

F200W SHADOW

BRUSHLESS DRONE WITH GPS & WIFI

USER MANUAL



FOR MORE INFORMATION

Visit us online at force1rc.com for product information, replacement parts, and flight tutorials.

**ATTENTION:
PLEASE WATCH THIS
FLIGHT INSTRUCTION
VIDEO BEFORE
FLYING YOUR DRONE.**



<https://youtu.be/tk3qzsUwoWs>



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WELCOME!

Welcome to the Force 1 RC Team, and thank you for your Force1 drone purchase. Please read this manual carefully before drone operation.

- (1) This drone is not a toy! It's a pro-level drone suitable for experienced RC drone users aged 14 years and older. You accept all liability for operation.
- (2) This drone does not require FAA registration or permitting, but FAA rules still apply. Please download the B4UFLY mobile app for the most up-to-date zoning info, and heed all local government ordinances.
- (3) The flying field must be legally approved by your local government.

Any questions? We'd love to hear from you! Please contact us at support@force1rc.com any time and we'll be happy to help.

***Please use only original Force1 parts and accessories.**

***Please keep the packaging and this user manual for future reference.**

SAFETY PRECAUTIONS

This drone is suitable for experienced RC drone operators aged 14 years and older. It contains small parts, and should be kept out of reach of small children.

Please follow these safety procedures:

(1) Flight Zone

This drone does not require FAA registration or permitting, but FAA rules still apply. Please download the B4UFLY mobile app for the most up-to-date zoning info, and heed all local government ordinances.

(2) Avoid Moisture

Humidity and water can damage your drone, which in turn may cause accidents.

(3) Fly Safely

Please operate your drone as your skill level allows. User fatigue, impairment and improper operation can cause accidents.

(4) Avoid Moving Parts & Hot Motors

Do not touch propellers, motors or other moving parts while your drone is on.

(5) Avoid Heat

Keep your drone away from heat and prolonged exposure to direct sunlight to avoid damage.

LI-PO BATTERY CARE

Avoid Overheating

Your batteries will sometimes be warm/hot to the touch after use. This is normal, but beware that battery components will fail if not allowed to cool down between uses. Also, do not leave batteries exposed to direct sunlight.

Store Properly

Store batteries at room temperature, between 5C°/40°F and 27°C/80°F.

Use Carefully

- Leave time between charging and using the battery
- To extend the lifetime of the battery time your flights to leave about 20% power remaining in the batteries (rather than completely draining them)
- If the battery is pushed beyond its limits, the battery could get hot and the performance will drop
- When using the battery for a long time, the battery will increase in temperature. If it is sealed, the air inside will inflate rapidly causing further heating

Charging

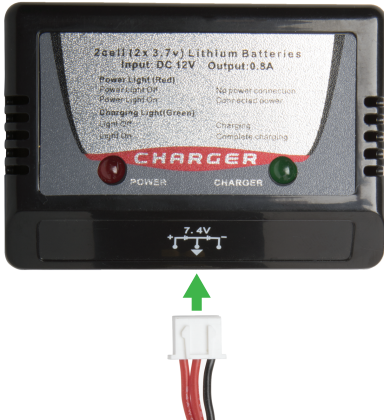
- DO NOT overcharge the battery; never charge batteries unattended, and stop charging as soon as your batteries indicate they are charged
- DO NOT attempt to charge batteries that appear damaged in any way (cracking, swelling, discoloration, etc.)
- If you feel a battery isn't charging properly, try using another charger if possible. If you find your battery or charger is defective, please visit force1rc.com for a replacement, or email us at support@force1rc.com
- To inspect a battery, remove it from the device and examine the battery, battery pins and contacts. If you notice damage, please visit force1rc.com for a replacement, or email us at support@force1rc.com
- Check your battery and connections after every crash
- Please use genuine factory parts and replacements from force1rc.com

WARNING:
DO NOT LEAVE BATTERY
CHARGING UNSUPERVISED

DRONE BATTERY CHARGING INSTRUCTIONS

Follow the steps below to charge your battery (failure to follow instructions precisely may result in damage to your battery charger):

1. Connect the charger plug to the charger.
2. Plug in the charger.
3. **Carefully connect the battery cable to the charger as shown below.**



4. Charger indicator light will turn green when charge is complete.

NOTE: DO NOT plug the battery cable into the battery charger upside down. This will render the charger inoperable.



