

# GT-11 2.4GHz 2IN1 ELECTRONIC SYSTEM

## USER'S GUIDE V1.0

### DESCRIPTION

GT-11 is a 2 in 1 multifunction 2.4GHz electronic system build for RC cars. It has built in ESC and BEC inside the receiver all these features just in one small piece.

### SPECIFICATIONS

- Transmitter Model: GT-11
- Voltage Range: 4.4V-8.4V
- Transmitter Frequency: 2.4G
- FHSS Output Power: <100Mw
- Remote control distance: >100m
- Power Supply: 4 Cell AA Batteries
- Configuration mode: Knob
- Weight: 205g (Without batteries)
  
- Receiver Model: FS-2REE
- Fwd.Cont. / Peak current 60A/330A
- Rev.Cont. / Peak current 30A/165A
- Voltage Range: 2-3S Lipo or 6-9S NiMH
- Cars Application: 1/10 Touring Car, Buggy, Short Course Truck, Monster, Truggy, Rock Crawler and Tank
- Motor Limit:
  - 2S Lipo or 6S NiMH: 540 or 550 size motor:  $\geq 12T$  or RPM  $\leq$  [30000 @7.2V](#)
  - 3S Lipo or 9S NiMH: 540 or 550 size motor:  $\geq 18T$  or RPM  $\leq$  [20000 @7.2V](#)
- Resistance: Fwd 0.001  $\Omega$  , Rev 0.002  $\Omega$
- Receiver frequency: 2.4G
- BEC Output:3A/5V (Switch Mode)
- Size / Weight: 37\*30\*17mm / 40g

### FEATURES DESCRIPTIONS

- 2 channel transmitters, set TRIM, DR and REV to TH and ST.
- Combine receiver and ESC, high integration, install conveniently.
- Water-proof and dust-proof, suitable for all-weather condition race.
- Two running modes: Fwd/Rev/Br and Fwd/Rev, fits for various vehicles.
- Great built-in BEC output capacity.
- Easy to set the ESC parameters with jumpers.
- Low voltage cut-off protection for battery / Throttle signal loss protection.

### WARNING

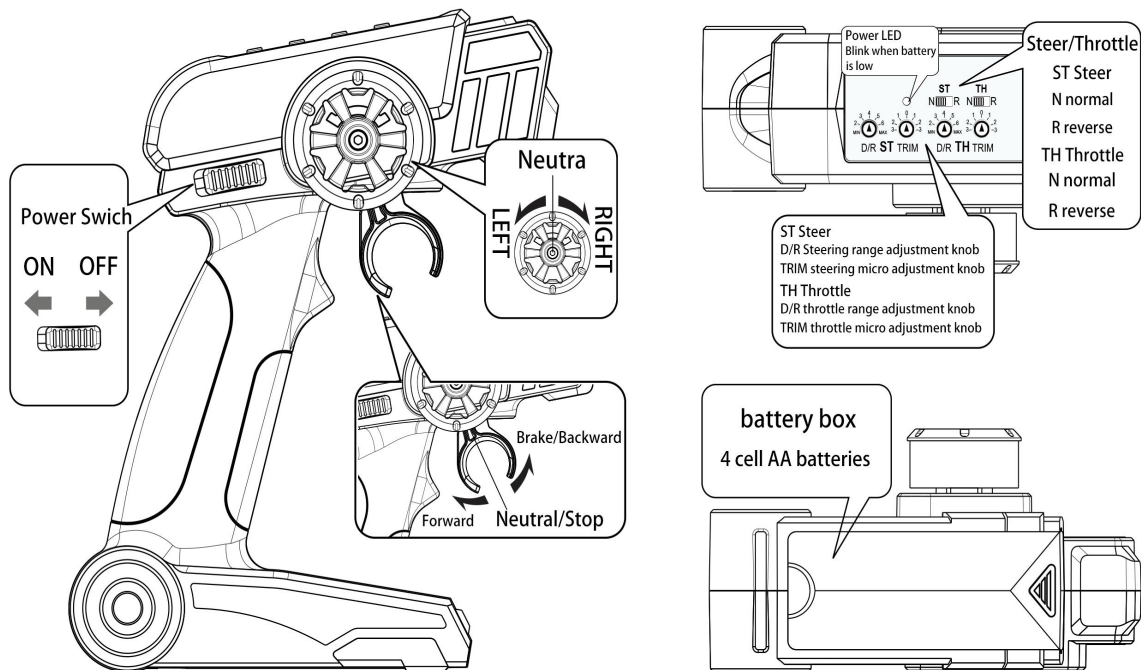
FS-2REE is a highly-integrated multifunction ESC, it has built in brush ESC,

