


**HITEC**

# HITEC 2.4GHz DSSS System SPECTRA 2.4DS & ATOM 3 Instruction Manual ver 1.0

• Risk of explosion if battery is replaced by an incorrect type.  
Dispose of used battery according to the instructions.

European CE notice to users and product statements

This product is CE marked according to the provisions of the R&TTE Directive(99/5/EC).  
Hereby, HITEC RCD Inc, declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.  
For further information, please contact <http://www.hitecrd.com>



FCC notice to users and product statements

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.

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

**CE11770**

2.403GHz - 2.476GHz Band for use in :  
AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
FI, GB, GR, HU, IE, IT, LT, LU, LV, MT, NL,  
PL, PT, RO, SE, SI, SK, FR  
2.454GHz - 2.476GHz for use in : FR

Made in the Philippines

## Atom3 Instruction

Thank you for your purchase of the Hitec Direct Sequence Spread Spectrum or DSSS, 2.4GHz surface module and receiver system. This manual contains the complete directions on how to use the Atom3 3 channel surface receiver. We encourage you to review the entire manual before using these products.

## Service & Support

### Hitec Customer Service

Help is available from the Hitec office through phone support and e-mail inquiries. Our US office is generally open Monday thru Friday, 8:00AM to 4:30PM PST. These hours and days may vary by season. Every attempt is made to answer every incoming service call. Should you get voice mail, leave your name and number and a staff member will return your call..

### Hitec Website

Make plans to visit the Hitec website, [www.hitecrd.com](http://www.hitecrd.com), on a regular basis. Not only is it full of specs and other information about the entire Hitec product line, our FAQ pages will eventually hold valuable information and program update about the Spectra 2.4DS module and Atom 3 receiver.

### The On-Line Community

One of the benefits of the extensive R/C online community is the vast wealth of archived knowledge available.

Hitec sponsors forums on most of the popular R/C web sites where a Hitec staff member or representative tries to answer all manner of product related questions. Bringing together strangers with common interests is proving to be one of the greatest gifts of the internet. If past history is any guide to the future, we are certain forums will be started about the Hitec 2.4 system and several are certain to stand out as valuable archives of information

### Warranty and Non-Warranty Service

All Hitec products carry a two year from date of purchase warranty against manufacturing defects. Our trained and professional service representative will determine if the item will be repaired or replaced. To provide all the necessary information we need to administrate your repair, visit our website at [www.hitecrd.com](http://www.hitecrd.com) and download the repair form, fill it out and send in your item for repair.



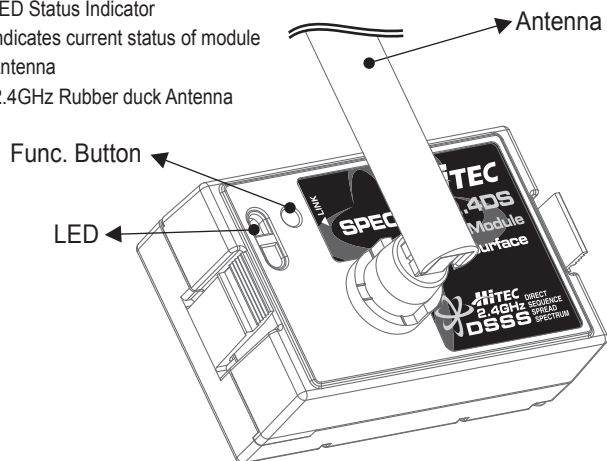
## Warning!

1. The receiver antenna should not be placed near the engine, metal parts, or high current batteries.
2. The receiver Antenna should not get damaged.  
To prevent antenna damage, do not install the antenna near the sharp edge or bend it more than 90 degree in angle.
3. Use a Velcro or think double sided tape to install to absolve the shock during the operation.
4. When LED indicator irregularly blinks, indicates unstable frequency environment, stop operating and look for the possible cause of problems.