LI-PO BATTERY DISPOSAL & RECYCLING

Do not put lithium-polymer batteries in household trash. Please contact your local waste management agency or LI-PO battery recycling center for more info.



BOX CONTENTS



DRONE WITH CAMERA



TRANSMITTER



7.4V 1800MAH LIPO BATTERY (2)



PROPELLERS (4)



PHONE CLIP



DRONE TOOLS



BALANCE CHARGER

DRONE OVERVIEW

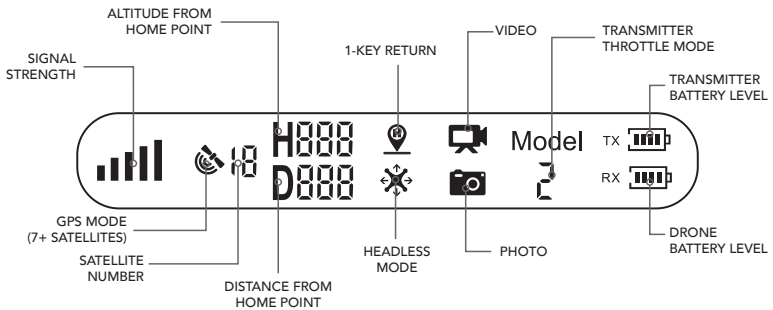


TRANSMITTER OVERVIEW



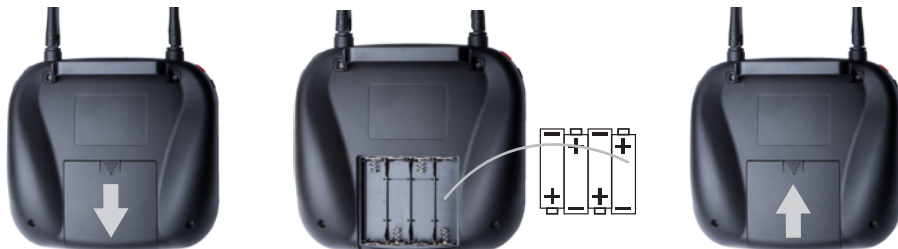
*APPLICABLE WHEN A MEMORY CARD IS INSERTED. IF THERE IS NO MEMORY CARD, PHOTOS AND VIDEOS CAN BE TAKEN AND SAVED WITH THE F200W APP.

LCD SCREEN



TRANSMITTER BATTERY INSTALLATION

Open the battery cover and insert 4 AA batteries as shown below.



CAUTION:

- The transmitter needs 4 AA batteries to work
- Insert batteries in correct polarity (+) and (-)
- Don't mix old and new batteries
- Don't mix alkaline, standard (carbon-zinc) and rechargeable (nickel-cadmium) batteries
- Remove rechargeable batteries before charging
- Only charge batteries under adult supervision
- Remove spent batteries from the transmitter
- Regularly inspect the charging cable, cord, plug, enclose and other parts; if you notice damage, please visit Force1rc.com for a replacement, or email us at support@force1rc.com

TRANSMITTER CHANNEL SELECTION

Your transmitter (remote controller) uses 5G Wi-Fi and works on channels 36 (5180 MHz) and 149 (5745 MHz), both of which are available in the United States. The factory default setting is channel 36.

