

# MOTA®



## **GIGA™-6000 Commercial Drone**

### Owner's Manual

For Owner's Manual updates, warranty information, and support, visit:  
[www.mota.com/giga-6000](http://www.mota.com/giga-6000)

Please read the Owner's Manual before your first flight. It has information critical to safe and efficient operation of your drone.

**Drones are sophisticated precision devices capable of complex aerial maneuvers. Please read these safety instructions before using your drone. Failure to operate your drone safely could degrade its performance and cause harm to people, animals, or property.**

**Please do not fly:**

- Near or around obstacles such as birds or pets, aircraft, helicopters, other drones, antennas or overhead lines, or airborne toys like kites.
- In or near airports or restricted areas.
- In adverse conditions such as strong winds, rain, hail, snow or sleet.
- If you are impaired, tired, or distracted

**Please do:**

- Know and comply with laws and regulations respecting drone use in your area.
- Keep hands away from rotors when drone is switched on.
- Fly within controller range.

**SAVE-A-DRONE: FLIGHT SAFETY** MOTA

**PREFLIGHT YOUR DRONE**  
Verify it's fully charged and the propellers are undamaged. Once you've gotten the hang of flying the drone, aim to graciously tread the sky.

**HEADS UP!**  
Be wary of people and objects nearby to prevent any possibility of contact.

**PROPER HANDLING**  
When operating a drone refrain from getting too close while the propellers are turning.

**CHECK FOR NO FLY ZONES**  
Several locations such as airports limit or prohibit drone operation. Be mindful of your surroundings prior to take-off.

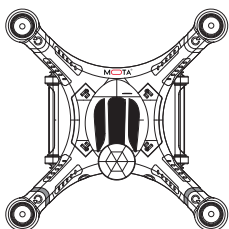


Download your  
SAVE-A-DRONE  
Flight Safety Poster  
@ [www.mota.com/fly-safely](http://www.mota.com/fly-safely)

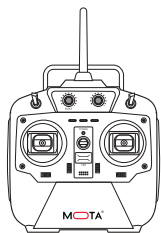
# Table of Contents

<b>In the Box</b>	<b>4</b>
<b>Before First Flight</b>	<b>5</b>
Propeller Attachment	5
LED Status Lights	5
<b>GIGA-6000 Controller</b>	<b>7</b>
Overview	7
Linking the GIGA-6000 with Its Controller	7
<b>GIGA-6000</b>	<b>8</b>
GPS Signal Calibration	8
Motor Unlocking and Locking	8
Flight Modes	8
Manual Flight	9
Auto Hover	9
Flight Direction Assist	9
Altitude Hold	10
Return Home	10
Auto Return Home	11
<b>Battery Alarms</b>	<b>11</b>
Drone Critical Battery Alarm	11
Controller Low-Battery Alarm	11
<b>HD Camera</b>	<b>12</b>
<b>Waterproof Camera Case</b>	<b>12</b>
<b>Monitor</b>	<b>13</b>
<b>Calibration</b>	<b>14</b>
<b>Troubleshooting</b>	<b>14</b>

