



THANKS FOR PURCHASING OUR RX-N2S DATA LOGGER METER. BEFORE OPERATING THIS UNIT, PLEASE READ CAREFULLY THESE INSTRUCTION SHEETS AND RETAIN THEM FOR FUTURE REFERENCE.

### Notice

- 1-This meter has been designed to work on 12 volts DC applications only. Make sure the power do not exceed 18 volts DC otherwise this might damage the instrument.
- 2-For proper installation, please follow the steps describes in these instruction sheets. Any damages caused by wrong installation shall be imputed to the users.
- 3-Do not disassemble or change any parts.
- 4-To avoid short circuit, do not pull the wires out of the terminals.
- 5- The interior examination or maintenance should be executed by our professionals only. Opening the instrument will void the warranty.
- 6- While riding the vehicle, do not attend to change the settings of the instrument to avoid injuries to yourself or others.

### MARK MEANING:

**NOTE** Some procedures must be followed to avoid damage to the instrument.

**WARNING!** Some procedures must be followed to avoid injuries to yourself and others.

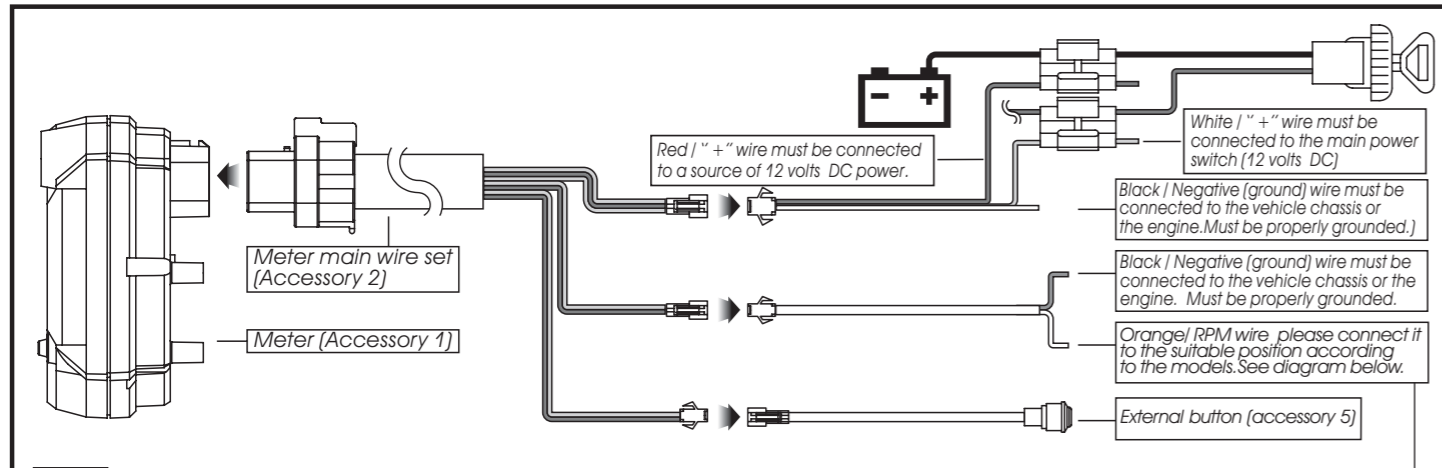
**CAUTION!** Some procedures must be followed to avoid damages to the vehicle.

## 1-1 Accessories

<b>1</b> Meter X 1	<b>2</b> Main wire X 1	<b>3</b> Power wire X 1	<b>4</b> RPM wire X 1
<b>5</b> External button X 1	<b>6</b> Meter bracket X 1	<b>7</b> M4 screw X 3	<b>8</b> M5 washer X 3
<b>9</b> 3 mm Allen key X 1	<b>OPTIONAL</b> 7/8 and 1" Handlebar remote thumb switch #BO020010		

