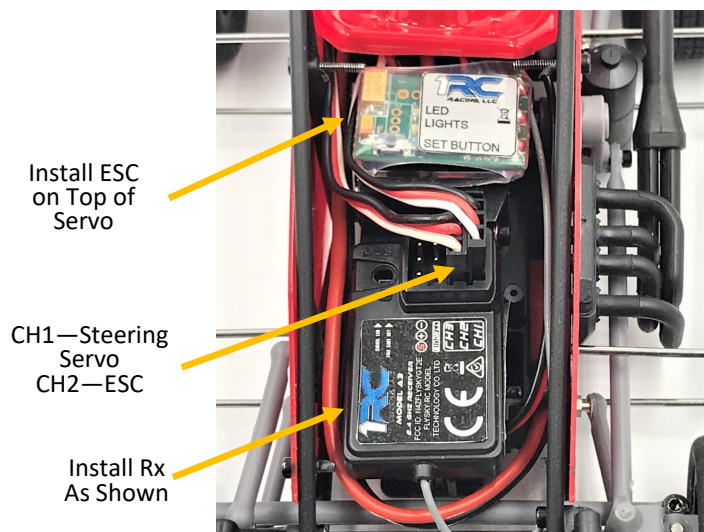


# 1RC7019—Upgrade Radio Package, 18th Scale

## Install Details

- Before installing receiver, you must cut the right side post off the battery box that was used to mount the original ESC/Rx unit. Cut that post off flush with top of battery box so new receiver will sit flat on battery box.
- Position receiver up against left side post on battery box and front servo mount post.
- Use double stick tape to attach the receiver and ESC as shown in the image to the right.
- Route all wires as shown and mount switch in same location as it is mounted with original ESC/Rx unit.
- Antenna wire is long and can be routed as shown and will extend into tail section of car. Ensure this wire does not get pinched and remains free in car to ensure good signal with the transmitter.

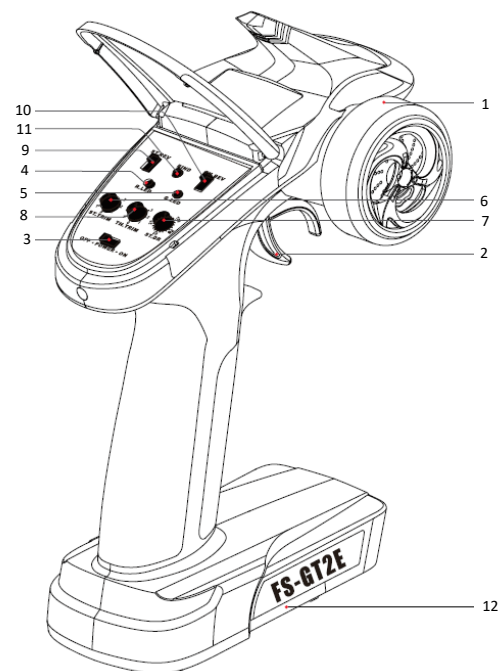


## Transmitter Operation

Caution: Never hold the trigger when turning on transmitter. Ensure you understand all features of transmitter before using. Do not drop transmitter or damage can occur.

## Transmitter Features

1. **Steering Wheel:** Controls direction of model (left/right).
2. **Throttle Trigger:** Controls direction of model (forward/reverse).
3. **Power Switch:** Turns transmitter on and off.
4. **Power LED:** Indicates if transmitter is on or off.
5. **Power Check**
6. **Steering Trim:** Adjusts the centering of the models front tires.
7. **Steering Dual Rate:** Adjusts the amount the models front tires turn front right to left.
8. **Throttle Trim:** Adjusts the motors speed when trigger is at neutral position.
9. **Steering Reverse:** Switch that will reverse the direction of steering servo.
10. **Throttle Reverse:** Switch that will reverse the direction of the motor when trigger is moved.
11. **Bind Button:** Used to bind transmitter to receiver.
12. **Battery Door:** Remove door to install 4x AA batteries.