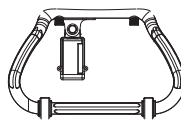
# IN THE BOX



GIGA-6000



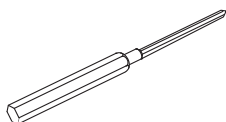
Controller



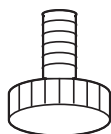
Landing Skid



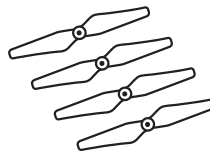
Camera



One Screwdriver



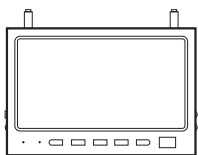
Screws



Propellers

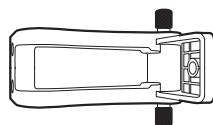


Wrench



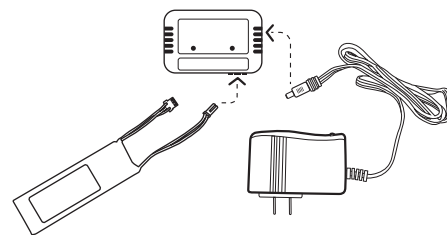
Monitor

+



Holder

Battery Monitor



Battery

AC Adapter

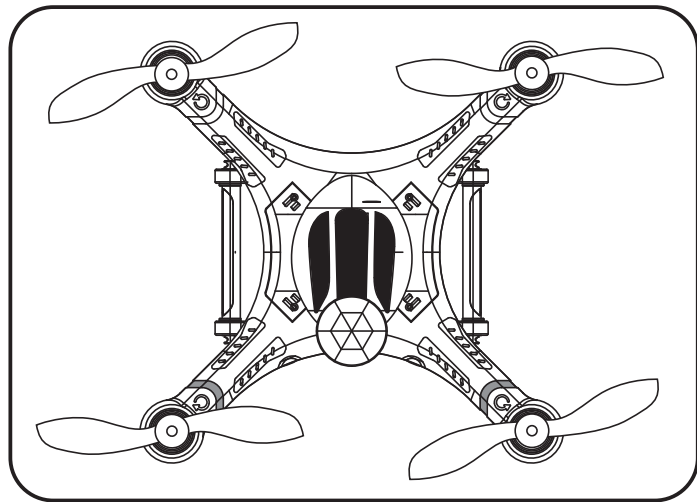
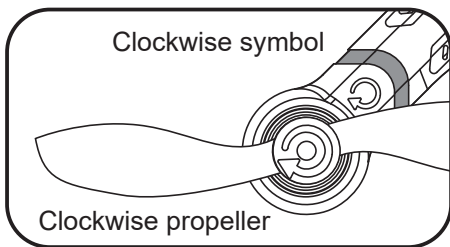
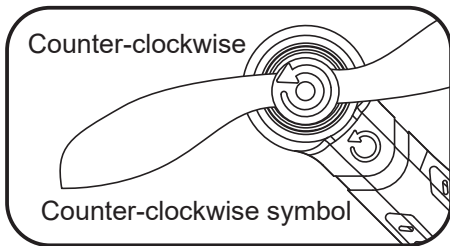
# BEFORE FIRST FLIGHT

## PROPELLER ATTACHMENT

NOTE: Propeller rotation direction matches that of its corresponding motor.

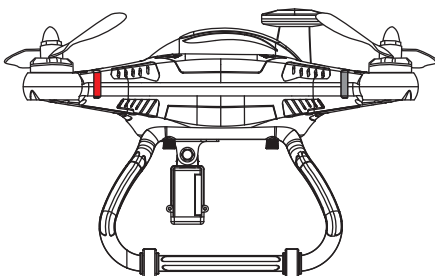
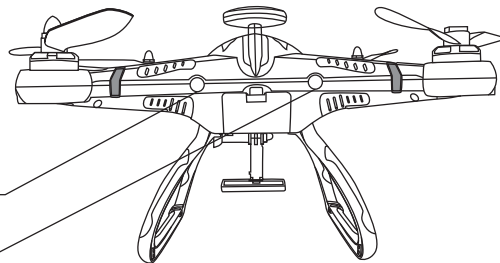
(1) Install clockwise propellers (recognizable by their silver cap) on the clockwise motors (recognizable by the clockwise symbol) by rotating in a *counter-clockwise* direction.

(2) Install counter-clockwise propellers (black cap) on to the counter-clockwise motors (recognizable by the counter-clockwise symbol) by rotating in a *clockwise* direction.



