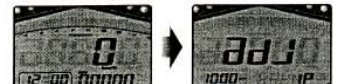●**4-1-3 Adjust+Selectbutton function instruction**

●In main screen, press the **Adjust & Select** button one time at the same time to switch the digital speedometer to digital tachometer.

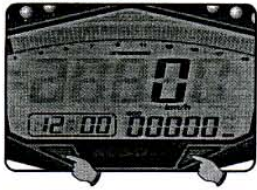●**4-1-4 Select+Adjust button function instruction X3**

● Press down the **Adjust & Select** button for 3 seconds to enter setting screen. (Check section **5-2** for detail)

● In main screen

● In main screen, press down the **Select & Adjust X 3 seconds** to enter the tire circumference and sensor point setting.
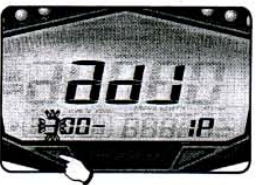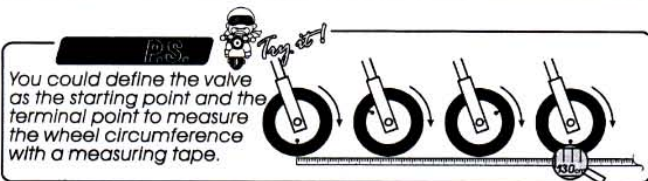
● Tire circumference setting

● **EX. The tire circumference is 1,300 mm.**
● Press the **Select button** to move to the digit you want to set.

NOTE setting range: 300~2,500 mm.
Setting unit: 1 mm.

⚠ **CAUTION!**
● Please measure the tire circumference (The tire you will install the sensor on) and make sure the number of magnet sensor point (You could install the magnet into the disc screw or the sprocket screw.)
● The speed displayed on the meter will be affected by the setting, please make sure the setting number is correct before you make the setting.

You could define the valve as the starting point and the terminal point to measure the wheel circumference with a measuring tape.

● Press the **Adjust button** to choose the setting number.
● EX. The circumference setting is changed from 1,000 mm to 1,300mm.
● Press the **Select button** to enter the sensor point setting

● Sensor point setting

● Press the **Adjust button** to choose the setting number.
● **EX. The sensor point you want to set is 6.**

NOTE The sensor point setting range: 6 points.

● EX. the sensor point setting is changed from 1 P to 6 P.
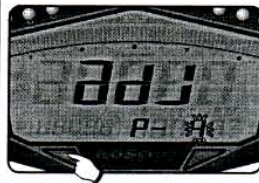● Press the **Select button** to enter the RPM pulse setting.

● RPM pulse setting

● **EX. You want to change the current setting value from 1 to 2.**
● Press the Adjust button to enter the corresponding value for the RPM signal number per ignition.
(Please check the reference table below!)
● EX. The original setting is 0.5 (4C-1P).

NOTE The piston type can be set is 0.5, 1, 1.5, 2, 2.5, 3, 4, 5, 6.

The setting value	The corresponding stroke and pistons number		The corresponding RPM signal number per ignition.
0.5	—	4C-1P	2 RPM signals per 1ignition.
1	2C-1P	4C-2P	1 RPM signal per 1 ignition.
1.5	—	4C-3P	2 RPM signals per 3ignition.
2	2C-2P	4C-4P	1 RPM signal per 2 ignition.
2.5	—	4C-5P	2 RPM signals per 5ignition.
3	2C-3P	4C-6P	1 RPM signal per 3 ignition.
4	2C-4P	4C-8P	1 RPM signal per 4 ignition.
5	—	4C-10P	2 RPM signals per 10ignition.
6	2C-6P	4C-12P	1 RPM signal per 6 ignition.

⚠ **CAUTION!** Most of the 4-cycle bikes with one single piston are igniting every 360 degree once, so the setting should be the same as the bike with 2-cycle and one piston engine.