Channel Selection

- Press and hold the bottom-right corner button until the transmitter beeps twice (Fig. 1)
- This indicates a switch between channels 36 and 149

NOTE

- You should see no difference in operation, as both channels work in the U.S.
- If you are outside the U.S., contact support@force1rc.com for more detailed frequency info



FIGURE 1

TRANSMITTER SIGNAL CONNECTION

Press and hold the top-left red button and then power on the transmitter (Fig. 2). It will beep twice, and the indicator light will flash as the transmitter establishes a GPS satellite signal. Flashing will stop when a signal is found.



FIGURE 2

CAUTION:

Keep the transmitter steady during this process, or it may result in signal connection failure.

THROTTLE MODE SELECTION

Your transmitter allows for left or right-hand throttle in a total of 4 different modes, depending on your preference.

To change the throttle mode press and hold the top-right button for 3 seconds (Fig. 3). The mode number is shown on the LCD screen (Fig. 4). Keep pressing to cycle through modes, but note: Mode 2 is the default.

NOTE

Mode selection must occur when your transmitter is in signal connection and the transmitter light is blinking.



FIGURE 3

4 MODES

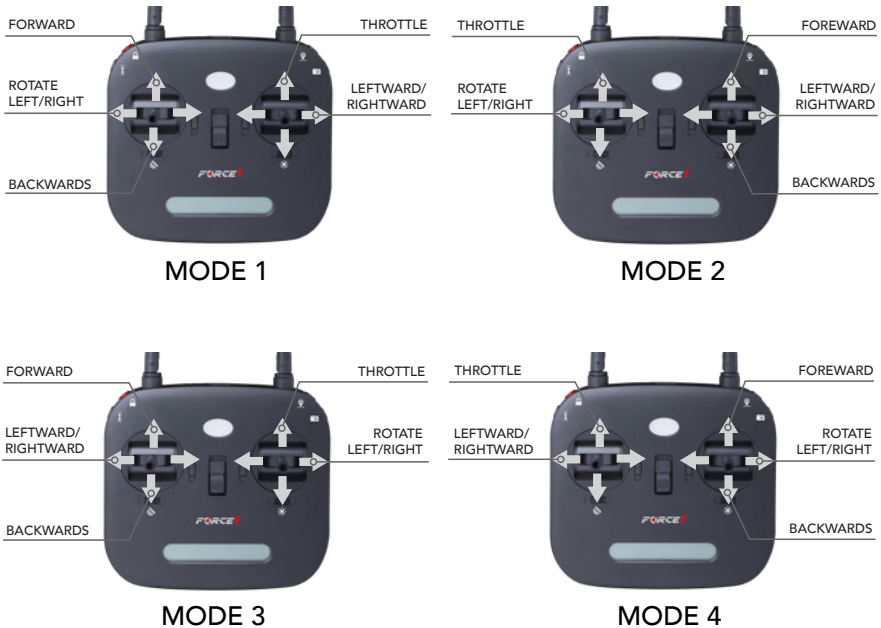


FIGURE 4

DRONE ASSEMBLY

BATTERY INSTALLATION

Insert the battery into the battery compartment until you hear a click. Turn the lock button on the bottom 90° to the "lock position."



SLIDE BATTERY IN COMPARTMENT



LOCK COMPARTMENT

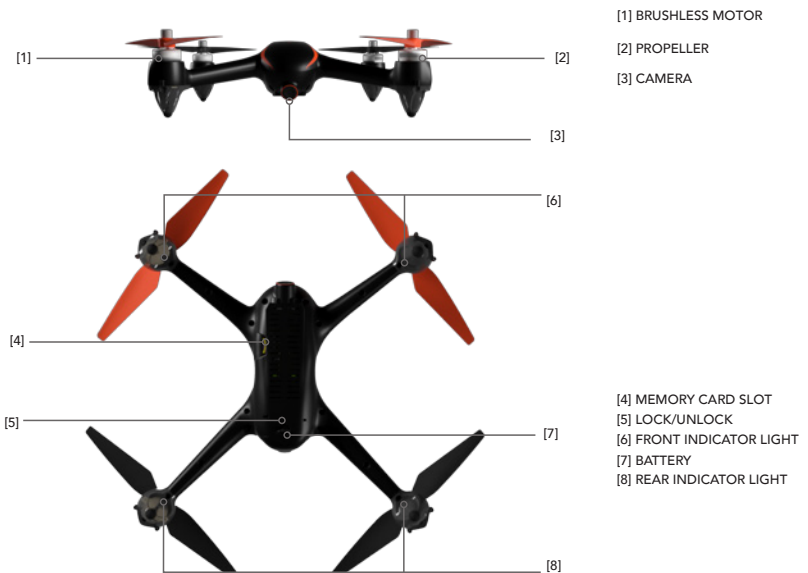
CAUTION:

Install the battery firmly; failure to do so may affect flight safety.

BATTERY REMOVAL

Turn the lock button counterclockwise 90° to the "unlock position." Use your thumb to press down the tab and remove the battery. NOTE: Battery removal is the ONLY WAY to power off the drone.

DRONE OVERVIEW



DRONE ASSEMBLY

PROPELLER INSTALLATION/REMOVAL

PROPELLER A INSTALLATION

Place propeller A on the corresponding motor shaft (Fig. 5). The side marked A should be facing upwards. Fix the rotor propellers by rotating them as per the "lock direction shown on the propellers." Place the rubber ring into the center bore of the propeller, then tighten the screws counterclockwise. Propeller A screws have a dot on top.

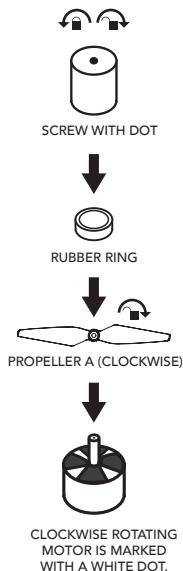
PROPELLER B INSTALLATION

Place propeller B on the corresponding motor shaft (Fig. 5). The side marked B should be facing upwards. Fix the rotor propellers by rotating them as per the "lock direction shown on the propellers." Place the rubber ring into the center bore of the propeller, then tighten the screws clockwise. Propeller B screws do not contain a dot on the top.

REMOVAL

Hold the brushless motor and unscrew the A screws clockwise and the B screws counterclockwise. Then rotate and remove the propellers as per the "unlock" direction shown on the propellers.

PROPELLER A REMOVAL



PROPELLER B REMOVAL

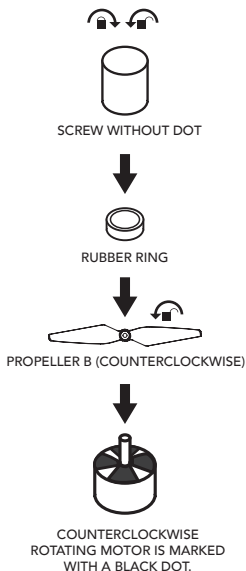


FIGURE 5

CAUTION:

- Please be sure to install the correct propellers (matching A and B)
- Be careful with propellers, as they can be sharp
- Purchase extra propellers at force1rc.com

CALIBRATION

TRANSMITTER CALIBRATION

1. Turn on the transmitter.
2. Push the Calibration button and hold for 3 seconds (Fig. 6).
3. Transmitter will beep 3 times, and the indicator light will start flashing slowly.
4. Rotate control sticks in any direction for 2 full rotations (Fig. 7).
5. Push the Calibration button and hold again for 3 seconds.
6. Transmitter will beep 3 times, and the indicator light will start flashing faster indicating calibration completion.

NOTE

Your transmitter is calibrated when manufactured, but may be required after a crash or notice of improper operation.




FIGURE 6



FIGURE 7

PAIRING WITH DRONE

When the transmitter is in signal connection status, power on the drone by inserting the battery. The transmitter will emit a single beep sound, and the signal icon  will appear on the LCD screen. This means that the drone has successfully linked to the transmitter.

