Thunder Tiger

KT 8

1/8 SCALE ELECTRIC POWERED RACING KART

This radio control model car is not a toy! Before beginning operation, please read this manual thoroughly.

The contents are subject to change without prior notice due to product improvements and specificatrion changes.

Instruction Manual

WARRANTY

Thunder Tiger Corporation guarantees this model kit to be free from defects in both material and workmanship. The total monetary value under warranty will in no case exceed the cost of the original kit purchased. This warranty does not cover any components damaged by use or modification. Part or parts missing from this kit must be reported within 60 days of purchase. No part or parts will be sent under warranty without proof of purchase. To receive part or parts under warranty, the service center must receive a proof of purchase and/or the defective part or parts. Should you find a defective or missing part, contact the authorized Thunder Tiger Service/Distributor nearest you. Under no circumstances can a dealer or distributor accept return of a kit if assembly has started.

Introduction

Thank you for purchasing this Thunder Tiger product. This manual contains the steps and instructions required to assemble your car. Please read this manual completely before attempting to start maintenance. Follow the directions in this manual closely to reduce problems during operation. We offer online help on our www.acehobby.com or www.thundertiger.com and forums and our product specialists are ready to take your call if you have any technical questions. Have fun and enjoy the exciting world of R/C.

CAUTION

1. This product is not a toy. It is important to familiarize yourself with the model, its manual, and its construction before assembly or operation.
2. Always keep this instruction manual for your assembling and operating reference.
3. Do not operate model products in rain, on public roads, near crowds, or near areas with restricted radio operation.
4. This product, its parts, and its construction tools can be harmful to your health. Always exercise extreme caution when assembling and/or operating this product. Do not touch any part of the model that is rotating.
5. Use an adequate charger for the batteries and follow the instruction correctly.
6. Right after use, do not touch the motor or ESC because they may generate high temperatures!
7. Do not stall the motor. The ESC may fail if power is applied to the motor when car cannot move freely.
8. By the act of assembling or operating this product, the user accepts all resulting liability. If the buyer is not prepared to accept this liability, then he/she return this product in new, unassembled, and unused condition to the place of purchase.

WARNING: To avoid a possible fire hazard, ALWAYS unplug the battery after use. Do NOT leave your vehicle unattended with the battery plugged in.

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Items Required For Operation

Ready To Run Contents

3-Channel Transmitter

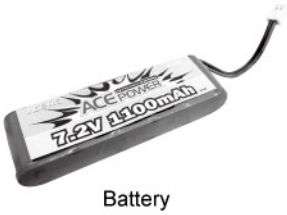
Brushless Motor

Brushless Motor ESC

Servo

Receiver

Equipment Needed
(Not Included)



Battery

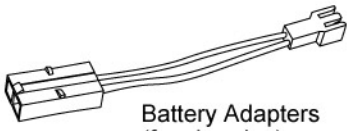
Charger

AA Alkaline battery
x8 for transmitter
發射機用電池

Tools Included

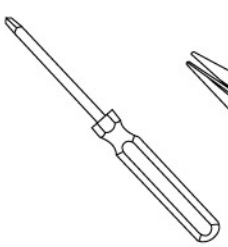
Hex Wrenches
1.5 / 2.0mm

4-Way Cross Wrench



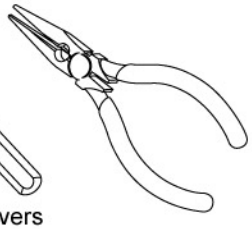
Battery Adapters
(for charging)

Tools Required For Assembly (Not Included)



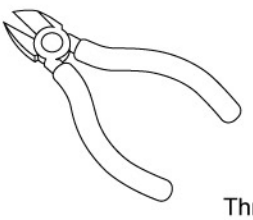
Philips Screwdrivers

Needle Nose Pliers

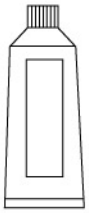


Super Glue
(CA Glue)

