



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.

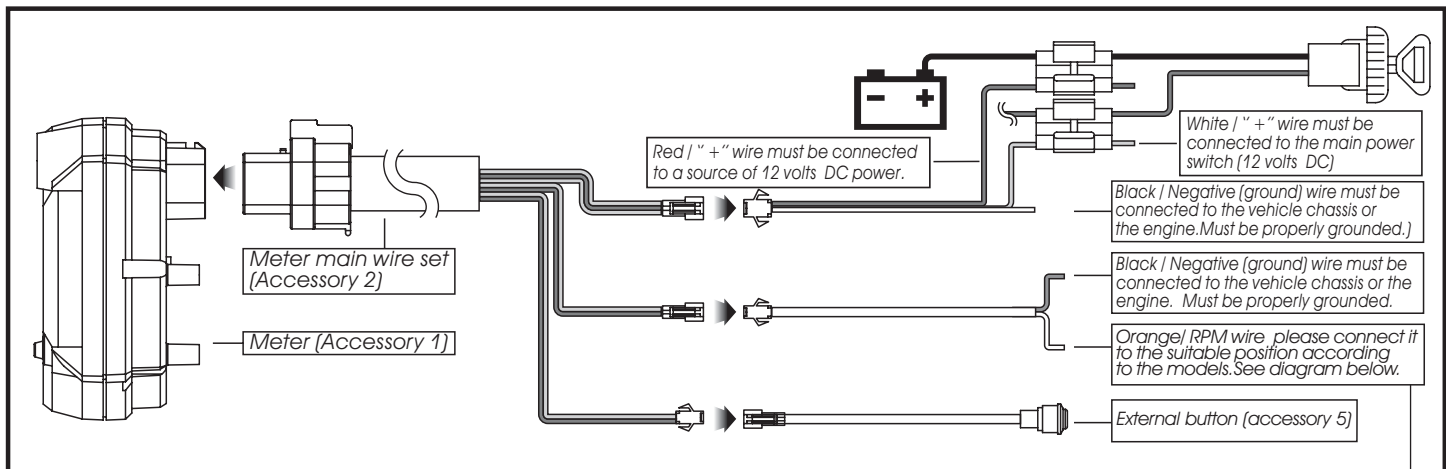
**⚠ CAUTION!** Some procedures must be followed to avoid damages to the vehicle.

## 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><br>7/8 and 1" Handlebar remote thumb switch<br>#BO020010<br> |                         |                        |
|                              |  |                         |                        |

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

## 2-1 Wiring installation instructions

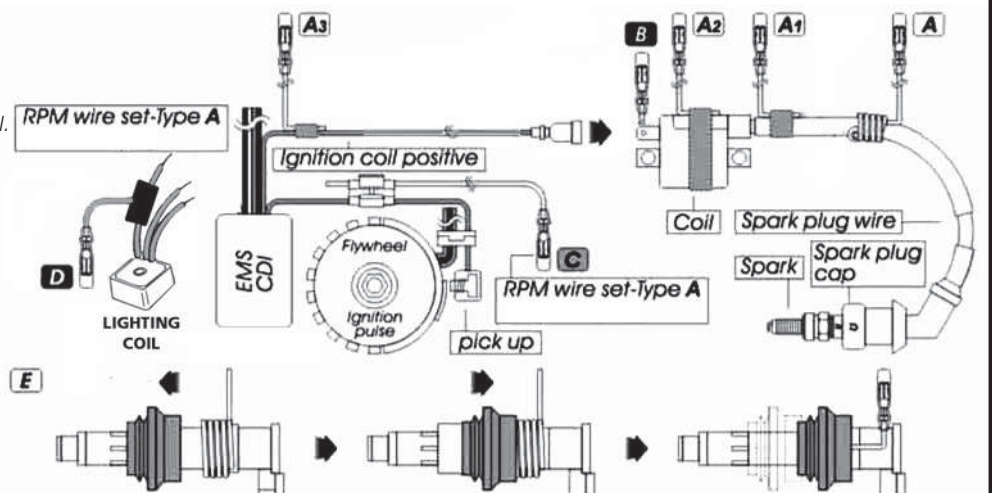


## NOTE

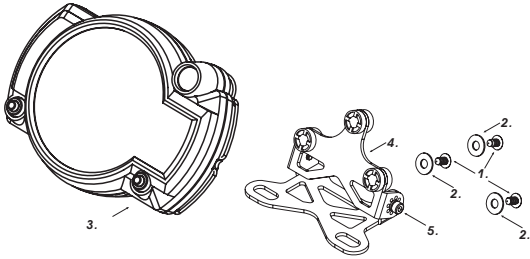
- ⚠ **A**-Wrap the RPM wire at least 5 times around the spark plug wire.
- A1**- Use tape to fix the RPM wire onto the spark plug wire.
- A2**- Use tape to fix RPM wire on ignition coil.
- A3**- Use tape to fix the RPM wire on the ignition coil positive wire.
- On some models, use the negative wire.