● EX. The ignition angle setting is changed from 1 to 2 (4C-4P).
● Press the **Select button** to enter the RPM setting screen.

● The negative impulse

● EX. We would like to change the setting to Lo. (The negative impulse)
● Press the **Adjust button** to choose the Input signal you want to set.

NOTE The impulse setting range is between Hi (the positive impulse)& Lo (the negative impulse)

NOTE If the tachometer can't detect the signal (No RPM is displayed on the screen), you could choose another setting, and check it again.

● EX. Now the setting is HI (The positive impulse)
● Press the **Select button** to enter the RPM setting screen.

● Bar graphic tachometer

● EX .You want to set the bar graphic tachometer to 20,000 RPM.
● Press the **Adjust button** to choose the setting range.

NOTE The tachometer range : 10,000, 15,000, 20,000RPM

● EX. Now the setting is changed from 10,000 RPM to 20,000 RPM.
● Press **Selec button** to enter sthe speeding setting screen.

● Speeding waring light seting

● EX. The speeding alarm you want to set is 68 Km/h
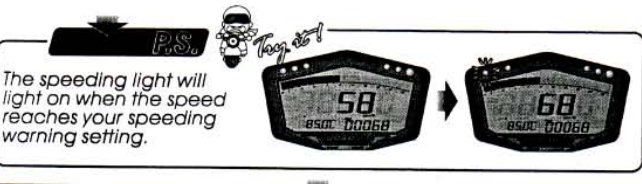● Press the **Select button** to move to the digit you want to set.

NOTE Setting range: 30~360km/h (19~225 MPH).
Setting unit: 1 km/h (MPH)

● The speeding alarm setting is changed from 60 Km/h to 68 Km/h.
● Press the **Adjust button** to choose the setting number.

● Press **Selec button** to enters the shift light setting screen.

P.S.

The speeding light will light on when the speed reaches your speeding warning setting.

● In main screen, press down the **Adjust X 3 seconds** to enter the target speed timer test setting.

The timer is automatic, so when your bike start to move the timer will start to count the time and stop automatically after you stops the bike.

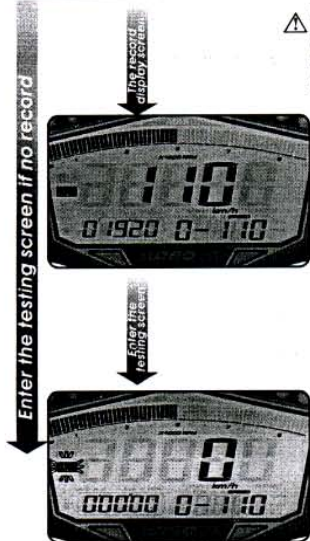| 0 km/h	3 km/h	Speed up	110 km/h
000000	000130		001920

⚠ **WARNING!**
Please use this function at racetrack to avoid traffic accidents.

In power test screen, press the **Select button** one time to enter the target speed timer test screen.

NOTE Please start the test when the bike stops.

⚠ If you have the power test record, it will display the record first. You must clear the record before starting a new test.

⚠ During the test, the ▦ will keep flashing!

the record display screen
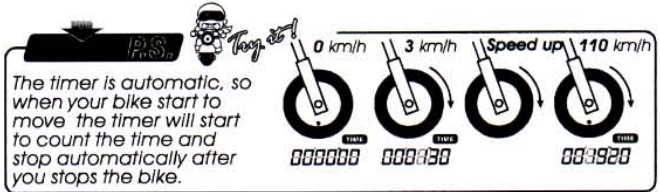*Enter the testing screen if no record*

Press the **Adjust button** to clear the record and enter the target speed timer test screen.
EX. Now you could see the record you have before. It displays the target speed timer setting as 0~110 km/h, the test result: 19"20 seconds. The top speed is 110 km/h during the test., The MAX RPM is 10,000 RPM during the test.
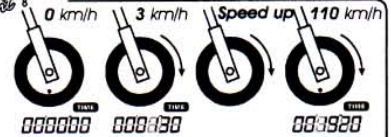
↪ If you just want to use the function one time, hold down the **Select button** for 3 seconds to save the records and back to the main screen.