Wire Cutter



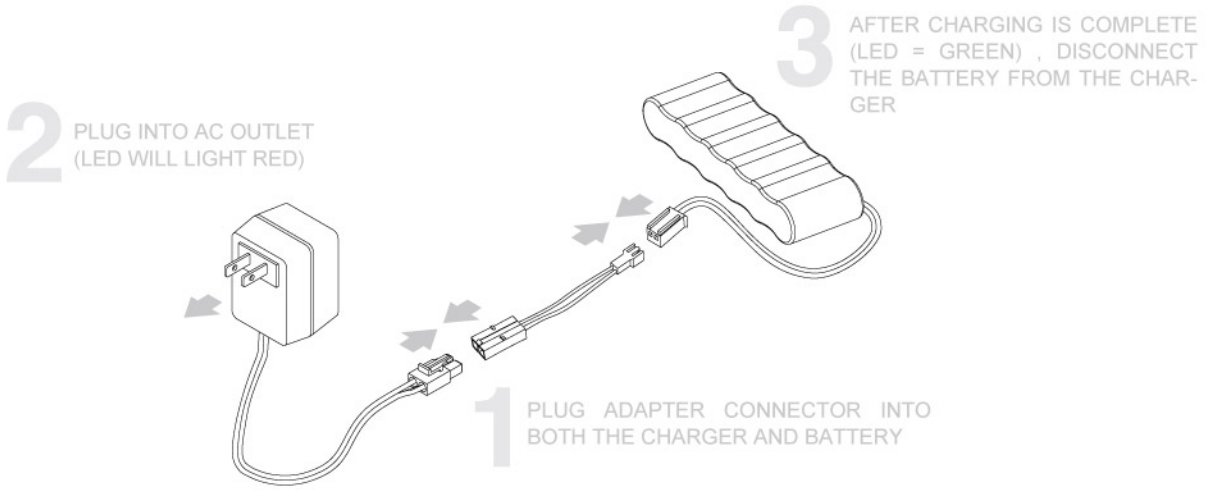
Thread Locking Adhesive
(Threadlocker)



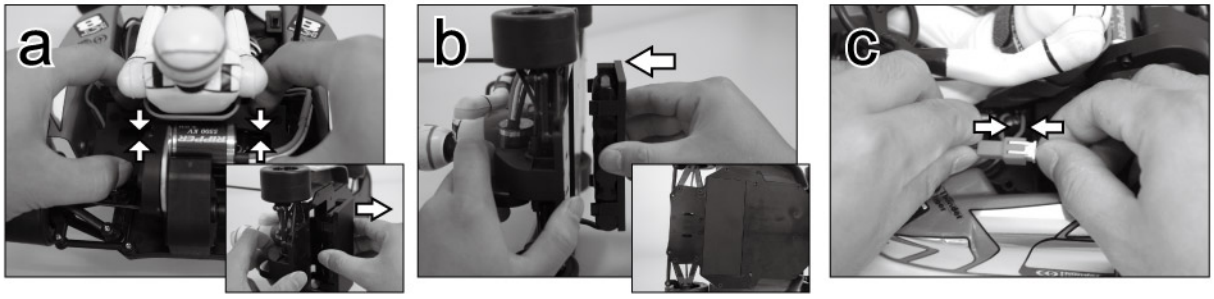
Grease

1 1.1 CHARGING THE BATTERY PACK (Battery & charger are not included)

1. When charging the battery, first plug the adapter connector into the charger. Connect the adapter connector to the battery pack. Confirm the link between charger, adapter connector and battery pack that are properly connected in order. You can connect the charger to the AC wall outlet now.
2. Once the charger is connected, a red LED will light up to indicate that the charging has begun. The LED will light up green to indicate that charging is completed.
3. When finished charging, first disconnected the charger from the AC wall outlet. Disconnect the battery pack from the charger. Install the battery pack on your vehicle.

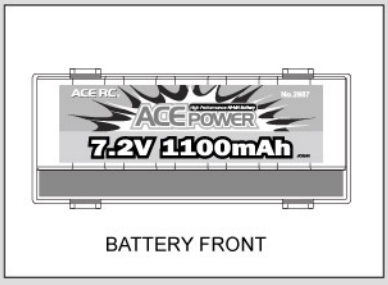


1.2 INSTALLATION OF BATTERY PACK

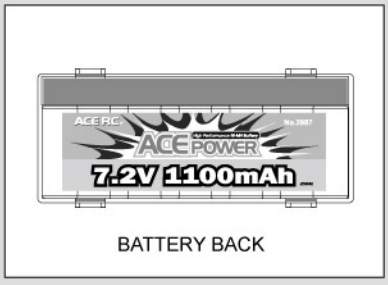


a. Disconnect the battery connector then squeeze the battery tray tabs towards each other to allow the battery tray to slide underneath the chassis.
b. Place a fresh battery pack along with the foam spacer onto the battery tray then slide it up from under the chassis until the battery tray tabs lock into place. (Always install the foam spacer with the battery as this acts as a spring to keep the locking tabs in place.)
c. Finally, reconnect the battery connector.