- 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

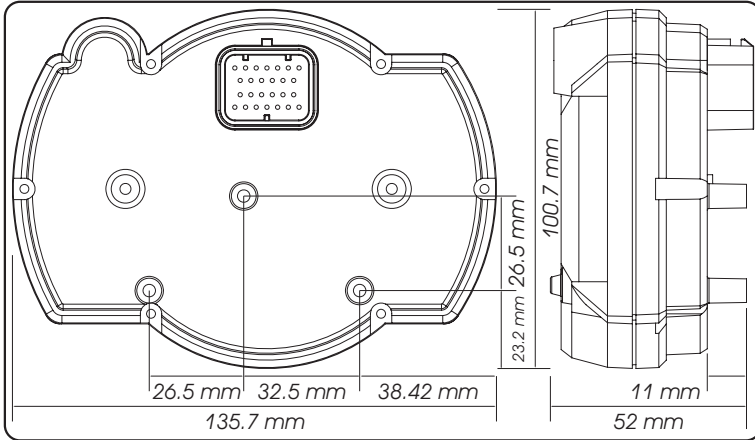


Follow the steps below when installing the meter

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 tightening the bracket screws (item 5)

## 3-1 Meter size



## 3-2 Features

### Needle Tachometer

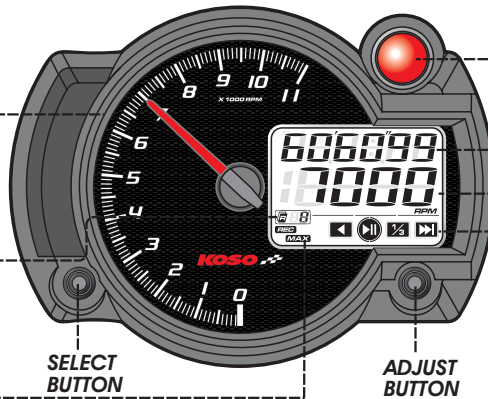
- Display range : 0~11,000 RPM.
- Display unit : 100 RPM.

### 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

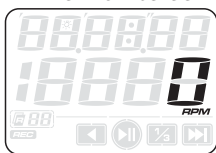
- 1x play/pause · 1/3x play/pause
- 3x play/pause · 1x rewind/pause

## 3-3 Functions

|                      |  |  |  |
|----------------------|--|--|--|
| • Needle Tachometer  | Display range : 0~11,000 RPM<br>Display unit : 100 RPM                               | • Play mode  | 1x play/pause · 1/3x play/pause<br>3x play/pause · 1x rewind/pause |
| • Digital Tachometer | Display range : 0~11,000 RPM<br>Display unit : 10 RPM                                | • Effective voltage  | <b>DC12V</b>   |
| • Display internal   | <0.5 second  | • Effective temperature range  | -10~+60°C  |
| • Shift light        | Setting range : 100~11,000<br>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<br>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

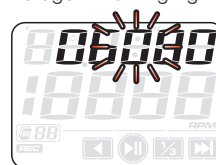
• In The main screen



• 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



The current RPM is at 4700

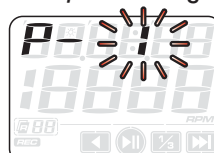


Stage A warning light is set at 6500 RPM. Warning light come ON steady when RPM reach 6500.



Stage B warning light is set at 8500 RPM. Warning Light is flashing when RPM reach 8500.

• RPM pulse setting

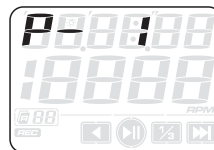


• EX: The pulsation setting need to be changed from 1 to 2.

• 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)

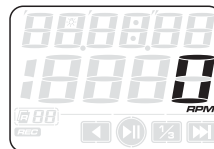
| setting value | 2 strokes settings | 4 strokes settings | RPM per sparks      |
|---------------|--------------------|--------------------|---------------------|
| 0.5           | NA                 | 1 piston           | 2 RPM per 1 spark   |
| 1             | 1 piston           | 2 pistons          | 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.

