

# SAFETY GUIDELINES

It is important that you read and understand the instructions completely before use.

Misuse of this product could cause fire or injury.

Please keep this manual for future reference in order to prevent accidents.

This product is not recommended for use by children less than 14 years of age without adult supervision.

## In the event of

- Smoke
- Burning smell
- Strange sound
- Water or any liquid coming into contact with the product
- Or if it is dropped or damaged.

- 1 After the smoke has cleared, check if the item has cooled.
- 2 Stop the engine and motor of the model.
- 3 Turn the receiver switch off.
- 4 Turn the transmitter switch off.
- 5 Remove the battery and contact your supplier.

## Please read before use

- This product is designed only for radio control ground models. Not recommended for use in boats or flying models.
- The manufacturer and distributor will accept no responsibility, expressed or implied, for accidents or injuries caused as a result of dismantling or modification.
- **That changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.**
- Please plug the connector into the receiver firmly and in the correct direction. Do not damage the cable, break, modify, pull or twist it. When pulling out the connector, it should always be pulled by its housing not by the cable.
- Keep fuel and exhaust away from plastic parts. This may cause damage or malfunction.

## Attention during use

- Any water ingress or moisture may cause damage or malfunction. Do not use in the rain or expose equipment to water.
- Always drive an RC car with care and do not use in:
  - 1 Crowded places, near other people, especially small children.
  - 2 Confined spaces. In the wet, in fog or at night time.
  - 3 When tired, sick, medication, under influence of alcohol or any other condition which may affect your ability to control the model.
- Changes to the TX settings should only be made when the engine has stopped (or motor wires disconnected).
- Always turn on the TX first and then the power to the RX.  
Reverse this procedure when turning off i.e. turn off the RX and then the TX.
- Always check the fail safe function on Nitro cars in prior to running the model.
- Never lose sight of your model which could result in damage or injury.

## Attention after use

- Do not keep your model
  - 1 In an extremely hot or cold place (more than 40 degree, less than -10 degree C.)
  - 2 In direct sunlight
  - 3 Humid atmosphere
  - 4 Avoid excessive vibration
  - 5 Dusty environment

! Exposing this equipment to such conditions, may cause the damage, degradation or malfunction.
- Keep the model away from children.

## Essential information regarding batteries

- When not in use always disconnect batteries. Leaving batteries connected can be very dangerous resulting in explosion or fire.
- Never short-circuit the connector terminal. This can cause explosion or fire.
- Only ever charge TX batteries with their own charger.
- Do not dismantle batteries. Batteries contain dangerous chemicals.
- Do not immerse batteries in water.
- Always ensure correct polarity.
- Note that alkaline batteries cannot be recharged. Make sure that batteries are rechargeable items before you charge them.
- Do not mix different types of batteries.
- Be careful of the sharp edges inside the battery box.

**In case of battery leakage** Avoid eye contact, which may cause blindness. Rinse eyes immediately with water and consult your doctor.

## Battery disposal

Do not dispose the battery with other general garbage.  
Disposal should be in accordance with your Country's legislation.



- Isolate battery terminals with insulating tape before disposal.
  - Rechargeable batteries must be recycled.
- Please note that short-circuiting batteries can cause fire or electric shock.

## 2.4GHz CHARACTERISTICS

- This system allows the transmitter and receiver to search for available bands empty band and lock on to one of 76 available on the 2.4GHz frequency. This eliminates the traditional method of using crystals.
- Each transmitter hold its own I.D. Receivers never operate with other transmitters. It also is not necessary to switch on TX and then RX as with traditional radio system.
- The control signal is high speed digital and it is recognized by RX CPU. In a fully charged state the car should be in full control at all times. You can also select hold function or fail safe function.

# TRANSMITTER

## EXTERNAL VIEW OF TRANSMITTER

When each lever is operated the action is confirmed with the sound of a buzzer beep.  
You can hear this click sound when the setting position is changed.

### STEERING REVERSE SWITCH

Switch between steering left and right direction

### THROTTLE REVERSE SWITCH

Switch between throttle forward and backward direction

### TX SETTING BUTTON

Switch the transmitter on by pushing the set up button. The LED will start to flash slowly indicating that it is in

LED

### POWER SWITCH

Slide to right to switch on.  
Slide to left to switch off.