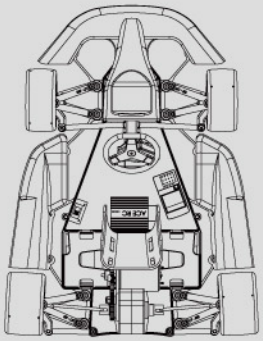
BATTERY PLACEMENT



BATTERY FRONT

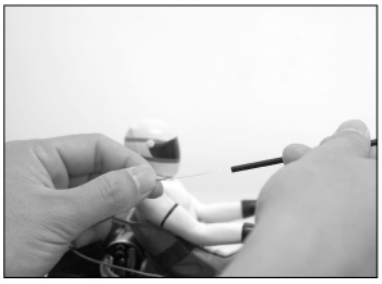


BATTERY BACK



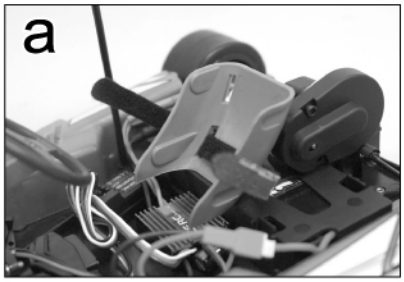
For most cases run the battery in the rearward position (foam spacer towards the front). Typically this will be the most stable and easiest to drive. Try moving the battery forward if the track surface has better traction.

2 PREPARING THE CHASSIS



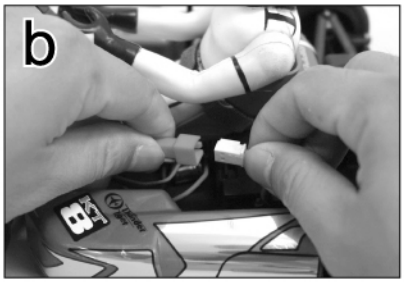
Thread antenna wire through the tubing.(Do not cut or shorten antenna wire!)

3 DRIVER FIGURE



a. Thread velcro tape through the holes beside the driver's seat. Select upper holes or lower holes as you wish.
b. Put the driver into the seat and then fasten the velcro tape around the driver.

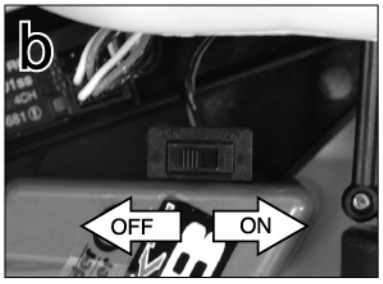
4 RADIO BATTERY INSTALLATION



a. Install 8 AA-size batteries into transmitter.
b. Put the battery pack inside the battery box and connect the battery to the ESC.

Caution: Check all the wirings and connections before you connect the speed control to a drive battery. Incorrect polarity will damage your speed control.

5 RADIO OPERATION



a. When turning your system on, ALWAYS turn on the transmitter FIRST. Then, turn on the receiver.
b. When turning off, ALWAYS turn the receiver off FIRST, then the transmitter.

6 The ACE RC Cougar PS3 2.4GHz Radio System

1. Transmitter Antenna
2. Battery Level Indicator
3. HI / LO Throttle ATV (Adjustable Travel Volume)
4. Servo reversing switches
5. Steering Trim
6. Throttle Trim
7. Steering D / R (Dual Rates)
8. AUX Ch Button
9. External Charging Jack
10. 2.4GHz binding SW
11. Steering Wheel
12. Power Switch
13. Throttle Trigger
14. Steering Tension Adjustment
15. Battery Cover

