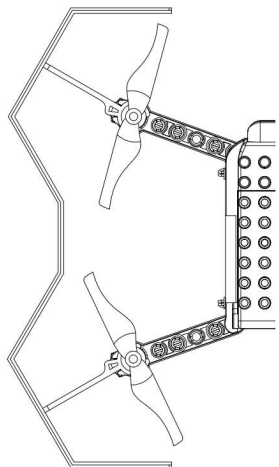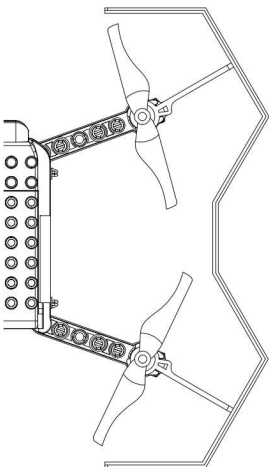# LiteBee Wing
# EDU Drone

## Product Manual
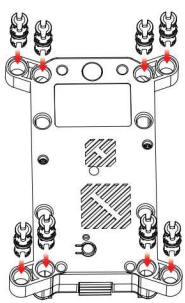
# Contents

## Assemble steps



**1** ⬡ X8  ▦ X1

**2** X4  X8

**3** ▭ X4

1

**4** X4

**5** X2

6   X1

7   Finish



3
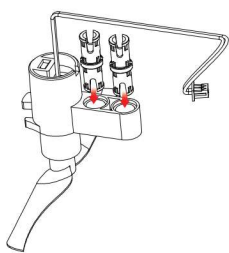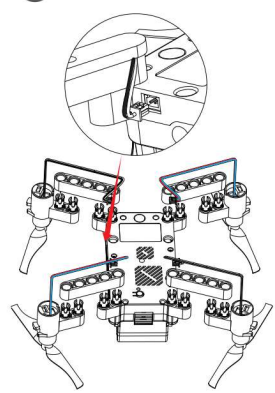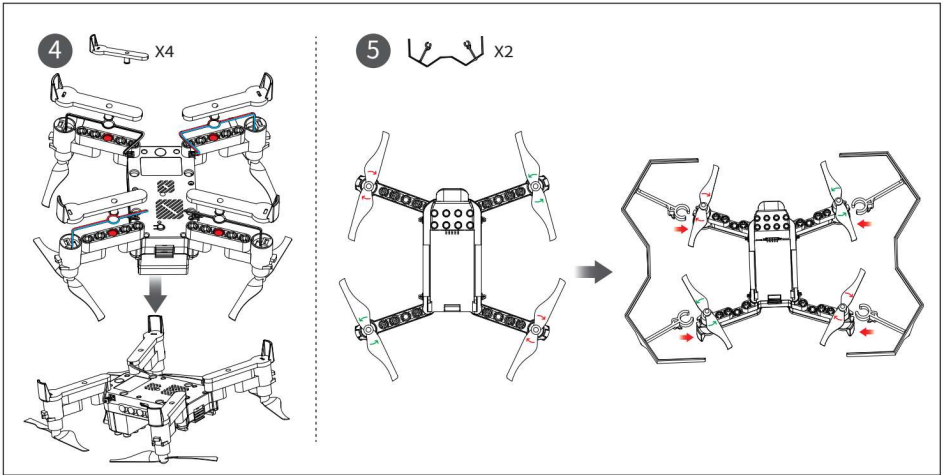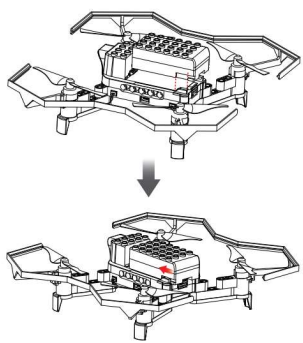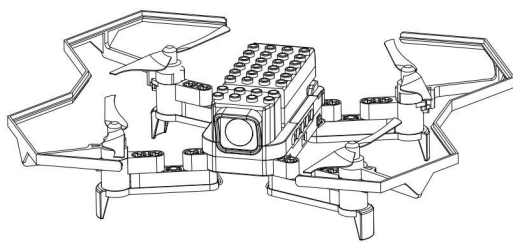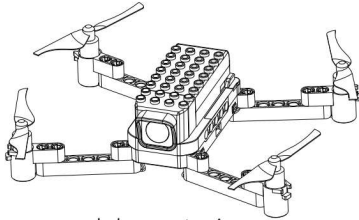
even-hole arm extension
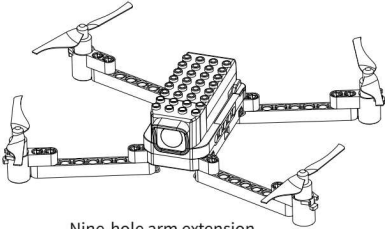
Nine-hole arm extension
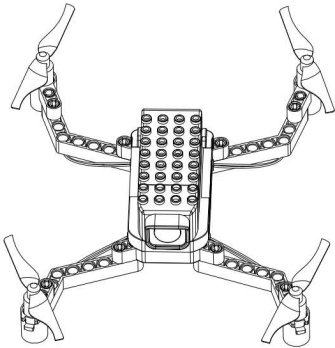
Shaped arm extension
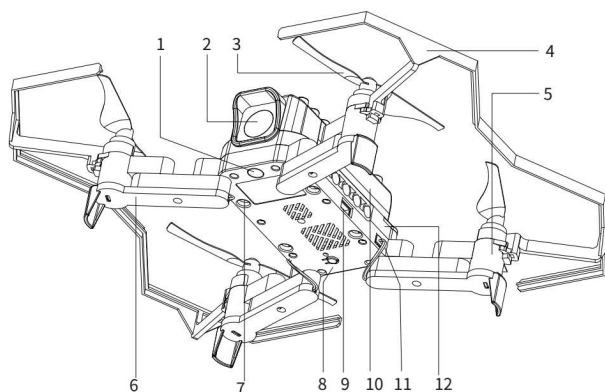
1. Optical flow camera
2. Front camera
3. Propeller
4. Guard ring
5. Brushed motor
6. Take-off stand
7. Expansion module installation
8. Power switch
9. Extended ports
10. Battery
11. Motor ports
12. Antenna

