KO PROPO

Multi controller /Multi receiver

MC-8(Transmitter) / MR-8(Receiver) Series

Thank you for purchasing radio system "MC-8/MR-8 series).
MC-8/MR-8 are multi controller /Multi receiver for radio controlled easily RC car or original robot .
This is radio controlled with assigned servo motor or motor driver to 8 channels of A to H channel.

Instruction Manual
Ver.1.00

KONDO KAGAKU Co., Ltd.

For Safe Operation

Due to the nature of radio controlled models, improper handling may lead to dangerous situations. Therefore please read the following information carefully in order to ensure safe operation.
Please also understand that KO Propo is not responsible for any injuries or damage which result from noncompliance of these cautions and notices.

⚠ Warning Improper handling/usage may lead to a high probability of material damage as well as a possibility of serious personal injury or even death.

⚠ Caution Improper handling/usage may lead to personal injury or material damage.

When Installing Components

• Make sure metal parts on the model (car chassis/ship hull) do not come into contact with each other.
* Contact between metal parts may result in noise, which could cause the receiver to malfunction and lead to an uncontrollable model.
• Do not cut or bundle the antenna cable.
* This may lower the receiver's sensitivity and lead to an uncontrollable model.
• Ensure correct polarity when installing transmitter and receiver batteries.
* Incorrect polarity may damage the product.
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Notes for Usage

⚠ Warning Prohibited matters
• Do not use when there is thunder.
* It is possible for lightning to strike the antenna.
• Do not use in the rain or in areas where water has accumulated.
* If water enters the product it may lead to an uncontrollable model.
• Do not use in the following locations:
1. Near R/C circuits (within 3km)
2. Near crowds, on streets, or near actual vehicles or ships.
3. Near high-voltage power lines or communication facilities.
* If signal interference, etc. causes an uncontrollable model, a serious accident may result.
• Do not use when your concentration levels are compromised by tiredness, alcohol, medication, etc.
* Mistakes in judgment may result in serious accidents.
• Do not allow glow engine fuel or engine exhaust to contact the product.
* These may attack the plastic and damage the produc

⚠ Warning Enforcement matters
• Check to ensure that the selected model memory matches the model to be controlled.
* Using an incorrect memory may lead to an uncontrollable model.
• Make sure to stop the engine (disconnect motor cables) before changing transmitter settings.

⚠ Caution Prohibited matter
• Do not touch engine, motor, ESC, etc. immediately after use as they may be hot.
* Doing so may lead to burns.

⚠ Caution Enforcement matters
• When switching on, always turn on the transmitter first, followed by the receiver. Follow the reverse order when switching off.
• If the wrong order is followed, it may lead to an uncontrollable model.
• Dismantling or modifying the RF Module (internalized in the case of the EX-RR) is prohibited and is punishable by law.
* Doing so may lead to accidents such as short circuits and KO Propo Customer Service Department may not accept dismantled/modified products for repair.

⚠ Caution Enforcement matters
• Do not use this product in aircraft, hospitals, or near fire alarms or medical equipment.
* This may lead to malfunctions and result in serious accidents. Also, by law you must cease operation if the product affects other wireless or electrical devices.
• 2.4GHz transmitters must be registered with the Japan Radio Control Safety Association.
* The transmitter which you have purchases is already registered. Products which do not have proof of registration are illegal.

Notes After Usage

⚠ Warning Enforcement matters
• In the case of an R/C car, make sure to remove the battery pack after driving.
* If the car is switched on accidentally, it may lead to a fire or an uncon trollable model.
• Keep transmitters, batteries, and models away from small children.
* Chemical agents and the items themselves may cause personal injury.

⚠ Caution Enforcement matters
• Remove batteries from transmitter if it will not be used for a considerable time.
* If batteries are left in the transmitter, battery leakage may result in damage.
• Do not store transmitter/receiver in the following conditions:
1. Extremely hot (over 40ºC) or cold (below 10ºC) temperatures.
2. Locations in direct sunlight.
3. Locations with high humidity.
4. Locations subject to vibrations.
5. Locations with lots of dust.
* These conditions may cause the case to deform and damage the product.

Explanation of product warranties

KondoKagaku co. ltd. guarantee after-sale service and others about this product. However, please understand that it cannot guarantee about the following points on the character of this product.
1) Breakage of the part by assembly.
2) Damage judged to be based on the operation after assembling.
3) When reconstruction of this product and analysis are conducted.

Explanation of Licensing

The company name or the brand name for each reference in the text is a registered trademark. Downloading the software from the attachment or from our homepage for this product and being used for the sole purpose of this product is accepted. Please do not use this for any other use. This product, software and the intellectual property rights are the legal rights of Kondo Kagaku Co. ltd. The act of which breaks the law, can result in penal regulations and other applicable laws in the region that the violation takes place.

