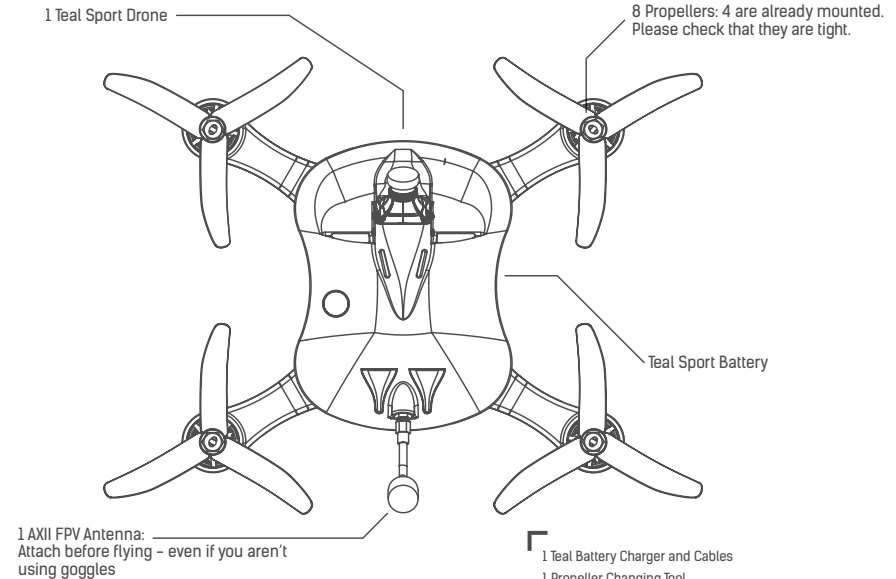


「**TEAL SPORT** USER GUIDE  
」

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## BOX CONTENTS

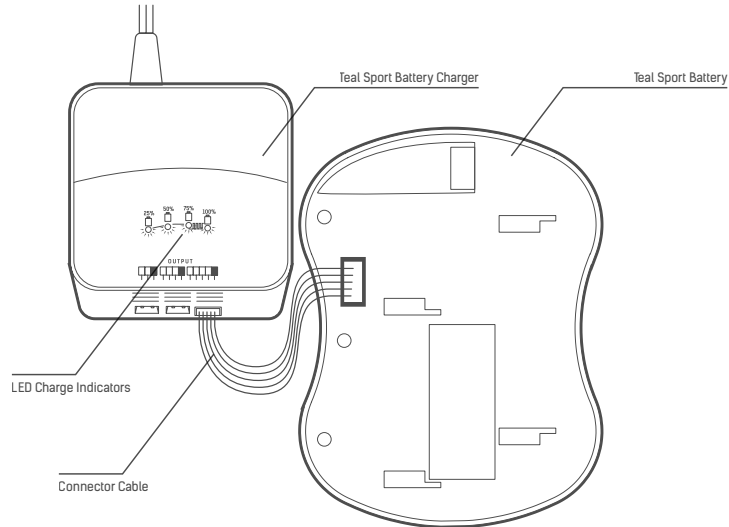


**WARNING!**  
READ ENTIRE USER GUIDE BEFORE ATTEMPTING ANY  
FLYING – DAMAGE TO PERSON OR PROPERTY CAN  
OCCUR IF INSTRUCTIONS ARE IGNORED.

- 1 Teal Battery Charger and Cables
- 1 Propeller Changing Tool
- 8 Decorative Sticker Sheets
- 1 User Guide (you're reading it now)
- 1 Battery Safety Guide
- 1 FAA Safety Guide
- 1 Quick Start Pre-Flight Check

## BATTERY CHARGING

To charge the Teal Sport flight battery, first read and remove the warning sticker covering the balance port on the battery. Next, plug the charger into a wall outlet and connect the supplied balance lead cable between the battery's balance port and the correct connector on the charger. The charger will only work when the cables are plugged into to the right holes. Charging time for a complete charge is 30 minutes. Charge state is determined by flashing LED's on the charger with 25%, 50%, 75% and 100% positions. When all lights are solid, the battery is fully charged.