BEC and 2 channel receiver functions inside the receiver. It must work with right motor in order to get FS-2REE work properly. If other types motor need to use with FS-2REE, we highly recommend follow the operating voltage, electricity current and power output from the user's guide. Otherwise it will break the FS-2REE.

BEC electricity current up to 3A and 5V output voltage. If any other connected electronic equipment with exceed the max electricity current usage, the BEC will be damaged.

Exceed the max electricity current of the brush ESC is prohibited, it will damage the ESC.

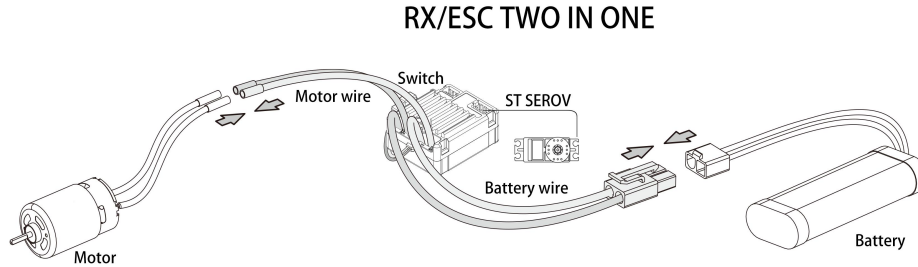
## Transmitter



**WARNING: ONLY ALKALINE BATTERIES CAN BE USED. MAKE SURE MATCH THE POLARITY (+/-) AS SHOWN ON THE BATTERIES. INCORRECT INSTALLATION OF BATTERIES WILL HARM THE RADIO SYSTEM.**