## SPECTRA 2.4DS: 2.4GHz DSSS Module Spec & Features

SPECTRA 2.4DS	Frequency	Output	Stock No.
US Bandwidth	2.403GHz~2.476GHz	18dBm	28724
Japan Bandwidth	2.403GHz~2.476GHz	10dBm	xxxxx
Europe Bandwidth	2.403GHz~2.476GHz	10dBm	xxxxx
France Bandwidth	2.454GHz~2.476GHz	10dBm	xxxxx

1. Function/Link Button  
Button for Link (ID-Setting)
2. LED Status Indicator  
Indicates current status of module
3. Antenna  
2.4GHz Rubber duck Antenna



## Atom 3: 3 Channel Surface Receiver Specifications & Features

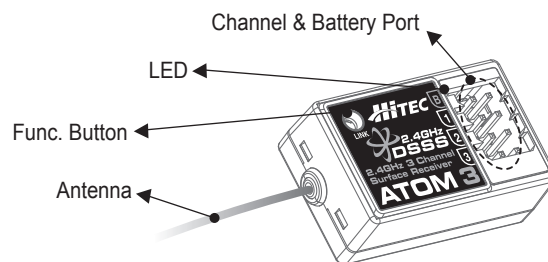
Model Name	Size	Weight	Stock Number
ATOM 3	1.18 x 0.79 x 0.47in (30 x 20 x 12mm)	0.23oz(6.5g)	29324

Operating Voltage: Rechargeable four to six cell NiMH, NiCd, or LiPo batteries (4.8~7.4V). From the receiver battery power or speed control (ESC) power. Select the suitable voltage depends on the servos capability.

Current Consumption: 40mA



**Note** Servo manufacturer will specify maximum voltage of their servo model. Please refer each servo's specification.



1. Function Button  
- Used for linking the receiver to a module and entering the FAIL-SAFE or Hold feature.
2. RED LED Status Indicator  
- Indicates the set-up process codes and current status of Atom 3.  
- Frequency environment indication feature: when the reception is bad the red LED irregularly blinks.
3. Channel Output and Battery Input Ports  
- The ports for battery, servos and other accessories

### Compatibility

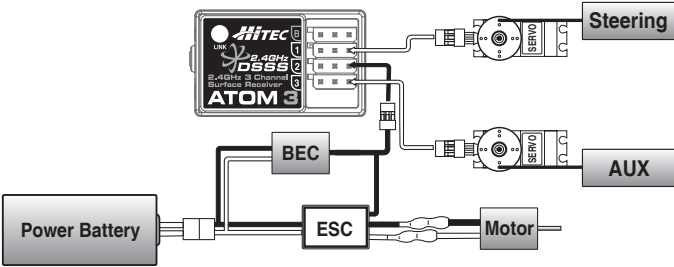
- The Atom3 receiver is compatible with transmitters using the Hitec DSSS 2.4 system Spectra 2.4DS module or future dedicated built-in DSSS 2.4 Hitec transmitters.

**FAIL-SAFE / HOLD Option**

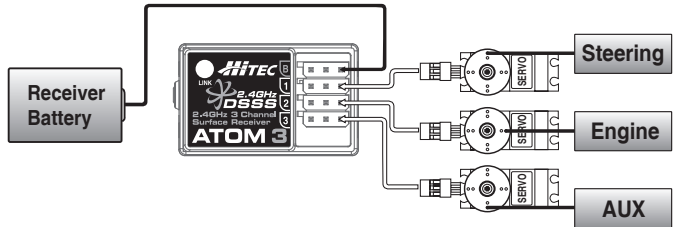
Servos and other accessories may be set with a FAIL-SAFE point or choose HOLD mode if power to the receiver is lost.

**Receiver Connection Diagrams**

Electric powered car with Electronic Speed Control  
Use this method on electric car using ESC's providing power to the receiver and servo functions



Glow, gas or electric powered aircraft using a separate receiver battery supply.  
Follow this connection diagram when using a regulated Li-Po, or 4.8 to 6V. Receiver battery,



**Link (ID-Setting)**

It is already lined between Spectra 2.4DS and Atom 3, if purchased as a set  
\* Only for the module/receiver combo set or radio combo sets.