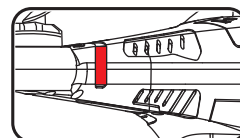
## LED STATUS LIGHTS

Indicator light for the main control board calibration, motor unlocking / lock instructional light (YELLOW light/RED light)  
GPS signal instructional light (GREEN light)

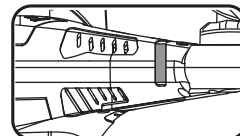


The rear bottom LED (GREEN)

The front bottom LED (RED)



The front bottom LED (RED)



The rear bottom LED (GREEN)

(1) Front indicator light:

- a. The red indicator light illuminates steadily when the motor starts.
- b. The red indicator light blinks and an alarm will sound if battery voltage and / or frequency are outside of specifications. *Should either of these conditions occur do not attempt flight.*

(2) Rear indicator light:

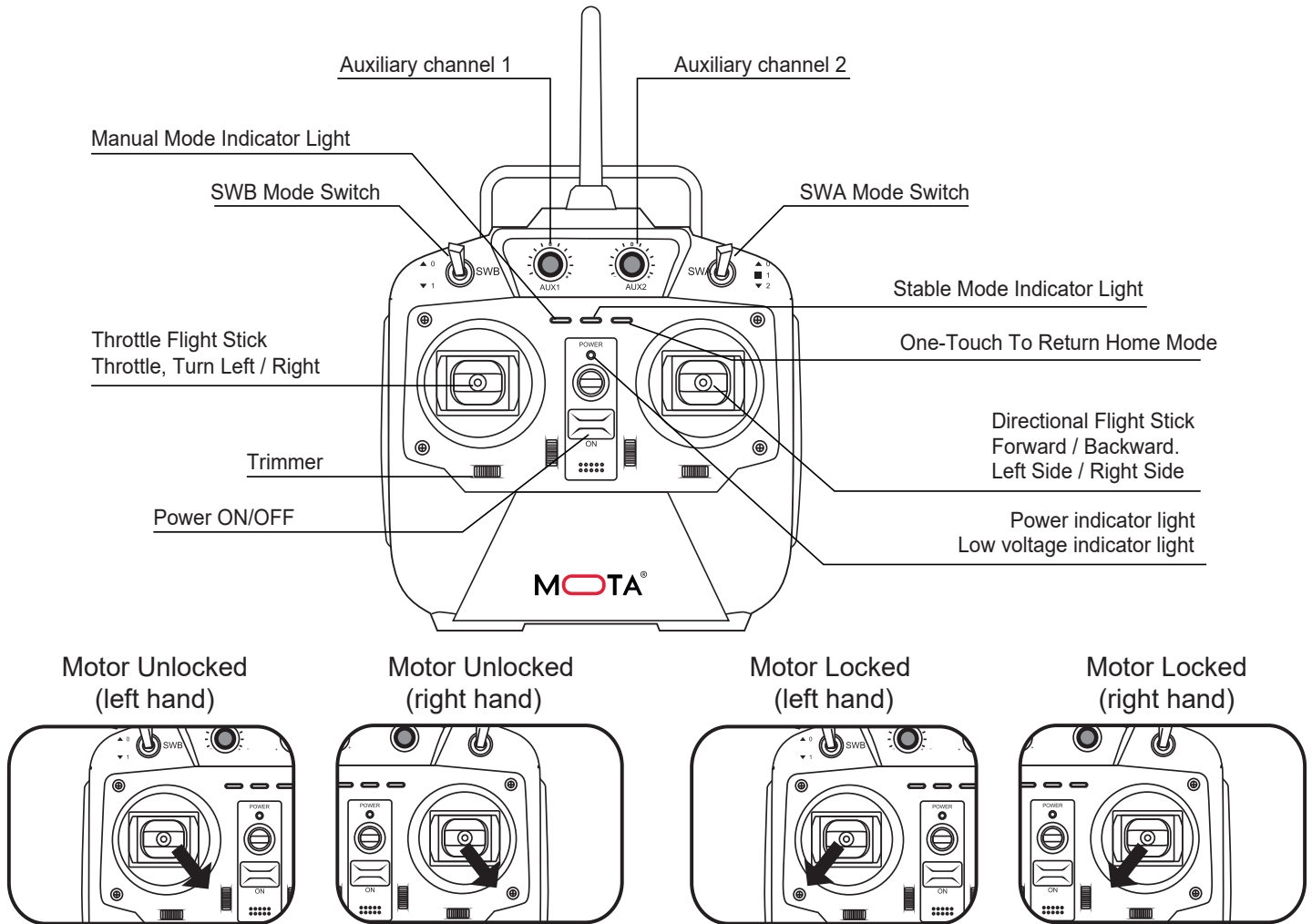
- a. The green indicator light illuminates steadily when the motors start.
- b. The green indicator light blinks and alarm will sound if the frequency is outside of specification. *Should this condition occur do not attempt flight.*

