_hydra

Full HD Camera Drone with WIFI, GPS & FPV

DRONE USER MANUAL

ZERO-X®

Capture the skies.™

ZX-HRA v3

CONTENTS

1.0 WELCOME 04

1.1 BEFORE YOU GET UP IN THE AIR 04

1.2 GENERAL SAFETY 04

1.3 BATTERY SAFETY 05

2.0 PACKAGE CONTENTS 06

2.1 PRODUCT OVERVIEW 06

2.2 CONTROLLER OVERVIEW 07

3.0 SETTING UP YOUR ZERO-X HYDRA 08

3.1 CHARGING THE BATTERY 08

3.2 REMOVING AND INSTALLING THE BATTERY 09

3.3 INSTALLING A MICRO SD CARD 10

3.4 REMOVING A MICRO SD CARD 10

3.5 REMOTE CONTROL 11

3.6 FOLDING DESIGN 11

3.7 FLIGHT SAFETY 12

3.8 WIFI CONNECTION AND APP SET UP 12

3.9 USING THE REMOTE CONTROL SMART PHONE HOLDER 13

4.0 FLYING YOUR HYDRA 13

4.1 BASIC FLIGHT 16

4.2 TROUBLE SHOOTING 16

4.3 ONE BUTTON TAKE OFF/LANDING 17

4.4 ALTITUDE HOLD 17

4.5 SPEED MODES 18

4.6 OUT OF RANGE ALARM 18
4.7 MOTOR LOCK DOWN 18
4.8 TRIMMING 19
4.9 RETURN TO HOME 19
4.10 POINT OF INTEREST 19
5.0 APP NAVIGATION 21
5.1 APP CONTROL SCREEN 21
6.0 MAINTENANCE 24
6.1 REPLACING ROTOR BLADES 24
6.2 REPLACEMENT PARTS 25
7.0 WARRANTY TERMS & CONDITIONS 26
NOTES 27

1.0 WELCOME

Thanks for purchasing a Zero-X Hydra, get ready to have the time of your life! We're sure your Zero-X Hydra will bring you a world of great experiences in the air.

Please take the time to read the following safety warnings and operating instructions carefully.

1.1 BEFORE YOU GET UP IN THE AIR

Connect the Hydra battery to the included USB charging cable and insert the USB charging cable into the supplied USB wall charger. While the battery is charging the LED on the charging cable will glow red. Once charging is complete the light will glow green. While the battery is charging please take the time to read the instructions and familiarise yourself with the controls of your Zero-X Hydra.

1.2 GENERAL SAFETY

Please familiarise yourself with your local legislation regarding drone usage before you begin using your Zero-X Hydra. Included in the package contents of your Zero-X Hydra are the Australian CASA guidelines, please read carefully and understand this information as operating a drone outside of these guidelines may result in legal issues. Zero-X takes no responsibility for operation of this product outside of what is legally permissible in your local area.

- Do not fly your Hydra any closer than 30 metres from people, animals or buildings. Check to make sure you are no closer than 5.5 kilometres from any airfields or airports.

  For more information on CASA's Australian legislation visit:

  http://www.casa.gov.au/ For information outside Australia please visit the website of your local aviation authority.
- Do not attempt to modify the Hydra or any of its components in any way, doing so will void your warranty and may affect the operation of the drone.
- Do not use the Hydra in any conditions that could affect, damage or impair your view of the Hydra including rain, wind, snow, fog or low light. Avoid getting your Hydra wet, dusty or sandy. These elements will damage the components of your Hydra.
- Please do not attempt to touch the Hydra when the Remote Control is powered on, or if the rotor blades are turning.
- When flying your Hydra, please keep in mind the privacy of others.

1.3 BATTERY SAFETY

When handled incorrectly, Lithium polymer batteries can be dangerous and can potentially harm and do damage to persons or property. Zero-X does not accept any liability for damage to persons or property if the battery is not correctly charged, stored or protected.

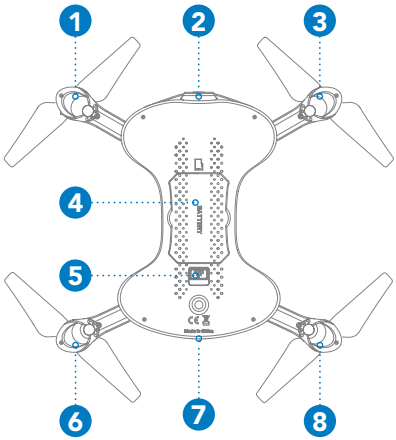
- Always unwind all cables before charging.
- Do not over charge the battery. Once the charging process is completed, remove the battery from the charger as soon as possible.
- Only use the included or replacement Zero-X Hydra chargers and batteries.
- You must charge the Lithium polymer battery in a safe area away from flammable materials.
- The battery is only to be charged under adult supervision, do not leave charging batteries unattended. You should always remain in constant observation to monitor the charging process and react immediately to any potential problems that may occur.
- Do not charge the battery in temperatures hotter than 40°C or colder than 0°C.
- Do not cover the batteries when charging. Do not leave batteries in direct sunlight.
- After each flight & or crash, please check battery for any damage or swelling.
- If the battery is damaged, leaking, making noise, punctured or malformed in any way DO NOT attempt to use it. Please dispose of the battery immediately and safely in the correct manner.
- Do not bend, puncture, crush or scratch the drone's battery. Do not store batteries in your pockets, on your person or in extreme temperatures.
- After flying/discharging the battery you must allow it to cool to ambient/room temperature before recharging.
- If at any time during the charge or discharge process the battery begins to balloon or swell, discontinue charging or discharging immediately. Quickly and safely disconnect the battery, then place it in a safe, open area away from flammable materials to observe it for at least 15 minutes. Continuing to charge or discharge a battery that has begun to balloon or swell can result in a fire. A battery that has ballooned or swollen even a small amount must be removed from service completely.
- Never plug in a battery and leave it to charge unattended overnight.
- Non-compliance with the above warnings may result in the failure of the battery.