GYROSCOPE CALIBRATION

Set the drone on a horizontal surface. Push down both of the control sticks to the lower left corner (Fig. 8). When the front and rear lights are both green and flashing rapidly, it means that the gyroscope is under calibration. When the lights turn solid, the calibration is successful.

NOTE

- All drone gyroscopes have been calibrated when manufactured
- Gyroscope calibration is required if pilots find the drone cannot exit the aircraft initialization detection procedure
- Do not power on the drone when calibrating the transmitter



FIGURE 8

DRONE INITIATION

After signal connection, the drone enters Initialization Detection Mode, and the front and rear lights flash red, light green and green. Make sure the drone is on a flat, still surface for this; it takes about 8 seconds. Once the front and rear lights glow light green and flash, initialization detection is done and the drone enters compass calibration.

DRONE COMPASS CALIBRATION

Drone compass calibration should be done before every flight, after every battery change and after every successful initialization detection.

HORIZONTAL CALIBRATION

When the drone's front and rear lights flash light green, hold the drone upright and rotate it 360° 3 times along the central axis (Fig. 9). The flashing lights will change from light green to green.

VERTICAL CALIBRATION

Hold the drone with its camera facing down and rotate it 360° along its central axis 3 times until the front light and rear light of the aircraft stop flashing and stay on (Fig. 10).

Now compass calibration is successful.



FIGURE 9



FIGURE 10

NOTE

- To fly in GPS mode, choose an open flight area and make sure the satellite number is 7+
- Don't calibrate the compass in strong magnetic areas like parking lots or construction areas
- Don't carry magnetic materials with you like key fobs and cellphones

2 WAYS TO LOCK/UNLOCK YOUR DRONE

UNLOCK

1. Press the red button; the motors rotate and the drone is unlocked (Fig. 6).
2. Push the left stick to the lower-right corner and the right stick to the lower-left corner at the same time (Fig. 11).

LOCK

3. Pull the throttle control stick to the bottom position, then press and hold the red button (Fig. 6) for 3 seconds. The motor will stop immediately and the drone will lock.
4. After the drone lands on the ground, pull down the throttle control stick to the bottom position and hold for 3 seconds. The motor will stop immediately and the drone will lock.



FIGURE 11

PREFLIGHT CHECKLIST

1. Fly in an open area and abide by all local and federal guidelines. Check the FAA's B4UFLY mobile app for up-to-date drone flight info.
2. Make sure your drone and transmitter batteries are fully charged.
3. Put the left stick of the transmitter in the middle position.
4. Follow power off/on instructions closely. Always turn ON your transmitter first before flying, and turn OFF the drone first when you're finished.
5. Make sure the connection is solid between your battery and motor; vibration may cause loosening.
6. Make sure the propellers are installed correctly and the motors are working normally after unlocking.

BASIC FLIGHT CONTROLS

HOVER UP AND DOWN

Push the THROTTLE/RUDDER STICK up to fly the drone up, and pull the THROTTLE/RUDDER STICK down to fly the drone down.



FLY FORWARD OR BACKWARD

Push the DIRECTION CONTROL STICK up to fly the drone forward, and pull the DIRECTION CONTROL STICK down to fly the drone backward.



FLY LEFT OR RIGHT

Move the DIRECTION CONTROL STICK to the left to fly the drone to the left, and move the DIRECTION CONTROL STICK to the right to fly the drone to the right.



ROTATE LEFT OR RIGHT

Move the THROTTLE/RUDDER STICK to the left to rotate the drone to the left, and move the THROTTLE/RUDDER STICK to the right to rotate the drone to the right.



FUNCTIONS

ONE-KEY TAKEOFF / LANDING

- After the drone is unlocked, press the one-key button (Fig. 12). The drone will automatically take off and hover at an altitude of around 5 feet
- When the drone is flying, press the one-key button; drone will automatically land



FIGURE 12

GESTURE MODE

To activate Gesture Mode, slide the Gesture/GPS button to position A (Fig. 13). In Gesture Mode, the drone uses its barometer to maintain altitude rather than GPS. It cannot fly with precise positioning and hovering. Gesture Mode requires a skilled pilot.



