Futaba®

D60739

FET MOTOR CONTROL AMP W/REVERSE

MC210CB

Please read this manual carefully and use the controller correctly.

MC210CB FEATURES

- Up-to-date high power MOS FET (Field Effect Transistor) used for forward, reverse and brake.
- Special heat sink supplies running Nicad battery power to the motor at high efficiency.
- Neutral point and high point can be adjusted independently with two built-in trimmers.
- Despite its miniature size and light weight, an adjustment checker for each point is built-in. Best adjustment is possible at all times and a checker does not have to be carried. A special adjustment screwdriver is also supplied.
- Built-in constant voltage power supply circuit for receiver and servo. The vehicle can be made lighter by using the running Nicad battery as a common power supply.
- Built-in heat protector and fuse.
  Reliable even when chassis and motor are abnormal.

(Specifications are subject to change without prior notice.)

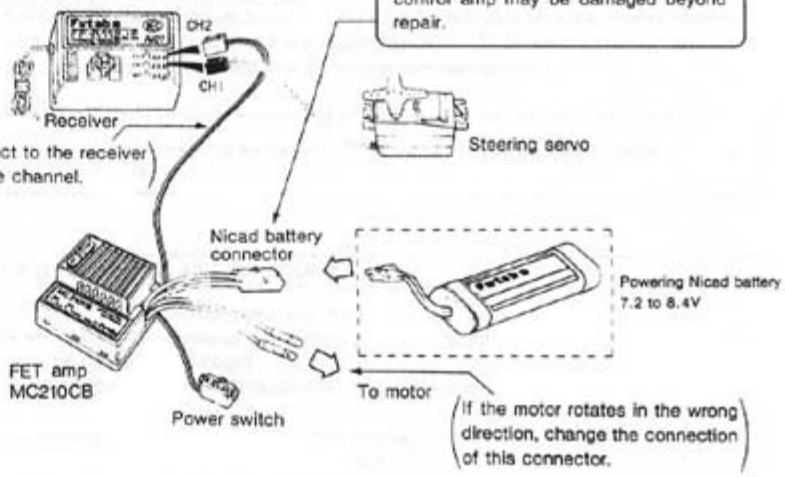
MC210CB SPECIFICATIONS

●Voltage drop	Approximately 0.52V at 20A (between input and output)	●Dimensions	45.5×41.5×26.0mm
●Maximum current	30A (fuse capacity)	●Weight	72.5g
●Power requirement	7.2 to 8.4V	●FET rating	Continuous/Instantaneous maximum current 142/568A
●Regulator output	6V/3A (max)	●Loss resistance	0.0062Ω×2

MC210CB CONNECTION

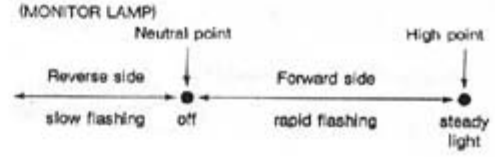
CAUTION
The receiver and servo battery must not be connected.

CAUTION
Red lead (+), Black lead (−)
If connected in reverse, the motor control amp may be damaged beyond repair.



DESCRIPTION OF TRIMMERS

- **Neutral trimmer**
  Trimmer that sets the transmitter throttle stick (throttle trigger) neutral position and amp neutral position.
- **High point trimmer**
  Trimmer that sets the maximum speed when the transmitter throttle stick (throttle trigger) is set to maximum speed.
- **Monitor lamp**
  Amp adjustment monitor lamp. Rapid flashing in the forward state, steady light at the maximum forward speed and slow flashing in the reverse state.



TRIMMER SETTING

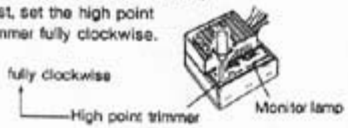
When adjusting the FET amp, do not connect the running motor. If the motor is connected, adjustments can not be made correctly.

* Adjust with the accessory screwdriver.