TRANSMITTER CONTROLS

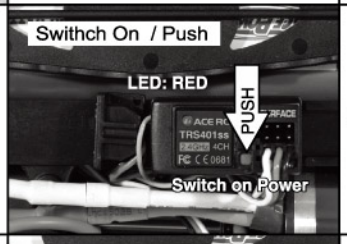
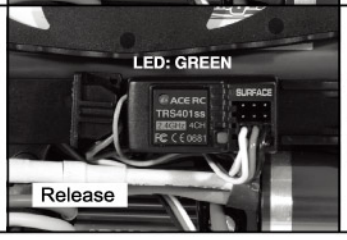
1. **Transmitter Antenna:** Straighten up the antenna before operating the model.
2. **Battery Level Indicator:** Three LEDs indicate the battery voltage level. If the Red LED flashes, please replace the batteries.
3. **HI/LO Throttle ATV (Adjustable Travel Volume):** Provides the function to let you independently preset the maximum travel of the throttle servo either side (high / low) of neutral.
4. **Servo reversing switches:** To reverse the servo's rotation direction at the flip of the switch. The reversing switches are recessed into the transmitter to prevent accidental operation.
5. **Steering Trim:** Adjusts the steering in small increments or decrements to run the model straight.
6. **Throttle Trim:** Adjusts the throttle in small increments or decrements to shift the neutral position.
7. **Steering D/R (Dual Rates):** Push this lever left or right to adjust the amount of the steering dual rate. Right to increase dual rate amount and left to decrease the amount.
8. **AUX Ch Button:** Provides an extra function for the control of the model.
9. **External Charging Jack:** For rechargeable NiCd/NiHM battery pack on the transmitter only.
10. **2.4GHz binding SW:** The Binding SW button is located on the back of the 2.4GHz transmitter. For additional details, please refer to the “Binding” setting procedure (Page 7).
11. **Steering Wheel:** Controls the steering of the model.
12. **Power Switch:** Sliding to turn the transmitter on or off.
13. **Throttle Trigger:** pulled or pushed to control the movement of the model.
14. **Steering Tension Adjustment:** Use a Phillip type screwdriver to tighten or loosen the tension of the steering wheel.
15. **Battery Cover:** Slide cover to install or remove batteries.

7 BINDING PROCESS

A binding feature is included in the ACE RC Cougar 2.4GHz spread spectrum system to ensure the transmitter and receiver bind properly and prevent interference from other controllers.
To manually bind Tx/Rx, please proceed as per the following steps:

a. Press and hold the “Binding SW” button on the back side of the transmitter while turning on the transmitter.
b. Release the “Binding SW” button after the green LED flashes indicating the transmitter is binding.
c. Press and hold the bind button on the receiver while turning on the receiver. Binding process will then start automatically.The LED will turn green/reed flash on the receiver.
d. Release the “Binding SW” button. Successful binding is confirmed by the binding LED changing from a quick blinking and then remain solid on the transmitter. The LED will turn green on the receiver. Once binding is complete, the system will automatically connect.

Note: Binding process may take 3~10 seconds to execute. If binding fails, the LED on the receiver will turn red. Please turn off the power and repeat the steps from a) ~d).

Step	TX Action	RX Action	LED
a		No Action	–
b		No Action	TX LED：GREEN FLASH
c	No Action		RX LED：GREEN/RED FLASH
d	No Action		TX LED： GREEN FLASH-->GREEN SOLID RX LED： RED SOLID-->GREEN SOLID

8 FAIL SAFE (F/S) FUNCTION SETTING

ACE RC COUGAR 2.4GHz R/C system features a built-in Failsafe function to automatically set a servo command if the receiver loses the signal from transmitter due to interference. For safety, we strongly recommend to active the FAILSAFE function on your Cougar R/C system.

Setting up the Failsafe (F/S) Function:

a. After binding the transmitter and receiver, you can continually set up the F/S function. Turn on the transmitter power and then receiver power.

b. Press and hold the “Binding SW” button on the receiver for 10 seconds. The LED will start flashing GREEN on the receiver.

⚠ **CAUTION:** Do not release the “Binding SW” button on the receiver until STEP C is completed.

c. Move and hold the throttle trigger to the position you want the control to be in if a failsafe condition should occur. First, keep steering wheel at neutral position（steering servo at neutral position）. To set up F/S function with the throttle servo position at "Brake", first push the trigger to the brake position and hold. To set up F/S function with servo position at "Neutral", keep the trigger at neutral position.

