



## Specification

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- Advanced 2.4GHz 6-channel transmitter
- Lightweight, full-range 6 channel receiver
- Uses the acclaimed Hitec Red protocol
- Simple, auto-pairing
- Servo reverse on all four primary channels
- Switched channel 5 and 6
- Mode 1 / Mode 2 selectable
- Delta mixing available
- Digital trims
- Adjustable stick length
- Adjustable stick tension
- Low consumption 4 cell (4.8V) transmitter
- Charging jack for optional rechargeable battery upgrade
- Simulator socket

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**IMPORTANT!** This radio control system is not a toy. It must be operated according to these instructions and may cause serious injury to persons or damage to property if not used responsibly or if operated without due caution. Unsuitable for children under 14 years of age.

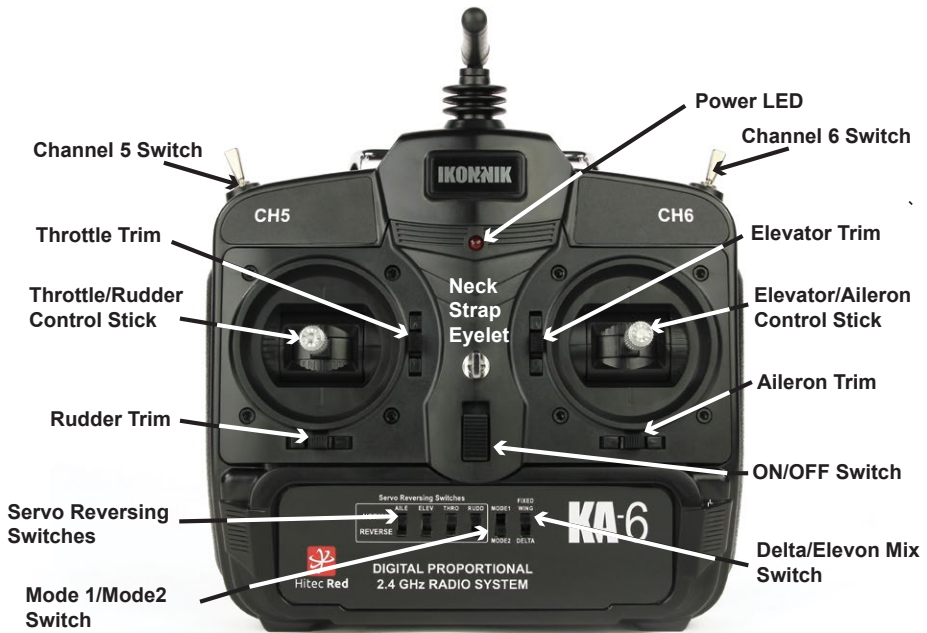
## Introduction

Thank you for purchasing the advanced IKONNIK KA-6 2.4GHz radio control system. It is designed for operating small to medium size model aircraft and features a lightweight, full-range receiver.

Its uncomplicated design makes it the perfect first or second radio system for the sport modeller.

The transmitter and receiver use state of the art manufacturing processes. The receiver features dual diversity aerials for extra security and that important 'locked-in' feeling.

Identifying your transmitter's features and function switches:



## Hitec 2.4GHz technology

Hitec Red technology is trusted by pilots worldwide to provide a supremely reliable and responsive radio link. Incorporating Hitec's AFHSS (Adaptive Frequency Hopping Spread Spectrum) technology, Hitec Red offers a simple, cost-effective solution for pilots looking to fly any model from the growing range of Hitec Red enabled aircraft from Ares. Pair to Fly with total confidence.



## Vibration

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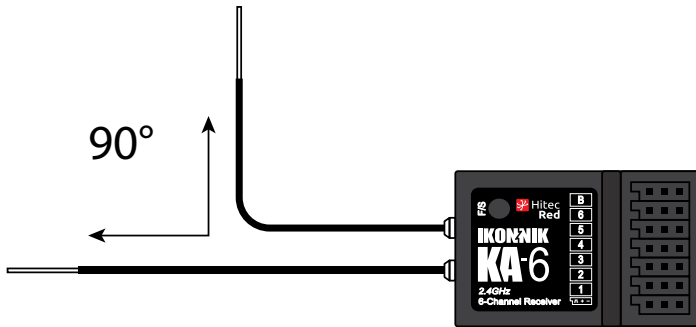
The receiver contains precision electronic parts. Ensure that you avoid vibration, shock, and temperature extremes. For protection, wrap the receiver in foam rubber, or use some other vibration-absorbing material.