1. PREPARATIONS

① Set the throttle reverse switch to the "N" position. (Normal side)

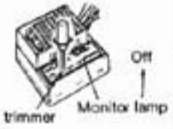
② First, set the high point trimmer fully clockwise.



2. NEUTRAL ADJUSTMENT

① With the throttle stick (trigger) in the neutral state.

② Set the neutral trimmer to the position at which the monitor lamp changes from rapid flashing to an off state.



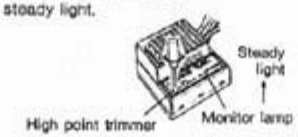
CAUTION

- Do not operate the transmitter throttle stick (throttle trigger).

3. HIGH POINT ADJUSTMENT

① Set the throttle stick to a little before maximum speed.

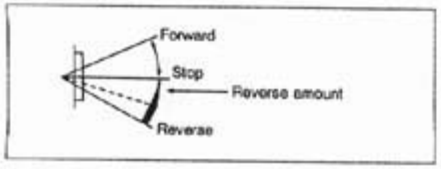
② Set the high point trimmer to the position at which the monitor lamp changes from rapid flashing to a steady light.



CAUTION

- If the high point trimmer is set so that the monitor lamp is steady light when the transmitter throttle stick (throttle trigger) is set to maximum speed, the motor may not run at maximum speed. Always set the trimmer so that the monitor lamp lights at about the 80% to 90% position.

Reverse



(1) Maximum amount point is approximately 50% at the reverse side of the throttle stick (throttle trigger).

(2) Slow flashing in the reverse state.

Brake

(1) When the throttle stick (throttle trigger) is moved from the forward side to the reverse side, braking proportional to the amount of stick movement is applied for approximately one second.

(2) Rapid flashing in the brake state.

The braking amount increases as the throttle stick (throttle trigger) is moved to the brake side.

POINTS THAT CAN BE ADJUSTED WITH THE TRANSMITTER

(1) Make the basic settings by setting 2. and 3. above at the FET amp side.

(2) Only the functions installed at the transmitter can be adjusted at the transmitter. Make all other adjustments at the amp.

(3) The neutral point and maximum braking amount can be adjusted with the throttle trimmer.

(4) The high point can be adjusted with the throttle high side ATL trimmer.

(5) The power curve can be adjusted with the throttle exponential knob.

NOTE

- Only special functions installed at the transmitter can be set at the transmitter. Make all other adjustments at the amp.

OTHER HANDLING PRECAUTIONS

(1) Do not run the vehicle with pebbles, etc. caught in the gears, or when the vehicle has struck an obstruction. Because the running motor is locked and an overcurrent flows, the amp may be irreparably damaged.

(2) Pay careful attention to WATERPROOFING. Water drops in the amp or on the connectors will cause trouble.

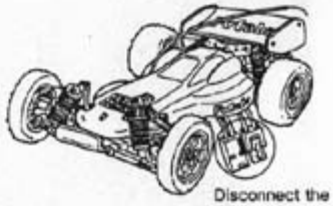
(3) Always install a noise killer capacitor to the running motor.

(4) Do not back up for a long time. The motor, battery, and amp may be adversely affected.

(5) To protect the motor and battery, wait more than 10 minutes between each running on one Nicad pack.

(6) When using the motor checker, disconnect the connector between the FET amp and the motor.

(7) When going and returning from the circuit, when the vehicle is stored, and other times when the vehicle is not running, always disconnect the running Nicad battery connector.



Disconnect the connector.

■ Futaba products are subjected to stringent quality control. If you are dissatisfied with your product, contact your local dealer or one of the radio control service centers listed below.

FUTABA CORPORATION
Makuhari Techno Garden Bldg., B6F 1-3 Nakase, Mihama-ku, Chiba 261-01, Japan
Overseas Marketing & Sales Radio Control Systems
Phone:(043)296-5119 Facsimile:(043)296-5124

FUTABA CORPORATION OF AMERICA
4 Studebaker, Irvine California 92718, U.S.A.
Phone:714-455-9888 Telex:23-0691227 Facsimile:714-455-9899