

**hitec** 2CH RADIO CONTROL SYSTEM  
**RANGER II N**

**Hitec RCD Korea, Inc.**



**hitec**

Printed in Philippines

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## Welcome to the exciting world of R/C Modeling

Thank you for purchasing the Ranger 2N, two channel, AM radio system. The Ranger 2N is ergonomically designed using the finest components available and engineered to provide years of trouble-free service. Look for the complete line of entry level, sport and competition quality Hitec radio systems, servos, receivers, speed controls and battery chargers at your favorite hobby dealer.

## FEATURES AND SPECIFICATIONS

### A. TRANSMITTER

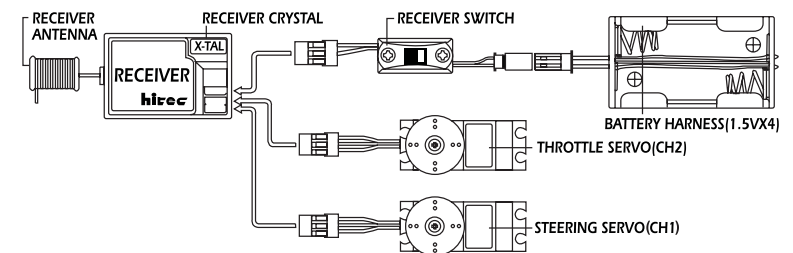
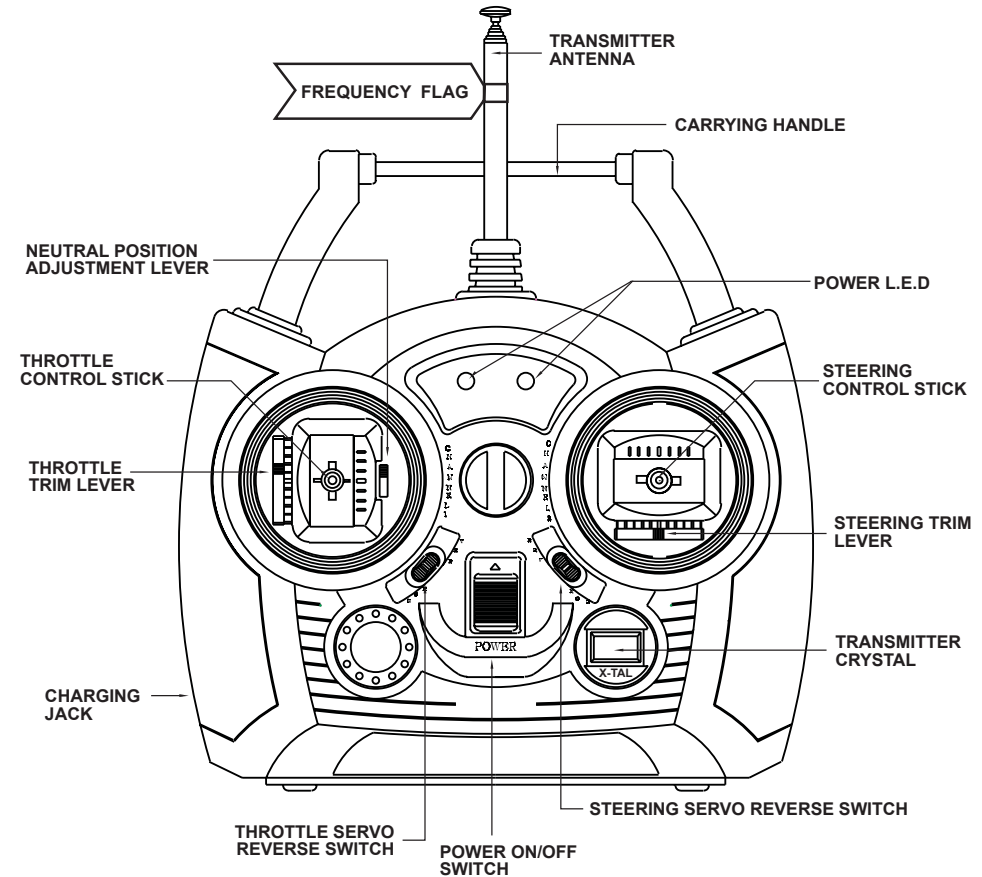
- SUPER-HETERODYNE DIGITAL PROPORTIONAL FOR EXTRA LONG RANGE
- CRYSTAL INTERCHANGEABLE
- ALL CHANNEL SERVO REVERSING SWITCHES
- CHARGER CONNECTOR FOR NI-CAD BATTERIES(8CELL 9.6V)
- LOW BATTERY WARNING L.E.D INDICATOR FOR BATTERY POWER
- NEUTRAL POSITION ADJUSTMENT FOR THROTTLE
- ALL SMT CIRCUITRY