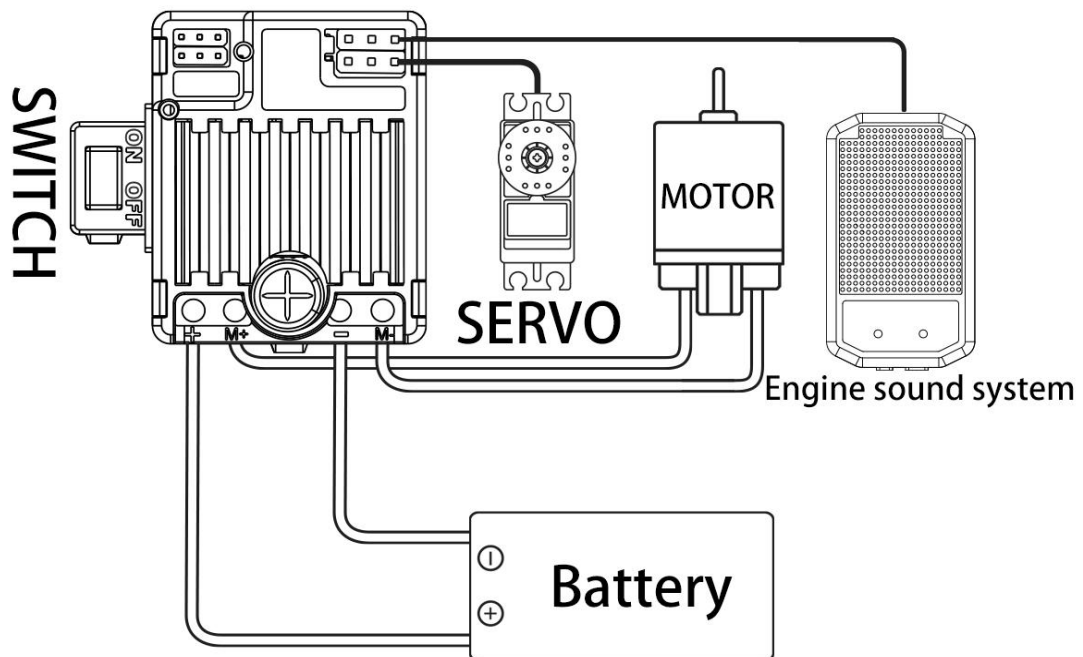
# Receiver

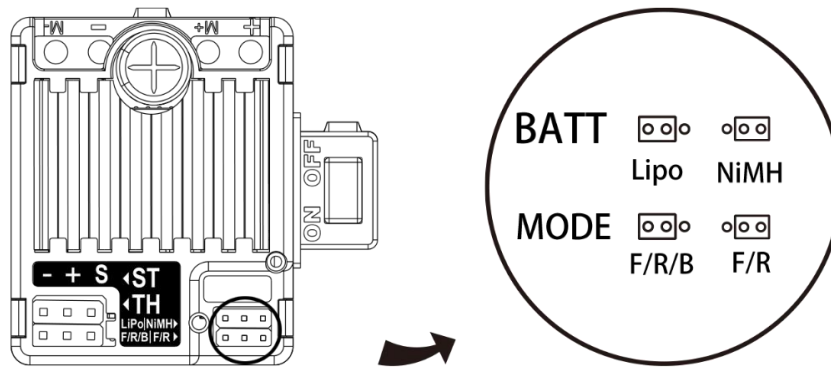
## Connections



**WARNING: MAKE SURE MATCH THE POLARITY (+/-) AS SHOWN ON THE BATTERIES. INCORRECT INSTALLATION OF BATTERIES WILL HARM THE FS-2REE !!!**

## 2in1 interface





- ON/OFF: Battery switch.
- +/-: Battery connector, range 6-12.6V.
- M+/M-: Motor connector. Max current 60A.
- ST: Steering signal output, it provides steering engine power supply and PWM signal.
- TH: Throttle signal output and bind set, it provides power supply and throttle PWM signal.
- LiPo | NiMH: Battery type selection between LiPo and NiMH.
- Fwd/Rr/Bev | Fwd/Rev: Running mode selection between Fwd/Rr/Bev and Fwd/Rev.

## Set the Parameters

Using the jumper cap to set running mode and battery type.

Battery Type: LiPo/NiMH, the “LiPo” is the default option.

Running Mode: Fwd/Rev/Br and Fwd/Rev. The “Fwd/Rev/Br” is the default option.

Fwd=Forward, Br=Brake, Rev=Reverse

The “Fwd / Br / Rev” mode indicates the vehicle can go forward, backward and brake. This mode uses “Double-click” method to make the vehicle reverse. When moving the throttle stick from the neutral zone to backward zone for the 1st time, the ESC begins to brake the motor and the motor slows down and stop, so the backward action is NOT performed immediately. When the throttle stick is moved to the backward zone again, the backward action will happen.

The “Fwd / Rev” mode uses “Single-click” method to make the vehicle reverse, when moving the throttle stick from neutral zone to backward zone, the vehicle reverses immediately, so this mode is usually used for rock crawler.

## Transmitter and Receiver Pairing

Transmitter has been already paired with receiver and ready to use. If user is

going to replace for the receiver, follow the steps below for the pairing:

Turn on transmitter. Connect the “S” and “-” of TH channel output. Then turn on the receiver, the LED light on the receiver should be fast blink, within 5 seconds LED light should stay on, pairing complete.