HOLE FOR STRAP

### CHARGING JACK

### IMPORTANT!

Only charge batteries capable of being recharged and marked rechargeable. Serious damage to equipment will result in trying to charge non-rechargeable cells.



### THROTTLE TRIM LEVER

Operates up and down

### ANTENNA

/ Please handle with care to reduce risk of damage.

### STEERING TRIM LEVER

Operates left and right adjustment

### STEERING WHEEL(CH-1)

Turn to left and right

### THROTTLE TRIGGER(CH-2)

Squeeze the trigger to accelerate. Push the trigger to engage brakes or reverse.

### GRIP

### BATTERY BOX

Be careful of sharp edges of the battery terminals or springs.

## HOW TO INSTALL THE BATTERIES

- Push the finger point ,then slide the battery cover

- Pay close attention to polarity of batteries when installing.

! Incorrectly installed batteries may cause damage to the radio.

! Do not mix different types of batteries.

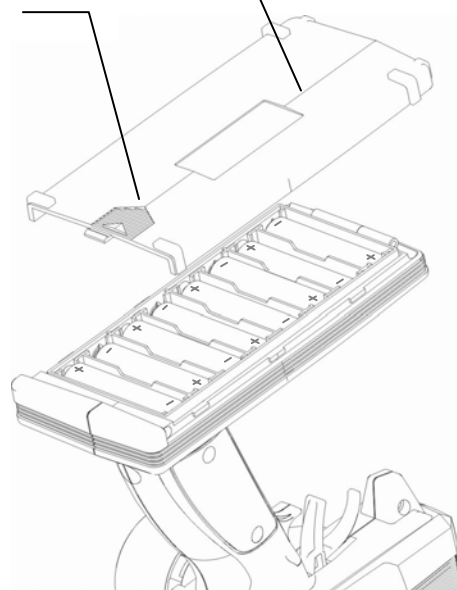
! **Never allow batteries to leak.**

**Clean surfaces and avoid skin contact.**

**Then replace with new batteries.**

Battery cover

Finger point



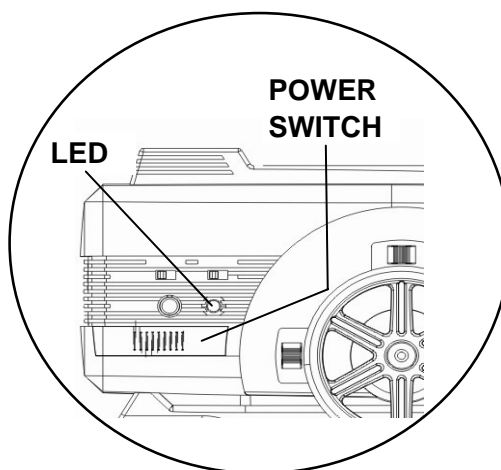
# SAFE SET UP PROCEDURE

## Transmitter

- When the Transmitter is switched on it automatically starts to search for free a band.  
Once it is located it locks to it during this search.  
The LED will initially blink and then change to a constant light once it has completed this procedure and secured a band.

### Attention:

When there are many 2.4GHz wave devices around, the search time may be longer.



## Receiver

- When the receiver is switched on, it will also look for the transmitter which has the same ID. When it finds the same ID, the LED will flash and when the band is fixed, the LED changes to a constant light. ( Just like the Transmitter )

### Attention:

When there are other 2.4GHz wave devices around, the scanning time may take longer.  
If the receiver cannot locate the transmitter's signal or suffers from interference, the steering servo will not function.

When the fail-safe function is off, the signal to the throttle channel is cut off.

This means that the speed controller throttle function or alternatively the throttle servo will not operate

Both functions will revert to normal operation when the receiver obtains the correct signal.

If the receiver cannot obtain the signal from the transmitter after one second, the receiver will automatically scan the bands to find the transmitter signal.

## ID registration and setting of fail safe function

**Attention:**

Set up should be conducted in an area free from interference by other 2.4GHz transmitters.

**Step 1**

Push the set up button on the front of the transmitter, then switch the transmitter on. Transmitter will output the electrical wave under this setting mode. Output power will be given weakly to avoid interference to others. In this case, LED will flash slowly.

**Step 2**

Push the set up button on the receiver and then switch receiver on. Release the set up button. The receiver will enter set up mode and transmitter ID is registered to the receiver.

