HK-i6X

Thank you for purchasing our product, an ideal radio system for beginners or experienced users alike.

Read this manual carefully before operation in order to ensure your safety and the safety of others or the safe operation of your system.

If you encounter any problem persists, contact your local dealer or visit our service and support website for help:

www.hobbyking.com

1. Safety

1.1 Safety 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.**

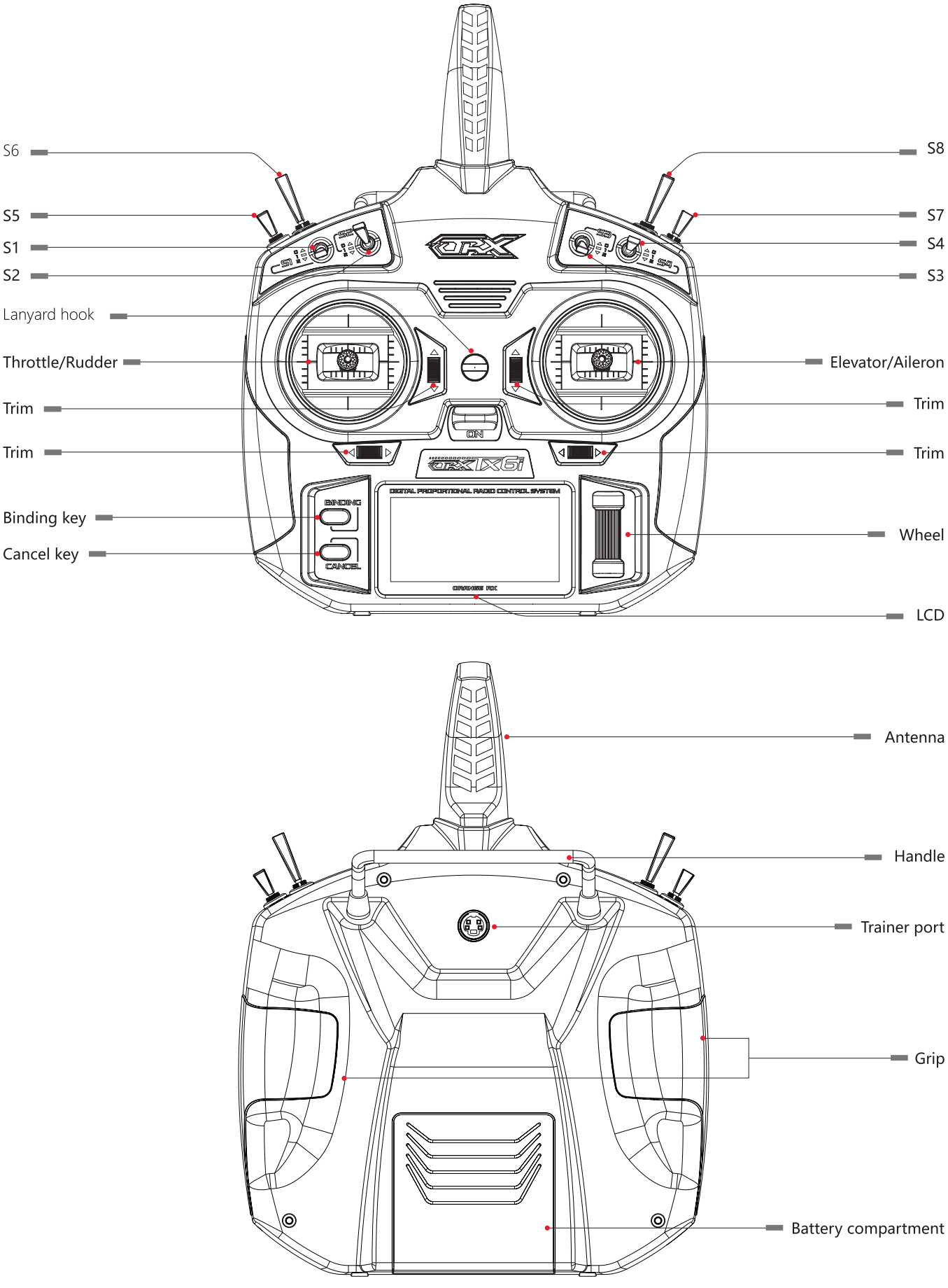
1.2 Safety Guide

Prohibited **Mandatory**

- **Do not use the product at night or in bad weather like rain or thunderstorm. It can cause erratic operation or loss of control.**
- **Do not use the product when visibility is limited.**
- **Do not use the product on rain or snow days. Any exposure to moisture (water or snow) may cause 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 body of water 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.**
- **The 2.4GHz radio band is limited to line of sight. Always keep your model in sight as a large object can block the RF signal and lead to loss of control.**
- **Never grip the transmitter antenna during operation. It significantly degrades signal quality and strength and may cause loss of control.**
- **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.**

- **Misuse of this product may lead to serious injury or death. To ensure the safety of you and your equipment, read this manual and follow the instructions.**
- **Make sure the product is properly installed in your model. Failure to do so may result in serious injury.**