If purchased separate Atom 3, the Link (ID-Setting) process is required.

How to Link additional receivers:  
Please refer to the connection diagram and connect all the necessary items before the process.

**Note** To avoid any interference, the link process should be done within 3 feet (1 meter) in distance.

**How to Link Spectra 2.4DS and Atom 3 receivers**

How to Link Spectra 2.4DS and Atom 3 receivers:

**Atom 3 receiver:**

1. Press the Function Button and turn on the power.
2. Release the button and confirm the red LED is blinking. The receiver is waiting for incoming signal.
3. Once the receiver's link (ID-Setting) process done. The red LED will stop blinking and become steady on status.

**Spectra 2.4DS:**

1. Press the Function Button and turn on the power.
2. Release the button the red LED will be blinking and looking for a receiver.
3. Confirm that the receiver's red LED is solid on.
4. Turn off receiver first then the transmitter power..
5. Turn on receiver first then the transmitter power.

Now you are ready to run.

**Fail-safe or Hold Mode Switch**

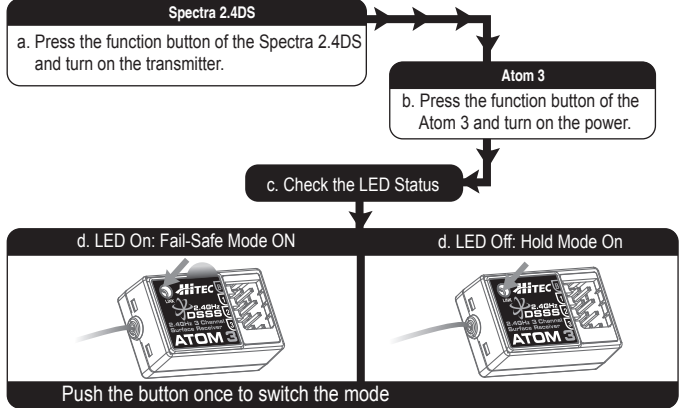
**What is Fail-Safe Mode?**

If you use the FAIL-SAFE function, and set it up properly, should the receiver signal somehow be interrupted or interference were to occur, the servos will move to your pre-set FAIL-SAFE position you previously stored in the receiver during the FAIL-SAFE set-up.

If FAIL-SAFE has not been activated, the signal is switched off after the HOLD period of 1 sec. This means that the servos become "soft" and remain in their last commanded position under no load (this may equate to full-throttle!), until a valid signal is picked up again.

In the interests of safety, we recommend that FAIL-SAFE should always be activated, and the FAIL-SAFE settings should be selected so as to bring the model to a non-critical situation (e.g. motor idle / electric motor OFF, control surfaces neutral, or full brake, etc.)

**Fail-Safe Setup Method**



**When LED On (Fail-Safe Mode On):**

Press the function button once to switch to the hold mode, the LED will go off and indicates that the receiver is in Hold Mode.

Note: once you switch to the hold mode all the saved Fail-Safe position will be deleted.

**Note** If FAIL-SAFE is deactivated, the FAIL-SAFE position settings are also deleted!

**When LED Off (Hold Mode On):**

To switch to the Fail-Safe Mode, first adjust all the control knobs to the fail-safe position you prefer, then press the function button once, the LED turns on at the same time the fail-safe position will be saved.

Once Fail-Safe/Hold Selection Mode activated, you can keep switching the mode by pressing the function button.

**Note** The FAIL-SAFE settings should be checked every time before you run the engine/motor.

**Warning!**

- This product is designed to be used as a R/C hobby product and should be operated under local regulation.
  - Improper use of this product can be dangerous.
  - Improper usage can cause damage other's properties and/or cause serious injury.
  - Never operate your vehicle in a crowded street with traffic
  - To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with minimum separation distance of 20cm between the radiator and your body.
- Use only the supplied antenna.

**Hitec Service**

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Product Approved to HITEC RCD, INC.

Manufacturer/Country: HITEC RCD, INC./The Philippines

Production Date:

