ROCKSTA

1/24 4WS mini Rock Crawler

INSTRUCTION MANUAL

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1. Introduction

Thank you for choosing our 2.4GHz digital remote control system. If you have not used this type of product before make sure that you read this manual carefully. If any problems arise while you are using the product, refer back to this manual. Keep this manual in a safe place incase you need it in future.

2. Services

If you have any problems while using the product, refer to the manual. If you still have problems contact our local dealer for information.

3. Special symbols

Pay close attention to the following symbols and their meanings. Failure to follow these warnings could cause damage, injury or death.

Danger: Not following these instructions may lead to serious injuries or death.

Warning: Not following these instructions may lead to major injuries.

Attention: Not following these instructions may lead to minor injuries.

Prohibited **Mandatory**

4.Safety guide

Do not use the product at night or in bad weather like rain or thunderstorm. It can cause erratic operation or loss of control.

Before use test each servo to make sure it moves in the correct direction. If not reverse the channels as needed.

Always follow the correct shutdown sequence. First disconnect the receiver's power then power off the transmitter. Turning off the transmitter first may lead to loss of control.

Other 2.4GHz systems may interfere with another's operation.

Make sure the failsafe function has been set before use.

Do not operate outside on rainy days, drive through water or when visibility is limited. Exposure to moisture may lead to damage, erratic operation or loss of control.

Interference may cause loss of control. To ensure the safety of you and others, do not operate in the following places:
Near any site where other radio control activity may occur
Near power lines or communication broadcasting antennas
Near people or roads
On any pond when passenger boats are present

Do not use this product when you are tired, uncomfortable, or under the influence of alcohol or drugs. Doing so may cause serious injury to yourself or others.

Do not touch any part of the model that may generate heat during operation, or immediately after use. The engine, motor or speed control, may be very hot and can cause serious burns.

Always test the systems operation before use.
Problems with the RC system or improper installation could cause damage or loss of control. To test have someone hold the model, or secure it so that the wheels do not touch the ground. Walk away from the model and check to see if the servos work correctly at various distances. If there are any problems do not operate the model.

Power On:
Before turning the system on, check to make sure that the transmitters throttle trigger is in its neutral position. Before making any adjustments to the model make sure that the model is powered off.

5. 2.4GHz System/Characteristic

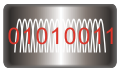
5.01 AFHDS 2A

The AFHDS 2A (Automatic Frequency Hopping Digital System Second Generation) is specially developed for all radio control models. Offering superior protection against interference, while maintaining lower power consumption and high, reliable receiver sensitivity. AFHDS technology is considered to be one of the leaders in the RC market today.

RF specifications:
RF ranger：2405.5MHz~2475.0MHz

Band sum: 140
RF power: less than 20dBm
2.4G system: AFHDS 2A
Code type: GFSK
Antenna length: 26mm
RX sensitivity: -98dBm

5.02 System Characteristic



This systems bandwidth ranges from 2.4055GHz to 2.475GHz. This band is divided in 140 channels. Each transmitter hops between 16 channels (32 for Japanese and Korean versions) in order to reduce interference from other transmitters.

This system uses a high gain multi directional antenna, with high receiver sensitivity and anti-jamming technology.

Each transmitter and receiver has it's own unique ID. Once the transmitter and receiver have been paired, they will only communicate with each other, preventing other systems accidentally connecting to or interfering with the systems operation.

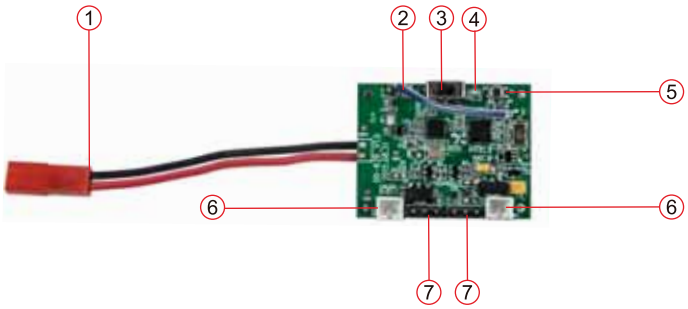
The system is built using highly sensitive low power consumption components, maintaining high receiver sensitivity, while consuming as little as one tenth the power of a standard FM system, dramatically extending battery life.

AFHDS 2A has multi-channel error correction technology, improving stability and reducing errors at both short and long range.