NOTE:
Always set the throttle trigger to neutral or full brake position and steering servo to neutral position in case of any unexpected control error!

Factory pre-settings for RC car F/S function are :

■ Electric Car- Steering servo at neutral, throttle at neutral.

■ Nitro Car- Steering servo at neutral, throttle at iddle.

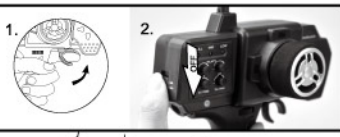
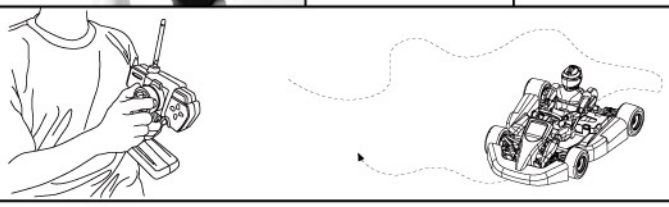
d. After the Step C, release the “Binding SW” button on the receiver first and then the throttle trigger. The LED turns to solid “RED” and then back to solid “GREEN” indicating the F/S function has now been activated.

e. Test by turning off your transmitter and watching the servo failsafe position activate.
F/S at "Neutral": To check the fail safe is working properly, by moving the throttle trigger to the full forward (full brake), hold this position and then turn off the transmitter. The F/S function should move the throttle servo to “Neutral” position and the steering servo to “Neutral” position.
F/S at "Brake": To check the fail safe is working properly, by keeping the throttle trigger at neutral and then turn off the transmitter. The F/S function should move the throttle servo to “Brake” position and the steering servo to “Neutral” position.

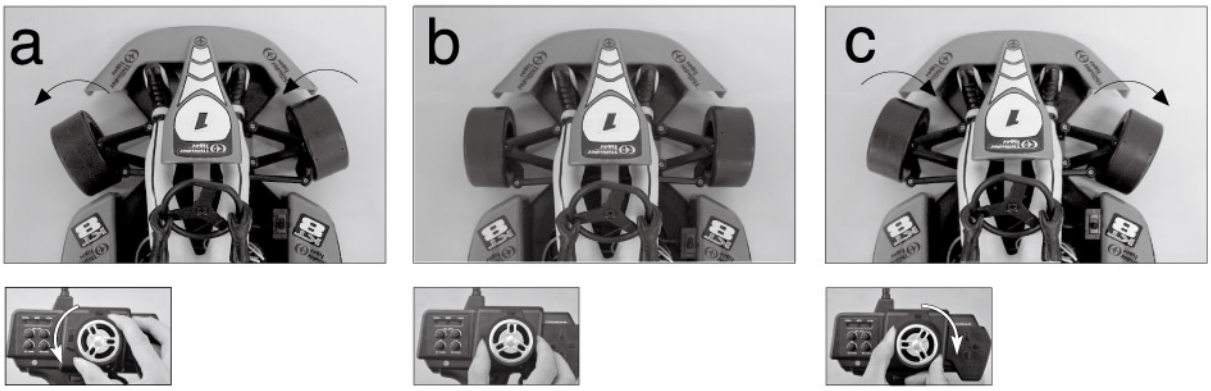
f. If the F/S function fails or need to change the F/S hold position, repeat the steps a) ~e). After the F/S is completed, you can start normal operation.

⚠ **CAUTION:**
ALWAYS reset FAILSAFE function after binding your transmitter & receiver.

8 FAIL SAFE (F/S) FUNCTION SETTING

Step	TX Action	RX Action	Check
a	Binding Complete	Binding Complete	TX LED：GREEN SOLID RX LED：GREEN SOLID
b	No Action		RX LED：GREEN FLASH
c	**1.** Steering:Neutral **2.** Keep brake or keep trigger at neutral 	No Action	**Pre-settings for F/S function:** ■EP Car : Steering at Neutral / ESC at Neutral ■GP Car : Steering at Neutral / Carb. at Iddle
d	Release later 		RX LED：RED SOLID-2s->GREEN SOLID
e	1. Keep brake 2. Swithch Off 	No Action	F/S function activates
f	OK! 		

