



Thank you for purchasing **KOSO DL tachometer**, before operating the unit, please read the instruction thoroughly and retain it for the future reference.

Notice

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

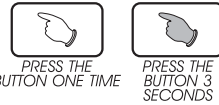
MARK MEANING:

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.



1-1 Accessory

1 LCD meter X 1	2 RPM wire set (Type A) X 1	3 RPM wire set (Type B) X 1	4 Temp sensor wire set X 2
5 PT 1/8 water temp sensor X 2	6 Connect terminal X 3	7 Meter bracket X 1	8 Handle bar clamp X 1
9 Rubber X 1	10 M6 X 18L screw X 1	11 M5 X P0.8 nut X 2	12 M6 X P1.0 nut X 1
13 M5 washer X 2	14 M6 washer X 1	15 Aluminum bush X 1	16 Manual

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 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	2 Water temp sensor adapter M14 M16, M18 M22, M26m/m	3 Cylinder head temp sensor M10, M14m/m	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
5 U-type meter bracket	6 Mirror hole meter bracket	7 Universal adhesive bracket	

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

2-1 Wiring installation instructions

Main switch wiring reference:

	"+" Color	"-" Color
YAMAHA	Brown	Black
HONDA	Brown	Black
SUZUKI	Black	Green
SYM	Black	Green

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

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.

▲ We provide 2 ways to get the rpm signal-sensor a & sensor b. If there are interruptions, you could change the sensor wiring to get better signal.

▲ CAUTION! Just wrap the RPM wire (A) around the spark plug wire. Do not connect them! We also suggest you to replace the "R" type spark plug in the mean time to get better signal. For the model more than one piston, please catch the signal from the first cylinder coil wire. **※Please make sure that the ignition coil positive electrode before connecting the RPM sensor wiring! Wrong installation will cause the meter broken!**

2-2 Installation instructions

When installing, please follow the process.

1. Lcd meter (Accessory 1)
2. Meter bracket (Accessory 7)
3. M5 washer X 2 (Accessory 13)
4. M5 X P0.8 nut X 2 (Accessory 11)
5. M6 X P1.0 screw (Accessory 12)
6. M6 washer (Accessory 14)

A Use the meter bracket (Accessory 7), handle bar clamp (Accessory 8), rubber (Accessory 9) and the nut to install the speedometer on the handle bar.

B Use the aluminum bush (Accessory 15) to install the speedometer on the handle bar stem.

3-1 Basic function instruction

Thermometer level gauge (TEMP 1)

- Display range: 20~120°C (68~248°F), and display as 10 level.
- Display unit: one level is similar to 10°C (50°F).

Digital water temperature (TEMP 2)

- Display range: 0~120°C (32~248°F)
- Display unit: 0.1°C or 0.1°F.

Tachometer

- Display range: 0~18000 RPM.
- Display unit: 100 RPM.

Clock

- 24 H.

Select button / Adjust button

Select button: Press the **Select button** to switch the temperature unit from °C to °F.

3-2 Function, setting instruction

● Tachometer	Display range: 0~18000 RPM Display unit: 100 RPM	20~120°C (68~248°F), display in 10 level Display unit: 1 level=10°C (50°F)
○ Display internal	<0.5 second	○ Display internal <0.5 second
○ Stroke / piston setting	2 Stroke: 1, 2, 3, 4 pistons 4 Stroke: 1, 2, 3, 4, 5, 6, 8, 10, 12 pistons	● Clock 24 H
● Temperature unit	°C, °F	● Effective voltage DC12V
● Digital water temperature	Display range: 0~120°C (32~248°F) Display unit: 0.1°C (0.1°F)	● Effective temperature range -10~+60°C
● Temperature level gauge	Display range: 0~120°C (32~248°F)	● Meter standard JIS D 0203
		● Meter size D55 X 57 m/m
		● Meter weight Around 190 g

NOTE Design and specification are subject to change without notice!

NOTE If you enter the setting screen for 30 seconds and don't press the button, it will back to the main screen automatically.

4-1 Cycle / Piston / Input signal setting



In main screen, press the **Select & Adjust X 3 seconds** to enter the stroke/ piston/ Input signal setting screen.

CAUTION!