### B. RECEIVER

- BUILT IN B.E.C (BATTERY ELIMINATOR CIRCUIT)
- CRYSTAL INTERCHANGEABLE
- SIZE AND WEIGHT
- SIZE : 53 X 35 X 19(mm) (2.1" X 0.8" X 1.4") , WEIGHT : 28g (0.99oz)

### C. SERVO

- HEAVY-DUTY SUPER HORN
- DUST RESISTANT DESIGN
- HIGH SPEED : 0.19sec/60°
- HIGH TORQUE : 3.0kg.cm(41.66oz.in)
- HI-TEC CUSTOM CHIP FOR NARROW DEADBAND
- ALL SMT CIRCUITRY

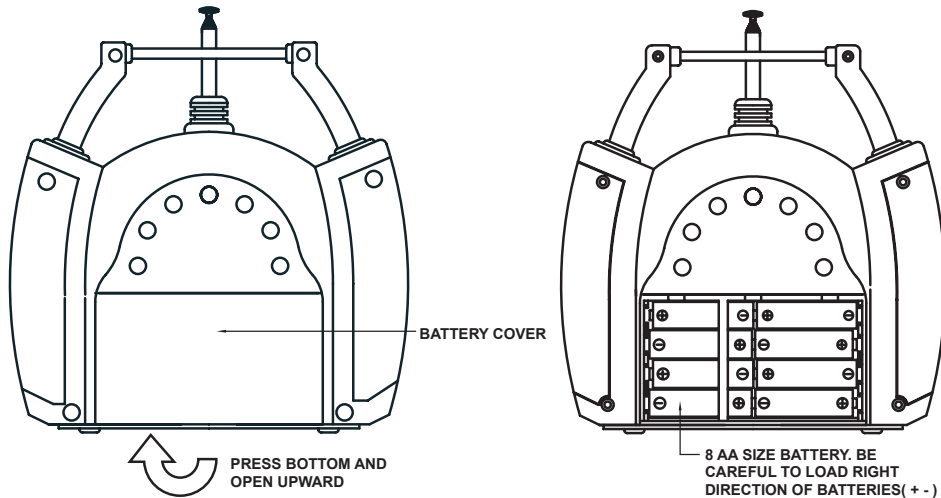


## Set-up and installation of your new Ranger 2N

Please read the following section carefully before attempting to install the Ranger 2N system

### BATTERY INSTALLATION

1. The transmitter requires eight and the receiver battery pack needs four AA size batteries. These can be Alkaline or Ni-cad cells. If you choose to install Ni-cad batteries, the optional CG-25A(110V) or CG-22(220V) Hitec overnight wall charger can be used to re-charge them.
2. When loading the batteries, make sure the receiver and transmitter switches are in the "off" position.
3. Open the battery door in the back of the transmitter by squeezing the tab on the bottom of the battery door and lifting up.
4. Load batteries into the appropriate slots, taking care to install according to the proper polarity.



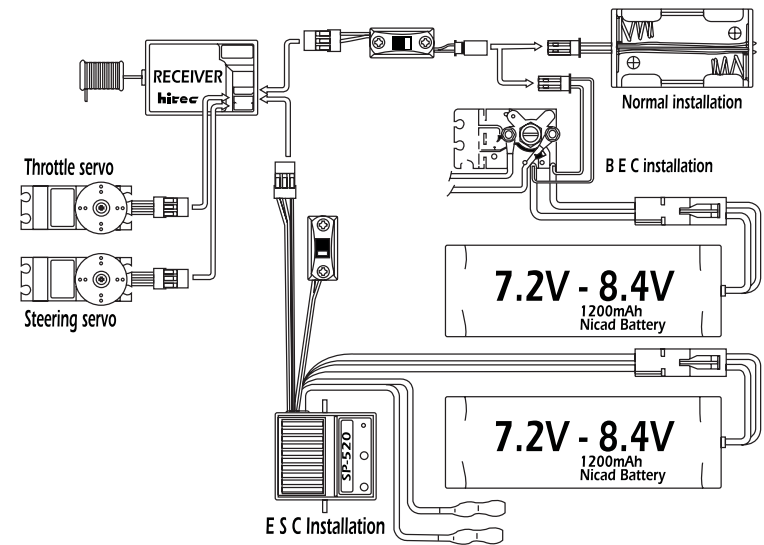
5. Replace the battery door and turn the power "on". If the batteries are fresh and charged, the green L.E.D. will be lit. Should the battery power drop to an unacceptable level, the red L.E.D. will glow, warning the user of impending failure. At this point, replace the alkaline cells or charge the batteries if they are Ni-cads.