On / Off: Turn on the Litebee Wing by long press the power button for 1 second,turn off by long press the power button for 3 seconds.

L2
L1
L5
3
0
Calibration
360 Degree
Rotation

L3
L4
L6
1
4
2
One key to takeoff
/ landing
Bounce Mode

On/off    USB
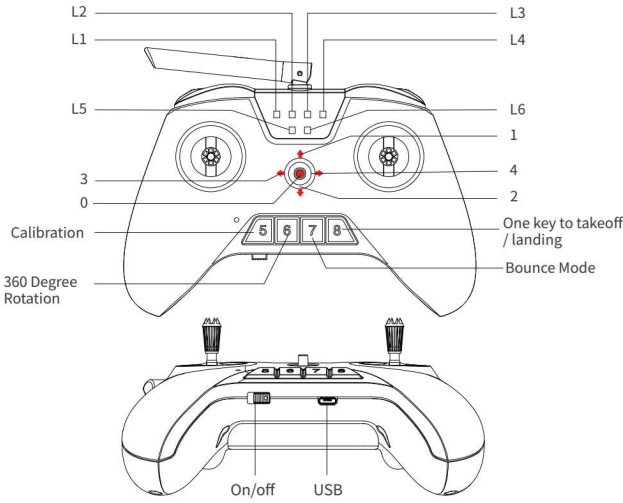
0 : Programming mode switching
1/2 /3/4 : Customized programming
button

| |
|---|
| **L1 Off:** The joystick is Mode2 |
| **L1 Green light flash solid:** The joystick is Mode1 |
| **L2 Off:** Radio transmitter connects with the Litebee Wing normally |
| **L2 Red light flash solid:** The radio transmitter fails to connect with Litebee Wing |
| **L3 Off:** Radio transmitter fails to bind with Litebee Wing |
| **L3 Green light flash solid:** Enter the binding mode |
| **L4 Off:** Radio transmitter operation mode |
| **L4 Green light flash solid:** Programming mode |
| **L5 Off:** Litebee Wing battery is fully charged |
| **L5 Red light flash solid:** Low voltage alarm for Litebee Wing battery |
| **L6 Green light flash solid:** Radio transmitter battery is fully charged |
| **L6 Red light flash solid:** Low voltage alarm for radio transmitter battery |

6

Mode2:



Ascend

Counterclockwise ← → Clockwise

Descend

Forwards

Towards Left ← → Towards Right

Backwards
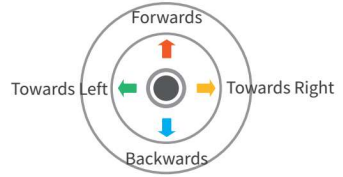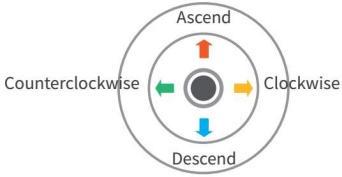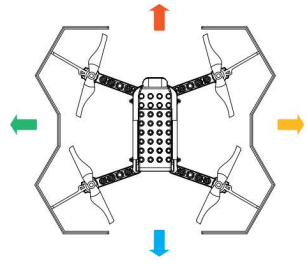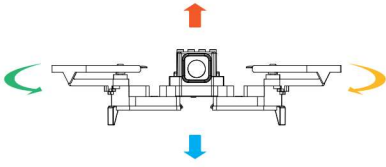
Left stick ○————————●————————○ Right stick

7

# Binding

1. Power on the radio transmitter;
2. Press the key K0 while pushing the right joystick of the radio transmitter to the upper right 45°, then LED3 green light flash solid;
3. Power on the Litebee Wing, binding succeeds when LED3 light is off.

# Flight Controller Indicator Light
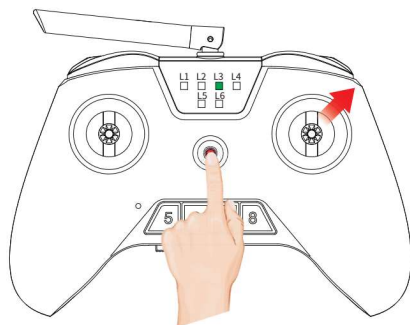
**Green light flash solid:** Ready to takeoff (altitude hold and fixed-point)

**Green light flash slowly:** One-key to take-off / landing (Litebee Wing moving status: fixed-point moving)

**Blue light flash once:** Taking photo

**Blue light flash slowly:** Recode mode (video recording)

**Red light flash slowly:** Fail to connect (fail to connect with radio transmitter or APP, not binding, signal lost)

**Red light flash fast:** Low voltage protection,Litebee Wing land automatically/ battery discharged

**Red light flash solid:** System crash / system failure

**Red light and green light flash alternately:** Sensor abnormal or error (Gyroscope/ optical flow/barometer abnormal)

**Blue light and green light flash alternately:** Gyroscope calibration

**Red light and blue Light flash alternately:** Special flight mode(one key to 360° rotation mode, bounce mode)

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## Aerobatics
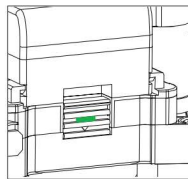
### One-key 360° rotation mode

Press the key "6" for one-key 360° rotation mode,Litebee Wing will rotate 360 ° slowly at the point, then exit the mode automatically.
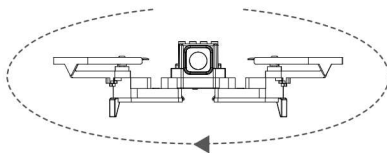
### Bounce Mode

Press the key "7" for bounce mode, Litebee Wing will automatically bounce up and down from 0.5m to 1.5m away from the takeoff plane, press key "7" button again to exit this mode.
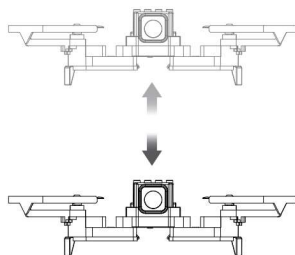
# Charging Operation

Put the battery into the battery holder with the standard micro USB cable, then connect the micro USB interface with the USB charger. For example,the charging time is about 1 hour with one 5V / 2A charger.

❶ Red light flash solid: On charging

❷ Green light flash solid: Charging finished

Connector

Green light

Red light

USB
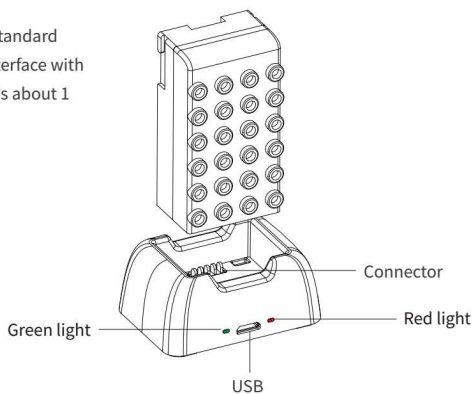
Attention: The USB on the main body and the controller are not chargeable.