- **Make sure to disconnect the receiver battery before turning off the transmitter. Failure to do so may lead to unintended operation and cause an accident.**
- **Ensure that all motors operate in the correct direction. If not, adjust the direction first.**
- **Make sure the model flies within a certain distance. Otherwise, it would cause loss of control.**

2. Transmitter Overview



3. Binding

The transmitter and receiver have been pre-bound before delivery.

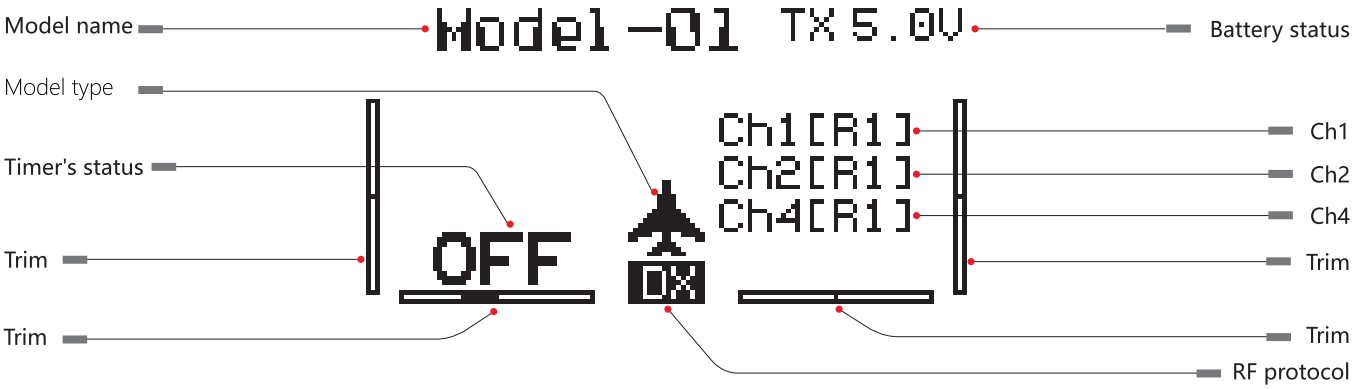
If you are using another transmitter or receiver, follow the steps below to bind the transmitter and receiver:

1. Connected the bind cable to the bind port of the receiver.
2. Connected the power to any other port. The indicator will start to flash in orange, indicating that the receiver is in bind mode.
3. Press and hold the binding key and turn on the transmitter. (or "Turn on the transmitter, press and hold the wheel to enter the main menu to select model setup, then choose the bind menu to enter binding mode.")

- The system will displayed "RX binding.....", After successfully binding the transmitter will automatically exit this menu, the receiver's LED will stop flashing, remaining solid, indicating that binding has been successful.

4. Main Screen

The main screen displays useful informatin about your model, including sensors and function status etc.



5. Airplane

This section contains the default menu function settings.

5.1 Servo setup

5.1.1 Reverse

The function is used to correct a servo or motor's direction in relation to the systems controls.
For example, if a servo is mounted upside down in order to fit inside a model.

Setup:

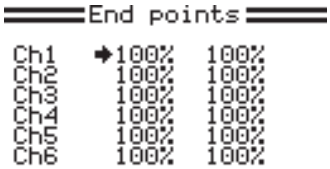
1. Press the wheel in order to change between channels.
2. Move the wheel left or right to change between "Nor" (Normal) and "Rev" (Reverse).
- Select the channel you want to reset, then press and hold the cancel key to reset to default value.
3. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.

5.1.2 End points

Endpoints are the limits of the channels' range of movement. There are two endpoints, the low endpoint and the high end point.

Setup:

1. Press the wheel to change between channels.
2. Move the channel using the stick in order to choose a high or low side.
3. Move the wheel left or right to change the endpoints value.
- Select a channel and a high side or low side, then press and hold the cancel key to reset to default value.
4. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.

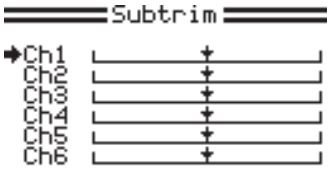


5.1.3 Subtrim

Subtrim changes the center point of the channel. For example, if the ailerons are slightly out of alignment, the subtrim could be used to fix this.

Setup:

1. Press the wheel to change between channels.
2. Move the wheel left or right to change the subtrim's value.
- Select the channel you want to reset, then press and hold the cancel key to reset to default value.
3. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.



5.2 Dual rate/exp.

This function is use to add a curve to the channels output. This means that the ratio of stick to channel movement can be changed in order to add or remove sensitivity at different parts of the sticks range of motion.

Setup:

This function sets the rate and exp. for channels Ch1, Ch2 and Ch4.

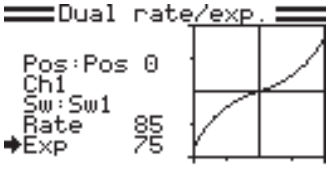
1. Press and move the wheel to select a channel, then press the wheel.
2. Move the wheel left or right to change the selection (Sw1-8, On and Disabled), then press the wheel.

- It is possible to set different rates to different switch positions if a switch is assigned.

3. Move the wheel left or right to change the rate, then press the wheel.
4. Move the wheel left or right to change the exponential.

- Select the Sw, rate or exp. , then press and hold the cancel key to reset to default value.

5. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.



5.3 Throttle curve

This function enables the user to adjust the ratio between stick and servo movement using linear or nonlinear curves. This is useful when wanting to change how the throttle reacts at different stick positions. For example having a smaller throttle change when the stick is between 0-30%, then a larger throttle change between 30% and 100%. If your models throttle is not linear, it is possible to use this function to create a more linear movement.

Setup:

This function can save several throttle curves that can be toggled using a switch.

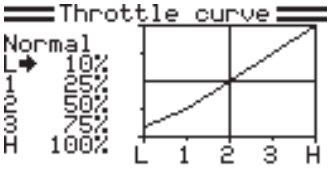
1. In the Assign switches menu, assign a switch to control Flight mode.

- It is possible to set different rates to different switch positions if a switch is assigned.

2. Go to the Throttle curve menu and move switch to select the desired mode.
3. Press the wheel to change point.
4. Move the wheel left or right to change the point's value (position) on the graph.

- Select the point you want to reset, then press and hold the cancel key to reset to default value.

5. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.

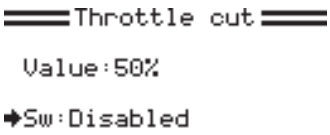


5.4 Throttle cut

The function is used for gas powered engines. When the chosen switch is toggled the throttle will drop below the set minimum in order to cut the engine.

Setup:

1. Use the wheel to set a minimum throttle value.
2. Press the wheel to move to the switch select option.
3. Use the wheel to select a switch.
4. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.



5.5 Mixes

This function is used to create a mix between channels. For example if at low throttle some automated flap movement is desired, it is possible to create a mix to do this. The difference between curve mixes and linear mixes is that it is no possible to create a nonlinear relationship between the master and slave.

Setup:

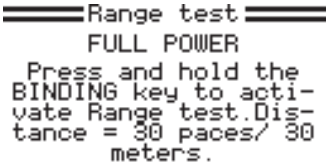
1. Use the wheel to select a mix and press the wheel to move to the mix on/ off setting.
2. Move the wheel to turn the mix on then press the wheel again.
3. Use the wheel to select a master channel and press the wheel.
4. Use the wheel to select a slave channel and press the wheel.
5. Use the wheel to change the pos. mix value then press the wheel.
6. Use the wheel to change the neg. mix value then press the wheel.
7. If needed use the wheel to change the offset value.

- Select the Pos. mix , Neg. mix or Offset, then press and hold the cancel key to reset to default value.

8. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.

5.6 Range test

This function temporarily reduces the transmitter's transmission power to allow for a manageable range test. Instead of having to walk several hundred meters away from the receiver, press and hold the bind key and walk 30 meters away from your model for the same effect.



5.7 Timer

This function is usually used to keep track of time to reduce the risk of aircraft running out of battery/fuel and crashing. These are very useful when used in conjunction with a toggle.
The engine timer triggers when throttle value exceeds the set value, and stops when back under that value.

Setup:

[Up (Up timer)]: Starts counting from zero when triggered.
[Dn (Down timer)]: Counts down from a selected time, to select the time you wish to count down from select min/sec and use the wheel to select the time.
[D/U (Down then up timer)]: Start from a selected time and count down, once they reach 0 they go into the negative and effectively start counting up again.

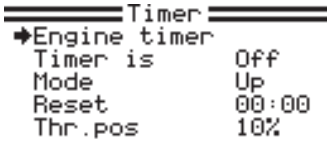
Engine timer

1. Use the wheel to select the engine timer then press the menu wheel.
2. Use the wheel to turn the timer on then press the menu wheel.

- If a switch is not assigned it is possible to start and stop the timer using the wheel in the timer menu, however if a switch is assigned it is not possible to do this.
- Select Reset, then press and hold the cancel key to reset the timer if needed. If the timer is assigned to a switch the cancel key will no longer be able to reset the timer.
- Select the Thr.pos, then press and hold the cancel key to reset to default value.

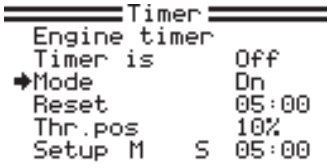
Up:

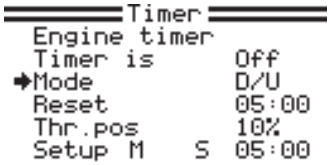
a. Use the wheel to select the up mode then press the wheel.
b. Press and hold the cancel key to reset the timer if needed, then press the wheel.
c. Use the wheel to change the throttle trigger point.
d. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.



Dn (Down) / D/U(Down then up timer):

a. Use the wheel to select the Dn mode then press the wheel.
b. Press and hold the cancel key to reset the timer if needed, then press the wheel.
c. Use the wheel to change the throttle trigger point then press the wheel.
d. Use the wheel to set the time in min then press the wheel.
e. Use the wheel to set the seconds.
f. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.





Multi. timer:

Use the wheel to select the Multi. timer then press the wheel.

Up:

a. Use the wheel to select the up mode then press the wheel to choose Enable switch.
b. Use the wheel to change the Enable switch then press the wheel.
c. Use the wheel to change the status of the switch then press the wheel.
d. Use the wheel to change the Reset switch then press the wheel.
e. Use the wheel to change the status of the switch then press the wheel.
f. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.

Dn (Down) / D/U(Down then up timer):

a. Use the wheel to select the Dn mode then press the wheel to choose M.
b. Use the wheel to set the time in min then press the wheel.
c. Use the wheel to set the seconds then press the wheel.
d. Use the wheel to change the enable switch then press the wheel.
e. Use the wheel to change the status of the switch then press the wheel.
f. Use the wheel to change the reset switch then press the wheel.
g. Use the wheel to change the status of the switch then press the wheel.
h. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.

