# Yokomo MMS Owners Manual

2002.5.2

Thank you for purchasing the Yokomo MMS Motor Tuner.
The MMS features many functions to provide a quick and easy way to gauge motor performance.
Please read the instructions in the owner's manual carefully.

## Specifications

★ Compact folding display (protects screen during transport)
★ Back-lit LCD screen (2 row display) displays various motor data in an easy-to-read format. Display also visible in dark areas.
★ Adjustable motor output from 0.00～8.00V. Motor break-ins can be performed at preferred voltage.
★ Motor Condition Meter (bar graph display) indicates motor condition.
★ RPM sensor included. Capable of measuring 100～99,900 revolutions.

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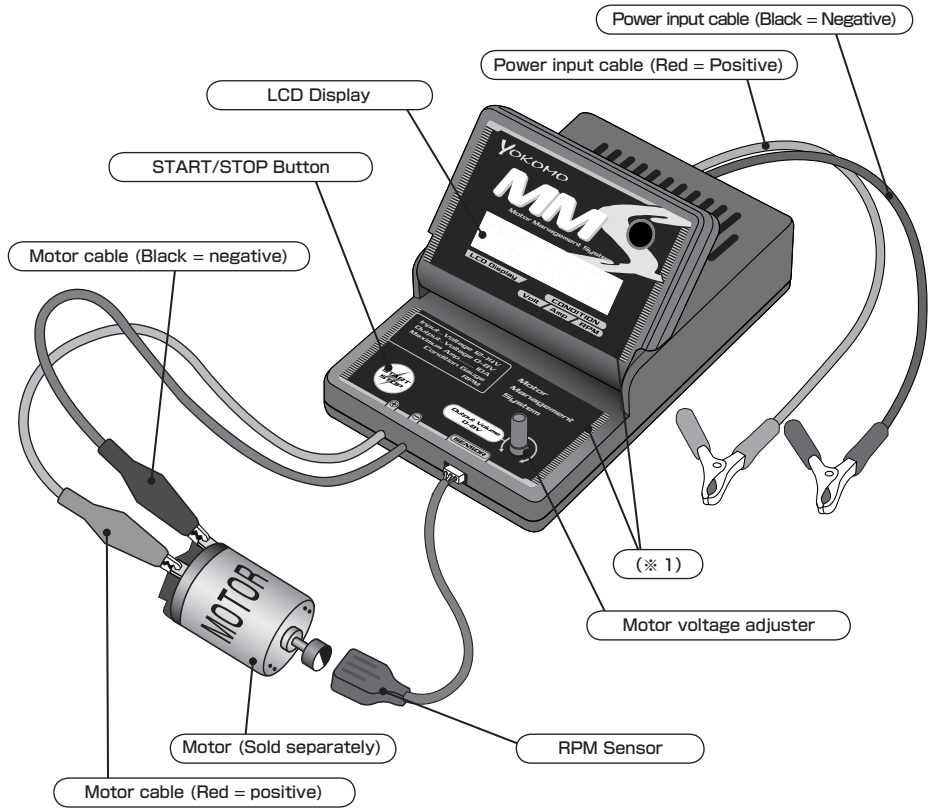
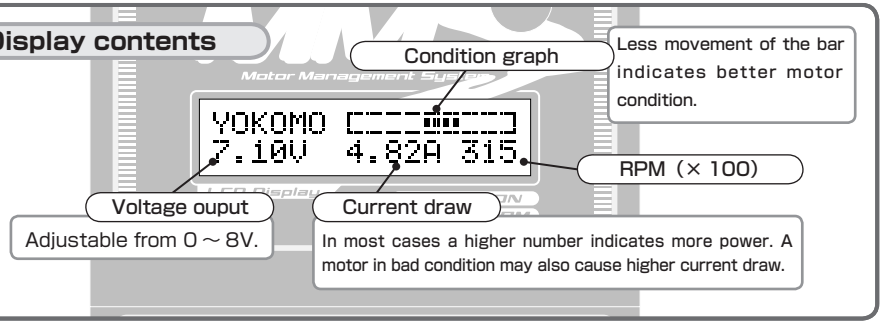
|---|---|---|
| ■ Application | : | Designed for R/C electric motors, the MMS measures motor performance, checks motor condition, and performs motor break-in. |
| ■ Power source | : | DC12V only (12V～13V) 14A and above recommended. |
| ■ Compatible motors | : | 7-Turn and above (10.00A minimum) |
| ■ Motor ouput | : | 0.00～8.00V (Adjustable) |
| ■ Display | : | Back-lit LCD display<br>(Displays voltage, current draw, rpm and condition) |
| ■ Case size | : | 158 × 97 × 37mm (Excludes external parts) |
| ■ Weight | : | 425g (Including cables) |
| ■ Additional parts | : | RPM Sensor and motor cables |

## Parts Descriptions




### Display contents




### Before operating

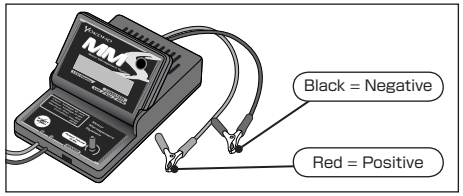
The display/switch panel (*1) has a clear protective film to prevent scratches during shipment. Please remove before operating.