6. Transmitter Overview

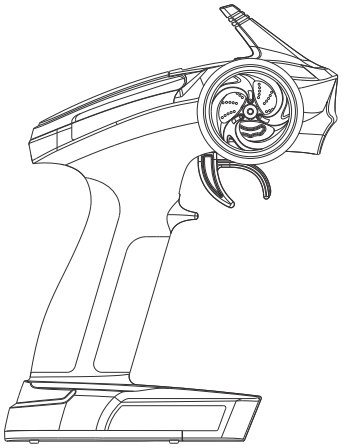
1. BIND KEY/MODE SELECT KEY
2. ST REV
3. CRAWLER MODE LED
4. ST TRIM
5. POWER LED
6. TH TRIM
7. POWER
8. BATTERY COMPARTMENT
9. POWER CHECK
10. ST D/R
11. THROTTLE TRIGGER
12. TH REV
13. STEERING WHEEL

7. Receiver Overview



1. BATTERY CABLE
2. ANTENNA
3. POWER SWITCH
4. INDICATOR
5. BIND KEY
6. MOTOR CONNECTOR
7. STEERING SERVO CONNECTOR

8. Transmitter specifications



Channels: 2
Model type: car/boat
RF ranger：2405.5MHz~2475.0MHz

Band:140
RF power: less than20 dBm
2.4G system: AFHDS2A
Code type: GFSK
Sensitivity: 1024
Low voltage warning: less than 4.2V
DSC port: 3.5mm; output: PPM
ST range:70 L:35 R:35
TH range:45 F:35 B:15
Charger port: no
ANT length: 26mm
Weight: 239g
Power: 6V DC 1.5AA*4
Display mode: LED indicator
Size: 210*95*160mm
Color: blacK

9. Receiver specifications

Channels: 2
Model type: car
RF ranger：2405.5MHz~2475.0MHz
Bandwidth: 500KHz
Band sum: 140
RF.receiver sensitivity: -98dBm
2.4G system: AFHDS 2A
Code type: GFSK
Sensitivity: 1024
Power: 6.0-8.4V DC (protected below 6.0V)
ANT length: 40mm
Size: 40*31mm
Color: black
Certificate: CE FCC RTTE RCM

10. 2.4GHz Operation notes

10.01 Matching(code)/Binding

The transmitter and receiver have been pre-bound before delivery. If you are using another transmitter or receiver, follow the steps below to bind the transmitter and receiver:

Steps:

1. Before powering on the transmitter make sure that the battery is installed correctly.
2. Press and hold the BIND key on the receiver and switch the power button to ON position.
3. The LED on receiver should flash, indicating receiver has entered bind status.
4. Press and hold the binding button on transmitter, and then switch on the transmitter.
5. Observe the LED light on the receiver. If LED stops flashing, and stays lit permanently, the binding procedure is completed. (This process takes approximately 5 seconds.)
6. Release the binding button on the transmitter.
7. Install the servos to test.
8. If the system does not work properly, repeat the procedure (The above binding instruction is only suitable for our 2.4GHz products.)

10.02 Power on

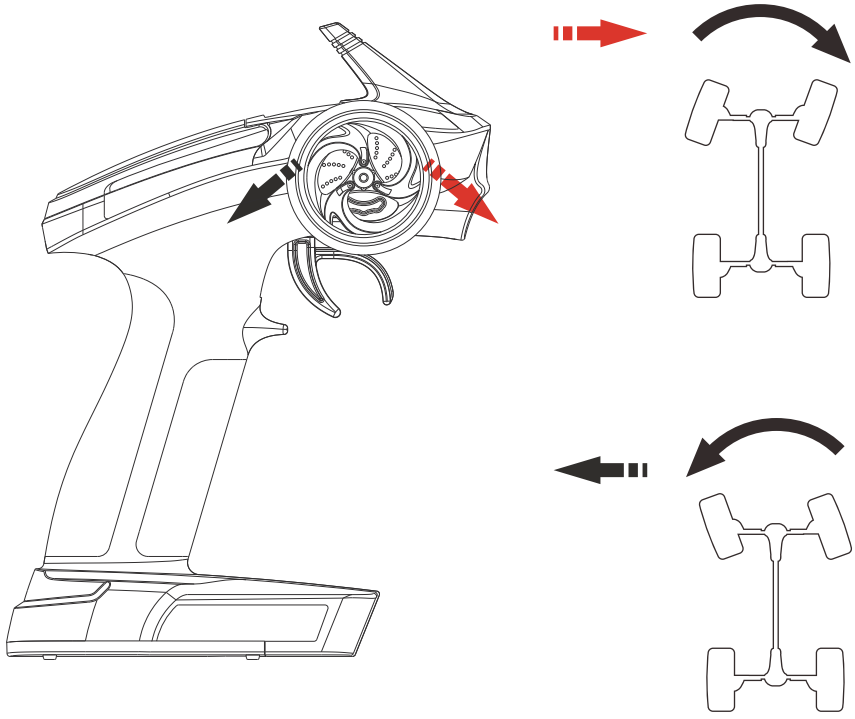
A. Connect servos and motors.
B. Toggle the transmitter's power switch to the on position.
C. Connect the receiver's battery.