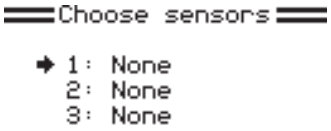
5.8 Telemetry

5.8.1 Choose sensors

The main screen can display the value of up to 3 sensors. This function is used to select which sensors to display.

Setup:

1. Press the wheel to select a slot 1, 2 or 3. Any sensors that are connected will automatically populate this list.
2. Use the wheel to select the desired sensor.
3. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.



5.8.2 Setup sensors

This function is used to setup any sensors connected to the receiver (Included RX, BATT, TEMP, CURR and RPM). For example, to set the higher and lower voltage alarm value.

Setup:

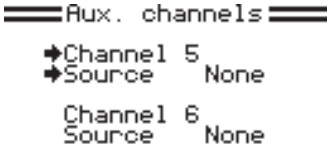
1. Press the wheel to choose the sensor which your desired and set the settings.
- Select the function you want to reset, then press and hold the cancel key to reset to default value.
2. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.

5.9 Aux. channels

This function allows users to set auxiliary channels. AUX channels can be used to control various extra features on an aircraft including landing gear, brakes, lights.

Setup:

1. Press the wheel to source between aux channel 5 and 6.(And after channels not in use)
2. Move the wheel to assign a switch.
3. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.

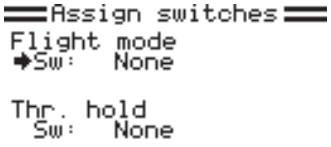


5.10 Assign switches

The assign switches function enables the user to assign a switch to the flight mode and thr. hold functions.

Setup:

1. Press the wheel to switch between Flight mode and Thr. hold.
2. Use the wheel to assign a switch.
3. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.



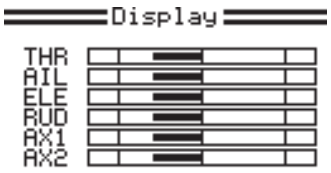
5.11 Display

This function displays the transmitter's channel output and can be used to test output and servo range.

Setup:

Press and hold the cancel key and the servos will move slowly though their entire range. Press the cancel key again to disable the function.

- Make sure the model engine is powered off while the test function is activated.++ If powered on, it will rev-up possibly leading to damages or personal injury.



6. Helicopter

This chapter introduces helicopter features, in addition to features already described in the chapter 6.

6.1 Pitch curve

Pitch curve can be used to smooth out or alter the rotor pitch over the sticks range of movement. For example if more reaction was needed though a certain range of the sticks movement then this can be done by altering pitch curve.

Setup:

This function can save several pitch curves that can be toggled using a switch.

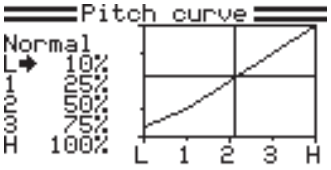
1. In the Assign switches menu, assign a switch to control Flight mode.

- It is possible to set different rates to different switch positions if a switch is assigned.

2. Go to the Pitch curve menu and move switch to select the desired mode.
3. Press the wheel to change point.

- Select the point you want to reset, then press and hold the cancel key to reset to default value.

4. Move the wheel left or right to change the point's value (position) on the graph.
5. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.



6.2 Swashplate mix

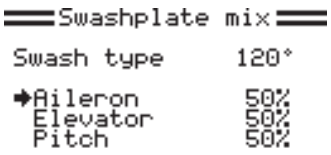
Adjust the motion range of these three functions to achieve the desired maneuverability. Refer to your models manual to ensure best results.
This function is used to edit the pre-programmed mix control of the helicopter's aileron, elevator and pitch.
Use the wheel to change the aileron, elevator and pitch values.

Setup:

1. Use the wheel to change the aileron value, then press the wheel.
2. Use the wheel to change the elevator value, then press the wheel.
3. Use the wheel to change the pitch value.

- Select the function you want to reset, then press and hold the cancel key to reset to default value.

4. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.