When you reach the target speed you set (0~110 km/h), the timer will stop counting (19"20 second).

↪ If you just want to use the function one time, hold down the **Select button** for 3 seconds to save the records and back to the main screen.

If you want to test it again, press the **Adjust button** to clear the record and enter the target speed timer test screen again.

Enter the testing screen

When the bike moves, the timer will start automatically.

NOTE About the power test setting, please check **4-2**.

P.S. *Try it!*
If you don't reach the target speed or stop accelerating during the test, you could press the **Adjust button** to stop the timer. Then you could press the **Adjust button** one time to clear the record and enter the target speed timer test screen.

0 km/h	3 km/h	Speed up	Test failure
000000	000930		002920

● In main screen, press down the **Adjust X 3 seconds** to enter the target distance timer test setting.

P.S. *Try it!*
The timer is automatic, so when your bike start to move the timer will start to count the time and stop automatically after you stops the bike.
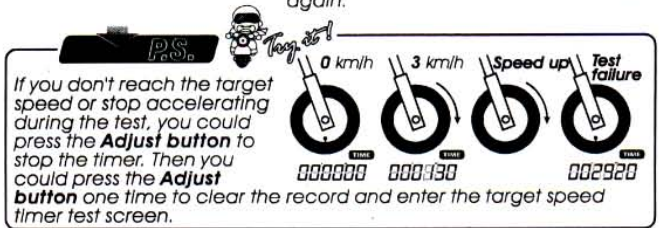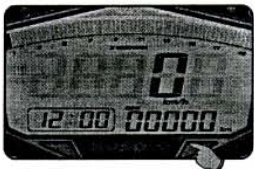
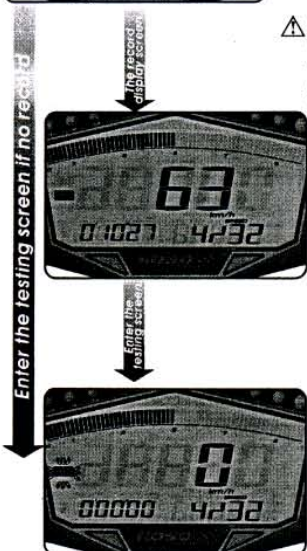| TIME 000000	TIME 000930	Speed up	TIME 001023
0 M			100 m

⚠ **WARNING!**
Please use this function at racetrack to avoid traffic accidents.

In power test screen, press the **Select button** 2 times to enter the target distance timer test screen.

NOTE Please start the test when the bike stops.

⚠ If you have the power test record, it will display the record first. You must clear the record before starting a new test.

⚠ During the test, the ▦ will keep flashing!

the record display screen
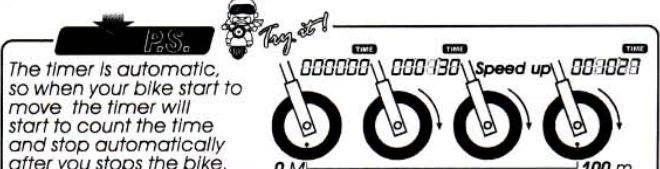*Enter the testing screen if no record*

Press the **Adjust button** to clear the record and enter the target distance timer test screen.
EX. Now you could see the record you have before. It displays the target speed Timer setting as 2/32 mile (100 M), the test result: 10"27 seconds. The top speed is 63 km/h during the test. The MAX RPM is 8,000 RPM during the test.
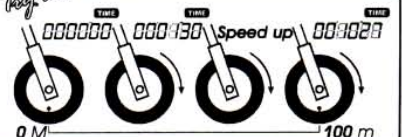
↪ If you just want to use the function one time, hold down the **Select button** for 3 seconds to save the records and back to the main screen.