(3) Indicator light for the main control board calibration and motor locking / unlocking indicator light: The yellow and red lights blink alternately as the main control board is calibrated. The red light blinks slowly when the motors are locked and illuminates steadily when the motors are unlocked.

(4) GPS signal indicator light: The green indicator light blinks when there are less than 6 GPS satellites recognized. The green indicator light illuminates steadily when more than 6 GPS satellites are recognized. Allow time for the satellite recognition to reach flight readiness.

NOTE: More than 6 GPS satellites must be recognized in order to use Auto Hover or Return Home modes. (The green indicator light illuminates steadily.)

# GIGA-6000 CONTROLLER



## LINKING THE GIGA-6000 AND ITS CONTROLLER

- (1) Place the drone on a stable level surface. Insert the battery into the battery compartment. The red and green indicator lights will rapidly illuminate alternately. Please do not touch the drone.
- (2) Close the battery compartment cover once the red and green indicator lights alternately blink slowly.
- (3) Pull the **Throttle Flight Stick** to the lowest position.
- (4) Set the **SWA** and **SWB** switches at the **0** position.
- (5) Switch **ON** the controller.
- (6) Wait for the controller to stop beeping.
- (7) Pull and hold the **Throttle Flight Stick** and **Directional Flight Stick** to the bottom right position until you see the red rear indicator light turn solid red.

## GPS SIGNAL CALIBRATION

(1) Before first flight please allow about 2 minutes for the LED light to illuminate steady, indicating the GPS signal is within specification.

## MOTOR UNLOCKING AND LOCKING

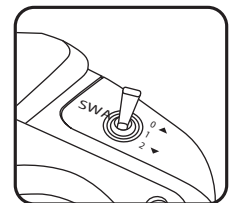
(1) Motor Locking: Once the drone and controller are linked, pull down **Throttle Flight Stick** to the *bottom left* position. When the red light blinks, the motors are locked. The drone is now ready for flight.

(2) Motor Unlocking: Once the drone and controller are linked, pull down the **Throttle Flight Stick** to the *bottom right* position. When the red light illuminates steadily, the motors are unlocked.

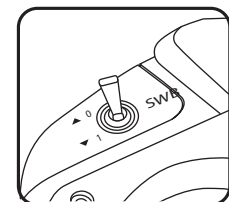
## FLIGHT MODES

	Mode	SWA Switch	SWB Switch
1.	Manual Flight	0	0
2.	Auto Hover	1	0
3.	Flight Direction Assist	1	1
4.	Altitude Hold	2	1
5.	Return Home	2	0
6.	Auto Return Home	n/a	n/a

SWA Mode ON/OFF



SWB Mode ON/OFF





**Take-off requires the drone be in Manual Flight mode.**

**We recommend novice pilots use only the Manual Flight, Auto Hover, and Return Home modes until they have gained experience.**

**Do not use GPS-dependent flight modes (Auto Hover and Return Home) indoors.**

**Manual Flight:** Set the **SWA** and **SWB** switches at **0**.

(1) Once the motors unlock, push the **Throttle Flight Stick** forward to begin take-off.

Move the **Directional Flight Stick** to fly forward / backward, up / down, left /right, and left rotate / right rotate.

(2) **Auto Hover:** After take-off in Manual Flight mode, once you have reached a desired hover point, set the **SWA** switch at **1**, the **SWB** switch at **0**, and center the **Throttle Flight Stick** in the middle position. The controller will confirm the **Throttle Flight Stick** is centered by beeping three times.

As long as the **Throttle Flight Stick** is centered, the drone will maintain its altitude and position.

NOTES:

1. Auto Hover requires the GPS signal being within specification with the GPS signal indicator light illuminated steadily.

The drone's position may vary depending on factors such as wind and weather.

(3) **Flight Direction Assist:** While in flight, set the **SWA** and **SWB** switches at **1**. The drone will rotate toward the direction it faced when the motors were unlocked.

Flight Direction Assist maintains the drone's body in a fixed orientation relative to your controls. As an example, if your drone is facing south on take-off and you

are behind it, pushing the **Directional Flight Stick** forward will send it south.

Flight Direction Assist can be used to bring your drone closer should it be too far away to determine direction of flight.

*Caution: Flight Direction Assist is not recommended for novice pilots. Please do not use this mode if you are not yet an experienced pilot.*

**Warning: Do not fly your drone beyond line of sight unless permitted in your jurisdiction.**

(4) **Altitude Hold:** After take-off in Manual Flight mode, set the **SWA** switch at **2** and the **SWB** switch at **1**, and then use the **Throttle Flight Stick** to attain the desired altitude. Center the **Throttle Flight Stick** in the middle position. The controller will confirm the **Throttle Flight Stick** is centered by beeping three times.

The drone will maintain its altitude during Manual Flight.

NOTE: The drone's position may vary depending on factors such as wind and weather.

(5) **Return Home:** Switch into Auto Hover mode, then set the **SWA** switch at **2** and the **SWB** switch at **0**. The drone will return to the point of take-off.

If the return point is higher than 15 meters / 50 feet above ground level, the drone will return maintaining its current altitude. If the return point is lower than 15 meters, the drone will ascend to a 15-meter height and then return.

NOTES:

A. Return Home requires the GPS signal being within specification and with GPS signal indicator light illuminated steadily.

B. If possible, rotate the front of drone toward the direction of the take-off point before initiating Return Home.

C. After landing, the drone's motors will automatically lock. If you wish to restart the motors, set the **SWA** switch at **0** before unlocking.

(6) **Auto Return Home:** If the drone is flown beyond controller signal range, it will automatically switch into the Auto Return Home mode return to the point of take-off and autoland.

While in Auto Return Home mode, if the drone reaches a point where it can be piloted in Manual Flight mode, you may cancel Auto Return Home.

### Cancel Auto Return Home:

If the <b>SWA</b> switch is set at <b>0</b>	If the <b>SWA</b> switch to <b>1</b> set at <b>0</b> .
If the <b>SWA</b> switch is set at <b>1</b> or <b>2</b>	If the <b>SWA</b> switch to <b>0</b> , and then to <b>1</b> , and then back to <b>0</b> .

## BATTERY ALARMS

### DRONE CRITICAL BATTERY ALARM

The drone will enter Critical Battery Alarm mode if battery voltage drops below specification. The alarm will beep repeatedly and the front-bottom and back-bottom indicators will flash.

**Warning: If the drone has entered Critical Battery Level Alarm mode you will generally have between 1-to-2 minutes of flight time left.\***

*IMMEDIATELY fly the drone to a safe area and land.*

\*Flight time depends on battery status and condition, flight conditions and drone operation.