Android users can search "LiteBee" in Huawei, Baidu, Tencent and 360 application market, while IOS users can search "LiteBee" in the APP Store and download the application.

Open the software and click "LiteBee Wing" to enter into the operation interface.
The App control is based on WIFI communication, which supports Litebee Wing operating and image transmitting.
Connect WIFI: "LiteBee Wing_XXXX", Password: 12345678.



App requires IOS 9.0 or Android 4.4 and advanced version.

Firmware Version

Aerobatics — Lipo battery power display — WiFi signal display — Taking photo — Connection

Calibration — Operation mode switch

Return — Taking video

Right joystick

Left joystick

Folder          Lock/Unlock          Setting

Set up

Mode1    Mode2

Connection →

Firmware Version

About →

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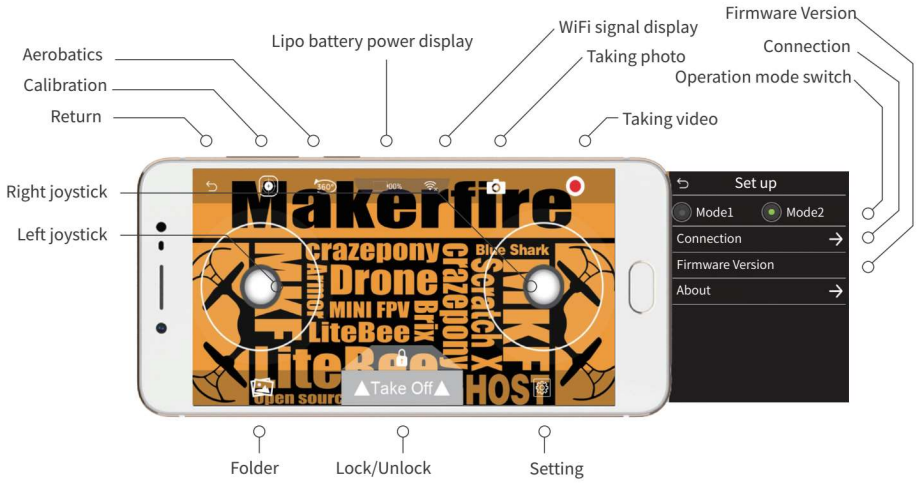
# Programming Functions

More programming guides visit: www.litebee.com or scan the QR code for more information.

Computer Programming: Connect the radio transmitter to the computer with a USB data cable,find the corresponding port on the computer, and then switch the radio transmitter to the programming mode.
Mobile phone programming: Search and connect with WIFI, and enter into the APP programming interface.

# Examples for Expansion Function

In programming mode, the buzzer module and LED light module can work.
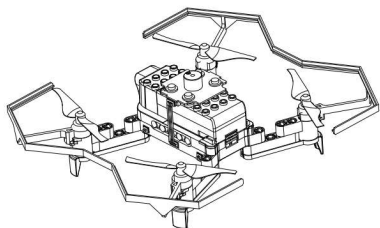
Top installation diagram for expansion module          Bottom installation diagram for expansion module
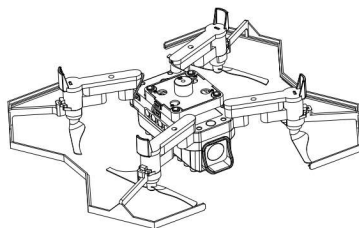
15

RGB(255,23,140): Red, Green, Blue(primary color of light), the numerical value indicates the brightness of the light, the maximum value is 255, means brightness reaches 100%.
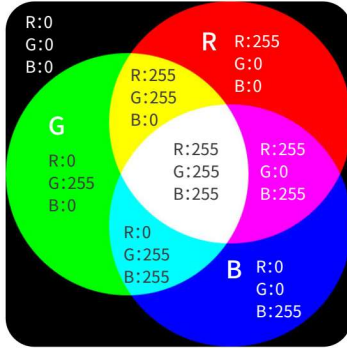
Steps:

1.Start the program by click 🚩 (take 1 second)

2.Calibrate the program by 5 seconds

3.Take off after finished calibration(take 3 seconds)

4.Turn on the first LED to White(last 2 seconds)

5.Turn on all LED to Red(last 2 seconds)

6.Turn on all LED to Green(last 2 seconds)

7.Turn on all LED to Blue(last 2 seconds)