When you reach the target distance you set (100 M . 2/32 mile), the timer will stop counting (10"27 second).

↪ If you just want to use the function one time, hold down the **Select button** for 3 seconds to save the records and back to the main screen.

If you want to test it again, press the **Adjust button** to clear the record and enter the target speed timer test screen again.

find the testing screen

When the bike moves, the timer will start automatically.

NOTE About the power test setting, please check **4-2**.
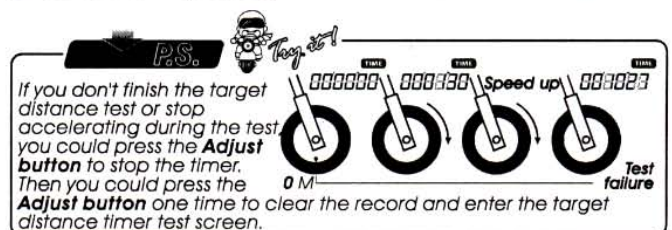
P.S. *Try it!*
If you don't finish the target distance test or stop accelerating during the test, you could press the **Adjust button** to stop the timer. Then you could press the **Adjust button** one time to clear the record and enter the target distance timer test screen.

TIME 000000	TIME 000930	Speed up	TIME 001023
0 M			Test failure
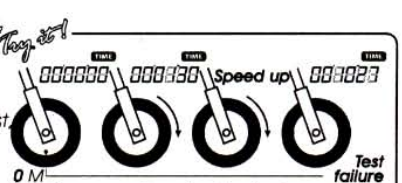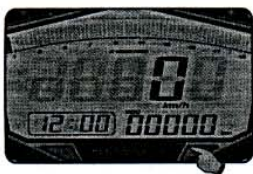
● In main screen, press down the **Adjust X 3 seconds** to enter the top spped timer test setting.

⚠ WARNING!
Please use this function at racetrack to avoid traffic accidents.

In power test screen, press the **Select button** 3 times to enter the top speed test screen.

NOTE Please start the test when the bike stops.

⚠ If you have the power test record, it will display the record first. You must clear the record before starting a new test.

Press the **Adjust button** to clear the record and enter the top speed test screen.EX. Now you could see the record you have before. It displays the top speed is 180 km/h, the distance to reach the top speed is 510 M, The MAX RPM is 10,000 RPM during the test, the time you need to reach the top speed is 10"20 seconds.

↩ If you just want to use the function one time, hold down the **Select button** for 3 seconds to save the records and back to the main screen.

When the bike moves, the timer will start automatically.

NOTE The top speed test range
Speed: 0~360 km/h.
Distance: 0~999 M (3280 feet)
RPM: 0~10,000 / 20,000 RPM.
Timer: 0~9'59"99 seconds.

⚠ The setting unit will change together with the speed unit setting (**4-2**).
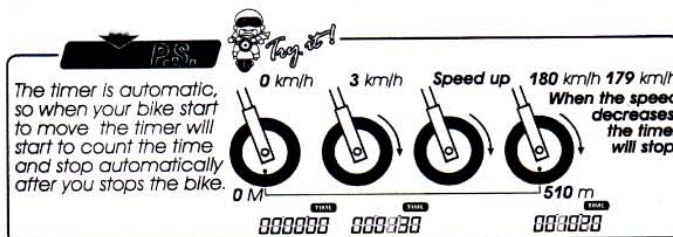
The timer is automatic, so when your bike start to move the timer will start to count the time and stop automatically after you stops the bike.

| 0 km/h | 3 km/h | Speed up | 180 km/h | 179 km/h |

When the speed decreases, the timer will stop.

0 M ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯ 510 m

⚠ During the test, the ▓▓ will keep flashing!