**SEVERE WARNING: NEVER FLY LONGER THAN THE LOW BATTERY WARNING. DISCHARGING THE BATTERY PAST ITS LIMITS WILL RESULT IN DAMAGE TO THE BATTERY AND POTENTIALLY THE DRONE. IT WILL CREATE A SWOLLEN BATTERY, WHICH NEEDS TO BE IMMEDIATELY AND PROPERLY DISPOSED OF AT A BATTERY DISPOSAL FACILITY. DO NOT ATTEMPT TO CHARGE A SWOLLEN BATTERY OR IT COULD CAUSE A FIRE OR EXPLOSION.**

**Important Note:** Typical flight times for high speed racing drones are 2 ½ minutes. This might seem short compared to slow flying aerial camera drones, but FPV is a rush and feels much longer in the goggles. These batteries are built to perform at high speed with a high discharge rate. Pro mini-quad pilots carry 25-30 charged batteries to the field for long practice sessions. Having 2-3 extra batteries and possibly a second charger when you are first starting to learn to fly a racing drone is a great idea to keep you from getting impatient and discouraged while waiting for your charge to complete.

## BATTERY WARNINGS – READ CAREFULLY

- Never leave a charging battery unattended.
- If a battery gets hot to the touch, turn off the charger and disconnect the battery from the charger.
- Do not mistreat batteries. Do not puncture or crush. This action could start a fire.
- If a battery looks like it is swelling, do not attempt to charge. Refer to battery manufacture warnings for proper disposal.
- If traveling by air with lipo batteries, do not send them away with your check luggage, keep them with you in your carry-on bag. They are safe for x-rays and in-cabin air-pressure environments.



**NOTE:** Read the supplied safety document about Lithium Polymer batteries.

## STICKER INSTALLATION

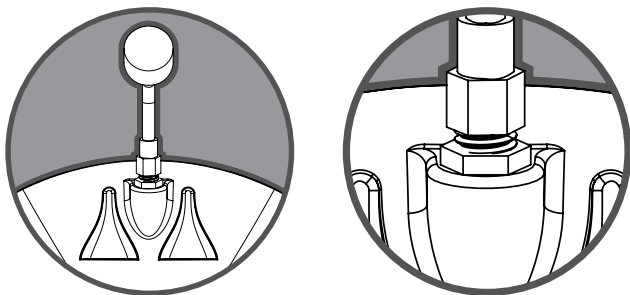
Be creative and personalize your Teal Sport, or use our examples if you're feeling uninspired.



## FPV ANTENNA INSTALLATION

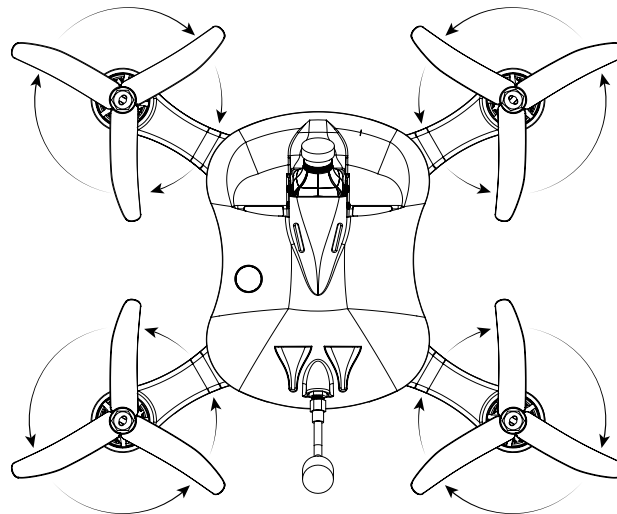
Screw on FPV Antenna to brass SMA connector at the back of the Teal Sport to finger tight for best results. Check tightness before every flight.

**NOTE:** Never plug in a battery or power-up the Teal Sport Drone without this antenna connected or else damage to the FPV transmitter will occur.



## INSTALLING PROPELLERS

The Teal Sport Drone uses propellers with two different directions: Clockwise and Counterclockwise. It is important to get these directions installed correctly or the drone will not fly and in some cases spin out of control. Always match the indicator dots on the propellers, motor shafts and arms to corresponding placements.