6.3 Gyroscope

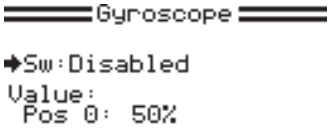
This function is used for adjusting the gyro sensitivity.
If the sensitivity is too high the helicopter will oscillate (Tail moving from side to side) and if the sensitivity is too low the helicopter will be sluggish and unresponsive.

Setup:

1. Use the wheel to select a switch or on, then press the wheel.
2. Use the wheel to change the position value.

- Select the Sw or Value, then press and hold the cancel key to reset to default value.

3. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.



7. Multicopter

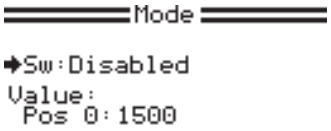
This chapter introduces multicopter features, in addition to features already described in the chapter 6.

7.1 Mode

The function can store up to 3 different modes which can activated using a switch.

Setup:

1. Use the wheel to select a switch or on, then press the wheel.
2. If needed use the wheel to change the position value.
- Select the Sw or Value, then press and hold the cancel key to reset to default value.
3. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.

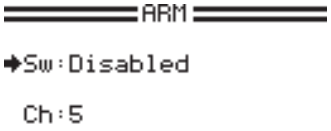


7.2 ARM

The function ensures a model will not fly until a switch has been toggled.

Setup:

1. Use the wheel to select a switch or on, then press the wheel.
2. Use the wheel to select a channel.
3. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.



8. Model setup

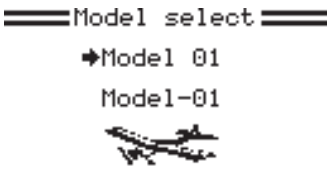
The mode setup function is used to set up, manage and delete models.

8.1 Model Select

Selects a model from memory. The HK-i6X can store up to 20 different models in the internal memory.

Setup:

1. Use the wheel to select a memory slot for the model.
2. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.



8.2 Type select

Change between airplane/glider and different helicopter (Included variable pitch, swash 90°, swash 120° and swash 140°) types and multicopter.

Setup:

1. Use the wheel to select the model type.
2. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.

8.3 Model name

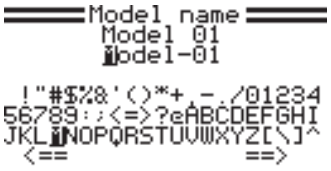
Change the name of a saved model.

Setup:

1. Use the wheel to select number, letter or special character.
2. Press the wheel to enter a number, letter or special character.

- Select one character you want to reset, then press and hold the cancel key to reset to default value.

3. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.

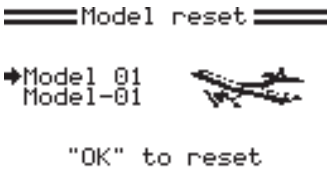


8.4 Model Reset

Resets a model to factory default settings, deleting all saved settings for that model.

Setup:

1. Use the wheel to select a memory slot for the model.
2. Press the wheel to select and then move the wheel to select yes and press the wheel again.
3. If needed press the cancel key to exit without saving.



8.5 Model copy

Copies a model from one memory slot to another.

Setup:

1. Use the wheel to select a model to copy and press the wheel.
2. Use the wheel to select a memory slot to copy to.
3. Press and hold the wheel and then move the wheel to select yes.
4. If needed press the cancel key to exit without saving.

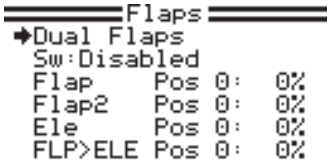
8.6 Flaps

Flaps increase lift at lower airspeeds by increasing the camber of the wing or, in some cases, increasing the camber and surface area of the wing, this is quite useful during landing and take off. If your model has flaps this function will set the **[UP]** and **[DOWN]** positions for the flaps. The flaps can also be controller by a switch, knob or logic gate. This function can also mix flap movement to elevator.

- This function cannot be used when the Elevon function is active.

Setup:

1. Use the wheel to enable the flaps function and press the wheel.
2. If needed use the wheel to set a switch and press the wheel.
- It is possible to set different rates to different switch positions if a switch is assigned.
3. Use the wheel to set the flap position and press the wheel.
4. Use the wheel to set the Elevon position.
- Select the function you want to reset, then press and hold the cancel key to reset to default value.
5. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.