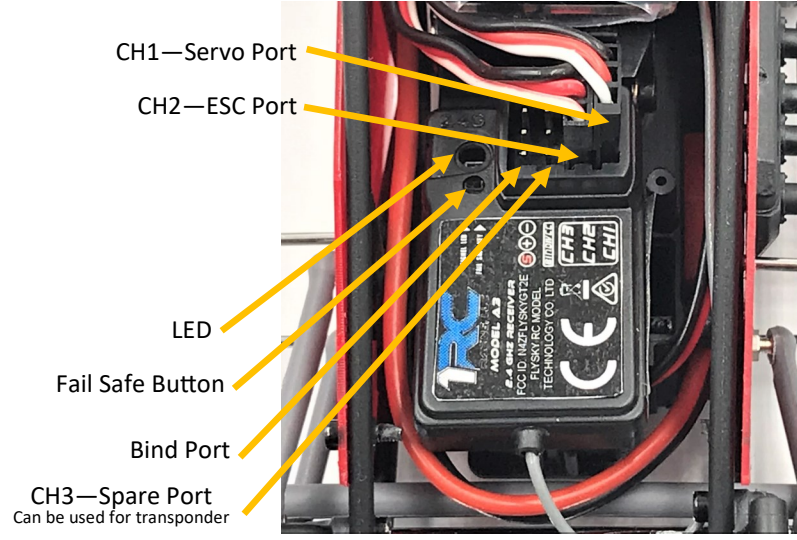


## Safety Precautions and Warnings

- This radio is not a toy and should not be operated by anybody under 14 years of age. Adult supervision is required.
- Always ensure radio is on before turning on car or injury or damage can occur.
- Always perform system check to ensure throttle and steering is working correct before operating.
- Do not mix old and new batteries. It is recommended to use only alkaline batteries.
- Do not operate radio in rain or wet environment.
- Ensure Failsafe function is set before operating vehicle.
- Do no hold transmitter by antenna while operating, this will decrease performance.

## Binding Transmitter to Model

1. Plug in bind plug to Bind Port on receiver.
2. Turn on cars on/off switch (located on bottom of the car) and LED on receiver will start to flash rapidly.
3. On transmitter, hold down Bind Button (item 11 in the image on previous page) and turn on Power Switch (item 3 in image on previous page). Continue holding Bind Button until LED on receiver stops flashing and goes solid and then starts to flash slowly.
4. Then turn off car and transmitter and remove bind plug from receiver.
5. Turn transmitter on then turn car switch back on and check steering and throttle operation to ensure controls are working correctly.
6. If controls are not working correctly, turn of the cars switch and turn on transmitter and repeat steps 1-6.



## Failsafe Setting

The failsafe will help prevent an out of control situation if the transmitter signal is lost.

### How to Set the Failsafe:

1. Turn on transmitter.
2. Turn on the receiver and ensure the LED on the receiver is on and solid.
3. Leave the throttle on the transmitter in the neutral position.
4. Using the Failsafe Setting Stick on the Bind Plug wire, press the Fail Safe Button on the receiver. The LED will blink and then stop after 3 seconds, that will indicate the failsafe is set.

### Test the Failsafe:

1. Turn on transmitter.
2. Turn on the receiver.
3. Turn off the transmitter and ensure the cars rear wheels do not roll. If rear wheels roll repeat steps 1-4 in How to Set the Failsafe.

# 1RC7014 ESC- Full Instruction Manual

(Covers Part 1RC7014)

Congratulations, and thank you for your purchasing this product. Improper usage and unauthorized modifications to our product is extremely dangerous and may damage the product and related devices. Please take your time and read the following instructions carefully before you start using your ESC unit. We have the right to modify our product design, appearance, features and usage requirements without notification.

### 01- WARNINGS

- ⚠ - Ensure all wires and connections are well insulated before connecting the ESC to related devices, as short circuit will damage your ESC.
- ⚠ - Ensure all devices are well connected to prevent poor connection that may cause your vehicle to lose control or other unpredictable issues such as damage to the device.
- ⚠ - Read through the manuals of all power devices and chassis and ensure the power configuration is rational before using this unit.
- ⚠ - Stop using the ESC when its temperature exceeds 90°C(194°F), otherwise your ESC will be damaged and may also damage ESC/Rx unit. We always recommend setting the "Over-Heat Warning" to "Enabled" to ensure damage does not occur to your ESC/Rx unit.
- ⚠ - Always disconnect the batteries after use, as the ESC will continue to consume current if it's connected to batteries (even if the ESC is turned off). Long-time connection will cause batteries to completely discharge and result in damage to batteries and/or ESC. This WILL NOT be covered under warranty.