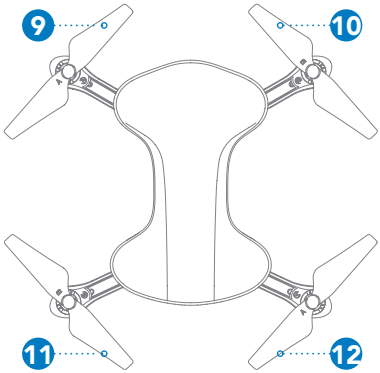
2.0 PACKAGE CONTENTS

1. Hydra Drone
2. Remote Control
3. Charger
4. AC Wall Charger
5. Battery
6. Rotor Blades
7. User Guide

2.1 PRODUCT OVERVIEW

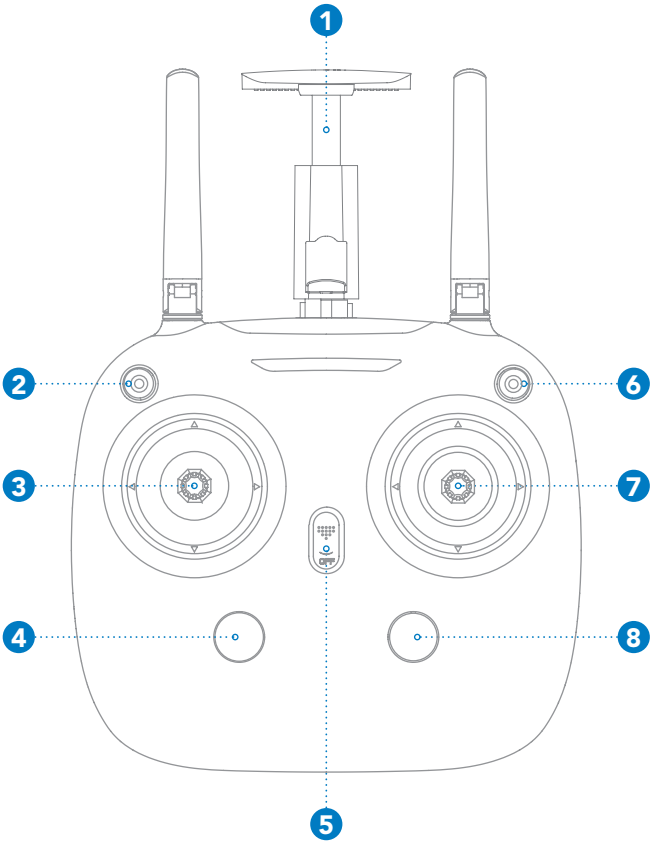
1. Front Left Foot
2. Camera
3. Front Right Foot
4. Battery
5. Battery Release
6. Rear Left Foot
7. Power Button
8. Rear Right Foot
9. Front Right Rotor Blade
10. Front Left Rotor Blade
11. Rear Right Rotor Blade
12. Rear Left Rotor Blade





2.2 CONTROLLER OVERVIEW

1. Phone Holder
2. Video Button
3. Left Thumbstick
4. Return To Home
5. Power Switch
6. Photo Button
7. Right Thumbstick
8. One Button Take Off / Landing / Emergency Stop Button



3.0 SETTING UP YOUR ZERO-X HYDRA

3.1 CHARGING THE BATTERY

PLEASE NOTE: YOUR ZERO-X DRONE COMES WITH A CERTIFIED ZERO-X USB AC CHARGING ADAPTER FOR 240v CHARGING OF YOUR DRONE BATTERY. USE OF A NON ZERO-X CERTIFIED USB AC CHARGING ADAPTER WILL VOID YOUR WARRANTY AND MAY DAMAGE BOTH YOUR BATTERY AND DRONE.

Fully unwind the included USB charging cable and plug the USB end into the included Zero-X Certified USB AC charging adapter. When connected to a charging source the LED light in the charger will flash red. Connect the drone battery to the charging cable and the light will shine green indicating charging is in process. The LED on the USB charging cable will begin to flash red again once charging is complete.

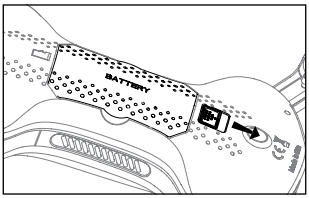
To keep the battery life as long as possible avoid removing the battery from the charging cable before charging is complete. If you have just finished flying your Hydra drone, please allow the battery to cool down for at least 30 minutes before recharging.