Contact information for repairing goods

■ **Kondo Kagaku Co., Ltd.**
Service department
ADDRESS : 4-17-7 Higashi-Nippori,
Arakawa-ku Tokyo Japan 116-0014

TEL : 03-3807-7648 (service)
9:00 -12:00 & 13:00 -17:00
Mon. – Fri. Except national holidays
Latest information can be accessed here

www.kopropo.co.jp

Names of Parts

MC-8

CH-A/B Stick
CH-A
CH-B
When operated up and down, can control for servo motor and MD-1 that connected to A channel.
When operated left and right, can control B channel.

CH-C/D stick
CH-C
CH-D
When operated up and down, can control for servo motor and MD-1 that connected to C channel.
When operated left and right, can control D channel.

CH-E button
CH-E
When hard push to the stick, can control ON/OFF of E channel.

CH-F button
CH-F
When hard push to the stick, can control ON/OFF of F channel.

CH-G/H button
When operated left and right each button, can control G/H channel each at 10 steps.

Power Switch
Long push make a turn on. When make a turn off long push at least 1 sec.

LED
It is light on when power on. It is slow flashing when pairing mode.
If it is blink with ring the buzzer please change the battery to new own.

Multi Controller
MC-8
KO PROPO
CH-G CH-H
CH-A CH-E CH-F CH-C
CH-B CH-D
TRIM-B TRIM-A POWER TRIM-C TRIM-D

TRIM-A to D button
Operate each TRIM, can change neutral position(position of not operate stick) in each channel.
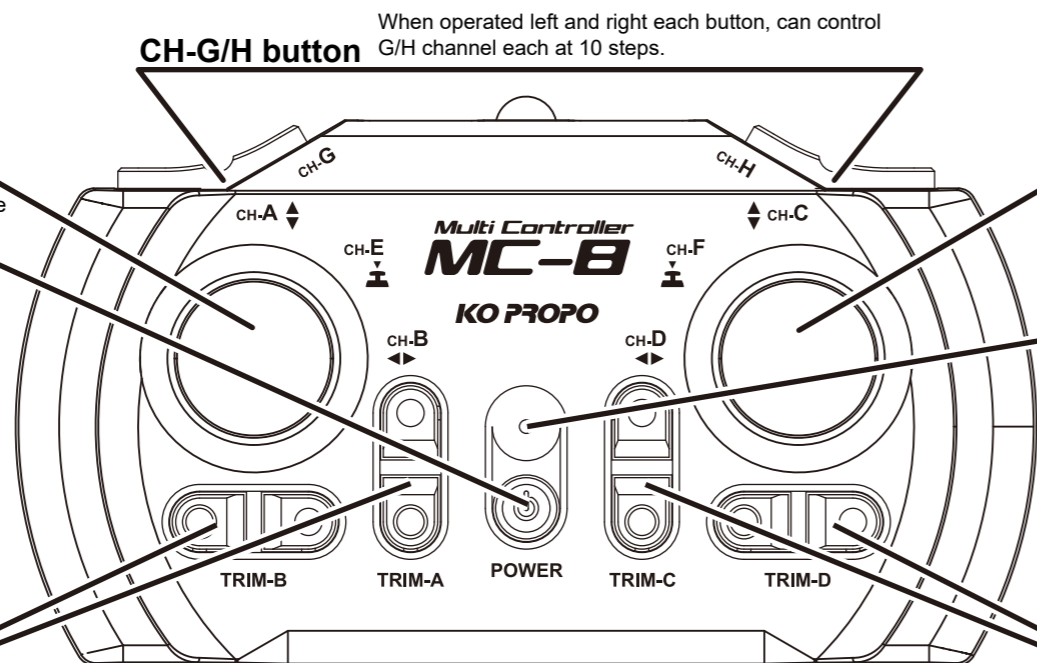
⚠ **Can not use over 10pcs this radios in the same field/ring/track.**

If there are busy traffic, radio problem will be happen. Please do not use in such a situation. MC-8 is using 2.4GHz radio wave that is Citizen band for other electrical equipment are using. Please understand advanced that radio problem may be happen even if there are using less than 10 situation.

Compatible models

Servos:
PDS / RSx / BSx Series

ESC :
MD-1 / VFS-FR2 / VFS-FR2 PRO

MR-8

A to H channel connector
Connect servo motor and MD-1 to connector that is wanted control.