**NOTE** Contact your local distributor if the items listed above are not the same as the one received.

## 2-1 Wiring installation instructions



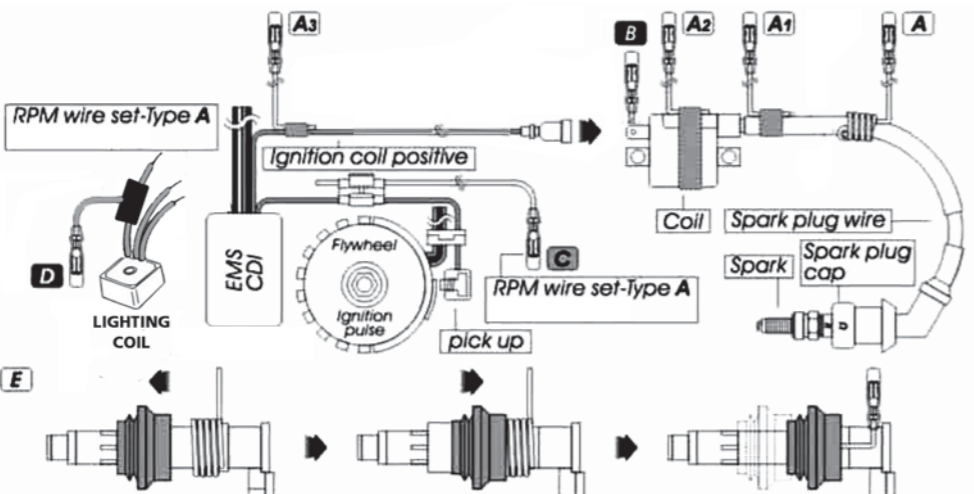
### NOTE

- A**-Wrap the RPM wire at least 5 times around the spark plug wire.
- A1**- Use tape to fix the RPM wire onto the spark plug wire.
- A2**- Use tape to fix RPM wire on ignition coil.
- A3**- Use tape to fix the RPM wire on the ignition coil positive wire.
- On some models, use the negative wire.

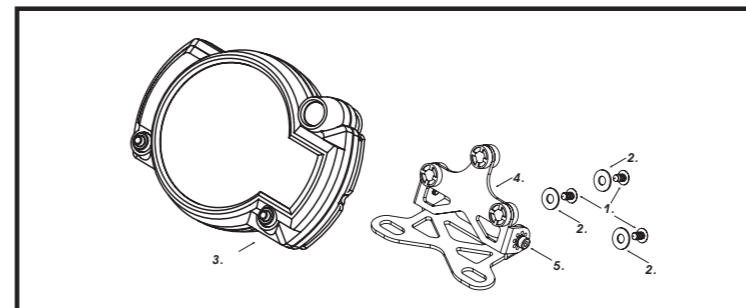
- B**-connect the RPM wire directly on the positive pole of the ignition coil.
- C**-connect the RPM wire to the flywheel ignition pulse.
- D**-Connect the RPM wire to one of the lighting coil wire.

- E**- For the models with coil over spark plug, wrap the RPM wire at least 5 times around the coil over the spark plug.

We do recommend to try different ways to pick up the RPM signal if you encounter any problems getting a stable or accurate reading.



## 2-2 Mounting instructions

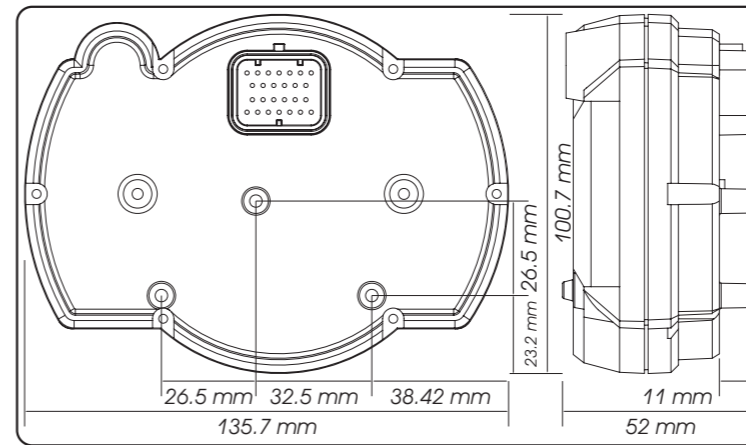


Follow the steps below when installing the meter

- 1.M4 screw X 3 (Accessory 7)
- 2.M5 washer X 3 (Accessory 8)
- 3.Meter (Accessory 1)
- 4.Bracket (Accessory 6)
- 5.Meter bracket micro-adjustment screw

**NOTE** Determine the proper view angle of the instrument before tighten the bracket screws (item 5)

## 3-1 Meter size



## 3-2 Features

### Needle Tachometer

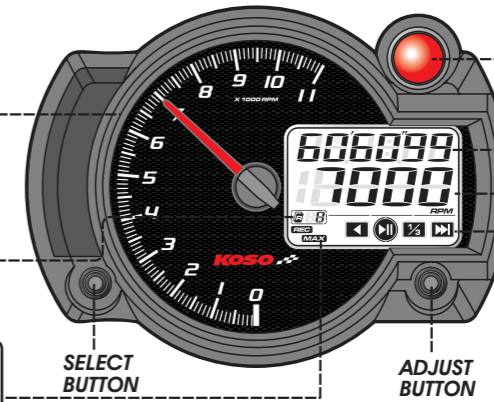
- Display range : 0~11,000 RPM.
- Display unit : 100 RPM.

### Record

- Maximum number of records : 50 sessions
- The meter will automatically stop to record if 50 sessions has been reached. Memory need to be erase in order to record again.