- When the Hydra battery has finished charging it is advised that the battery is removed from the charger as soon as possible. Overcharging will damage the battery and effect the flight time.
- The Hydra battery can take up to 90 minutes to fully charge. If the battery has been on charge for any longer than 2 hours and the indicator on the charging cable is not showing that the battery is charged, please remove the battery from the charger.
- When connecting the USB cable with the battery, make sure to follow the guides on the battery connector as these are designed to only be inserted in one direction. Forcing the connection in the incorrect direction, may cause damage to the battery and charging cable.
- When flying the Hydra, low battery will be indicated when the remote control starts beeping and the lights on the Hydra start flashing.

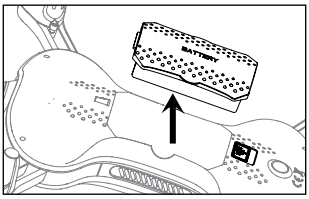
3.2 REMOVING AND INSTALLING THE BATTERY

To remove the hydra's battery please follow the instructions below.

1. Slide and hold the Battery Release latch on the underside of the drone back towards the power button.

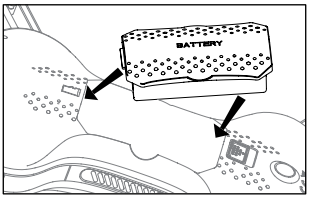


2. While holding the Battery Release latch in the release position lift the battery out of the battery slot.

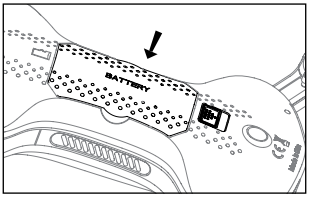


TO INSTALL THE HYDRA'S BATTERY.

1. Slot the battery into the slot aligning the batteries connection slot with the drones copper pins



2. With the batteries contact side locked into position, firmly press down the battery at the locking end until the Battery Release latch clicks into position

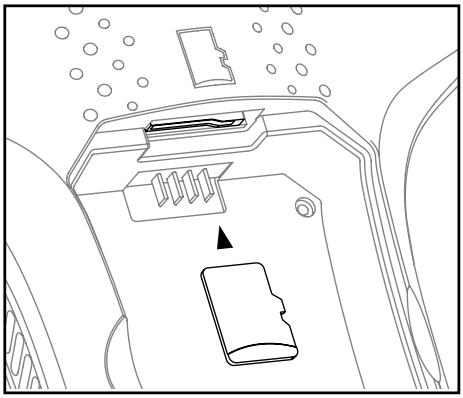


3.3 INSTALLING A MICRO SD CARD

If you want to record your flights using the Hydra's built in camera it is required that you install a Micro SD Card (not included). It is recommended that you use a class 10 Micro SD Card, up to 32 GB.

To install a Micro SD Card, please follow the instructions below.

1. Remove the Hydra's battery following the instructions laid out in the section of this manual named **REMOVING AND INSTALLING THE BATTERY.**
2. With the Hydra positioned upside down and the battery removed, insert your Micro SD Card into the slot near the copper contacts ensuring that the text facing upward



3. Press the Micro SD card in until a click is heard and the Micro SD Card locks in position.

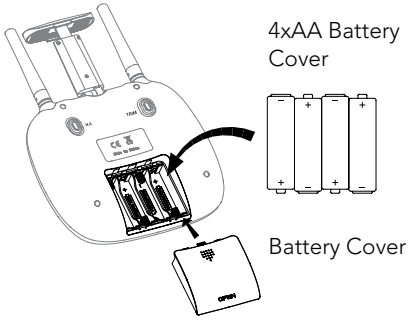
3.4 REMOVING A MICRO SD CARD

To remove your Micro SD Card, follow the instructions below.

1. Remove the Hydra's battery following the instructions laid out in the section of this manual named REMOVING AND INSTALLING THE BATTERY.
2. Press the Micro SD Card in until a click is heard and the card releases.
3. The card will now release and the Micro SD Card will now be removable.

3.5 REMOTE CONTROL

1. Ensure that the Remote Control power switch is in the OFF (down) position.
2. Remove the battery cover on the rear of the Remote Control by sliding it downward.
3. Insert 4 x AA batteries (AA Batteries not included) making sure that they are in the orientation specified.
4. Do not mix new and old batteries or different types of batteries.



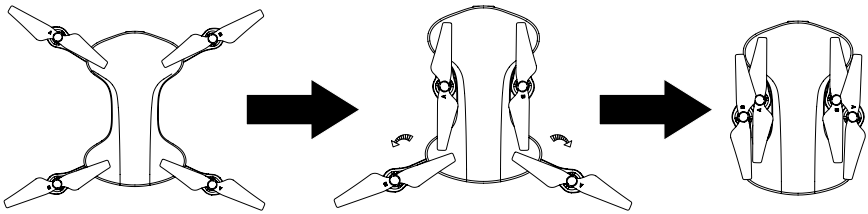
3.6 FOLDING DESIGN

The Hydra can fold down for easy storage and transport.

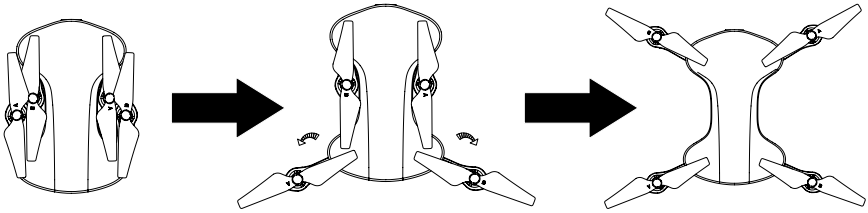
To fold the Hydra's arms down it requires that the arms are folded down and unfolded in a specific order.