When you reach the top speed (180 km/h), the meter will stop counting the distance (510 M), and time (10"20 seconds). If you want to test it again, press the **Adjust button** to clear the record and enter the target speed timer test screen again.

Enter the testing screen if no record
the record display screen
enter the testing screen

6 Trouble shooting

The following situation do not indicate malfunction of the meter.Please check the following before taking it in for repair.

Trouble	Check item	Trouble	Check item
The meter doesn't work when the power is on.	● The power doesn't supply to the meter. → Please make sure the wiring is connected. The wiring and fuse are not broken. → The battery is broken or the battery is too old to supply enough power **DC 12V** to make the meter work.	Fuel gauge does not appear or appear incorrectly.	● Please check your fuel tank. → Is there any fuel inside ? ● Please check the wiring. → Do you connect the wiring correctly ? ● Please check the setting. → Please refer to the manual **4-2**.
The meter shows wrong information.	● **Please check the voltage of your battery, and make sure the voltage is over DC12V.**	**Temp does not appear or appear incorrectly.**	● **Please check the sensor.** **→ Does the wiring break or falling off ?**
Speed does not appear or appear incorrectly.	● Please make sure the speed sensor is connected correctly. ● Please check the tire-size setting. → please refer to the manual **4-2**.	The clock is incorrect.	● Do you connect the wiring correctly. → Please check the positive wire (Red) connects to the battery, and main switch positive wiring (Brown) connects to the main switch.
Tachometer does not appear or appear incorrectly.	● **Please check the RPM sensor wiring is connected correctly.** ● **Please check the spark plug is R type or not. If not, please replace the spark plug with the R type spark plug.** ● **Please check your setting.** **→ Please refer to the manual 4-2.**		

※ If still can't solve the problems according to the steps above, please contact with distributors or us.

● The clock setting

● **EX. To change the setting to 14:05.**
● Press the **Adjust button** to choose the hour you want to set.

 ➡ ➡➡

NOTE Setting range: 0~59 minutes.

⚠ **CAUTION!** The second will be reset if you adjust the clock setting.

● **EX.** Now the setting is changed from 14:00 to 14:05.
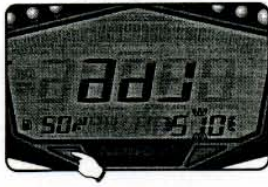● Press the **Select button** one time to enter the fuel gauge resistance.

● The fuel gauge resistance

● **EX. You want to change the fuel resistance setting to 510 Ω.**
● Press the **Adjust button** to choose the hour you want to set.

 ➡

NOTE The fuel gauge resistance setting range: 100 Ω. 510 Ω.
If you don't install the fuel wiring, the fuel gauge will not display.

● EX:The fuel gauge resistance setting is changed from 100 Ω to 100 Ω.
● Press the **Select button** one time to enter the insufficient fuel warning setting.

● The insufficient fuel warning

● **EX. You want to change the Insufficient fuel warning setting to 50%**
● Press the **Adjust button** to choose the hour you want to set.

 ➡ ➡➡

NOTE The insufficient fuel warning setting range : 10%~50% 。

● EX:The insufficient fuel warning setting is changed from 10% to 50%.
● Press the **Select button** one time to enter the backlight setting setting.

● Backlight setting

● **EX. You want to set the brightness at 5.**
● Press the **Adjust button** to choose the hour you want to set.

 ➡ ➡➡

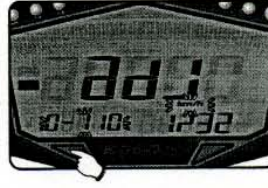**NOTE** Backlight setting range: 1(darkness) ~5 (Brightness) .

● EX:The Backlight setting setting is changed from ILL 1 to ILL 5.
● Press the **Select button** one time to enter the target speed timer test.

● Target speed timer test

● **EX. You want to change the target speed timer test setting to 0~110**
● Press the **Adjust button** to choose the hour you want to set.