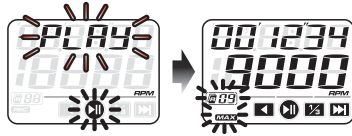
## 4-1 Adjust button instruction (right side button)

### Adjust button

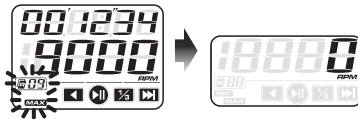
1-In the main screen, press the **Adjust button** to switch to the record mode or play mode.



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.



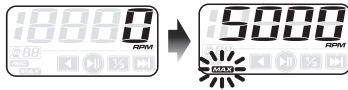
3-In the play mode screen, press 3 seconds the **Adjust button** to go back to the main screen.



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

### Select button

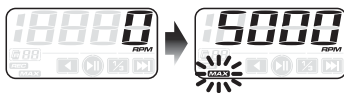
1- In the main screen, push the **Select button** once to view the max RPM record.



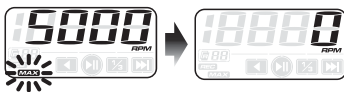
## 4-3 Maximum RPM recall and reset



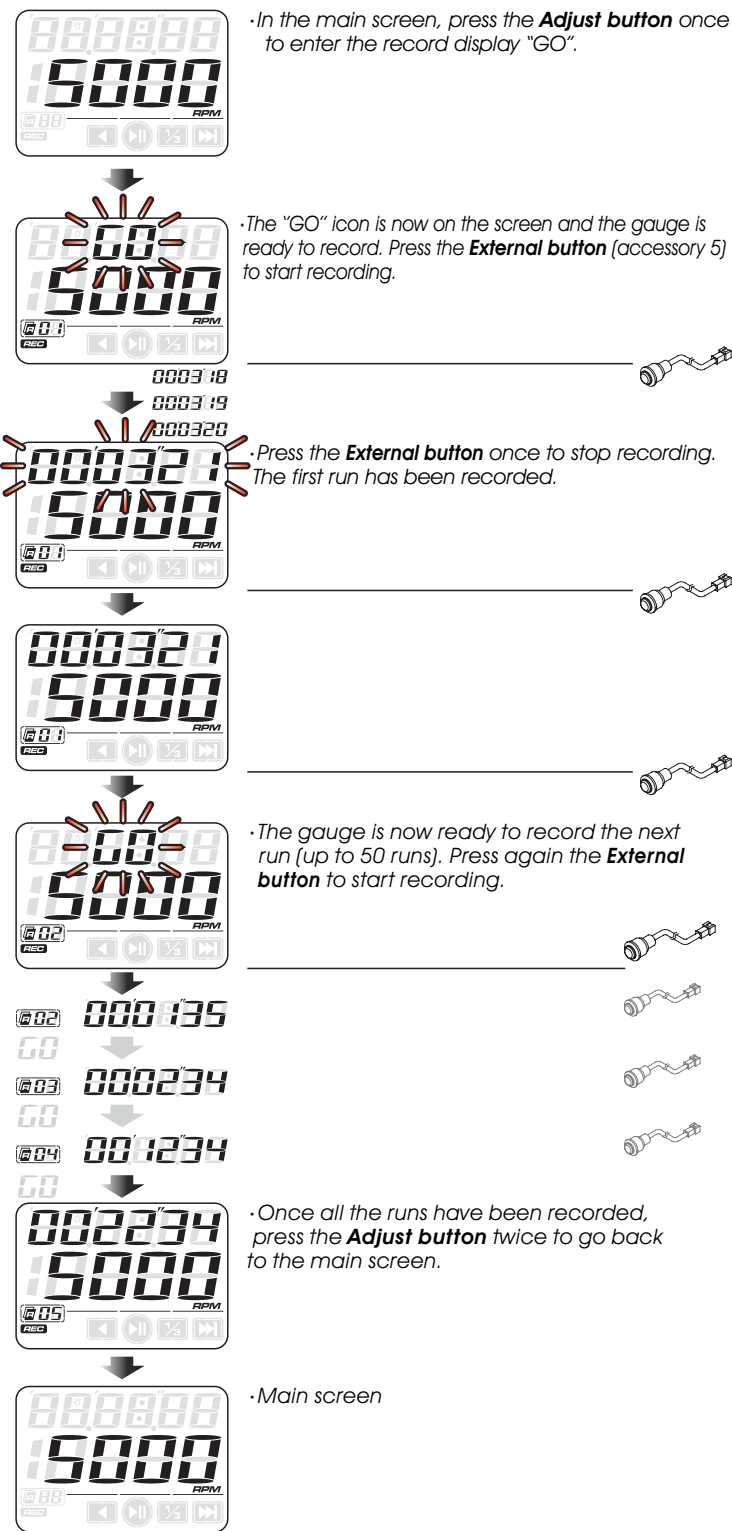
- In the main screen, press the **Select button** to view the maximum RPM recorded.
- Press 3 seconds the **Adjust button** to erase the maximum RPM recorded.