Battery connector
Connect to battery

A B C D E F G H BAT.
Multi Receiver
MR-8 KO PROPO
SET UP

LED
It is light on when under communication. And it is blinks when searching the paired transmitter.

Antenna
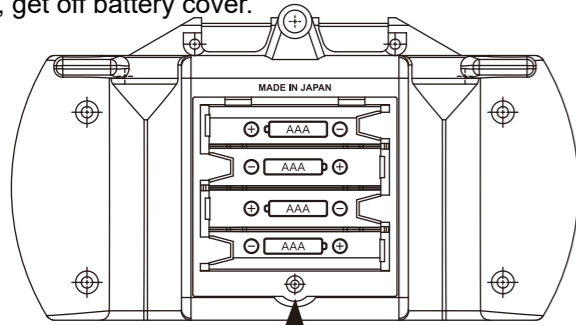Please using by vertical position as you can.

SET-UP switch
It is use when pairing.
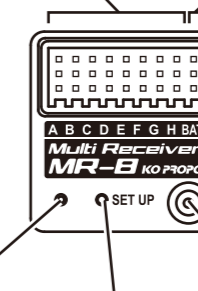
1. MC-8 Insert battery to MC-8

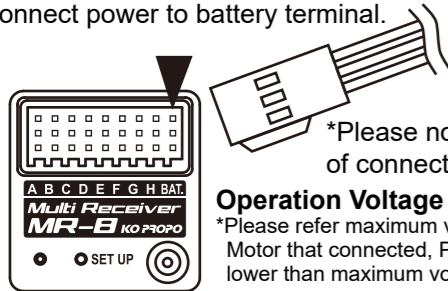① Please loosen the 2 mm screw in the back side of MC-8, get off battery cover.

2mm Screw

② Set AAA battery by refer direction of figure.
③ Set battery cover

2. MR-8 Connect power to MR-8(receiver).

①Connect power to battery terminal.

*Please notice direction of connector.

Operation Voltage : 3.0V to 6.6V
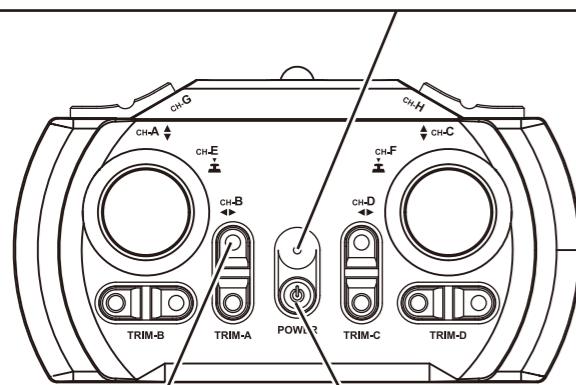*Please refer maximum voltage for Servo or Motor that connected, Please use under lower than maximum voltage.

If you using ESC that is VFS-2FR etc for RC car , ESC supply power to receiver.
So, If you using ESC for RC car, do not connect power to BAT terminal in the receiver.

② Connect servo or ESC that controlled to CH-A-H.

3. MC-8 MR-8 Pairing for MC-8 and MR-8.

*Pairing is Setting for make pair for can communication with transmitter and receiver.

① Please turn on power at MC-8 with push on TRIM-A(upper button). If you release TRIM-A Button, Led is start blink.

②Please turn on power at MR-8 with push on SET-UP button. If release SET-UP button, MR-8 LED is once light off and light on again.

Turn on power with push on
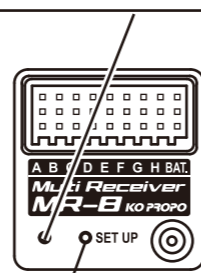
with Push on   Turn on Power

Please pairing once time at only first using.
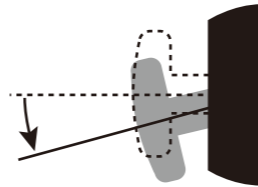**If pairing are done, in usually using, can communication MC8 with MR-8 by only turn on power.**

4. MC-8 MC-8 Working mode setting

There can 2 type working mode setting at each CH-A,B,C,D stick.

Quick mode
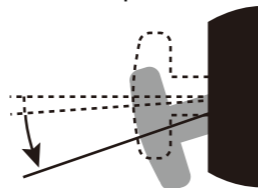You can 2 type working mode setting at CH-A,B,C,D each stick.

Work immediately when operating

Multi mode
Stick operation has some lag, so, Servos and ESC is work with some delay from operation.
This mode is recommended for operate multiple function by the stick as like as robot.

It has lag when start operation.
Work with some delay from operation.