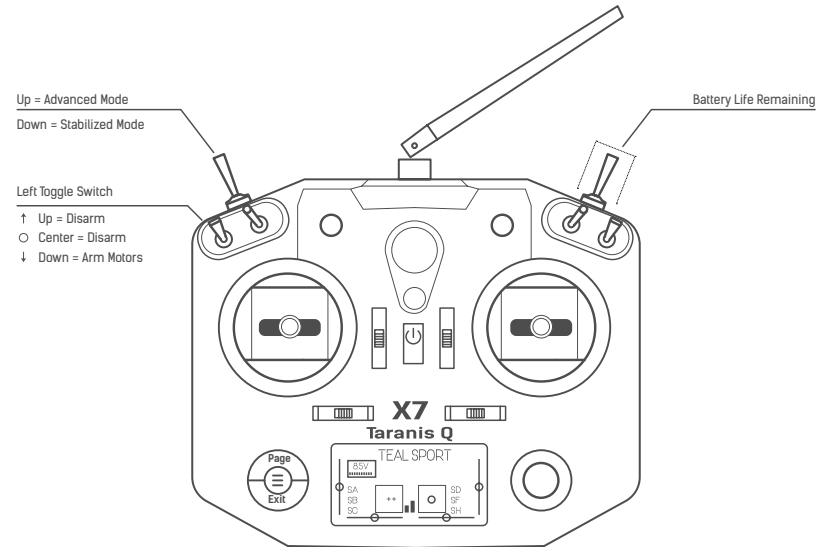
## TARANIS QX7: TRANSMITTER

To power on the transmitter press the power button. To power down the transmitter press and hold the power button until the screen displays "Shutting Down". The front left switch is the Arm switch. The away and middle position are both Disarm and the closest position to you is the Arm position. Note: Never arm the Teal Sport Drone with anything near the props. They will cause damage. Only arm your Teal Sport when it has plenty of clearance and is on a flat surface. The back left switch is the Acro/Stabilized flight mode switch. The away position is the Stabilized flight mode and the closest to you switch position is the Acro flight mode. Stabilized is for beginners and Acro mode is for advanced pilots who want full agility control. The back right spring-loaded switch is for telemetry. Momentarily moving the switch to the position closest to you will announce a battery telemetry report for battery capacity (announced in milliamp hours) and voltage (announced in volts.) Think of milliamp hours as fuel left in the tank and voltage as the strength of that fuel. Land your Teal Sport before 1,000 milliamp hours is reached to prevent permanent battery damage. If voltage goes below 14 volts the Teal Sport should immediately be landed.

With the Taranis QX7 turned on, pressing and holding the page button will show the Telemetry page. This shows VFAS (voltage) and Fuel (indicated in milliamp hours). To exit out of the telemetry screen press the Exit button. Telemetry will begin when your Teal Sport Drone is powered up by plugging in your battery.

**IMPORTANT:** Unplugging and replugging in a partially discharged battery will reset the battery capacity monitor. Your audio capacity warnings may not be accurate. Use a fully charged battery for accurate audio warnings.

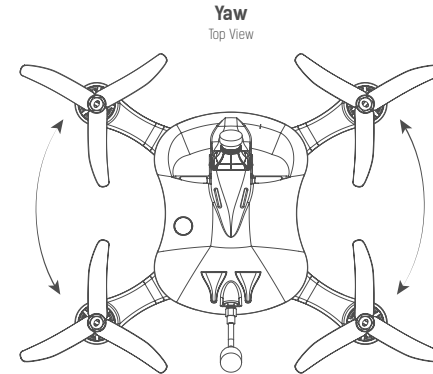
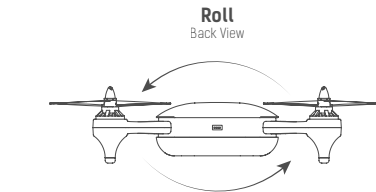
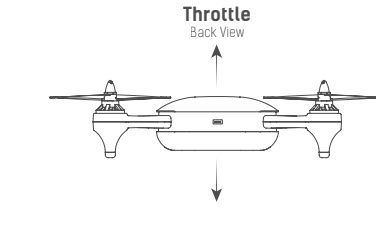
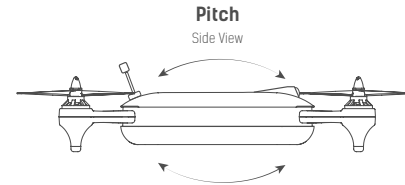
**NOTE:** Always begin your flights with a full battery.