When folding and unfolding the arms press the arms in towards the body of the drone, they will click once when unlocking from their extended position and then click again when they are locked into their folded position.

To fold down the Hydra's arms first fold in both front arms, and then both rear arms.



To unfold the Hydra's arms, first unfold the rear arms and then unfold the front arms.



PLEASE NOTE: Do not power up the Hydra while the arms are folded down.

Do not attempt to fold down or extend the arms while the Hydra is powered up.

3.7 FLIGHT SAFETY

Before flying your Hydra make sure that you are in a safe setting. CASA restrictions regarding flying drones require the drone be no closer than 5.5kms from any airport or airfield whilst flying. Drones should also not be flown over populated areas or any closer than 30 metres from vehicles people or animals.

It is also required that you check your surroundings before taking off making sure there are no obstacles or dangers in the area, including overhead power lines and bodies of water. If there are hazards present in your intended area of flight, please consider an alternative location.

3.8 WIFI CONNECTION AND APP SET UP

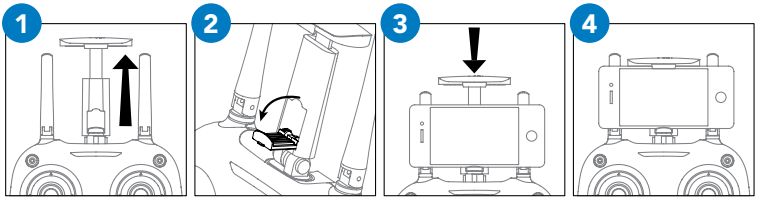
To use your Apple or Android smart-phone as a FPV screen you will need to wirelessly connect your smart phone to your Hydra over WiFi. This is done during the set up and launching of the Hydra and requires you to have the Zero-X Hydra App installed.

1. To find the Zero-X Hydra App search 'Zero-X Hydra' on the Apple App store if you are using an iPhone, or on the Google Play store if you are using an Android phone.
2. Download the Zero-X Hydra App.
3. Once the App is downloaded and installed on your Smart phone, switch on your Hydra by holding the power button for two seconds and move your Smart-phone to be within two metres of the drone.

4. When the Hydra is switched on (without the remote controller switched on) The lights on the arms of the Hydra will flash. While these lights are flashing the WiFi signal will start up be available for connection.
5. In your Smart-phone's WiFi settings find the and select the Zero-X Hydra WiFi connection.
6. Open the Zero-X Hydra App.
7. Press the App Control button on screen to access FPV mode.

3.9 USING THE REMOTE CONTROL SMART PHONE HOLDER

1. Extend the Phone cradle from the top of the drone.
2. Flip down the bottom grip of the phone cradle.
3. Lift the top grip and place your smart phone horizontally between the two grips.
4. Release the top grip making sure that your smart phone is securely in position.

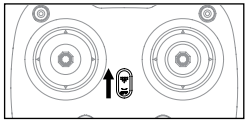


4.0 FLYING YOUR HYDRA

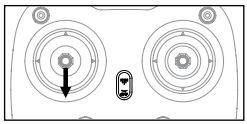
GETTING STARTED, POWERING UP, PAIRING, CALIBRATING AND UNLOCKING THE MOTORS

1. Now that you have installed fully charged battery into your Hydra Drone and 4 x AA batteries (AA batteries not included) into your remote control, please conduct a complete check of your surroundings to ensure that your location is safe to take off from.
2. On your Android or Apple Smart-phone, open your WiFi settings and connect to the Zero-X Hydra WiFi connection. Once connection is made, open the Zero-X Hydra app on your Smart-phone.
3. Position your phone in the remotes smart phone holder.

4. Switch the Remote Controls power switch to the up ON position. The Remote Control should beep once and the light commence flashing to indicate power up has been successful.



5. Next push the LEFT Thumb stick (Acceleration/Yaw) on the Remote Control to the maximum lowest (down) position, the Remote Control light should now change to a slow flash. The Remote Control is now ready to be paired with the Hydra drone.

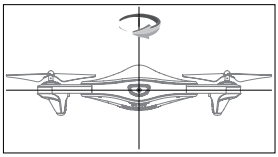


6. To activate the connection between the Remote Control and the Hydra, move the Left Thumb stick (Acceleration/Yaw) on the Remote Control to the lowest (down) position hold for one second and then return the Left Thumb stick to the middle position.

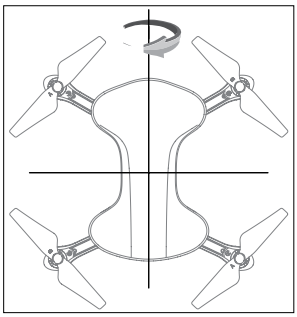
7. On your Hydra Drone, press and hold the power on/off button at the back of the drone for 2 seconds. The drone should turn on with all lights active and shining brightly. Once the drone lights start flashing and rotating, the drone is now in GPS pairing mode ready to connect to the Remote Control and activate GPS functionality for take off. DO NOT OPERATE THE DRONE BEFORE GPS HAS BEEN CONNECTED.