FIGURE 13

GPS MODE

In GPS mode, the drone can precisely position and hover using the GPS module. To activate GPS mode, slide the Gesture/GPS button to position B (Fig. 13).

HEADLESS MODE

Headless Mode allows you to fly your drone without knowing its orientation. Slide the Headless Mode button to position B. When the drone is in Headless Mode, push the right stick forward/backward/left/right and the drone will fly accordingly.

Prerequisite: Position the drone in such a way that its front is your front (Fig. 14).

TIP: Do not change the orientation of the transmitter (Fig. 15) after entering Headless Mode.



FIGURE 14



FIGURE 15

FUNCTIONS

RETURN TO HOME (RTH)

The Return-to-Home function brings your drone back to the last recorded home point.

A GPS signal of 7+ must be available for the drone to record its home point (Fig. 16).

There are three RTH functions: Smart RTH, Failsafe RTH and Low-Battery RTH.

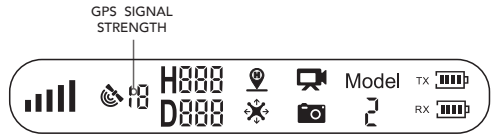


FIGURE 16

SMART RTH

If you have a 7+ GPS signal and your home point is recorded, press the RTH button (Fig. 17) and the drone will return to the previously recorded home point. During Smart RTH, you can use the transmitter to guide the drone around obstacles. Press the button again to exit RTH and regain drone control.



FIGURE 17


FAILSAFE RTH


If you have a 7+ GPS signal and your home point is recorded, Failsafe RTH is triggered when the transmitter signal is lost for more than 6 seconds. The drone will automatically return to the previously recorded home point. Press the button again to exit RTH and regain drone control if you regain the signal.

NOTE

- Your drone will not avoid obstacles during Failsafe RTH
- The drone cannot return if the GPS signal is weak (less than 7+ GPS signal)
- Your drone will land slowly if there is no GPS signal and the transmitter signal is lost for more than 6 seconds

LOW-BATTERY RTH

Your drone will return automatically if it detects a low battery while flying at an altitude of 100+ meters or at a distance of 300+ meters when you see this battery icon: . Your drone's lights will also slowly flash red.

Similarly, your drone will return automatically if it detects a low battery while flying at an altitude of 15+ meters or at a distance of 15+ meters when you see this battery icon: . Your drone's lights will also slowly flash red.

NOTE

You can't regain control of your drone in Low-Battery RTH Mode.

FUNCTIONS

PHOTO / VIDEO

- Press the photo/video button on the top right of the transmitter to take a photo (Fig. 18). The camera icon on the LCD screen will flash once indicating that a photo has been taken
- Press and hold the photo/video button to start recording video. The video icon on the LCD screen will flash slowly, indicating that a video is being recorded. Press the button again to stop recording



FIGURE 18

NOTE

If there is no memory card inserted into the drone camera, photos and videos can only be taken using the F200W app (see page 19).

LOW BATTERY WARNING

- The battery is nearing low voltage when the battery icon in Figure 19 appears on the LCD screen and the rear lights of the drone flash slowly (the front lights remain the same)
- Low voltage is indicated by the battery icon in Figure 20, and the rear lights of the drone flash rapidly (the front lights remain the same)

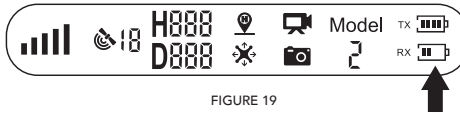


FIGURE 19

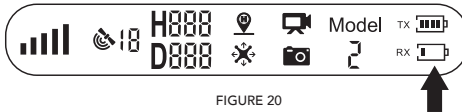


FIGURE 20



GETTING TO KNOW YOUR APP

1. DOWNLOAD AND INSTALL THE FORCE1-F200W APP

The Force1-F200W app is what you will use to enjoy first-person view (FPV) control and photo/video capture via your mobile device while flying your F200W Shadow drone. The app is compatible with iOS and Android phones. To download the app from the App Store or Google Play:

1. Scan the QR code on the product box or below, OR
2. For iOS phones: Search for the Force1-F200W app in the App Store;
3. For Android phones: Search for the Force1-F200W app in Google Play.

