

MODEL: RCR-2CENR



MAN-RCR-2CENR-2017.7.21

•To ensure that you are using the most recent version of this manual:
www.redcatracing.com/manuals/RCR2CENRMANUAL.pdf

WARNING!

Thank you for choosing the Redcat Racing RCR-2CENR 2.4GHz radio system. Be sure to read and understand this manual in its entirety.

**AGE WARNING!**

This radio is not a toy! You must be 14 years of age or older to operate this vehicle. Adult supervision is required.

**RISK OF RUNAWAY VEHICLE OR INJURY!**

Never turn on the vehicle or plug in the battery pack without first having the radio turned on. When powering on the RC vehicle, you must first power on the radio, then the vehicle. When powering off the RC vehicle, you must first power off the vehicle, then the radio. If the radio is switched off while the receiver is still powered on, the vehicle may take off causing injury and damage.



Do not operate outdoors on rainy days, run through puddles of water, or use when visibility is limited. If any moisture (water or snow) enters into any part of the system, erratic operation and loss of control may occur. Do not use this product in bad weather, like when lightning out. This could cause interference in the signal, with loss of control and injury.



Always perform an operating range check prior to using. Problems with the radio control system as well as improper installation in a model could cause loss of control. (Simple range test method) Have a friend hold the model, clamp it down, or place it where the wheels or prop cannot come in contact with any object. Walk away and check to see if the servos follow the movement of the controls on the transmitter. If you notice any abnormal operation, do not operate the model.



Be sure to set the Failsafe function.

**RISK OF FIRE! / RISK OF EXPLOSION!**

There is a risk of fire and explosion when dealing with batteries. Rechargeable batteries may become hot and catch fire if left unattended or charged too quickly. Use extra caution when charging LiPO batteries. Use only LiPO specific chargers. Use a LiPO safe charging pouch when charging LiPOs. Charge away from flammable materials. Never charge at a rate higher than 1C. (2000Mah pack= 2amps charge rate). Overcharging can lead to fire and explosion. Always store battery packs in a cool dry place.

**RISK OF BURNS!**

The batteries, electronic speed controller (ESC), electric motor, and other areas of the vehicle can get hot. Burns can occur if touched after vehicle operation. Allow adequate time to cool before handling.

**RISK OF ELECTRICAL SHOCK!**

Use caution when charging batteries. Do not touch positive and negative leads together. Do not lay battery on metal. Use only chargers specified for the battery type being charged. Keep batteries and chargers away from water.

**RISK OF INJURY!**

Hobby grade RC vehicles can cause serious injury or death if not operated correctly. Never use the vehicle in crowds. Never chase people or animals. Drive in safe open areas only. Keep body parts away from all moving parts.

Do not use this product at night. Lack of vision could cause loss of control and injury. Do not operate this R/C system when you are tired, not feeling well, or under the influence of alcohol or drugs. Your impaired judgement may result in a dangerous situation, causing serious injury to yourself and others.

**RISK OF DAMAGE!**

Never operate RC vehicles near people, public roads, other sites where other radio control activity may occur, or anywhere passenger boats or vehicles are present. Damage of vehicle and property can occur. Only operate on open private property. Never use an RC radio near high tension power lines or communication broadcasting antennas. Interference could cause loss of control. Improper installation of your Radio Control System in your model could result in serious injury. Never charge the battery pack while it is still plugged into the RC vehicle. Always unplug the battery pack from the electronic speed controller (ESC) and remove the battery from the RC vehicle before charging. Failure to do so will result in damage to the vehicle's electronics.

WARNING!

**WARNING!**

Do not mix old and new batteries. Do not mix alkaline, lithium, standard (carbon zinc), or rechargeable (nickel cadmium) batteries. Do not change or charge batteries in a hazardous location.



FCC Compliance Statement! The radio included with your vehicle complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operations.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



WARNING: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

WARNING: While operating the Radio, a separation distance of at least 20 centimeters must be maintained between the radiating antenna and the body of the user or nearby persons in order to meet the FCC RF exposure guidelines.

**AFHDS (automatic frequency hopping digital system)**

AFHDS was developed for Radio control models and offers active and passive anti-jamming capabilities, low power consumption and high receiver sensitivity.

This radio system works in the frequency range of 2.405 to 2.475GHz. This band has been divided into 141 independent channels. Each radio system uses 16 different channels and 142 different types of hopping algorithm. By using various switch-on times, hopping scheme, and channel frequencies, the system is less likely to lose transmission.

Each transmitter has a unique ID. When binding with a receiver, the receiver saves that unique ID and can accept only data from that unique transmitter. This avoids picking another transmitter signal and dramatically increases interference immunity and safety.

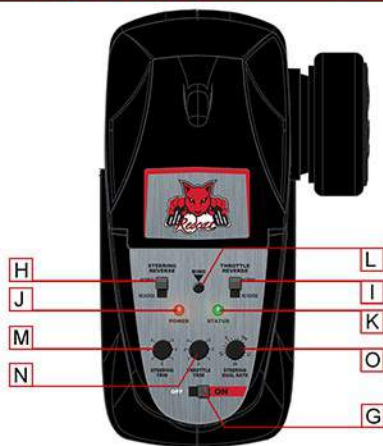
WARNING: Even with the AFHDS technology, if the radio system is not used in accordance with this manual, it can still fail and cause serious injury. Be sure to read and understand this entire manual, as well as the manual that came with all other RC components you are using.

SPECIFICATIONS

- Channels: 2
- Model Type: Surface Only
- RF Range: 2.405-2.475GHz
- Bandwidth: 500KHz
- RF Channels: 141
- RF Power: <20dBm
- 2.4GHz System: AFHDS
- Low Voltage Warning: <4.2V
- Color: Black
- Steering Range: 70° L:35° & R:35°
- Throttle Range: 45° F:30° & B:15°
- Throttle Pull: 20mm
- Weight: 239g
- Size: 210x95x160mm
- Power: 6V DC - 4x 1.5V AA Batteries
- Chargeable: NO
- Display: LED Indicators
- Certificate: CEO678, FCC

Battery Requirements: 4x - 1.5v Alkaline "AA" Batteries. Do not charge Alkaline batteries.

TRANSMITTER OVERVIEW



A: Control Panel

B: Steering Wheel

C: Trigger (throttle/brake/reverse)

D: Grip

E: Battery Compartment

F: Antenna

G: ON/OFF Switch: Powers the transmitter on or off.

H: Steering Reverse Switch: Used to change steering orientation. If the car turns right when you steer left, flip this switch.

I: Throttle Reverse Switch: Used to change throttle trigger orientation. If the car goes in reverse while you pull the throttle trigger, flip this switch.

J: Power LED: Lights up constantly when the transmitter is turned on.

K: Status LED: Lights up constant green when the transmitter batteries are full. Flashes when the transmitter batteries are low and need replacing.

L: Bind Button: Used to bind the transmitter to the receiver. See binding instructions.

M: Steering Trim: Used to set the steering neutral point. If the vehicle veers in one direction while the steering wheel is centered, turn this knob in the opposite direction until the car drives straight.

N: Throttle Trim: Used to set the throttle neutral point. If the vehicle moves forward or reverse while the throttle trigger is centered, turn this knob until the vehicle remains still. For maximum setting, turn slowly until the vehicle creeps forward, then turn the knob the opposite direction until the car stops.

O: Steering Dual Rate: Used to limit the amount of steering. 0= little/no steering & 100= maximum steering. Set the knob to the amount of steering you are comfortable with. If the vehicle has a tendency to spin out while cornering, lower the steering rate.

RECEIVER

ELECTRIC VEHICLES:

P: Bind/VCC: Used when binding to the transmitter.
Used as an Aux.

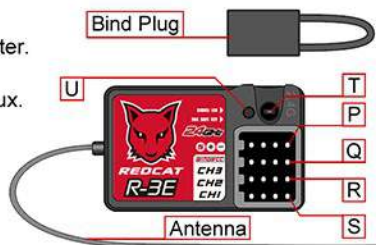
Q: Ch3: Used for 3rd channel when needed or Aux.

R: Ch2: Used for Electronic Speed Controller.

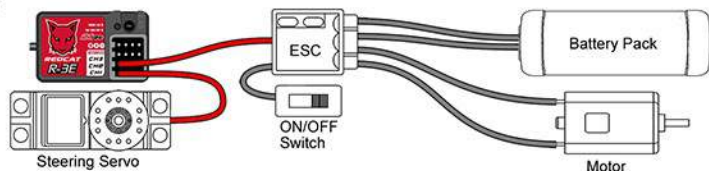
S: Ch1: Used for steering servo.

T: LED: Indicator light.

U: Fail Safe Button: See next page



Installation
Diagram



GAS & NITRO VEHICLES:

P: Bind/VCC: Used when binding to transmitter.
Used to power the servos and receiver,
through a receiver battery.

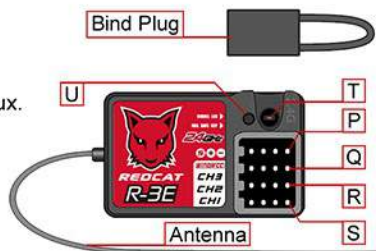
Q: Ch3: Used for 3rd channel when needed or Aux.

R: Ch2: Used for throttle/brake servo.

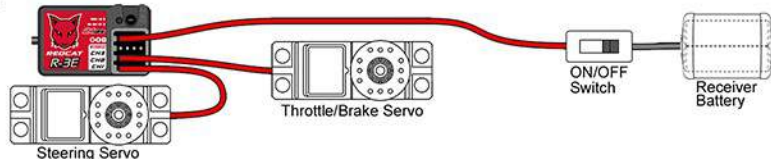
S: Ch1: Used for steering servo.

T: LED: Indicator light.

U: Fail Safe Button: See next page



Installation
Diagram



BINDING THE RECEIVER TO THE TRANSMITTER:

1. Make sure your ESC, or a receiver battery, is plugged into CH2 [R].
2. Insert the BIND PLUG into the receiver BIND/VCC [P]. Now, power the vehicle on and the receiver light [T] should begin to blink red.
3. Press and hold the BIND button [L] in the center of the transmitter's Control Panel while turning on the radio.
4. Release the bind button when you see the green light [K] on the radio flashing. At this point, your receiver's LED [T] should now be solid red. Turn off the power to your vehicle, as well as the radio.
5. Remove the BIND PLUG from the receiver. Make sure the servos and ESC are attached as described above.
6. First turn your radio on, then your vehicle on as normal. Your radio and receiver should be bound together and communicating with each other.

FAILSAFE & BASIC CONTROLS

USING THE BUILT IN FAILSAFE:

1. Function:

The failsafe helps to prevent out-of-control RC vehicles if the transmitter signal is lost. If the receiver is unable to receive a transmitter signal, the position of the throttle channel, on the receiver, will return to its preset failsafe position.

2. Setting the Failsafe:

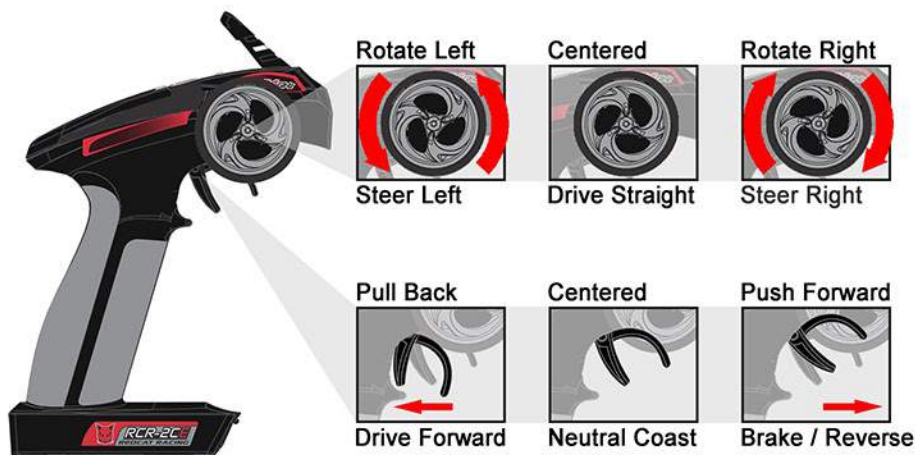
- Turn on the transmitter.
- Turn on the receiver. The LED [T] will light up.
- On the transmitter. For gas/nitro vehicles, apply full brakes and hold. For electric vehicles, leave the trigger in the center neutral position.
- Press the setting button [U] on receiver. The LED will blink, then stop after 3 seconds. This means the failsafe has completed setup.

3. Testing the Failsafe:

- Turn on the transmitter.
- Turn on the receiver.
- Turn off the transmitter.
- The throttle will automatically return to the position you just set it to.
- The failsafe setup is complete if the above procedures were successful.

WARNING: Low or no voltage to the receiver will not allow the Failsafe to engage.

BASIC CONTROLS:



Steering Wheel:

- Rotating the steering wheel to the left will steer the vehicle to the left.
- Leaving the steering wheel centered will cause the vehicle to drive in a straight line.
- Rotating the steering wheel to the right will steer the vehicle to the right.


Throttle Trigger:

- Pulling the throttle trigger back will cause the vehicle to drive forward.
- Leaving the throttle trigger centered in the neutral position, stops all power to the motor.
 - If the vehicle is sitting still, it will remain sitting still.
 - If the vehicle is already moving, the vehicle will coast.
- Pushing the throttle trigger forward will initiate braking or reverse.
 - If the vehicle is sitting still, pushing the trigger forward will cause it to drive in reverse.
 - If the vehicle is moving forward when the throttle trigger is pushed forward, it will apply the brakes. If you then push the throttle trigger forward again, the vehicle will drive in reverse.

Note: gas and nitro vehicles do not have reverse. Reverse is only used for electric vehicles.



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