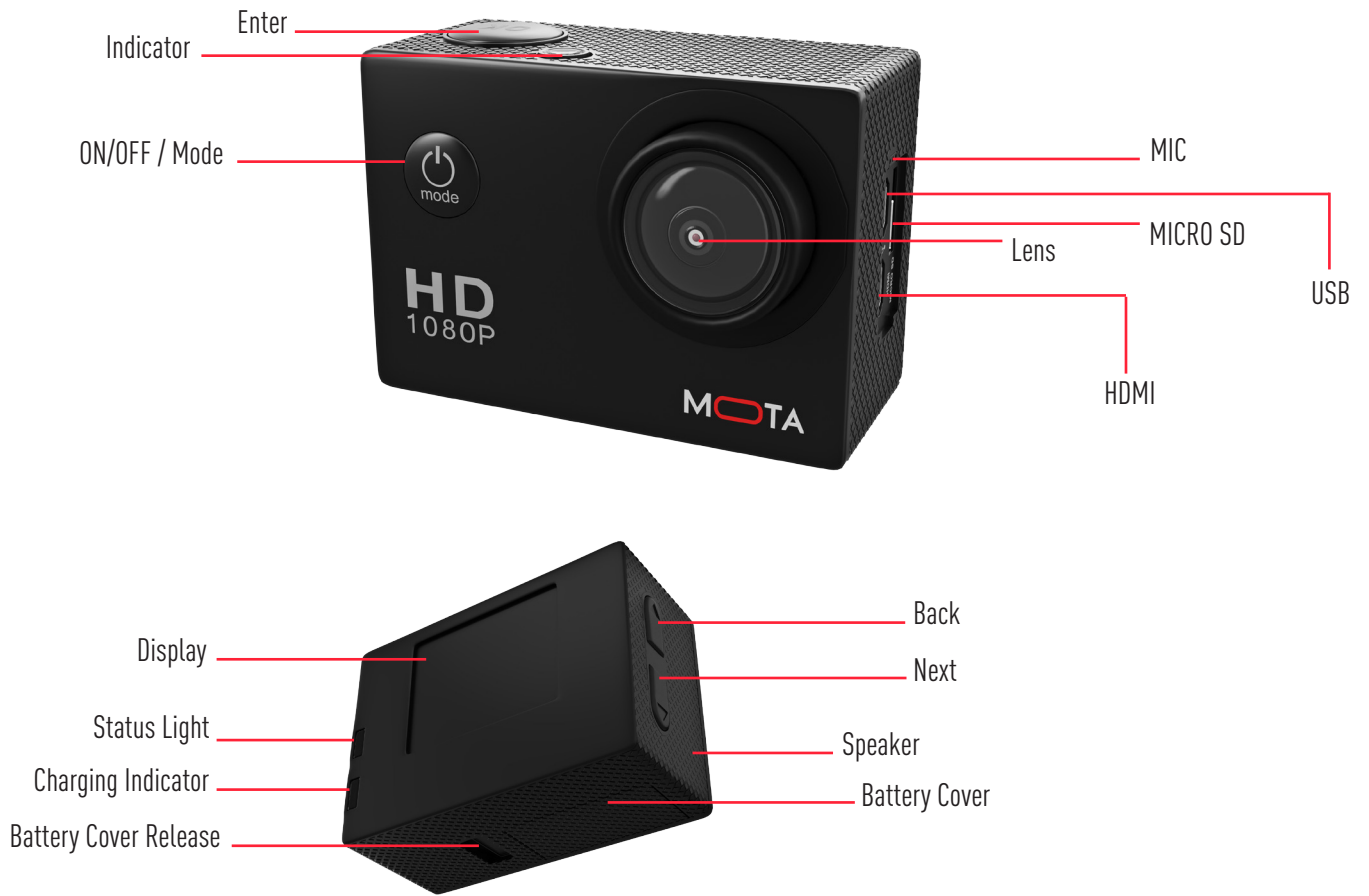
### CONTROLLER LOW-BATTERY ALARM

The Controller will enter Controller Low-Battery Alarm mode if its battery voltage drops below specifications. The alarm will beep repeatedly and the Controller's Power Indicator will flash slowly.