8. While the Hydra is in GPS paring mode, it can take up to a minute for the Hydra to orientate itself. Once the Hydra has gained a GPS connection the left side of the controller's light bar will glow blue.

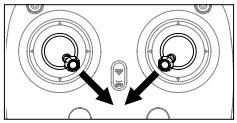
9. Level Correction: When the indicator lights on the left side of the Hydra Drone are flashing, please place the Hydra on a flat level horizontal surface, then lifting it slightly off the ground (around 10cms) rotate the drone 4 times in 180 degree increments in a clockwise direction until the remote control makes a long "beep" sound, the left indicator will turn solid and the right indicator will start flashing. Once completed, level correction has been successfully calibrated.



10. Vertical correction: Rotate the drone vertically on the ground, until the remote control makes another long “beep”. When the four indicator start flashing in a clockwise sequence, it indicates that the drone has been successfully calibrated.



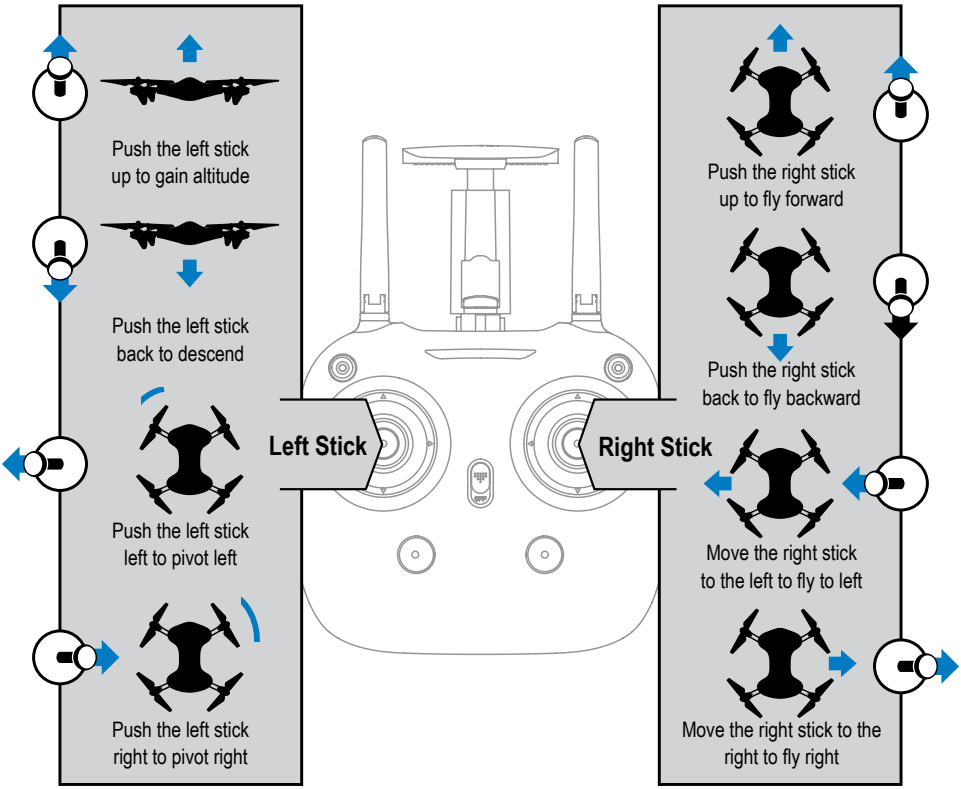
11. Once the remote is paired and the Hydra is calibrated, the motors will need to be unlocked before you fly. To unlock the motors, move the left thumb stick to the right and downward position while also moving the right thumb stick to the left and downward position as shown in the diagram below.



When done correctly the rotor blades will spin waiting for take off.

12. Press the Auto Take Off button and the Hydra will jump up to shoulder height.

4.1 BASIC FLIGHT



4.2 TROUBLE SHOOTING

Do not approach the drone again until the remote has been powered off. If for any reason the Hydra does not work after following the launching steps, please check the following.

A. The Hydra battery is fully charged, correctly connected and not damaged.

B. The batteries in the Remote Control are of the same brand, have an equal amount of charge and have enough charge to power the remote control correctly (Using an assortment of batteries will affect the performance of the Remote Control).

C. The connection between the Remote Control and the Hydra may not have been completed correctly. Ensure that when activating the connection, the Left Thumb stick (Acceleration/Yaw) is moved all the way to the bottom and then returned to the middle. If this is not completed the connection will not activate. Once these points have

been checked turn both the Hydra and the Remote Control off and start the launching process again.

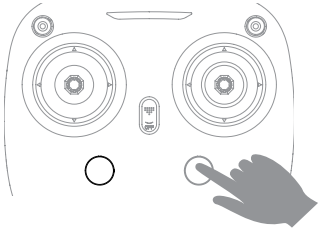
4.3 ONE BUTTON TAKE OFF/LANDING

The one button take off and landing button allows you to easily get your drone off the ground and land once the Hydra is paired and the motors are unlocked.

TO TAKE OFF
Follow the powering up and pairing instructions in this manual. Once the drone is paired to the controller press and the motors are unlocked the one button take off/ land button, and the drone will take off and hover at shoulder height.

TO LAND
While flying to bring the drone down, press the one button take off/land button. The drone will then descend and land.