9 OPERATING RADIO STEERING FUNCTION



a. Check the radio steering functions. With the radio transmitter and receiver on, turn the steering wheel/stick to the left. The front tires/wheels should turn left accordingly. If not, flip the steering servo reverse switch.
b. Return the steering wheel/stick to neutral. The front tires/wheels should point straight forward. If not, use the steering trim lever to correct it.
c. Turn the steering wheel to the right. The front tires/wheels should turn right accordingly.

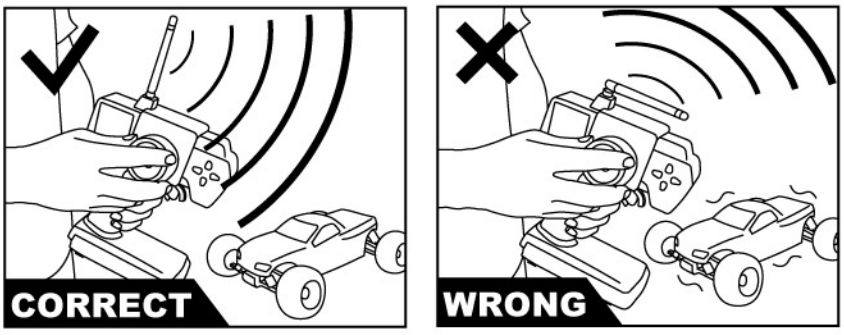
10 MAINTENANCE AFTER RUNNING

a. Always turn off the radio system and disconnect the battery pack when the car is not in use.
b. Remove the sand, mud, dirt, and any other elements completely from the car before you store it.
c. Never use chemicals or any solvents to clean the chassis as it may cause damage to the electronics components and plastic parts as well. Use compressed air, soft paintbrush, or toothbrush to clean dust and dirt.

11 BEFORE OPERATING

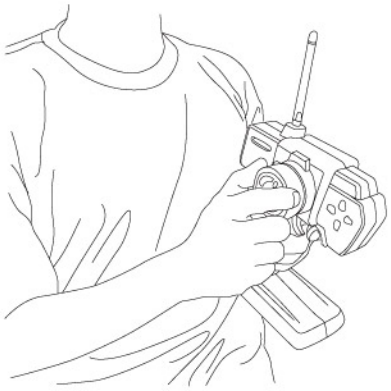
For best operating range, always ensure the largest section of your transmitter antenna faces the model.

⚠ **Warning! Operating range may be significantly reduced with the transmitter antenna pointing directly at the model!**

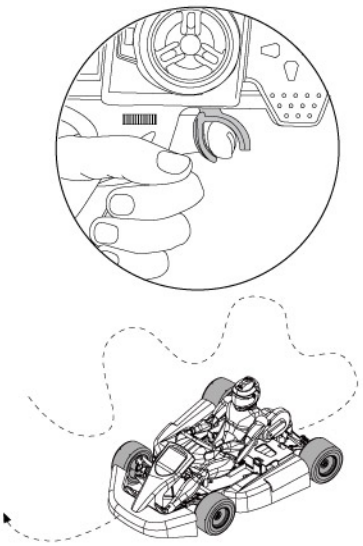


12 DRIVING TIPS

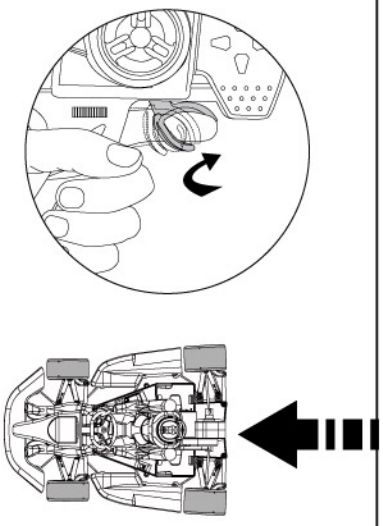
a. Hold your elbows in and keep the transmitter antenna pointing straight up.