### The Highest RPM Recorded (MAX RECORD)

- Range of Recording : 0 - 11,000 RPM



### The RPM shift light (11,000 RPM)

- Setting range : 100~11,000 RPM.
- Setting unit : 100 RPM.

### Duration of Recording

- Max duration for a single session: 99' 59" 99. The meter will automatically stop to record if the maximum duration has been reach.
- Total Duration of Recording: ± 6.30 Hours

### Digital Tachometer

- Display range : 0~11,000 RPM.
- Display unit : 10 RPM.

### Play mode Speed

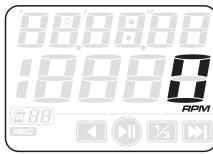
- 1x play/pause · 1/3x play/pause
- 3x play/pause · 1x rewind/pause

## 3-3 Functions

•Needle Tachometer	Display range : 0~11,000 RPM Display unit : 100 RPM	•Play mode	1x play/pause · 1/3x play/pause 3x play/pause · 1x rewind/pause
•Digital Tachometer	Display range : 0~11,000 RPM Display unit : 10 RPM	•Effective voltage	DC12V
•Display internal	<0.5 second	•Effective temperature range	-10~+60°C
•Shift light	Setting range : 100~11,000 Setting unit : 100 RPM	•Meter standard	JIS D 0203 S2
•Max. RPM record	Range of recording : 0~11,000 RPM	•Meter size	135.7 X 100.7 X 52 mm
•Records	Number of records : 50 sessions	•Meter weight	Around 240 g
•Recording Time	Duration of recording : 99'59"99 Total duration of recording : Approx. 6.30 Hours	<b>NOTE</b> Design and specifications are subject to change without notice	

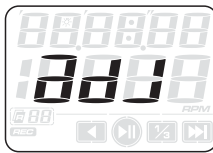
## 4 Warning light and RPM pulse setting function

• In The main screen



• In the main screen, press down the **Select & Adjust buttons** at the same time for 3 seconds to enter the setting screen.

• The meter will go back automatically to the main screen if no setting has been changed after 20 seconds.



• Stage A Warning Light (Steady light)



• Ex: To set the warning point at 6500 RPM in Stage A.  
• Press the **Adjust button** to choose the setting value.



**NOTE** Press the **Select button** to move to the digit you want to set.



• Press the **Select button** until it switch to the B warning light setting.

• Stage B Warning Light (Flashing light)



• Ex: To set the warning point at 8500 RPM in Stage B  
• Press the **Adjust button** to choose the setting value.



**NOTE** Press the **Select button** to move to the digit you want to set.

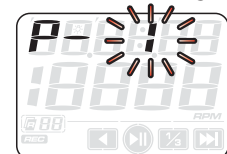


• Press the **Select button** until it switch to the RPM pulse setting.

• Warning light A & B display



• RPM pulse setting

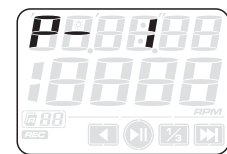


• EX: The pulsation setting need to be changed from 1 to 2.

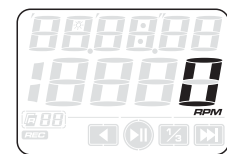
• In the pulsation setting mode, press the **Adjust button** to switch the value from 1 to 2. The default setting is set at 0.5 (4 strokes / 1 piston)

setting value	2 strokes settings	4 strokes settings	RPM per sparks
0.5	NA	1 piston	2 RPM per 1 spark
1	1 piston	2 pistons	1 RPM per 1 spark
1.5	NA	3 pistons	2 RPM per 3 sparks
2	2 pistons	4 pistons	1 RPM per 2 sparks
2.5	NA	5 pistons	2 RPM per 5 sparks
3	3 pistons	6 pistons	1 RPM per 3 sparks
4	4 pistons	8 pistons	1 RPM per 4 sparks
5	NA	10 pistons	2 RPM per 10 sparks
6	6 pistons	12 pistons	1 RPM per 6 sparks

**NOTE** Some of the 4 strokes engines with 1 piston are igniting once every 360 degree. To get the proper RPM for such engines, the setting should be the same as a 2 strokes engine with 1 piston.



• EX. The pulse setting is changed from 1 to 2.  
• Press the **Select button** to enter the main screen.

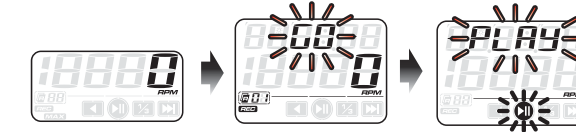


• Back the main screen.