 ➡ ➡➡

● EX:The target speed timer test setting is changed from 0~30 km/h to 0~110 km/h.
● Press the **Select button** one time to enter the target distance timer test.
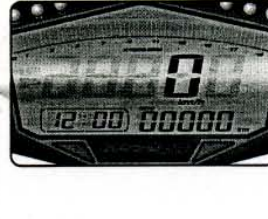
● Target distance timer test

● **EX. You want to change the target distance timer test setting to 4/32mile 。**
● Press the **Adjust button** to choose the hour you want to set.

 ➡ ➡➡

● EX:The target distance timer test setting is changed from 1/32 mile to 4/32 mile.
● Press **Select button** to back the main screen.

● The main screen.

The shift light setting instruction
● The setting is started from the Shift light, and then make the setting value for Pre shift light A&B according to it.

YELLOW
Pre shift light A (5) RPM → ORANGE **Pre shift light B** (15) RPM → RED **Shift light** 9500 RPM

●The shift light setting

● EX: You want the shift light to light on at 9500 RPM Please change the shift light setting value to 9500 directly.
● Press the **Adjust button** to choose the setting number.

5000 → 5 00 → 9500

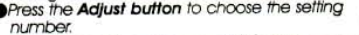**NOTE** Display range : 5,000~10,000 RPM
Display unit : 100 RPM

● EX: Now the shift light setting is changed from 5000RPM to 9500 RPM.
● Press the Select button to enter the pre shift light B setting.

●The pre-shift light B setting

● EX: You want the pre-shift B light to light on at 8000 RPM.
The equation is as following,
The shift light setting value (9500) - The pre-shift light B setting value, (B) = 8000 (the RPM you want the pre-shift light to light on.)
=> The setting value of pre-shift light B = 1500. It means that you should set the pre-shift light setting as 15.
● Press the **Adjust button** to choose the setting number.

10-10 → 2-10 → 5-10

NOTE Display range : 5 (500 RPM)~50 (5000 RPM)
Display unit : 100 RPM

● EX: The setting value is changed from 10 to 15.
● Then press the **Select button** to enter the pre-shift light A setting.

●The pre-shift light A setting

● EX: You want the pre-shift light A light to light on at 7500 RPM.
The equation is as following,
The **pre-shift light B** setting value (8000) - The pre-shift light A setting value (A) = 7500 (the RPM you want the pre-shift light to light on.)
=> The setting value of pre-shift light A = 500. It means that you should set the pre-shift light A setting as 5.
● Press the **Adjust button** to choose the setting number.

10-10 → 2-10 → 5-10

NOTE Display range : 5 (500 RPM)~50 (5000 RPM)
Display unit : 100 RPM

● EX: The setting value is changed from 10 to 5.
● Then press the **Select button** to enter the pre-shift light A setting.

P.S. Try it!

The shift light
● When the shift light & pre shift light setting is 9500-15-05, the 3 stages Shift light will light on as below.

pre shift light A 7500 RPM → pre shift light B 8000 RPM → Shift light 9500 RPM

●Temperature alarm A setting

● EX: You want to set the temperature alarm A at 68C.
● Press the **Select button** to move to the digit you want to set.

060℃ → 060℃ → 062℃

● Press the Adjust button to change the value.
● EX: The temperature alarm A setting is changed from 60 C to 68 C.

06 ℃ → 06 ℃ → 068℃

● Then Press the Select button to enter the temperature alarm B setting.

P.S. Try it!

The red LED alarm will light on according to the temperature alarm A setting value.

●Temperature alarm B setting

● EX: You want to set the temperature alarm B at 108C.
● Press the **Select button** to move to the digit you want to set.

100℃ → 00℃ → 10 ℃

● Press the Adjust button to change the value.
● EX: The temperature alarm A setting is changed from 100 C to 108 C.