EMERGENCY LANDING
If you need to bring the drone down in an emergency, while flying, hold the one button take off/land button. The motors will stop completely and the Hydra will fall to the ground.



PLEASE NOTE: When using any land function, make sure that there are no obstacles, people or animals under the drone.

Do not use the emergency stop function unless it is an emergency situation as this will cause the motors to lock, and the drone to free fall.

4.4 ALTITUDE HOLD

Altitude hold works while you are flying the Hydra to help the drone hover and maintain a constant height making aerial photography easy.

To see altitude hold working, allow the left thumb stick to fall back to its default middle position while flying, and the Hydra will balance itself to hold its altitude.

4.5 SPEED MODES

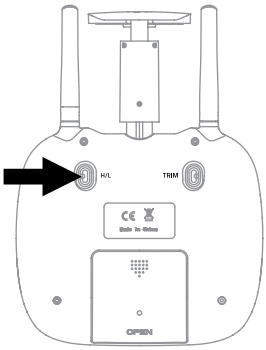
The Hydra drone has three speed modes.

To cycle through the speed modes, use the speed button on the rear of the controller. Each mode will be identifiable by a series of beeps.

Low Speed Mode: One beep

Medium Speed Mode: Two beep

High Speed Mode: Three Beeps



4.6 CONTROLLER ALERTS

When the Remote Control battery is low the Remote Control will issue a slow series of beeps, signalling that the batteries need to be replaced.

When the Hydra battery is running low, the remote will issue a fast series of beeps, signalling that the battery needs to be recharged.

The remote will quickly beep twice when the Hydra is flying out of range. If the controller begins to sound the out of range alarm, please fly the Hydra back towards you.

PLEASE NOTE: Do not ignore low power warnings as this may result in unplanned landings.

4.7 MOTOR LOCK DOWN

When the rotor-blades are stopped by an obstacle the motors will go into protective lock down.

To unlock the motors make sure the rotor-blades are clear from debris and put the Hydra back on the ground. Once you are ready to fly again pull the left thumb stick back and the motors will release.

4.8 TRIMMING

Trimming is used to balance out your drone if it is drifting when flying.

To adjust the trimming please follow the steps below.

1. Make sure that the Remote Control and Hydra are switched on and correctly paired.
2. Hold the Trimmer button on the rear of the Remote Control.
3. While still holding the Trimmer button use the right thumb stick to counter the direction that your Hydra is drifting.
4. As you are adjusting the trimming the beep tone will go lower the more that you trim in any directing.

PLEASE NOTE: If Trimming is not fixing the drones drifting, you may need to re calibrate your drone by turning off the drone and the controller and restarting the instructions in the Getting Started section of this manual.

4.9 RETURN TO HOME

Return to home brings the Hydra back to the location it was launched from.

To activate Return to Home press the Return to Home button on the front of the remote control.

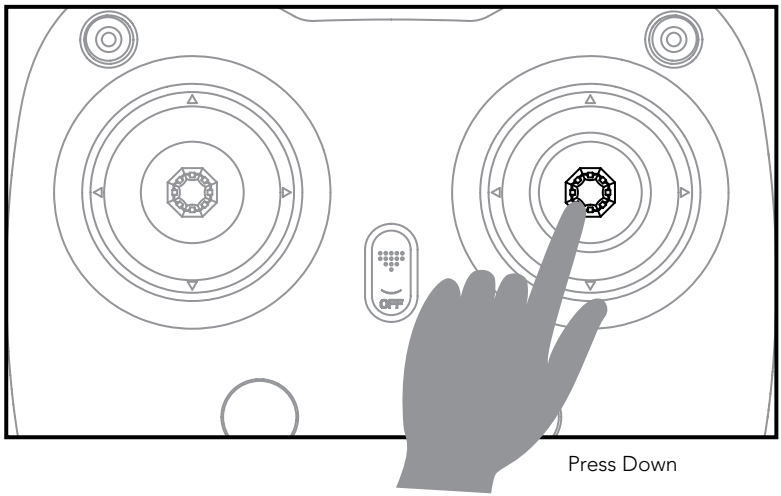
PLEASE NOTE: It is important that the GPS is correctly connected before launch before activating return to home. Failing to do so may result in the drone flying away when return to home is attempted.

4.10 POINT OF INTEREST

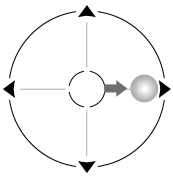
When activated, point of interest will make the Hydra circle around the desired point of interest.

To activate Point of interest aim the Hydra at the desired point of interest and then press the right thumb stick in like a button and the controller will beep.

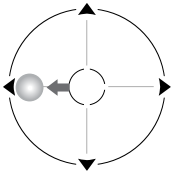
While in Point of Interest mode the left thumb stick is used only to control the Hydra's height and the right thumb stick is used to control the direction and speed that the Hydra circles the target and how close the Hydra is to the target.



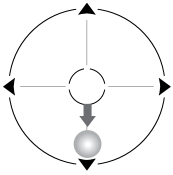
Press Down



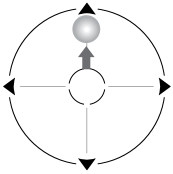
Moving the right thumb stick right will make the Hydra circle the target clockwise while focusing on the target.



Moving the left thumb stick left will make Hydra circle the target counter clockwise while focusing on the target.