### 02- FEATURES

- ESC is compatible with sensorless brushless motors.
- Proportional brake with 4 levels of maximum brake force and 4 levels of initial brake force and 5 levels drag brake force.
- 3 levels of acceleration/rpm from low to high.
- Thermal Protection, Overvoltage Protection, and Fail Safe (throttle signal loss protection).
- Single-button ESC programming and factory reset.

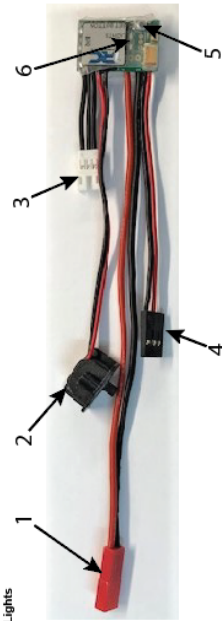
### 03- SPECIFICATIONS

Model #	1RC7014	Lipo/NiMH Battery	2S Lipo / 4-9 Cells NiMH
Constant/Burst	10A/RDA	BEC Output	5A1A (Switch Mode BEC)
Motor Type	Sensorless Brushless Motor	Size/Weight	~20mm x 19mm x 9mm / ~10g
Application	1/18th Scale 1RC Cars	Programming Port	Set Button
Motor Limit	2 Cell Lipo - KV<10000 (Max. 130 Size Motor)		

### 04- CONNECTIONS AND COMPONENTS

This is an extremely powerful brushless motor system. For your safety and the safety of those around you, we strongly recommend keeping wheels in the air when you turn on the ESC Unit.

1. Battery Wiring  
Proper polarity is essential here! Make absolutely sure positive (+) of ESC(RED WIRE) connects to positive (+) of Battery, and negative (-) of ESC(BLACK WIRE) connects to negative (-) of Battery when you plug in your battery! If reverse polarity is applied to your ESC from the battery, it will damage your ESC. This will not be covered under warranty.
2. ESC Switch
3. Motor  
There is no polarity on the A/B/C wires between ESC and Motor, so do not worry about how you connect them initially. You may find it necessary to swap two wires if the motor runs in reverse.
4. Receiver Wiring  
This wire will plug into the receiver. Polarity polarity is essential when plugging this into the receiver. The white wire is the signal wire so ensure it is plugged in correctly to your receiver.
5. Set Button
6. ESC Lights



### 05- ESC SETUP AND ADVANCED TUNING FEATURES

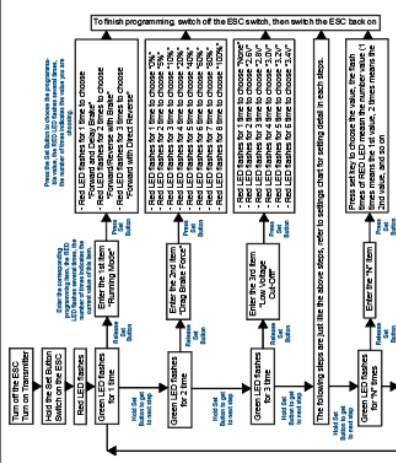
- #### ESC SET-UP
1. Ensure battery is installed and Ensure battery is installed and connected to model and secured in battery tray area. Ensure battery is connected correctly or damage can occur to ESC unit.
  2. Remove hood or bodywork on model so you have full access to ESC unit.
  3. Ensure car is elevated off ground so tires are not touching ground, this will prevent any damage if car starts to move during binding process.
  4. On transmitter, make sure the throttle trim knob is in the middle of its adjustment range.
  5. Hold ESC Set Button down while you turn on the model using the ESC switch.
  6. When ESC Red Light starts to flash, release the Set Button, ESC is now in setup mode.
  7. With trigger on radio in neutral position, press Set Button one (1) time, ESC Red Light will stop flashing and green light will flash one time, this confirms the neutral position.
  8. Now pull trigger to full throttle on transmitter and press Set Button again, ESC Green Light will flash two (2) times to confirm full throttle setting, hold trigger to full throttle until light stops flashing.
  9. Now push trigger to full brake on transmitter and press Set Button again, ESC Green Light will flash three (3) times to confirm full throttle setting, hold trigger to full throttle until light stops flashing.
  10. Return ESC on transmitter to neutral and ESC Green Light will blink two (2) times. Your ESC is not set.
  11. Ensure ESC is reaching full throttle, pull trigger to full throttle and ESC Green Light should go solid if full throttle is reached.
  12. If throttle do not work correct, go back to step 1 and repeat steps 1-12.
  13. If throttle do not work correct, go back to step 1 and repeat steps 1-12.