10 ℃ → 10 ℃ → 108℃

● Press the **Select button** one time to enter the clock (hour) setting.

P.S. Try it!

The red LED alarm will light on according to the temperature alarm B setting value.

●The clock setting

● EX: **You want to change the hour to 14.**
● Press the **Adjust button** to choose the hour you want to set.

2:00 → 3:00 → 4:00

NOTE Setting range: 0~23 H.

⚠ **CAUTION!** The second will be reset if you adjust the clock setting.

● EX. Now the setting is changed from 0:00 to 14:00.
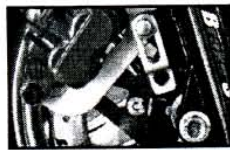● Then press the **Select button** to enter the minute setting.

MOTO / SCOOTER S type speed sensor bracket instruction

Loose the screw on the caliper

Install the speed sensor.

Install the S type bracket on the caliper.

Adjusting the distance between the sensor and screw to get the best speed signal. Please make sure the distance is under **2 mm** to get the best signal.

Please adjust the bracket to the proper angle and then screw it up. Please make sure the disc screw could pass the hole on the bracket for you to install the sensor into the same hole for catching the speed signal.

## MOTO / SCOOTER L type speed sensor bracket instruction

Please install the L bracket and the anti-slip rubber on the front fork and adjust it to the proper height and angle.

Please install the speed sensor into the proper hole on the bracket.

Please use the cable tie to fix the bracket on the front fork. Please make sure the disc screw could pass the hole on the bracket for you to install the sensor into the same hole for catching the speed signal.
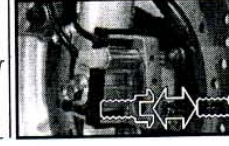
Adjusting the distance between the sensor and screw to get the best speed signal. Please make sure the distance is under **2 mm** to get the best signal.

The active speed sensor could be installed by the metal parts to detect the speed.
EX. 1 The disc screw.
EX. 2 The disc to detect the disc gap. (Please make sure the distances between the gaps are the same in advance to avoid wrong speed signal.)
EX. 3 The sprocket to detect the disc gap. (Please make sure the distances between the gaps are the same in advance to avoid wrong speed signal.)
We will suggest you to catch the speed from the disc screws. The more the sensor points are, the better the speed accuracy is. The maximum sensor points the speed sensor could detect is 60 points per turn.

⚠ **After installation, please use your hand to turn the tire to see is everything ok. The LED on the active speed sensor will light up once the signal is detected.**
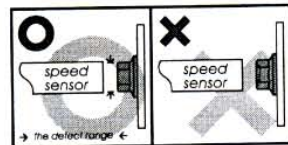
EX. 1
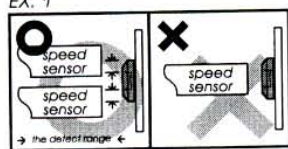
The hexagon socket disc screw
The best detect area: The edge of the hexagon socket screw.
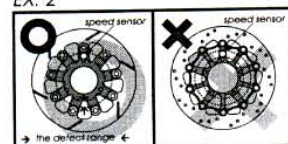⚠ Please don't catch the signal from the middle hole of the hexagon socket screw to avoid wrong signal.

The hexagon screw
The best detect area: The middle of the screws.
⚠ Some hexagon screw center is with a small hole in the center in this case, we will suggest you to catch the signal from the edge of the screw like the hexagon socket screw.
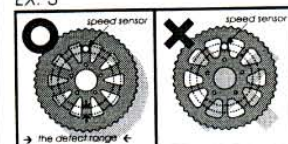
EX. 2

The disc
The best detect area: Please detect the speed signal from the gaps of the disc.
⚠ Please note that there are discs with the gaps in different difference, and this method will not work on it!

EX. 3

The sprocket
The best detect area: Please detect the speed signal from the gaps of the sprocket.
⚠ Please note that there are sprockets with the gaps in different difference, and this method will not work on it!