Moving the thumb stick down will move the Hydra away from the target making the circle bigger.

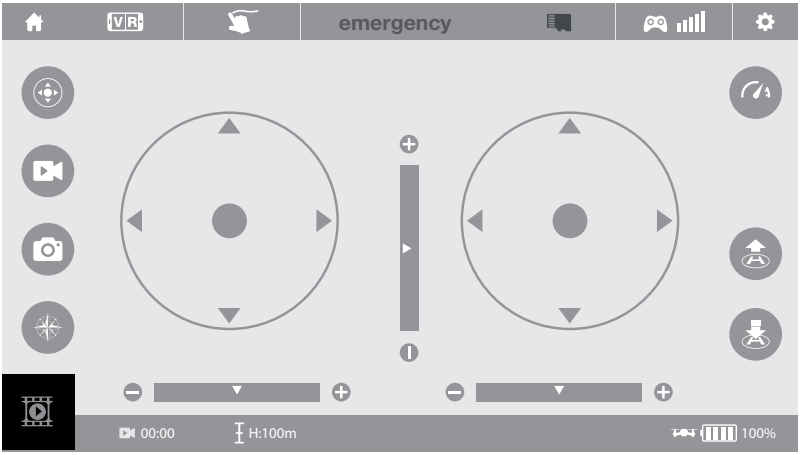


Moving the left thumb stick up will move the Hydra closer to the target making the circle smaller.

5.0 APP NAVIGATION

Once you have connected your Smart-phone to the Hydra via WiFi and launched the **Zero-X Hydra App,** you will be able to access the App's Control screen. This screen has all of the control options and settings, as well as access to the on screen control system.

If you want to only use your smart phone to control the Hydra drone, use the 'App Control' setting and press the button to show the on screen controls.



To use the App to assist the controls on the remote control, use the 'Control Assist' setting and press the button to show the on screen controls. In this mode the controller must be used for take-off.

5.1 APP CONTROL SCREEN

APP ICONS

HOME PAGE
When selected, this will take you back to the home page.

FPV
This will split the screen into two so that it can be used in a smart phone compatible VR headset (Headset not included).

This mode should be used with the controller.
Please obey your local aviation laws when using FPV mode.

FLIGHT PATH TRACING
This allows you to trace a flight path for the drone to follow.

Please make sure you have enough space where you are flying for the

drone to follow your drawn path.

EMERGENCY **EMERGENCY STOP**
Pressing this will cause the Hydra's motors to stop and the drone will fall to the ground.

Only use this in the case of an emergency.

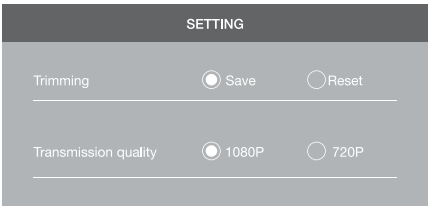
MICRO SD CARD
This will show is a micro SD card is inserted in the Hydra's on board camera.

When there is no Micro SD Card detected the icon will be displayed.

When a Micro SD Card is detected the icon will be displayed.

REMOTE CONTROL SIGNAL
Displays the Hydra's WiFi signal strength.

SETTINGS
Settings will allow you to set your transmission resolution trimming.



ON SCREEN CONTROLS
This will give the option of Stick Controls or Tilt Controls.

STICK CONTROLS
Allows you to control the Hydra with two on screen virtual thumb sticks.

TILT CONTROLS
Allows you to control with a virtual left thumb stick and the right thumb stick can be controlled by tilting your smart phone.

VIDEO
Selecting this will start a video recording.

PHOTO
Selecting this will capture a photo.

MEDIA

This will take you to all recorded files both on your phone and saved to the Micro SD Card installed in your Hydra drone (Micro SD Card not included).

SPEED MODE

Select your required speed mode.

ONE BUTTON TAKE OFF

This button will launch the drone.

When selected, the drone will take off and hover at shoulder height.

ONE BUTTON LANDING

This button will initiate the automatic landing sequence.

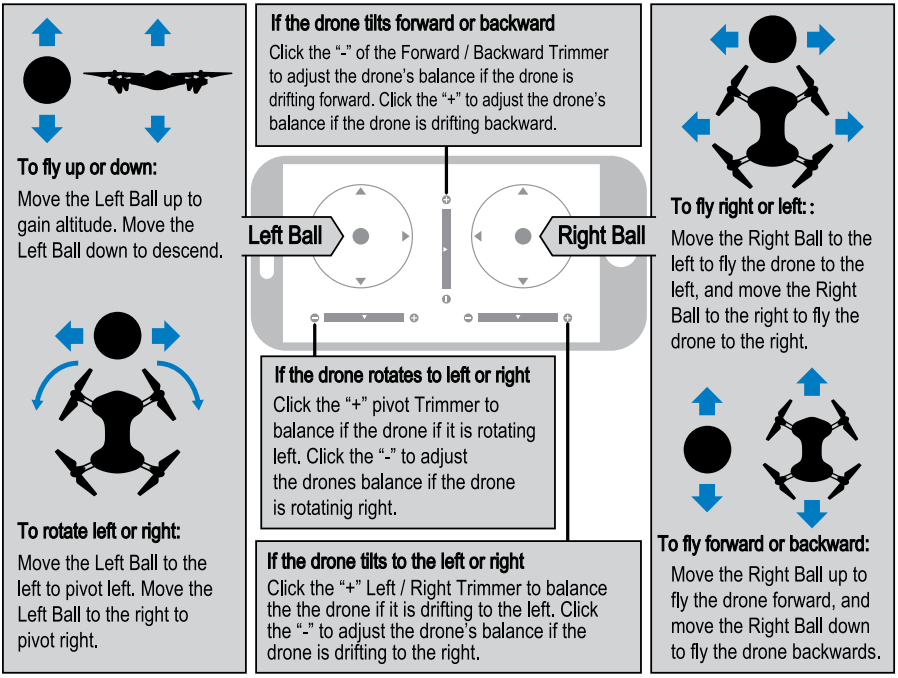
Please be sure there is no obstructions, people or animals under the drone when this is selected.