①Turn off power in MR-8(receiver). It is for protection for connecting device like Servos etc.
②Turn off power in MC8, and turn on power with pushing TRIM-D(Upper).
③Please wait with push on TRIM-D(Upper) , release TRIM-D(Upper) when light off LED.
④Initial Setting is quick mode. If you want to change mode, please operate from ① again.

5. MC-8 MC-8 start and end.

①When push on Power switch over 0.5sec, MC-8 is started.
②When push on Power switch over 1sec while MC-8 is available, MC-8 is exit.

If no operation MC-8 while over 5 minutes, MC-8 ring buzzer for alarm. And not operate is continue more 5 minutes, MC-8 will be turn off power automatically.

6. MC-8 CH-A - D Reverse setting

CH-A,B,C,D are can change output signal direction to reverse (operate direction to reverse)

Ex. when reverse CH-A
①Turn off power in MR-8(receiver). It is for protection for connecting device like Servos etc.
②Hold turn on power MC-8, operate stick to up side(this is A and C) or left side(this is B and D) as direction.
③Please hold beat the stick operation, push on TRIM (same direction button for stick). Please hold beat the stick operation, push on TRIM (same direction button for stick). Ring the buzzer like a 'blip' when push the TRIM. And if Hold pushing TRIM, Ring like a 'blip' after about 1 sec later again.
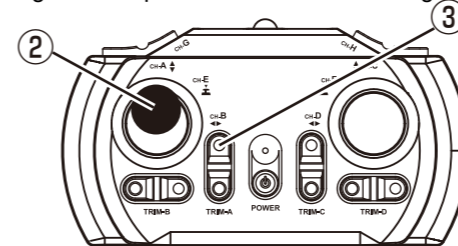
④Please check the work the TRIM by turn on power MR-8.

This use when steering operation direction is wrong etc. * Please setting only channel that needed change. Please hold beat the stick operation, long push on TRIM (same direction of button as stick). it is same operation method in the A -D each ch.

7. MC-8 Trim setting at the CH A-D.

Neutral position(operation center position) are can be setting in the CH-A,B,C and D.

①Push trim button of same direction as want to change when MC-8 is working by turn on power.
②Please adjust setting value by each models.
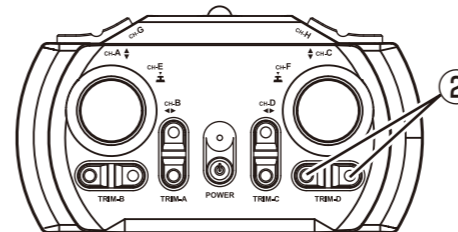
Steering neutral position is can be setting when the car is can not run the straight.
* Please setting only channel that needed change.

8. MC-8 End point setting at the CH A-D.

Maximum operation range(angle) are can be setting in the CH-A,B,C and D.
Ex, when change operation range of right direction by CH-C.
①Operate stick to the want change range direction when MC-8 is working by turn on power.
②Please hold stick operation and operate trim button for change value.
③Please adjust setting value by each models.
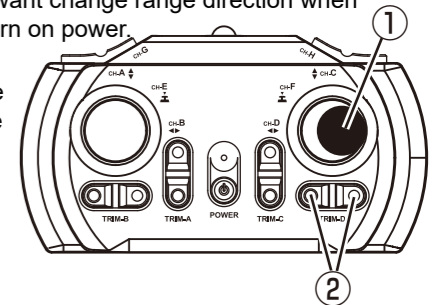
It is can be change setting for adjust when if tire is touch the chassis of car when maximum operation of stick.
* Please setting only channel that needed change. It is same operation method in the each CH A-D.

9. MC-8 Reset operation method of MC-8 (Initialize)

Can be reset MC-8 when you don't know setting value or situation.

①Turn off power in MR-8(receiver). It is for protection for connecting device like Servos etc.
②Turn off MC-8. And Turn on again while pushing TRIM-A(down side) and TRIM-C(down-side).
③Please wait after release power Button but hold pushing TRIM-A(down side) and TRIM-C(down-side),After 1 sec later LED is light off.
Release TRIM-A(down side) and TRIM-C(down-side) after light off LED. MC-8 is started with initialized.
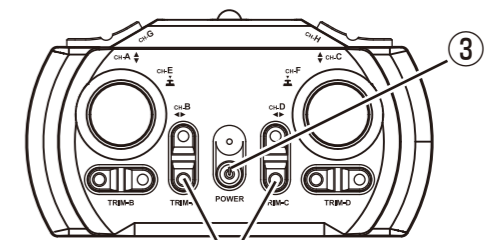
Pushing button until light off LED.

*if you operate this method,All information of MC-8 except pairing are initialized.
Also '4, Mode Setting' to '8,End point setting' will be initialized, Please these setting again.