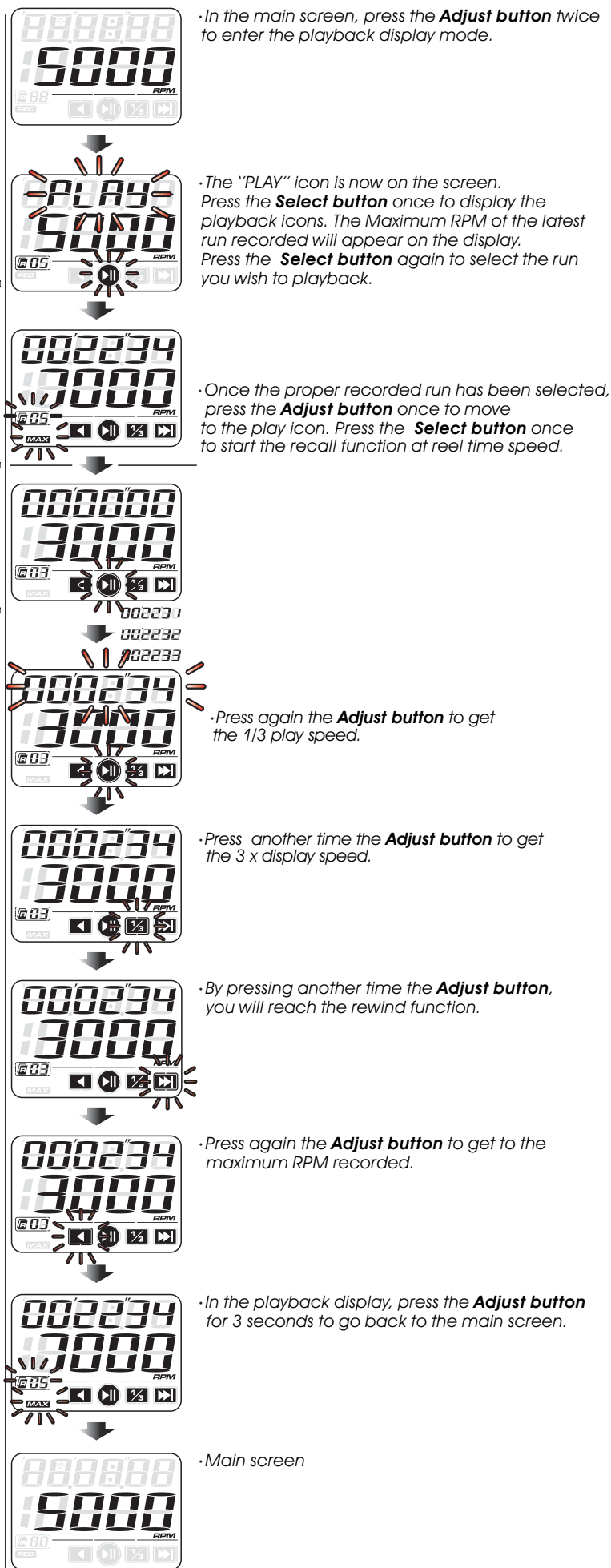
• Press the **Select button** once to go back to the main screen.



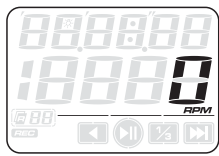
## 4-4 Data Recording Display Instruction



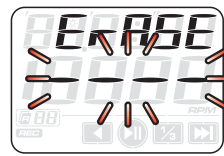
## 4-5 Playback Display Instruction



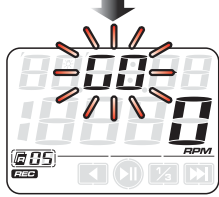
## 4-6 Recorded Data Erasing Instruction



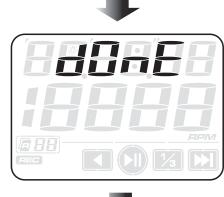
· In the main screen, press the **Adjust button** once to enter in the record mode ("GO").