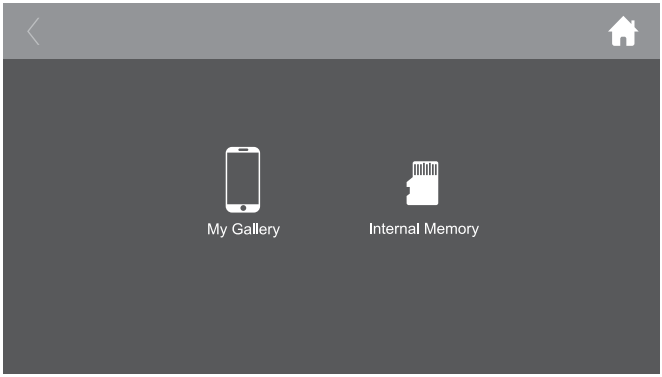
ALTITUDE HOLD

This displays the drone's current altitude

DRONE BATTERY INDICATOR

This displays the drone's battery level.





VIEWING AND TRANSFERRING PHOTOS AND VIDEOS

To view your photos and videos select the Media setting from the home screen.

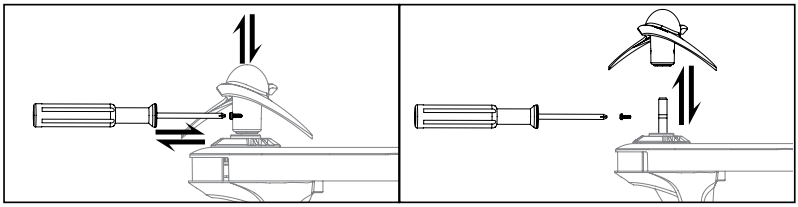
From this screen, you can select whether you want to view the files recorded to the inserted Micro SD Card, or the files that have been transferred to your phone. From either of these libraries you can view and transfer your videos and photos.

6.0 MAINTENANCE

6.1 REPLACING ROTOR BLADES

If your rotor blades become damaged or the Hydra drone is no longer flying straight the rotor-blades may need to be replaced. To replace the Hydra's Rotor Blades please follow the directions below.

1. Remove the screw securing the rotor blade, and lift the blade off taking note whether the blade that is being replaced is an 'A' blade or a 'B' Blade. Press the replacement blade onto the stem making sure that the screw holes align and the replacement rotor blade is the same ('A' or 'B') as the original rotor blade. Once the rotor blade is in position replace the securing screw.



6.2 REPLACEMENT PARTS

We understand that it's not always easy learning how to fly a drone, and sometimes a close call can turn into a crash landing. To thank you for your support of Zero-X and your drone purchase, we would like to help you build you confidence in learning how to fly your drone. We would like to offer you 50% off your first two orders of any spare parts, by using the codes in the coupons below.

There you will be able to find and buy the spare parts listed below.

- Battery
- Clockwise Motor
- Counter Clockwise Motor
- Rotor Blades
- Rotor guards
- Feet

THANK YOU FOR YOUR SUPPORT!
PLEASE VISIT OUR WEBSITE & USE PROMO CODE:
OOPSIBROKEIT
to receive
50% OFF
your spare parts purchase!

THANK YOU FOR YOUR SUPPORT!
PLEASE VISIT OUR WEBSITE & USE PROMO CODE:
OOPSIBROKEITAGAIN
to receive
50% OFF
your spare parts purchase!

Visit **www.zero-x.com.au** to make your purchase.

7.0 WARRANTY TERMS & CONDITIONS

Our goods come with guarantees that cannot be excluded under the Australian and New Zealand Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

This warranty is provided in addition to your rights under the Australian & New Zealand Consumer Law.

Zero-X warrants that this product is free from defects in material and workmanship for a period of 12 months from the date of purchase or for the period stated on the packaging. This warranty is only valid where you have used the product in accordance with any recommendations or instructions provided by Zero-X.

This warranty excludes defects resulting from alterations of the product, accident, misuse, abuse or neglect.

In order to claim the warranty, you must return the product to the retailer from which it was purchased or if that retailer is part of a National network, a store within that chain, along with satisfactory proof of purchase. The retailer will then return the goods to Zero-X. Zero-X will repair, replace or refurbish the product at its discretion. The retailer will contact you when the product is ready for collection. All costs involved in claiming this warranty, including the cost of the retailer sending the product to Zero-X, will be borne by you.

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Ph: +61 03 8331 4800

Email: service@zero-x.com.au

NOTES

_hydra

Capture the skies.™

ZERO-X

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