8.Turn off all LED, 2 seconds later, land automatically

```
when 🚩 clicked
wait 1 secs
Calibrate
wait 5 secs
Take off
wait 3 secs
Ext ColorLight all LED set RGB: R 255▾, G 0▾, B 0▾
wait 2 secs
Ext ColorLight all LED set RGB: R 0▾, G 255▾, B 0▾
wait 2 secs
Ext ColorLight all LED set RGB: R 0▾, G 0▾, B 255▾
wait 2 secs
Ext ColorLight all LED set RGB: R 0▾, G 0▾, B 0▾
wait 2 secs
Auto land
```

# Buzzer module
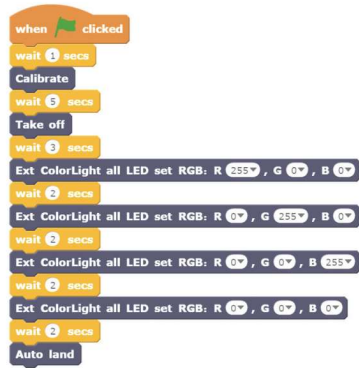
`Ext Buzzer set note: [C3▾] , set meter: [1▾] (0.5s/)`

## Scale and Beat

Scale: CDEFGAB means the scale (S is chromatic scale), pronounced: do, re, mi, fa, sol, la, si; the values(12345678) behind the scales (CDEFGAB) means the size of pitch

Beat: combination rule of strong beats and weak beats, refers to the total length of each note in the score, Such as 1/4, 2/4, 3/4, 4/4, 3/8, 6/8, 7/8, 9/8, 12/8, etc.

Ode to Joy
欢乐颂

# Example

Musical Note: a symbol used to record processing of different length notes. Most common notes: Whole note, half note, quarter note, one eighth note, and one sixteenth note. Musical note consists of three components: Head, Stem and Tail. It is also divided by beats, such as: Whole Note is four beats; Half Note is two beats, etc.

The number: 1, 2, 3, 4, 5, 6, 7 in musical symbols is pronounced: do, re, mi, fa, sol, la, si, Correspondence to: C, D, E, F, G, A, B.

For more details about LED and buzzer modules programming. Pls. feel free to contact us by sales@makerfire.com or visit www.litebee.com.

# Frequently Asked Questions

**Q1: Motor does not work?**
A1:Check if the motor wiring is reliable; Check if the motor wire is disconnected; Whether the propeller is over-pressed and stuck to the motor; Check if there is large resistance by turning the motor by hand. If the motor is damaged, replace the motor in time.

**Q2: Litebee Wing can't fly?**
A2: Check the motor installation; Check the battery voltage. Calibrate the Litebee Wing before flying.

**Q3:LiteBee Go programming can not recognize the radio transmitter?**
A3:Install the radio transmitter driver in LiteBee Go at the first-time use,after finishing the installation,Select the corresponding device ports.

**Q4: How to switch the radio transmitter from Mode2 to Mode1?**
A4:Connect the radio transmitter to the computer via the USB cable, and can download Mode1 program on Litebee Go software.

**Q5: LiteBee Wing's propellers fall off in high frequency?**
A5:Replace with new propeller.

**Q6:How much weight can LiteBee Wing carry?**
A6:Recommended under 10g.

# Disclaimer statement

This product is a multi-rotor drone. We recommend for children over 8 years of age. Children under the age of 8 are required to be accompanied by adults. Please be careful when handling this product in the presence of children.

Please read this document carefully before using this product. This statement has important guidance for your safe use of this product and your legal rights. This product provides an easy flight experience when the power supply is working properly and the components are not damaged. Be sure to know your legal rights, responsibilities, and safety instructions before using this product, and also clear about that use this product may bring property damage, safety accidents and personal safety hazards. By using this product, you are deemed to have read, recognized and accepted all terms and conditions of this statement. The user is committed to being responsible for his non-compliant operations and the consequences thereof; the user undertakes to use the product solely for legitimate purposes and agrees to these terms and any relevant policies or guidelines that may be developed by us. We are not liable for any direct or indirect personal injury or property damage caused by failure to use this product in accordance with the safety guidelines.

> **warning:**
> Not suitable for children under 3 years old, it contains small parts, prevent children from swallowing them by mistake.

Crazepony



LiteBee Pro



LiteBee Brix



Ghost II

FCC Warning
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 inte rference received, including interference that may cause undesired operation.

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

NOTE: 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 interferenceto radio or television 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.
Radiation Exposure Statement
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Makerfire Technology Co.,Ltd.
www.makerfire.com
Email:sales@makerfire.com

LiteBee