## **Receiver LED light State**

1. LED light stays on: transmitter and receiver has been paired, work properly.
2. LED light off: receiver does not pick a signal from transmitter: 1. transmitter is not on; 2. pairing has not been done yet.
3. LED light blink once a second: battery voltage is low.
4. LED light keeps fast blink: under pairing mode.

## **Beep Meaning**

- 1 Short beep: The battery is NiMH.
- 2 short beeps: The battery is 2S Lipo.
- 3 short beeps: The battery is 3S Lipo.
- 1 long beep: the ESC is ready to run.

## **Fail Safe**

Fail safe feature build in receiver. When receiver stop communication with transmitter, ESC will stop outputting, then steering channel output will maintain the latest position.

## **Low Voltage Warning**

Low voltage warning feature build in receiver.

If the voltage of battery is lower than 3.3V per series(LiPo) or 5.3V total(NiMH), the ESC will enter the protection mode, so the motor max speed will be limited to 50%.

If the voltage of battery is lower than 3 V per series(LiPo) or 5V total(NiMH), the car will stop.

## **Installation and Use Guide**

The remote control is a 2.4G wireless products, a proper installation and usage will exert influence on performance of the product.

Due to the poor penetration of 2.4G signals, it is necessary to ensure that transmitters and receivers are used without occlusions in order to ensure reliable communication;

A build-in 2.4G signal receiving module inside the receiver, so keep it away as far as possible from other electronic products, motors, etc., to reduce interference; A build-in antenna is inside the transmitter of the remote controller. The antenna is vertically installed. So keep the remote controller in a vertical position when using; The remote controller receiver has an antenna, ensure that the antenna keep vertical position to the ground during the installation, and keep any metal materials away near the antenna.

As the radio frequency products are affected by the external environment, the performance differences vary greatly. The main points of installation and use are to ensure that the RF signals of the remote controller can be transmitted effectively and reliably.

Proper installation and use are essential to ensure product performance.

**Summary: FS-2EE radio system is a high performance and multiple functions for RC cars. The built-in receiver and ESC make FS-2EE become a high degree of integration with complex functions product, please be sure to carefully read the user manual in using, avoid wiring error caused damage to the product.**

## Transmitter troubleshooting

Troubles	Possible Causes	Solutions
After power on, no LED lights up	Batteries are installed abnormal; Battery low	Reinstall the batteries; change the batteries

## ESC troubleshooting

Troubles	Possible Causes	Solutions
After power on, no LED lights up	No power is drawn to the ESC; The switch is broken	Check the connections between battery and ESC; Re-solder the connector if needed; Change the ESC switch
Led off	The transmitter is closed; The transmitter is not paired	Open the transmitter; Re-pair the transmitter
Led blinks once a second	Battery voltage is low.	Change battery.
The car runs backwards when accelerating forward on the transmitter	The direction setting of the throttle channel is incorrect in the transmitter or the motor wires are wrongly connected	Reverse the direction of the throttle channel; Swap the wires between the ESC and motor.
The vehicle can't reach to the full speed.	Incorrect TH D/R setting; Battery protect due to battery low	Increase TH D/R; Change battery
The vehicle can't motion, but the	Battery low cut-off protect; The connection between ESC	Change battery; Check the connection between the motor

LED indicators work normally	and motor is interrupted; The motor is damaged	and ESC; Change battery.
The motor accelerates rapidly at the startup moment, but has lockout or cogging problem.	The discharge capacity of the battery is not strong enough; The motor rotates too fast, and the gear ratio is too aggressive; Something wrong with the driveline of the vehicle.	Change a battery with better discharge capability; Use a motor with lower RPM, or smaller pinion to soften the gear ratio; Check the driveline of the vehicle

## **FCC STATEMENT :**

This device 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 operation.

**Warning:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 or more 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.

This device comply with FCC SAR requirements. The highest reported 1g-SAR for body is 0.339 W / Kg