10.03 Shut down

A. Disconnect the receiver's battery.
B. Toggle the transmitter's power switch to the off position.

11. Transmitter function notes

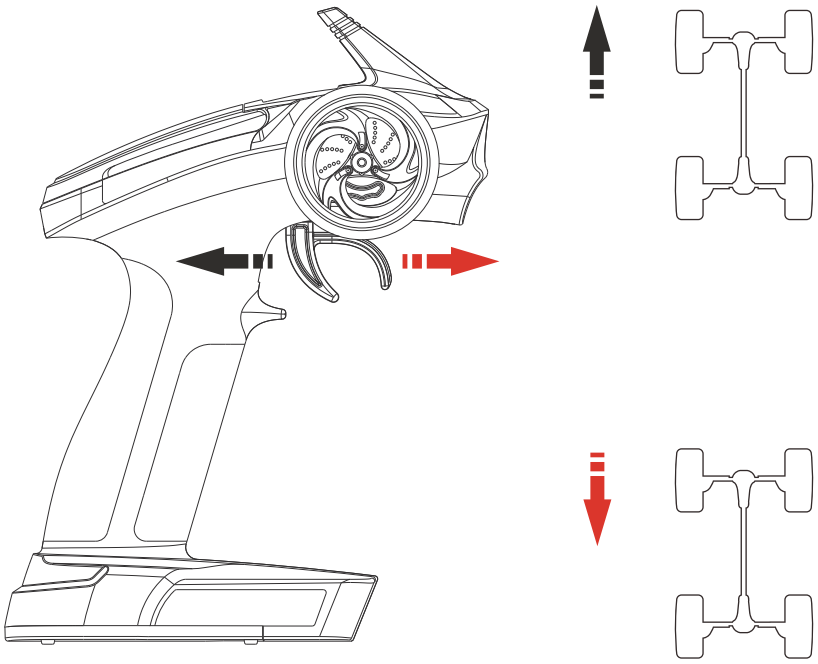
11.01 Steering control



Function Introduction:

This function controls the model's steering. When turning the wheel right the front wheels will turn right and vice versa.
Dual Rate:
To adjust the D/R use the DR adjustment buttons.

11.02 Throttle control



Function Introduction:
This function controls the throttle. Pulling the trigger will increase the throttle, pushing the trigger away will apply the breaks.

Note: If a different ESC is used or the TH REV switch is adjusted, this function might be different from described above.

To control it by pushing and pulling back the throttle trigger after power on.

12. Failsafe Function Instruction

Failsafe aims to prevent out-of-control driving of RC car or RC boat. If the Receiver is not able to receive any signal from the transmitter for over 1 second, the system starts the fail safe function, the status indicator starts to flash slowly, and the throttle and steering servos go back to the middle position automatically. When the voltage falls below 6V the motor will become unresponsive.

13. Crawler Mode

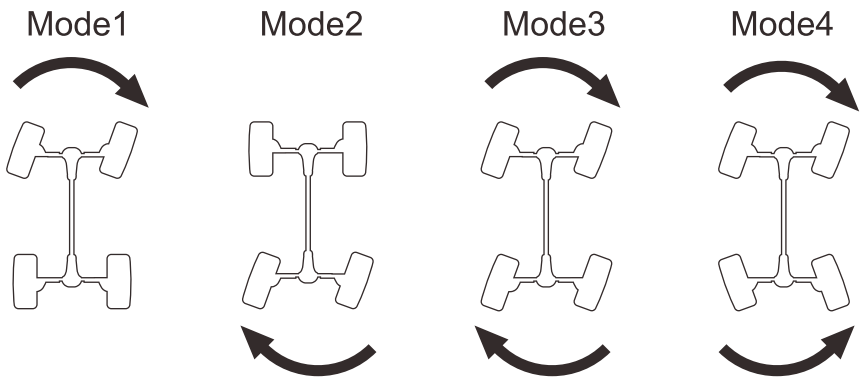
1.Function

Crawled mode changes which wheels are involved in steering. There are four LEDs on the transmitter indicating the crawler modes, which are, from left to right.

1) Front wheel steering;
2) Rear wheel steering;
3) Front and rear steering at the same time, when turning a direction all the wheels will turn the same direction;
4) The front wheels and back wheels are both involved in the turning process. However, the rear wheels will always turn the opposite direction to the front wheels.

2.Setup

To switch crawler mode, press the bind button on the transmitter. Each press will switch from one mode to the next.



14. Simulation

Function Details:

The transmitter can be used in conjunction with software simulators.

Setup:

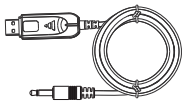
1. First make sure the provided RC simulator (VRC) is installed on your computer . To install the software , insert the disk into your computer and follow the instructions.
2. Connect the transmitter to the computer via the supplied USB adaptor cable.
3. Open and use the RC simulator.

Note:

This product has only been tested with the VRC Simulator which only comes with one usable track . If you wish to acquire more tracks visit www.vcrworld.com for more information.

TO COMPUTER USB PORT
MODEL NO:FS-SM100

15. Packaging content

NO:	Model	Sum	Remarks
1	2 channel 2.4G transmitter(FS-DD-GT2G)	1	/
2	2 channel 2.4G receiver(FS-DD-R2B)	1	/
3	Manual	1	Optional
4	FS-SM100 	1	Optional

16. FCC Statement

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 televison 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.

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example use only shielded interface cables when connecting to computer or peripheral devices).

This equipment 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.

Caution!

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment.

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