#### ADVANCED TUNING FEATURES

Program the ESC with the Set Button on the ESC. See below for setting options.

Basic Setting	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8	Option 9
1. Running Mode	Full	Full	Full	Full	Full	Full	Full	Full	Full
2. Drag Brake Force	0% **	5%	10%	20%	40%	60%	80%	100%	100%
3. Low Voltage Cut-Off	Default **	2.800V	2.800V	2.800V	2.800V	2.800V	2.800V	2.800V	2.800V
4. Start Mode (PUSH)	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9
5. Max Brake Force	25%	50% **	75%	100%	100%	100%	100%	100%	100%
6. Max Reverse Force	25%	50% **	75%	100%	100%	100%	100%	100%	100%
7. Initial Brake Force	0% **	5%	10%	20%	40%	60%	80%	100%	100%
8. Neutral Range	0%	3%	5%	10%	15.00% **	18.75%	22.50%	26.25%	30.00%
9. Timing	0.00°	3.75°	7.50°	11.25°	15.00% **	18.75°	22.50°	26.25°	30.00°
10. Over-Heat Warning	Enable **	Disable	Disable	Disable	Disable	Disable	Disable	Disable	Disable

\*\* This indicates factory setting in ESC.



#### FACTORY RESET

Restore the default values with the SET Button. Press and hold the SET Button for over 3 seconds anytime when the throttle trigger is at the neutral position (except during the ESC calibration and programming) can factory reset your ESC. RED GREEN LED's flash simultaneously indicating you have successfully restored all the default values within your ESC. Once you power the ESC off, and then back on, your settings will be back in the default mode.

### 06- LED LIGHT FUNCTIONS

1. During the Start-up Process
  - The RED LED keeps flashing rapidly indicating the ESC doesn't detect correct throttle signal/neutual value stored in ESC that match radio settings. Rotate Throttle Trim knob on radio until light stops flashing.
2. In Operation
  - RED & GREEN LEDs: flash out when the throttle trigger is in throttle pull zone.
  - The RED LED turns on solid when your vehicle starts to run forward. The GREEN LED will also come on when pulling the throttle trigger to the full (100%) throttle.
  - The RED LED turns on solid when you brake the vehicle.
  - The RED LED turns on solid when you reverse your vehicle.
3. When Some Protection is Activated
  - The RED LED flashes a short, single flashes that repeats 3 times indicating the low voltage cutoff protection is activated.
  - The GREEN LED flashes a short, single flashes that repeats 3 times indicating the ESC thermal/overheat protection is activated.

### 07- PROTECTION FUNCTIONS

1. Cutoff Voltage  
The ESC monitors the battery voltage all the time, it will immediately reduce the power to 50% and cut off the output 8 seconds later when the voltage goes below the cutoff threshold. The RED LED will flash (3 times) to indicate the low-voltage cutoff protection is activated. Please replace the battery or charge the battery immediately.
2. ESC Thermal Protection  
The ESC will automatically cut off the output with the RED LED flashes (3 times) when the temperature gets up to the value you've previously preset and activates the ESC Thermal Protection. The output will not resume until the temperature goes down.
3. Signal loss protection  
The ESC will automatically cut off the output with the RED LED flashes fast when the throttle signal loss 0.1 second later.