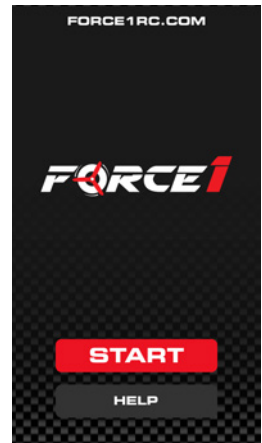


Force1-F200W



2. HOW TO PAIR YOUR MOBILE DEVICE & DRONE WI-FI

1. Install the battery and power on the drone. Put the drone on a flat surface in a horizontal position.
2. Make sure your mobile device Wi-Fi settings are on and connect to the Wi-Fi name Force1_*****. Return to your home screen after successful connection.
3. Open the Force1-F200W app and click on "START" to fly in FPV and capture photos/video via your mobile device.



PHONE CLIP ATTACHMENT & USE

1. Connect the phone clip to the round knob attachment (Fig. 21).
2. Insert the clip vertically, down into the transmitter (Fig. 22). Make sure the clip is firmly in place.
3. Put the phone into the clip and then release the clamp; the clamp should hold your phone tightly (Fig. 23).

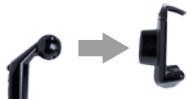


FIGURE 21

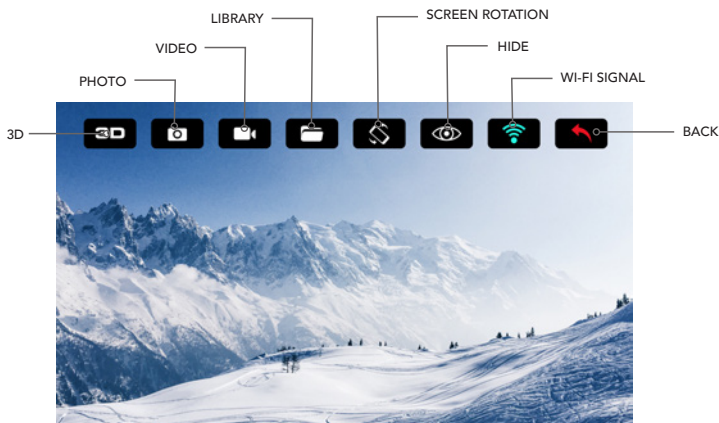


FIGURE 22





FIGURE 23


3. APP ICONS OVERVIEW



8. AERIAL PHOTOGRAPHY & VIDEO

 **Photo:** Click on this icon to take a photo.

 **Video:** Click on this icon to record video. The recording time will show at the bottom of the screen. Click on the icon again to finish recording.

 **Library:** Click on this icon to view photos/videos.

If there is a memory card inserted into the drone camera, photos and videos taken on the F200W app will be stored there. Videos and photos will save to the app if there is no memory card in the camera, and you may download them from there.




TIP: Make sure your mobile device supports 5G Wi-Fi before linking the Force1-F200W app to the drone camera.