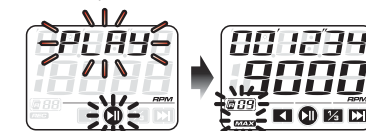
## 4.1 Adjust button instruction (right side button)

**Adjust button**

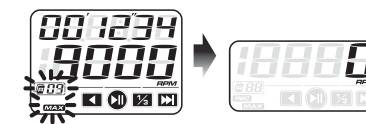
1-In the main screen, press the **Adjust button** to switch to the record mode or play mode.



2-In the play mode screen, press the **Select button** to view the play mode functions. (At least 1 run need to be recorded in order to be able to view the play mode icons). Then press the **Adjust button** to switch icon. Press again the **Select button** to enter the function.



3-In the play mode screen, press 3 seconds the **Adjust button** to go back to the main screen.



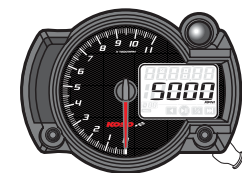
## 4-2 Select button instruction (left side button)

**Select button**

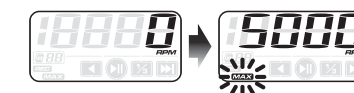
1- In the main screen, push the **Select button** once to view the max RPM record.



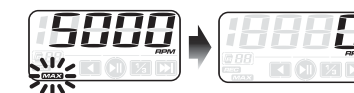
## 4-3 Maximum RPM recall and reset



• In the main screen, press the **Select button** to view the maximum RPM recorded.  
• Press 3 seconds the **Adjust button** to erase the maximum RPM recorded.



• Press the **Select button** once to go back to the main screen.





#### 4-4 Data Recording Display Instruction

·In the main screen, press the **Adjust button** once to enter the record display "GO".

·The "GO" icon is now on the screen and the gauge is ready to record. Press the **External button** (accessory 5) to start recording.

Press the **External button** once to stop recording. The first run has been recorded.

·The gauge is now ready to record the next run (up to 50 runs). Press again the **External button** to start recording.

·Once all the runs have been recorded, press the **Adjust button** twice to go back to the main screen.

·Main screen

#### 4-5 Playback Display Instruction

·In the main screen, press the **Adjust button** twice to enter the playback display mode.

·The "PLAY" icon is now on the screen. Press the **Select button** once to display the playback icons. The Maximum RPM of the latest run recorded will appear on the display. Press the **Select button** again to select the run you wish to playback.

·Once the proper recorded run has been selected, press the **Adjust button** once to move to the play icon. Press the **Select button** once to start the recall function at reel time speed.

·Press again the **Adjust button** to get the 1/3 play speed.

·Press another time the **Adjust button** to get the 3 x display speed.

·By pressing another time the **Adjust button**, you will reach the rewind function.

·Press again the **Adjust button** to get to the maximum RPM recorded.

·In the playback display, press the **Adjust button** for 3 seconds to go back to the main screen.

·Main screen

#### 4-6 Recorded Data Erasing Instruction

·In the main screen, press the **Adjust button** once to enter in the record mode ("GO").

·Erasing the recorded data

·Recorded data erasing completed

·Return to data recording display

·In the record mode ("GO"), press the **External switch** (accessory 5) for 3 seconds to enter the erase setting.

Press again the **External switch** for 3 seconds to confirm the operation and erase the memory. **IMPORTANT:** erasing the memory will clear **all** recorded runs.

#### 4-7 Operating Instruction

·RPM display mode/Main Screen

Press and hold **Adjust + Select button** for 3 seconds to enter setting

Enter Setting Mode

Press **Select button** once to enter data recording display

Press and hold **Adjust button** for 3 seconds to erase the recorded highest RPM

Back to data recording display

Prepare to record: Push extension button one time

Recording: Push extension button one time

Stop: Push extension button 3 seconds

Clear memory: Push extension button 3 seconds

Clearing: Push extension button 3 seconds

Finish clearing

Press **Adjust button** once to enter playback display

Play mode: Press **Select button** once to start the operation

Max. RPM record: Press **Adjust button** once

1x play/pause: Press **Adjust button** once

1/3 play/pause: Press **Select button** once to play the selected list. Press and hold **Select button** for 3 seconds to set play time back to 000000 (Please see section 2-4)

3 play/pause: Press **Adjust button** once

1 rewind/pause: Press **Select button** once to play the selected list

Press **Adjust button** once to repeat the playback list

#### 5 Trouble shooting

If you encounter operational problem, please check the following steps. If the problem still occur, please contact your Koso dealer.

**Trouble= The meter shows no or false information.**  
**Cause=** The voltage is too low. Make sure the voltage is over 12 volts DC.  
**Cause=** Power wires are not connected properly. Refer to the wiring diagram (2-1)

**Trouble= RPM is not accurate or unstable.**  
**Cause=** The RPM is not accurate. Make sure the proper setting has been entered in the programming.  
**Cause=** The RPM is not stable. Try to connect the RPM signal wire in a different location by referring at the wiring diagram (2-1)