- Make sure the correct cycle and pistons before setting.
- Make sure the setting is correct, or the RPM output will be incorrect.
- We define the engine with the ignition system ignites every 360 degree as 2-cycle and the engine with the ignition system ignites every 720 degree as 4-cycle.
- 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.

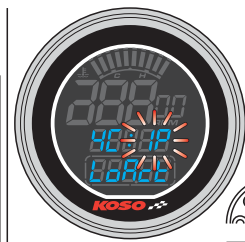


Press the **Adjust button** to select the stroke.
EX. 1. Now the setting is 2C (2 Stroke) 1P (1 piston) Lo act (the RPM input signal is negative)

▲ Now the stroke number is flashing!
NOTE You could set the stroke as 2 stroke or 4 stroke.

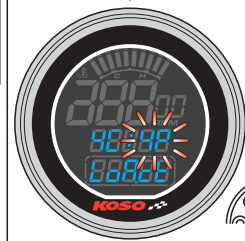


Press the **Select button** to enter the piston setting screen.
EX. Now the setting is changed from 2 stroke to 4 stroke.

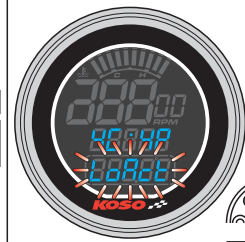


Press the **Adjust button** to select the piston number.
▲ Now the piston number is flashing.

NOTE 2 Cycle: 1, 2, 3, 4 pistons
4 Cycle: 1, 2, 3, 4, 5, 6, 8, 10, 12 pistons



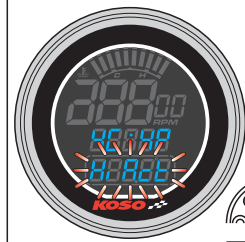
Press the **Select button** to enter the RPM signal input setting.
EX. The piston setting is changed from 1 P (piston) to 4 P (pistons).



Press the **Adjust button** to choose the input signal you want to set.
▲ Now the input signal setting is flashing!

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

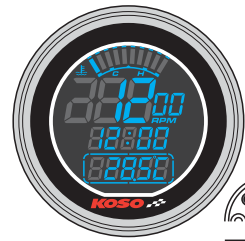
NOTE If the tachometer can't detect the signal (No RPM is displayed on the screen), you could choose another setting, and check it again.



Press **Select button** 3 times, to back the main screen.
EX. The impulse setting is changed from Lo to Hi.



4-2 The clock setting



In main screen, press the **Select & Adjust X 3 seconds** to enter the stroke/ piston/ Input signal setting screen.



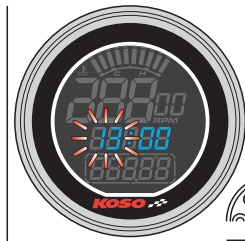
Press the **Select button** 3 times to enter the clock setting screen.



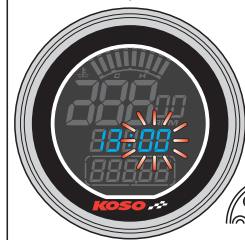
Press the **Adjust button** to choose the setting number.
EX. Now the time is 0:00.

▲ Now the hour number is flashing!

NOTE This is a 24 H clock.



Press the **Select button** to enter the minute setting.
EX. Now the hour is changed from 0 to 13.



Press the **Adjust button** to choose the setting number.
▲ Now the minute number is flashing!



Press **Select button**, to back the main screen.
EX. the minute is changed from 0 to 1.



5 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.	<ul style="list-style-type: none"> ● The power doesn't supply to the meter. <ul style="list-style-type: none"> → 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. 	Temp does not appear or appear incorrectly. The clock is incorrect.	<ul style="list-style-type: none"> ● 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. <ul style="list-style-type: none"> → Please refer to the manual 4-1. ● Please check the sensor. <ul style="list-style-type: none"> → Does the wiring break or falling off ? ● Do you connect the wiring correctly. <ul style="list-style-type: none"> → Please check the positive wire (red) connects to the battery, and main switch positive wiring (brown) connects to the main switch. ● Please check your setting. <ul style="list-style-type: none"> → Please refer to the manual 4-2.
The meter shows wrong information. Tachometer does not appear or appear incorrectly.	<ul style="list-style-type: none"> ● Please check the voltage of your battery, and make sure the voltage is over DC 12V. ● Please check the RPM sensor wiring is connected correctly. 		

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