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### RADIO SYSTEM INSTALLATION

When installing the system in the model of your choice, please follow the detailed instructions found in the model kit.

1. Install the receiver to protect it from vibration and potential crash damage.
2. Typically one servo will be used for the steering and the other servo will be used to operate a mechanical speed control, or not used at all and an optional electronic speed control will be used.
3. If your vehicle is electric, there will be a proportional speed control you will wish to use. If your speed control is mechanical, it will require a servo to operate it. The battery and switch harness found in the kit must also be used to provide the receiver with power.
4. Should your model use an electronic speed control that has the option of the B.E.C. circuit (battery eliminator circuit), this feature will eliminate the receiver battery and use the motor battery to feed the receiver and servos through the speed control.



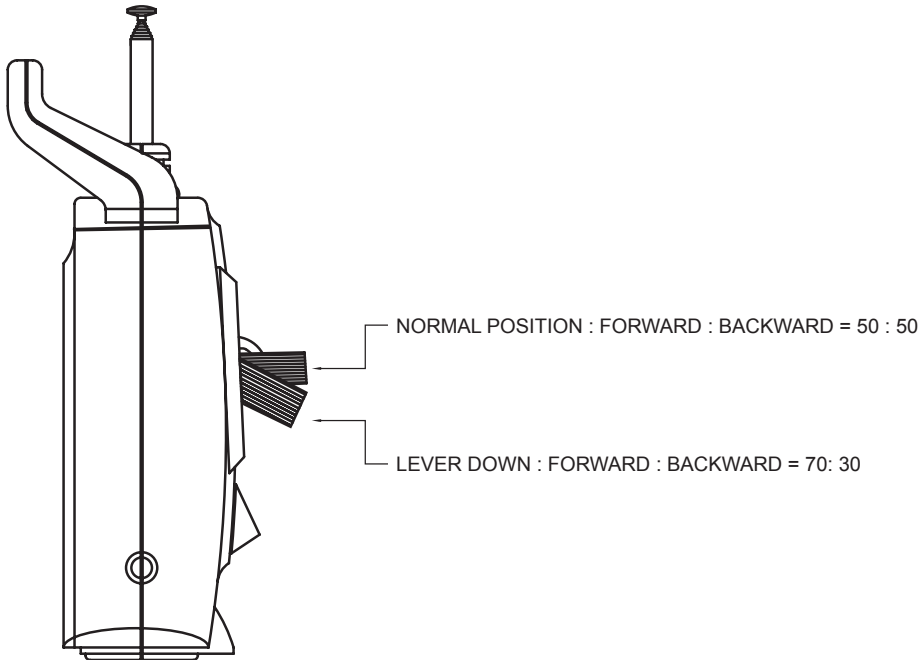
(Electronic Speed Control)

5. Please refer to the instructions that accompany your electronic speed control for installation.

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## OPERATION CHECK

1. Plug the switch harness and servo connectors into the proper slots.  
The connectors are polarized, so they will fit into the receiver one way only.  
**NEVER USE EXCESSIVE FORCE TO PLUG IN OR PULL OUT CONNECTORS.**
2. Always turn the transmitter power switch "on" first, before the receiver switch to avoid damaging your equipment.
3. Move the trim levers to the "neutral" position.
4. Check to see the servos move in the proper direction when the joysticks are moved.  
If you wish to change the direction of rotation, use the servo reversing switches on the front of the radio.
5. If you wish to have more forward throttle stick movement, push down the neutral position adjustment lever, this will give 30% more forward movement.



## HELPFUL HINTS

### Antenna

Both the transmitter and the receiver antenna must be fully extended when in use. Do not cut off any excess receiver antenna wire or bundle it up as this will cut down on the operating range of the system.

### Changing Frequency

Hitec offers receiver and transmitter crystals to be used in changing the frequency of your Ranger 2N system. Caution: The frequency can be changed only within the same band, you cannot change from 75MHz to 72 or 27MHz just by changing crystals.

### Water, Dust and Fuel

Take suitable measures to protect your system from water, dust, oil and fuel.

### Servo Linkage

Install your linkages to be free from binding and slop. If you hear severe "humming" from the servo, it is an indication the servo is working too hard and the geometry of the linkage should be adjusted.

### Throttle Ratchet

The spring mechanism on the throttle stick may be disconnected and an optional ratchet part # 58314 is available to fit on the throttle gimbal to facilitate a ratchet effect with detents.

*Congratulations again and have fun!*