**Step 3**

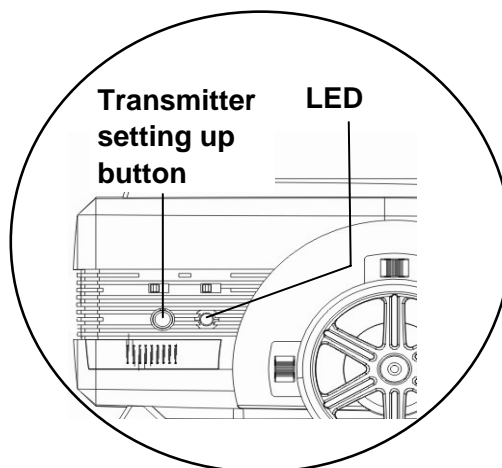
You can set the failsafe function ON or OFF by repeatedly pushing and releasing the set up button on the receiver.

LED is ON : Fail-safe function ON

LED is OFF : Fail-safe function OFF

**Step 4**

To set the position of the servo in failsafe mode, first press the receiver button so that the LED is off. Move the trigger to the desired failsafe position. Push the receiver set up button so that the LED is on and this position will be memorized in the receiver. If the TX trigger is not moved, the position of the trigger will be memorised in neutral.

**Attention:**

After the ID and fail safe are set, switch the transmitter and receiver off and restart both. Check that all functions are working correctly before operating the model.

**Attention:**

When adjusting failsafe function for nitro models, set failsafe function to apply brakes in a setting that will allow the model to stop in a safe fashion.

**Attention:**

If another 2.4GHz radio is being set up nearby, your TX will not enter set up mode.

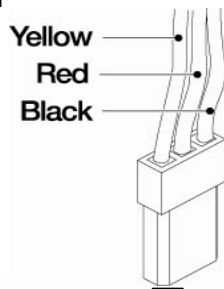
## Checking Fail Safe Function ON/OFF

Switch the transmitter off and leave the receiver on, the receiver start to search and LED will start to flash. If you activated the fail-safe function and it is ON, the servo will return to the position saved in memory and if failsafe function is OFF, the servo will be in neutral position.

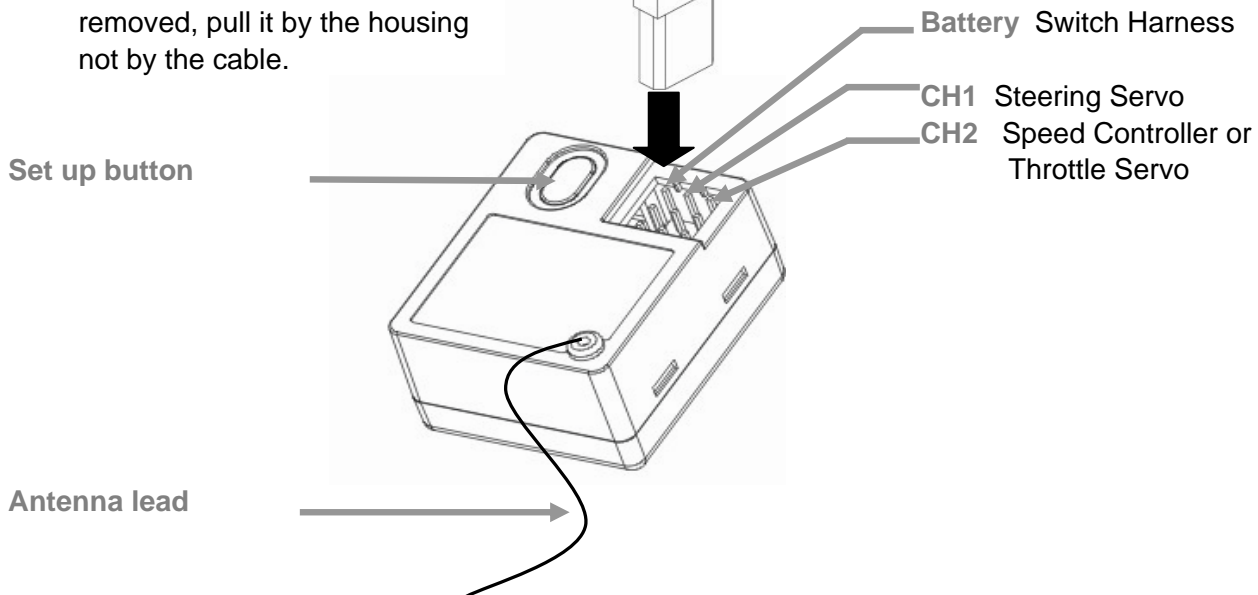
# RECEIVER

## Parts identification

- Connector must be fitted firmly. If the connector is not fixed correctly, it may come disconnected and cause vehicle to go out of control.
- When the connector is removed, pull it by the housing not by the cable.