· Erasing the recorded data



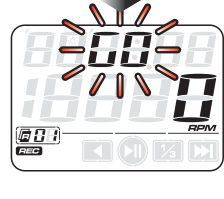
· In the record mode ("GO"), press the **External switch** (accessory 5) for 3 seconds to enter the erase setting.



· Recorded data erasing completed



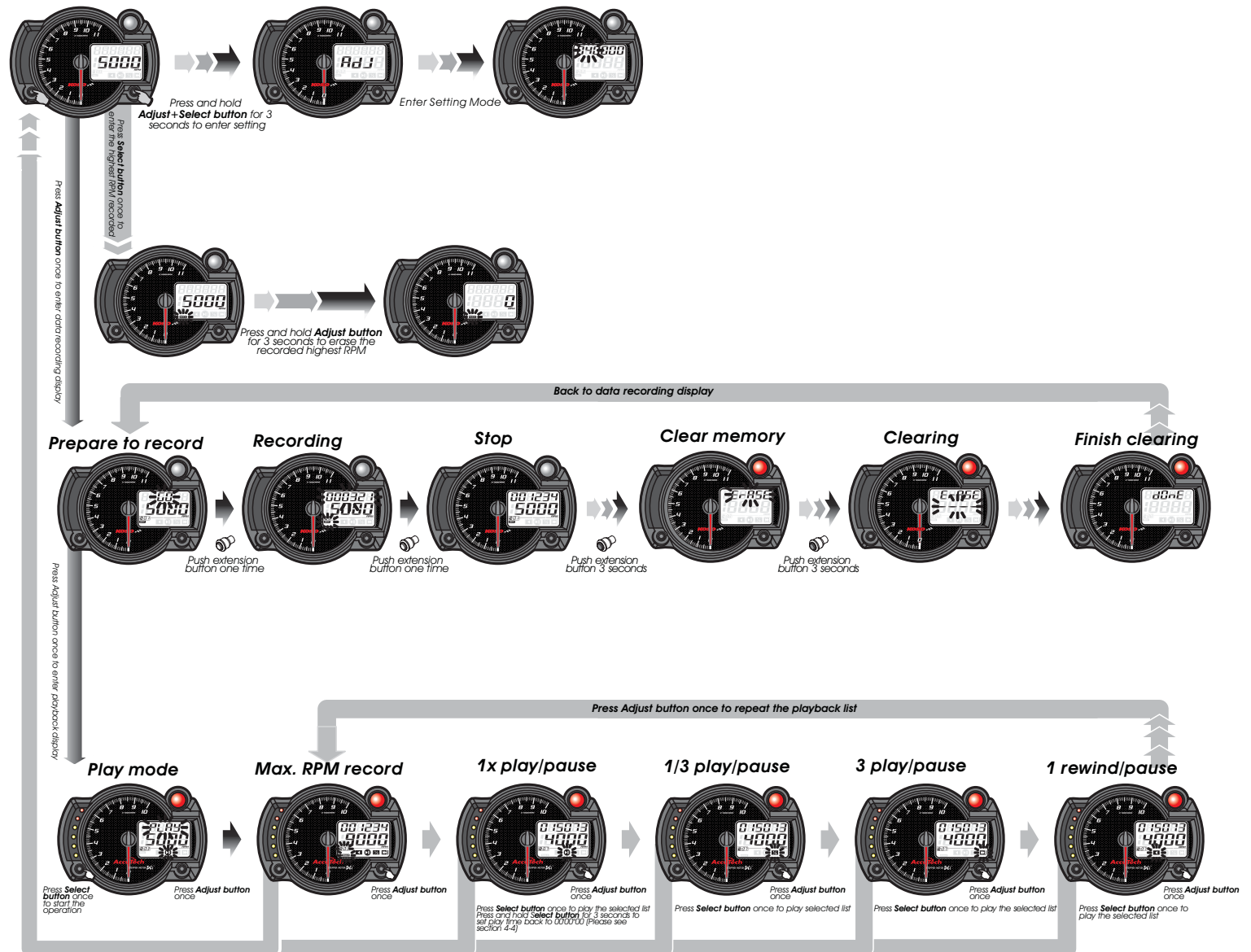
Press again the **External switch** for 3 seconds to confirm the operation and erase the memory. **IMPORTANT:** erasing the memory will clear **all** recorded runs.



· Return to data recording display

## 4-7 Operating Instruction

### ·RPM display mode/Main Screen



## 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)