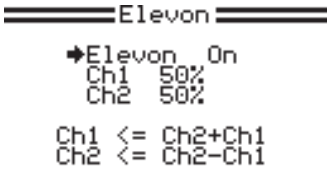
8.7 Elevon

The elevon function is used for planes that combine the elevons and ailerons together.

- This function cannot be used when the flaps, V-tail or aileron functions are active.

Setup:

1. Use the wheel to enable the elevon function and press the wheel.
2. Use the wheel to set the Ch1 position and press the wheel.
3. Use the wheel to set the Ch2 position.
- Select the Ch1 or Ch2, then press and hold the cancel key to reset to default value.
4. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.



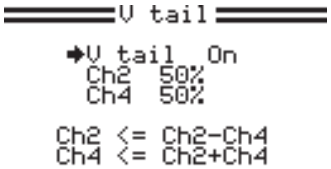
8.8 V Tail

The V-tail function is used for planes that have no elevators and has a V-tail rudder configuration.

- This function cannot be used when the Elevon function is active.

Setup :

1. Use the wheel to enable the elevon function and press the wheel.
2. Use the wheel to set the Ch2 position and press the wheel.
3. Use the wheel to set the Ch4 position.
- Select the Ch2 or Ch4, then press and hold the cancel key to reset to default value.
4. Press and hold the wheel to save an exit, or press the cancel key to exit without saving.



8.9 Aileron

The function sets a ratio between aileron 1 and aileron 2 movement which can be customized for the users' needs. Changes between single and dual aileron mode.

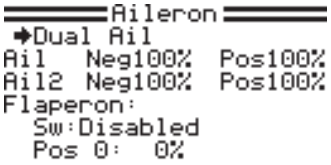
- This function cannot be used when the Elevon function is active.

Setup:

1. Use the wheel to change between single and dual mode, if selecting single mode, press and hold the wheel to exit, if selecting dual mode press the wheel using a normal press.
2. Use the wheel to change aileron 1 and 2 positions (positive and negative), roll the wheel to change the value and press the wheel to change between settings.
3. If needed set the flaperon to a switch using the wheel then press the wheel.
4. Choose the flaperon position.

- Select the aileron's Neg (or Pos) value or select the flapron's Sw (or pos.), then press and hold the cancel key to reset to default value.

5. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.



8.10 Bind

To bind refer to **[3. Bind**].

9. System setup

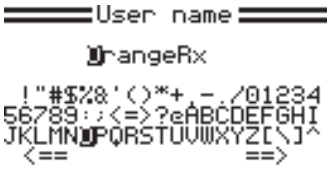
This menu is used to set transmitter system function such as screen and audio settings.

9.1 User name

Set a username for your system.

Setup:

1. Use the wheel to select a character and press the wheel to enter it.
- Select one character you want to reset, then press and hold the cancel key to reset to default value.
2. Press and hold the wheel to save and exit, or press the cancel key to exit without saving.

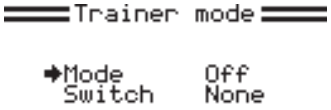


9.2 Trainer mode

This function allows you to connect 2 transmitters together. The system that enables the trainer function will become the master, and will be able to override the system it is connected to (if the slave is set to student mode). Usually this function is used by instructors to teach students how to fly, they can give the student full control but can quickly step in if anything goes wrong.

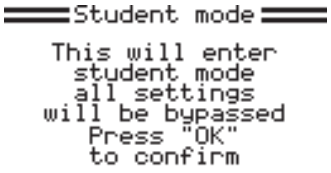
Setup:

1. Use the wheel to turn trainer mode on then press the wheel.
2. Select a switch to control the trainer mode (The student will only have control when this switch is in its active position).
3. Press and hold the wheel to save and exit.



9.3 Student mode

This function is used when another system is connected as a master (trainer), when this mode is active all settings will be bypassed and the system will only function through the master.
Press and hold the wheel and move the wheel to select yes.