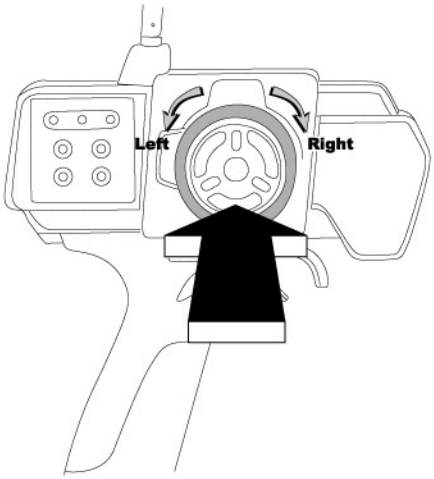
b. Squeeze the throttle trigger or pull the throttle stick gently and steer the car to left and right.



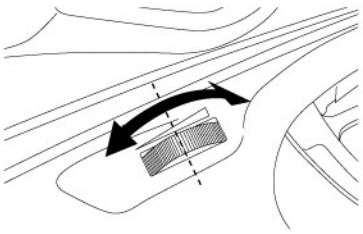
c. Squeeze the throttle trigger and release. Repeat this action to control car speed.



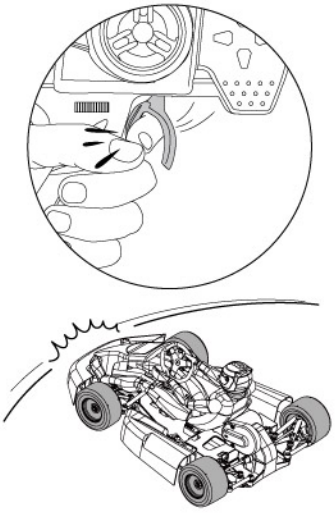
d. If you are of unsure of the steering direction, practice with the transmitter facing towards you.



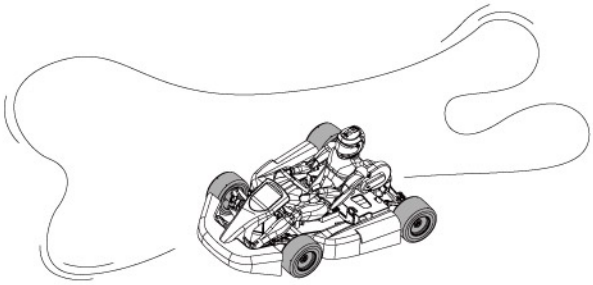
e. At first, set the steering D/R function for less steering response.



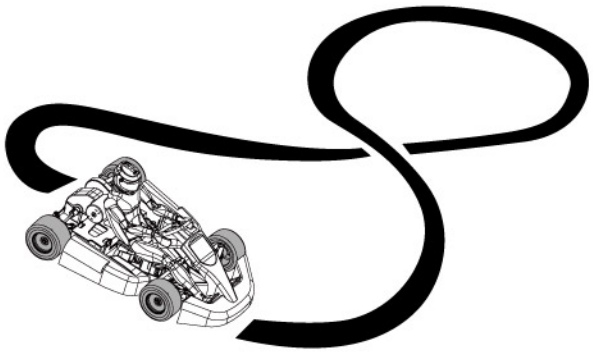
f. Be careful not to squeeze the throttle trigger abruptly while steering.



g. After you become used to the controls, experiment with high performance at full throttle and full steering.



h. Practice doing figure 8's.



TROUBLESHOOTING

If you have trouble starting or keeping your **KT8 RACING KART** running, here's a quick checklist of what to look for first.

Description	Problem	Solution
Car stops or slows	Speed control over heats	Let it cool and try later
Car is glitching	Car has a problem on power	Check motor capacitors, losse wires or crystals.
Motor is overheats	Gear mesh is too tight	Let motor cool and check recommended gearing for motor type. Reset gear mesh.
No power	Battery is discharged	Charge battery
	Battery not plugged in	Plug in battery
No throttle	Motor not plugged in	Plug motor in
	Motor failure	Replace motor
	Motor keeps running	Check if the throttle trim knob is in neutral position.
No steering	Servo not plugged in	Plug servo into ESC unit
	Locked up steering linkage	Free up steering linkage
	Servo failure	Replace servo
Reversing	Goes backwards when you pull the trigger or goes right when turning the wheel left	Check throttle / steering reversing switches on transmitter

Manufactured by THUNDER TIGER CORPORATION
http://www.thundertiger.com
JD7308v2