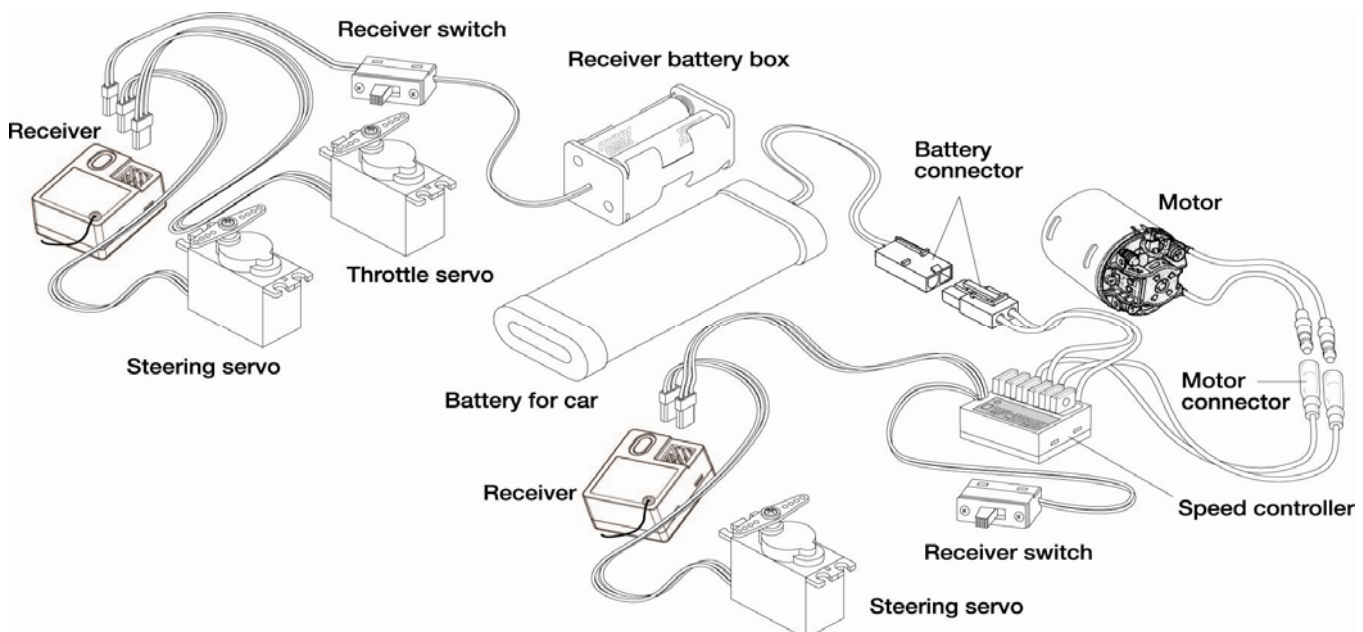


- The plug must only be fitted facing one direction. Always ensure that the black cable lead wire is facing outwards when the servo and switch harness are connected to the receiver.



## Receiver Connection

- Connect the battery and motor with correct polarity. (\* Incorrect polarity causes product damage)
- The manufacturer and distributor will accept no responsibility, expressed or implied, for problems caused by usage of Non-genuine parts.
- When you have finished driving your car, remove batteries to prevent danger of activation if accidentally switched on.