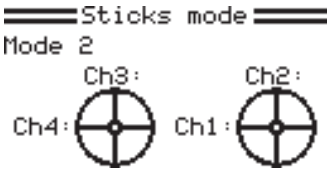


9.4 Sticks mode

There are 4 available stick modes, each stick mode changes the stick functions. For example when using stick mode 2 the left stick controls throttle on the vertical axis and rudder in the horizontal axis, however in stick mode 3, the vertical axis controls elevator and the horizontal axis controls aileron. These modes are largely down to personal preference.

- Press and hold the cancel key to reset to default Mode.

Move the wheel to select a stick mode then press and hold the wheel to save and exit.



9.5 LCD brightness

This function controls the backlight brightness. Note that increasing the brightness will reduce battery life.
To change the LCD brightness, Use the wheel to change the screen brightness then press and hold the wheel to save and exit.

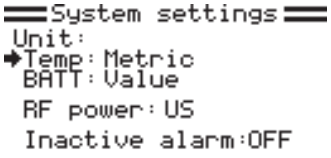
- Press and hold the cancel key to reset to default value.

9.6 Frame rate

This function sets the protocol type and speed (Included DSMX, DSM2 and S_Link). Use the wheel to highlight the desired protocol then press and hold the wheel to save.

- Press and hold the cancel key to reset to default mode.

9.7 System settings

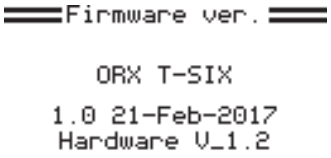


This function changes the type of display for temperature and battery level as well as setting the RF power to EU or US settings.

Setup:

Press the wheel to change between settings and move the wheel left or right to change. Press and hold the wheel to save and exit or press the cancel key to exit without saving.

9.8 Firmware Ver.



This function shows information about the transmitters currently installed firmware version.

9.9 Firmware update

The function is for updating the system firmware.

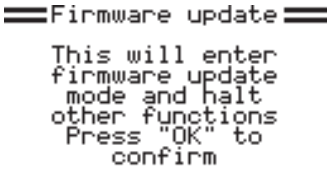
Setup:

1. Download the latest firmware.
2. Open the firmware update on a computer and connect the system via USB cable.
3. Select [Firmware Update] from the systems function menu. Press the wheel, the system will show a prompt, "This will enter firmware update mode and halt other functions" with an option to continue, select “Yes”.

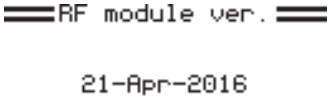
- When in update mode the system will show a prompt, "Update mode active. Turn the system off and on again to exit".

4. Once the system has been recognized by the computer select the update button.

- Once the system has been updated it will restart.
- Once the system has restarted it is safe to remove the USB cable.



9.10 RF module ver



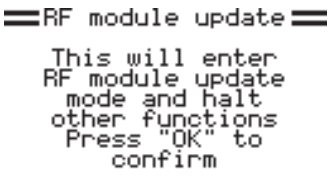
This function shows information about the transmitter's currently installed RF module version.

9.11 RF module update

This function is for updating the RF module.

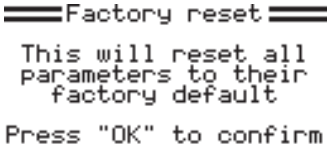
Setup:

1. Connect the system via USB cable.
2. Press the wheel, the system will show a prompt, "This will enter RF module update mode and halt other functions" with an option to continue, select "Yes".
3. Open the software update on a computer . Select COM port , then press "Connect".
4. Press "Open file" to choose the file and press "Write" to enter the update mode.
5. Restart your system.



9.12 Factory reset

Resets the system to factory settings. To reset enter this function, press the wheel then move the wheel to select yes and press the wheel again.
Press the wheel, the system will show a prompt with an option to continue, select "Yes".



CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACEDBY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDINGTO THE INSTRUCTIONS

Appendix 1 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.

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.

1. Move all your channels to the desired position.
2. Select [All channels] and then [Yes] in the confirmation box.