DRONE INDICATOR LIGHT

NO.	STATUS	DESCRIPTION
1	The front and rear lights of the drone flash light green rapidly.	The transmitter is not linked to the aircraft, and it requires completing the signal connection steps.
2	Front and rear lights flash green rapidly.	The drone is in gyroscope calibration mode.
3	The front and rear lights alternate flashing light green.	The drone is in horizontal compass calibration.
4	The front and rear lights alternate flashing green.	The drone is in vertical compass calibration.
5	The front and rear lights of the drone alternate flashing green, red and light green.	The drone is in initialization detection mode.
6	The front lights glow solid red, the rear lights glow solid light green.	No GPS signal, the drone is in gesture mode.
7	The front lights glow solid red, the rear lights glow solid green.	Good GPS signal, drone is preparing for GPS mode.
8	The front lights glow solid red, the rear lights flash red slowly.	The drone is nearly low voltage, 1/4 of the battery is left.
9	The front lights glow solid red, the rear lights flash red rapidly.	The drone is in low voltage, only 1/6 of the battery is remaining.
10	The front and rear lights flash once, then stop for 1.5 seconds.	Something is wrong with the gyroscope.
11	The front and rear lights flash twice, then stop for 1.5 seconds.	Something is wrong with the barometer.
12	The front and rear lights flash three times, then stop for 1.5 seconds.	Something is wrong with the compass.
13	The front and rear lights flash four times, then stop for 1.5 seconds.	Something is wrong with the GPS module.

TRANSMITTER INDICATOR LIGHT



	TRANSMITTER STATUS	OPERATION
1	Indicator lights flash rapidly.	The transmitter is under signal connection status.
2	Indicator lights flash slowly with a steady beep and the battery icon  on display is flashing.	The transmitter has low voltage.
3	Battery icon  on LCD display is shown, with a steady beeping sound.	Battery is running out. The aircraft will return when drone is at an altitude is over 100m or a distance of over 300m.
4	Battery icon  on LCD display is shown, with a long beeping sound.	Battery is low. The drone will return when the altitude is over 15m or the distance is over 15m.
5	Signal legend on LCD display is less than two grids or not displaying, with a steady beeping sound.	1) The distance between the drone and transmitter is so far that the signal is weak. 2) The battery was removed after the drone connected to the transmitter.

SPARE PARTS

			
Upper Cover 001	Lower Cover 002	Propellers (A/B) 003	Front/Rear Light Covers 004
			
Screws A/B 005	Front/Rear LED Indicator 006	Camera PCB 007	GPS Module 008
			
ESC B2C009	Interleaving Paper 010	Compass 011	Receiver PCB 012
			
Clockwise Motor 013	Counterclockwise Motor 014	Battery 015	Screws Pack 016
			
Propeller Changing Tool 017	Silicone Rubber Ring 018	Anti-Vibration Pad 019	Transmitter 020

TROUBLESHOOTING

NO.	PROBLEM	SOLUTION
1	The front and rear lights of the drone flash green rapidly.	The transmitter is not linked to the aircraft, and it requires completing the signal connection steps.
2	The front and rear lights of the drone flash red, light green and green alternately and do not change.	1) Check to see if the drone is in the stationary state. 2) Recalibrate the gyroscope.
3	The front and rear lights of the drone flash light green alternately.	1) Complete the horizontal compass calibration steps. 2) The compass of the drone is broken and needs to be replaced.
4	The front and rear lights of the drone flash green alternately.	1) Complete the vertical compass calibration steps. 2) The compass of the drone is broken and needs to be replaced.
5	The drone isn't positioning properly.	1) The GPS signal is weak; fly in another location.
6	The return point of the drone is far away from the takeoff point.	1) The GPS signal is weak; fly in another location. 2) The drone cannot receive a satellite signal while taking off; fly the drone again when you have a 7+ GPS signal.
7	The drone fails to unlock.	1) The battery of the drone is low; replace/charge the battery. 2) The drone is in initialization status; re-calibrate the gyroscope.

NOTE

- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment
- 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 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 antenna
 - Increase the separation between the equipment and receiver
 - Connect the equipment to 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

FCC INFORMATION

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- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on the circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced technician for help.

FCC WARNING

The equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. Modifications not authorized by the manufacturer may void user's authority to operate this device.

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 interference received, including interference that may cause undesired operation.



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