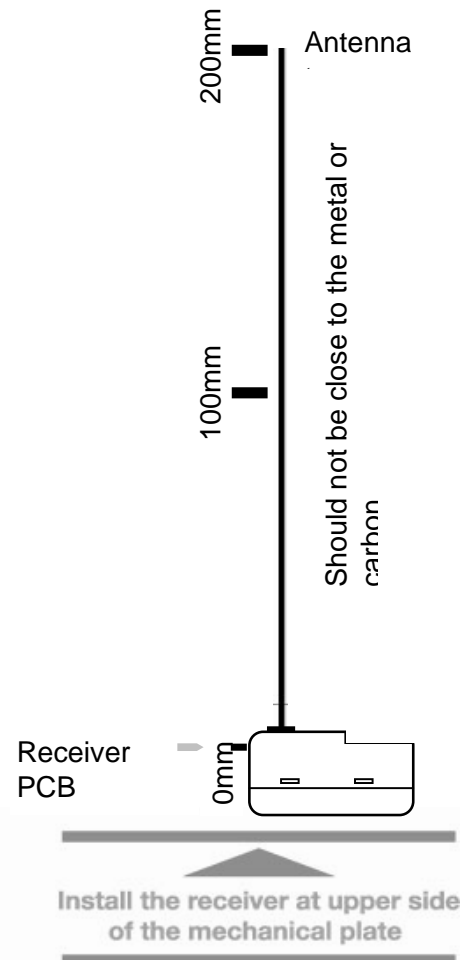


### Important ! Caution when installing the receiver

- Do not install the receiver in a low position of a large scale model. The antenna wire must protrude sufficiently to receive a clear signal. Furthermore, if the receiver is surrounded by metal components (i.e. a roll cage) the signal may be subject to interference. In these instances the receiver should be repositioned at the front or on the upper sections of the model.
- To avoid direct vibration during driving, receiver should be fixed in a place which will not touch other parts using thick double sided tape. When installing in a car with an engine, the receiver should be protected with sponge to prevent shock or vibration which could result in malfunction.
- The receiver and antenna should not be close to motor, speed controller, battery or silicon cord, as this can cause interference due to electrical noise.
- Operate each servo and check that unnecessary throw is not exerted on the push rod, which can cause servo damage or shorten battery life.
- Servo should be fixed with rubber grommets in a place which will not touch with other parts to avoid direct vibration to the servo, otherwise servo may be damaged by shock or vibration.
- When used in an engined car, be careful that fuel or exhaust gases do not come into contact with the receiver.

### Important ! Caution receiver antenna installation

- Never cut, lengthen or bind the antenna wire as the wavelength for 2.4GHz is short and it is very sensitive to the length of antenna wire.
- Keep the antenna wire away from metal or carbon material. In case the antenna is installed outside, it should be as close to the receiver as possible. If the antenna wire from receiver to holder is longer, their sensitivity becomes less.
- Do not put the antenna wire directly on the metal or carbon.
- Do not put the antenna wire near electric conductors such as metal or carbon it causes less sensitivity due to interference. Especially, such as right illustration, antenna wire should be installed more than 30mm away from the electric conductor. Also note that the middle part of the antenna wire should not be close to the metal or carbon.



# FUNCTION SETTING

## BEFORE SETTING

- Set up the model before driving.
- To change the transmitter settings, always stop the engine first and disconnect the motor wire.
- When each lever is operated, a beeping sound will be heard.
- Pay attention to linkage to servos on R/C cars. If the servo function is forced to stop this may cause excess current to build which will shorten servo life. Adjust with steering rate and steering ATV.

## RIGHT AND LEFT TURN ADJUSTMENT FUNCTION ( STEERING ATV)

Hold the wheel to full lock right and operate the trim lever. Repeat this for full left lock.

( Steering ATV level 20~150 )

This function ensures that the steering linkage does not lock.

## STEERING RATE LEVER FUNCTION

Push the set up button and operate the steering trim lever to adjust the maximum rudder angle of the steering servo. This is to ensure optimum running of your model.

( ST RATE= 20~100 )

## STEERING TRIM LEVER FUNCTION

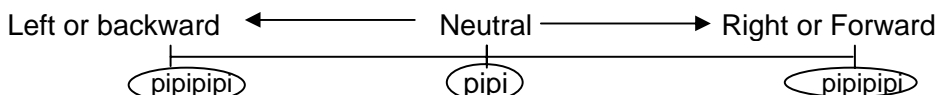
Keep the steering wheel in the neutral position and adjust the trim lever in order to set up desired neutral position on the servo. ( Moving direction 0~50 for L/R ) 4 continuous quick beeps indicate the 50 incremental positions. 2 continuous quick beeps indicate default neutral position.

This function ensures that the steering linkage does not lock.