If you are flying near water, it's also a good idea to protect the receiver by placing it in a plastic bag and securing the open end of the bag with a rubber band before wrapping it with foam.

## Receiver antenna Installation

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The KA-6 receiver has two aerials for maximum security. Please install as shown:



**WARNING:** Never pinch or bend the antennas. Avoid locating the antennas next to any components that are likely to create interference such as batteries, motors, ESCs etc. Avoid locating the antennas in highly conductive environments such as carbon fiber fuselages etc.

Never change the length of the antennas. Cutting the length of either antenna will seriously affect the receiver's range.

## Handling connectors

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Always ensure that you maintain the correct polarity when connecting a servo or battery connector to the receiver. When unplugging connectors from the receiver, ensure you hold the plastic connector and do not pull directly on the wires.

## Installing batteries in the transmitter

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Remove the transmitter battery cover and insert four AA alkaline cells (not included) taking care to observe the correct polarity. Re-fit the battery cover



You can use rechargeable batteries in the KA-6 transmitter. Ensure that you maintain the correct polarity. If using rechargeable batteries, they may be charged using a suitable, compatible charger and the factory-installed charging socket on the right-hand side of the transmitter. While individual rechargeable batteries can be used in the battery box, we recommend using a welded pack that connects to the factory-installed socket in the battery compartment. Simply remove the upper battery springs before installing the battery pack.



**WARNING:** Do not attempt to charge non-rechargeable batteries. Never mix rechargeable batteries with non-rechargeable alkaline batteries. Do not mix old and new batteries. Do not fast charge batteries when installed in the transmitter as this may lead to overheating which can result in damage to the batteries and the transmitter and even result in fire.

## Turning on the KA-6 transmitter

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The transmitter is turned on using the switch located on the front. Always switch on the transmitter first, followed by the receiver. Push the switch forward to turn on the transmitter. The LED will illuminate red.



ON Switch

## Transmitter aerial orientation

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In use, the optimum operating range of the transmitter is achieved with the aerial in the upright forward-facing position. Do not point the aerial directly at the model.

## Stick length adjustment

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As everyone's hand size is different, the KA-6 transmitter uses a two-piece stick top that can be adjusted in length to suit a variety of different users' hand size.

Separate the two parts of the stick top by holding the lower part stationary and unscrewing the upper part. Once the stick top is in the correct position, it can be locked in place by tightening the bottom section of the stick.



## Stick lever tension adjustment

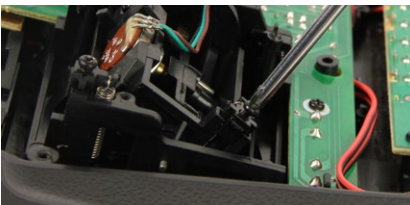
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The stick spring tension can be adjusted to suit the exact stick 'feel' you wish. To carry out this procedure, you must remove the rear of the transmitter case.

Start by switching off the transmitter and remove the batteries. Now remove the six self-tapping screws that hold the rear of the case in position and store safely.

Place the transmitter face down on a soft surface (sponge rubber is perfect for this). Gently ease off the rear of the transmitter case taking care to ensure that the wiring loom between the charging socket and the battery box is not disturbed.

Using a small Philips screwdriver, rotate the adjusting screw for each stick to give the desired spring tension. The tension decreases when the adjusting screw is turned counterclockwise, and increases when turned clockwise.

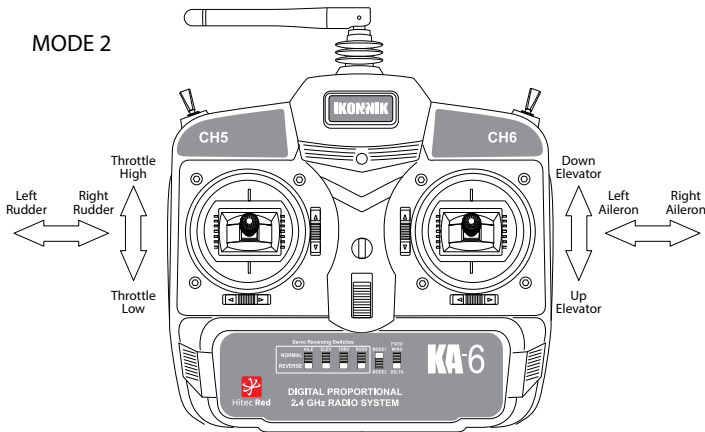


When you are happy with the stick spring tension, you may carefully reinstall the rear cover ensuring that you haven't trapped any wires. Replace the six self-tapping screws taking care not to over-tighten.