# Operating Instructions

## 1 Connecting the power cables

Connect the power cables to the power source (a stable power supply of at least 12V 14A).
The display will turn on when powered on.

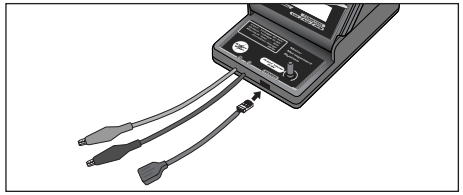
※ Although the MMS features an internal circuit for reverse-polarity protection, please pay special attention to the polarity of the power cables.





## 2 Connecting the RPM sensor

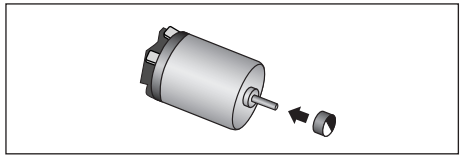
Connect the RPM sensor to the plug located on the front panel.



## 3 Connecting the Motor Plug.

Attach the Motor Plug to the motor shaft.

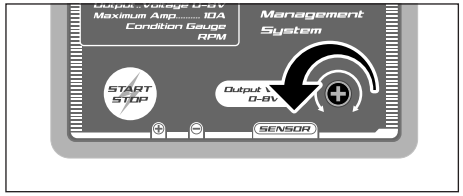
※ Make sure to attach the Motor Plug correctly to prevent it from falling off while spinning.



## 4 Switch and Ouput Dial check

Make sure that the RPM field in the display reads [STP] (indicates output off state). If the RPM field reads [000], press the 'START/STOP' button to switch it to [STP]. Turn the Output Dial fully left to turn down the output voltage to 0V.

※ Please make sure to set the dial to 0V to prevent the motor from suddenly spinning when the motor cables are connected.



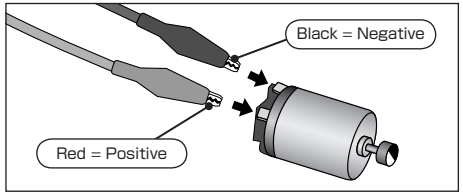


## 5 Attaching the Motor Cables

Attach the Motor Cables to the motor.

※ Securely attach the clips.

※ Make sure that the polarity is correct when connecting the clips to prevent damage to the motor. Connecting the clips in reverse may cause the internal protection circuit to cut off power.

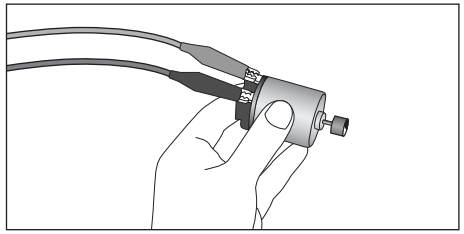



## 6 Securing the motor

Please hold the motor tightly.

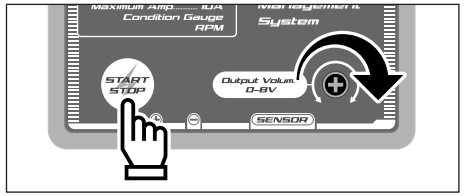
※ The motor will exert a good amount of rotating force when spinning. Please make sure to hold onto the motor tightly.

※ The motor will build up heat when spinning, and may get extremely hot.



## 7 START & STOP

Press the 'START/STOP' button and turn the dial to the right. Once the motor begins to spin, adjust the dial to the desired voltage. The motor's current draw and condition will be displayed.
Pressing the 'START/STOP' button once more will cut power to the motor and the motor will stop spinning.





## 8 Checking motor condition

The Condition Graph indicates the condition of the motor.
A rapidly fluctuating bar graph indicates a motor in bad condition. If the graph is stable and shows little movement, the motor is in good condition.

Bad


Good


## 9 Measuring RPM

Position the RPM Sensor about 5mm away from the Motor Plug. The RPM will be displayed on the screen. Multiply the displayed RPM number by 100 to obtain the actual RPM.

※ If the RPM is not displayed on the screen, slightly change the position of the sensor to get a better reading from the plug.