## THROTTLE TRIM LEVER FUNCTION

When operating this lever without holding the trigger, you can adjust the neutral position or stop position. ( Moving direction 0~50 for UP/DOWN ) 4 continuous quick beeps indicate the 50 incremental positions. 2 continuous quick beeps indicate the default neutral position.

\*\* Each trim position is indicated with a beeping sound



## FORWARD AND REVERSE ANGLE ADJUSTMENT FUNCTION(Throttle ATV)

Hold the trigger to the forward position or reverse at maximum and then operate the throttle trim lever can adjust the limits of the servo movement in each direction.

( Throttle ATV level 20~150 )

## CHANGE SERVO ROTATION DIRECTION (Servo reverse)

You can adjust the steering reverse switch and the throttle reverse switch to change the servo rotation direction.

## RESTORE DEFAULT FUNCTION SETTING

Push the set up button for more than 2 seconds with keeping the wheel full lock right, and the trigger full lock to forward, then release.

## BATTERY ALARM

When the battery voltage < 6V the LED will turn off, when the input voltage < 9V the LED will flash and buzzer beep. for 5S during operating. When this happens, please change the batteries to new ones.





Used correctly, domestic batteries are a safe and dependable source of portable power. Problems can occur if they are misused or abused – resulting in leakage or, in extreme cases, fire or explosion

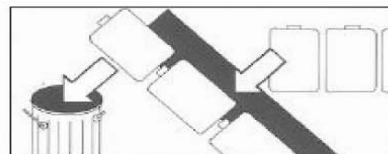
Here are some simple guidelines to safe battery use designed to eliminate any such problems.

## ALWAYS



Take care to fit your batteries correctly, observing the plus and minus marks on the battery and appliance.

## ALWAYS



Replace the whole set of batteries at one time, taking care not to mix old and new batteries or batteries of different types.

## ALWAYS



Store unused batteries in their packaging and away from metal objects which may cause a short-circuit.

## ALWAYS



Remove dead batteries from equipment and all batteries from equipment you know you are not going to use for a long time. Otherwise the batteries may leak and cause damage.

## NEVER



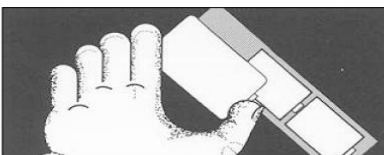
Never dispose of batteries in fire as this may cause them to explode. Please put dead batteries in with the normal household waste.

## NEVER



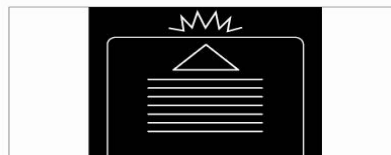
Never attempt to recharge ordinary batteries, either in a charger or by applying heat to them. There are special rechargeable batteries which are marked as such.

## ALWAYS



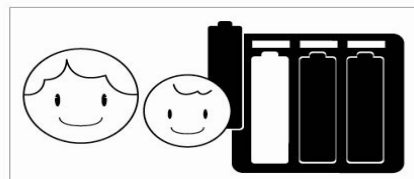
Supervise children if they are replacing batteries themselves in order to ensure these guidelines are followed.

## ALWAYS



Make sure battery compartment are secure.

## ALWAYS



Supervise children if they are replacing batteries themselves in order to ensure these guidelines are followed.

## IMPORTANT Electrical characteristics for 2.4GHz frequency

- 2.4GHz uses a very high frequency, the product will not be effected by motor noise.

However, the electrical signal characteristics are very different to lower frequencies.

The presence of metal parts or carbon between TX antenna and RX antenna, can weaken the signal and cause interference. If RX antenna is covered by metal or carbon, please change the position of the installation.

When racing, never switch on the TX in an area other than the drivers stand, to prevent interference to other drivers.

- 2.4GHz signals are easily distorted by metal parts.

If the transmitter operation become slow at the track, please move your driving position. Please also check that the receiver is correctly installed.

- Any metal obstacle between driver and car may result in a loss of signal i.e. a metal crash barrier on a racing circuit.

- If you experience interference, stop the car, switch off the TX and then switch on again. The transmitter will scan for a new band, which may improve the reception and reduce interference.

- More than 3.5V is necessary to operate the receiver correctly.

When running an electric car, if low voltage occurs the receiver may reset itself.

If you are using 4 or 5 cell power battery for driving, installing an additional power source for the receiver is highly recommended.







3.