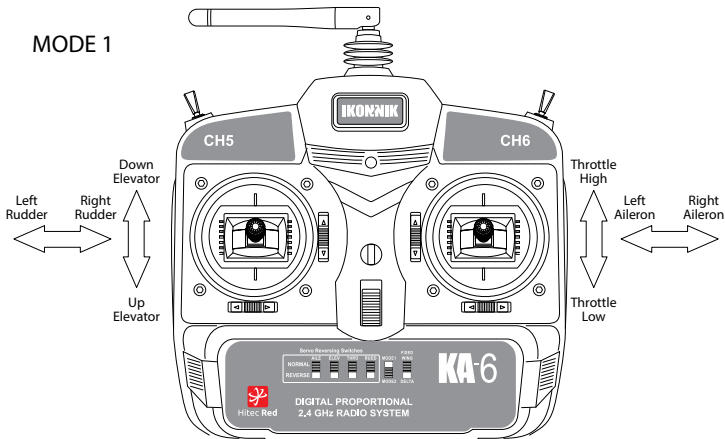
## Changing the transmitter to Mode 1

As standard, the transmitter is factory-configured to Mode 2 (with the throttle on the left hand stick). The transmitter can be changed to Mode 1 (with the throttle on the right hand stick).

### MODE 2



### MODE 1

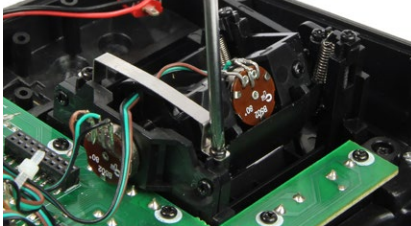




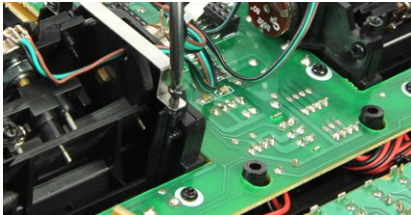
1. Remove the six self-tapping screws that retain the rear of the transmitter case.



2. Place the transmitter face down on a soft surface.
3. Gentle ease off the rear of the transmitter case.
4. Remove the throttle ratchet from the back of the right hand stick unit by removing the two retaining screws.



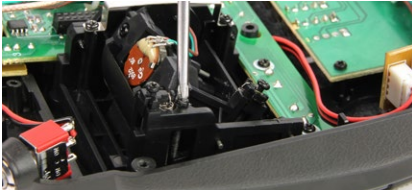
5. Re-fit the throttle ratchet to the left hand stick unit and retain with the two retaining screws.



6. Enable the elevator spring tension by removing the single screw shown in the diagram.



- Transfer this screw to the other stick unit to disable the spring tensioner.



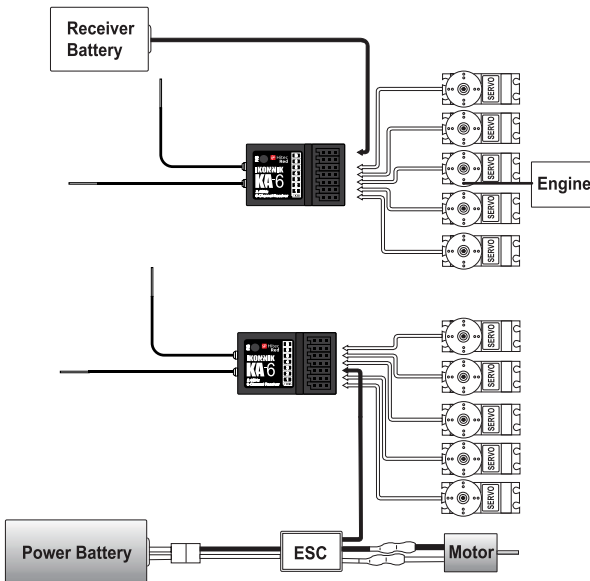
- Check the operation of the throttle stick and once happy, refit the rear of the transmitter case.
- Re-fit the six self-tapping screws taking care not to over-tighten.
- Now move the mode selection switch to the Mode 1 position.



Switch to  
MODE 1

## Connection Diagram

Use these diagrams to connect the KA-6 for I.C. and electric powered aircraft.



## Pairing

Place the transmitter and receiver within 2m of each other (but not less than 45cm) then power the transmitter ON.