**Warning: The drone may be at risk of losing the Controller's signal.**

*Replace the Controller's batteries immediately.*

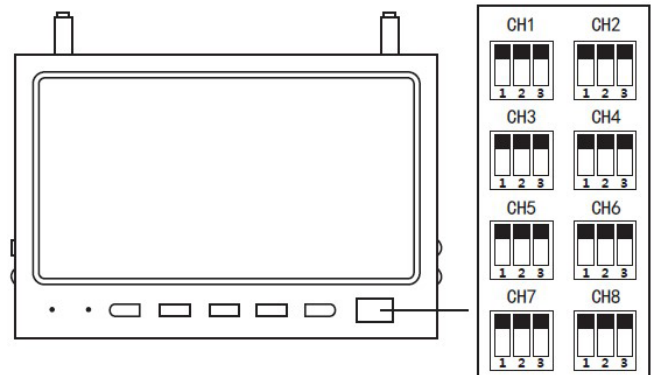
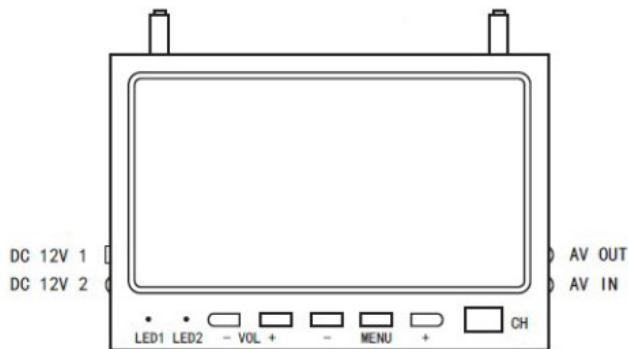
# HD CAMERA



# WATERPROOF CAMERA CASE



# MONITOR



## Frequency List

A	B	E	F
CH1 : 5865MHz	CH1 : 5733MHz	CH1 : 5705MHz	CH1 : 5740MHz
CH2 : 5845MHz	CH2 : 5752MHz	CH2 : 5685MHz	CH2 : 5760MHz
CH3 : 5825MHz	CH3 : 5771MHz	CH3 : 5665MHz	CH3 : 5780MHz
CH4 : 5805MHz	CH4 : 5790MHz	CH4 : 5645MHz	CH4 : 5800MHz
CH5 : 5785MHz	CH5 : 5809MHz	CH5 : 5885MHz	CH5 : 5820MHz
CH6 : 5765MHz	CH6 : 5828MHz	CH6 : 5905MHz	CH6 : 5840MHz
CH7 : 5745MHz	CH7 : 5847MHz	CH7 : 5925MHz	CH7 : 5860MHz
CH8 : 5725MHz	CH8 : 5866MHz	CH8 : 5945MHz	CH8 : 5860MHz

1. Connect the Monitor to the Controller if necessary and insert the Monitor's battery (DC 12V1 or DC 12V2).

2. Turn on the HD camera and set the camera to the "TV out" to on. Now you should be able to see the live feed on the screen. (please note that the frequency switches on the wireless antenna must match the switches on the screen).

## 3. Buttons

**VOL-** Decrease Volume  
**VOL+** Increase Volume

Menu Selection:  
 Brightness - Contrast - Chroma

**-Decrease**  
**+Increase**

# CALIBRATION

If the drone flies unsteadily, it may need to be recalibrated. Calibrate the drone as follows:

(1) Move the **Throttle Flight Stick** to bottom left. Wait for the red light and green lights to blink alternately, indicating the motors are locked.

(2) Pull the **Throttle Flight Stick** to the bottom right until the rear red and yellow lights blink alternately, then throttle up gently to obtain take off and hover the drone for more than 20 seconds; then, land and lock the drone again. The drone should now be calibrated and fly steadily after the next unlock.

# TROUBLESHOOTING

PROBLEM	SOLUTION
Drone flies in a circle in Auto Hover.	1) Bad GPS signal. Move to a flight location with greater open space and / or calibrate the compass. 2) Fly 3-5 minutes in Manual Flight mode; the GPS signal will be obtained automatically.
Motor(s) does / do not work.	1) <b>SWA</b> switch is not set to <b>0</b> . 2) Low battery voltage; change the battery.
Drone does not take-off.	Make sure propellers are correctly attached.
Return Home mode not accurate.	Bad GPS signal. Move to a flight location with greater open space and / or calibrate the compass.
Drone cannot hover.	Recalibrate your drone.