Power the receiver ON noting that the LED will initially flash red / blue, then change to fast flashing red. For initial pairing the receiver must be powered on within 5 seconds of the transmitter. Once paired this time constraint is no longer necessary.



Pairing will be complete when the receiver's fast-flashing red LED turns solid red. This usually works without issue, however if you are attempting to operate multiple aircraft at the same time be sure that you only turn one transmitter and aircraft on at a time, waiting for the two to pair before moving to the next. If a mis-pair occurs simply turn off both units and begin the process again.



You can check the pairing operation by plugging a servo into a spare channel and operating the respective control. Note: Always switch your KA-6 transmitter ON before powering up your model and only switch the transmitter OFF after powering down your model.



## Failsafe

In the event of signal loss the KA-6 is equipped with a fail-safe function which operates across all 6 channels and must be set independent of the pairing process. To activate the fail safe setting, turn ON the transmitter and receiver and ensure they are paired.

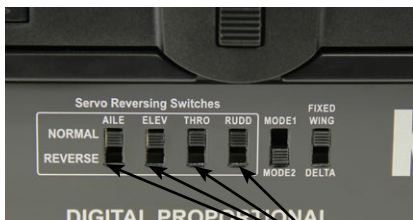


Press and hold the fail safe (F/S) button on the receiver. The LED will extinguish, then flash. When the LED lights solid red, turn the receiver's power OFF and then ON. The fail safe is now set. You can test the fail safe function by turning OFF the transmitter and checking that the throttle and flying surfaces move to their pre-set positions.



## Servo Reverse

If, when you move a joystick in one direction, the control surface moves in the wrong direction, then the control requires reversing. This is very quick and easy to do. Just flip the switch from Normal to Reverse on the channel you wish to reverse. Check that the control surface's direction has been reversed.



Reversing Switches

## Trim Adjustment

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The trim, or center position of each servo, can be adjusted using the four digital trim levers. Ensure that the control surface is mechanically centered before using the trim levers. Adjust pushrods to the correct length prior to flying so that the trims are only used for fine adjustment in the air.

Try to keep all trims at their center position as large amounts of trim compensation may mean that the servo's full range of travel will be restricted.



## Elevon (Delta) mix

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The KA-6 transmitter can be used to control a delta aircraft (or a flying wing). This pre-programmed mix combines channels 1 and 2. In this way, the ailerons can be operated as ailerons using the aileron joystick and as elevators using the elevator joystick.

1. Activate the Delta function by moving the switch from Fixed Wing to Delta.



2. Connect one aileron servo to channel 1 and the other to channel 2.
3. Check the operation of the ailerons. Moving the aileron joystick to the left should result in the left aileron moving up and the right aileron moving down.
4. Use the channel 1 reversing switch as necessary to reverse the servo direction.
5. Now pull back on the elevator stick. Both ailerons should rise.
6. Use the channel 2 reversing switch to reverse the elevator servos' direction if required.

## Warranty, support and service

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### 30-Day Limited Warranty Term Period:

We warrant that the Product(s) purchased (the 'Product') will be free from defects in materials and workmanship when the product is new (before being used) for the limited warranty term period, 30 days, from the date of purchase by the Purchaser.

If you believe a defect in material, workmanship, etc. was not apparent when the Product was new and only became evident after the Product was used, take the following steps:

If you purchased the Product at a HobbyTown store, please contact your local HobbyTown store for warranty support and/or service.

If you purchased the Product from the Firelands website, use the contact information found under the Support heading to contact Firelands directly.

If you contact Firelands, you may be asked to send the product to Firelands, at your cost, for inspection. Provided the warranty conditions have been met within the warranty term period, the components that are found to be defective, incorrectly manufactured or assembled may be repaired or replaced, at the sole discretion of Firelands. Your warranty item will be returned to you at Firelands' expense. In the event your product needs repair or a replacement part that is not covered by this warranty, your local HobbyTown store or Firelands can assist you with support and in obtaining the genuine replacement parts to repair your Product. Firelands will charge \$40.00 per hour plus the cost of replacement parts to service your vehicle if after contacting you, you so authorize such repairs. Your product will be returned to you at your expense.

If you purchased your Product from a HobbyTown Internet site not affiliated with a local store, please consult that site for its support and service policies. You can also find more information at:

[www.Hobbytown.com](http://www.Hobbytown.com)

by emailing [customerservice@firelandsgroup.com](mailto:customerservice@firelandsgroup.com)

or by calling 800-205-6773



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