## TARANIS QX7: TRANSMITTER CONTROLS

The Taranis will give automatic audio warnings when the battery consumption approaches its limits. If voltage gets low, an audio warning will sound. When 90% of the battery capacity is used, a warning will sound. When 95% has been reached you will be told to land. Do not continue flying or you will damage your battery. The Teal Drone has 4 stick flight controls. **Pitch, Roll, Yaw and Throttle.**

- **Pitch** controls the forward and backward angle. Moving the pitch stick away from you will make the drone fly forwards and moving it backward will make the drone fly backwards.
- **Throttle** controls the height-speed of altitude gain or loss and makes the drone move up or down vertically. Just the right amount of throttle is needed to hover. USE VERY SMALL MOVEMENTS AT FIRST. A little more throttle and the drone will gain altitude. A little less and the drone will descend. A lot more or less throttle input will exaggerate the speed at which the drone gains or loses height.
- **Roll** controls the sideways angle. Pushing the roll stick to the left will make the drone fly sideways to the left and pushing the roll stick to the right will make the drone fly sideways to the right.
- **Yaw** makes the drone yaw left and right. Pushing the yaw stick to the left will make the drone do a flat spin to the left and pushing the yaw stick to the right will make the drone do a flat spin to the right.



# TARANIS QX7: LOADING MODEL MEMORY TO QX7 RADIO

**BIND AND FLY VERSION ONLY (BnF)** – This process will teach you how to install the custom settings onto the recommended Taranis QX7 transmitter.

1. Download the custom Teal QX7 Taranis files from [tealdrone.com](http://tealdrone.com) and place them on a Micro SD card.
2. Remove plastic flap at base of the radio and insert the Micro SD card into the slot. *Figure 1*
3. Turn on the QX7 radio by pressing the middle power button. Press the middle menu button to access the menu and the model select screen. *Figure 2*
4. Use scroll wheel to select an unused model memory slot Press the scroll wheel button. Use the scroll wheel to highlight “Restore Model” and press the scroll wheel button. *Figure 3*
5. Select Teal\_Sport file and press scroll wheel button to write file onto Taranis QX7. The new file has been written and is ready to use with the Teal Drone. *Figure 4*
6. A star will show beside the model memory indicating it is the selected model profile. Highlight the Teal Sport model memory, press the scroll wheel button, highlight “select model” and press the scroll wheel button once more. The Teal Sport model memory is now selected. *Figure 5*

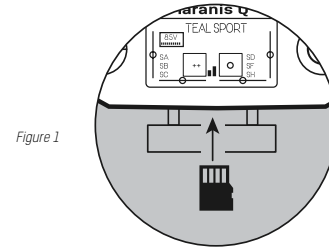


Figure 1

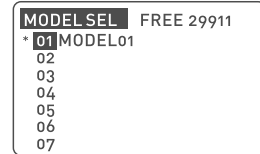


Figure 2



Figure 4



Figure 3



Figure 5

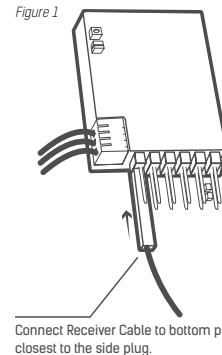


# INSTALLING X4RSB RECEIVER AND BINDING X4RSB RECEIVER TO TARANIS QX7

To fly the Teal Sport Bind and Fly model, first you must install the radio receiver and bind the receiver to the radio transmitter so the transmitter knows which receiver it is talking to. The FRSky Taranis QX7 and FRSky X4RSB receiver are the recommended hardware for the Teal Sport. Other types and brands of receivers and transmitters can be used but the below instructions only show how to install the X4RSB receiver used with the Taranis QX7 transmitter.

1. Remove props (take note of direction/orientation before removing).
2. Remove the eight (8) arm screws that hold the top plate. Remove top plate.
3. Place X4RSB receiver on double sided tape.
4. Connect receiver cable to receiver. The plug connects to the side of the X4R and the S.Bus needs to be connected to the bottom pin, closest to the side plug. It is very important that the correct pin is connected as damaging components may result if done incorrectly. *Figure 1*
5. Place receiver antennas along the inside of the drone chassis.
6. To bind the receiver to the Taranis QX7, power on Taranis QX7 transmitter and press the middle menu button to access the menu.
7. Press the center menu button, followed by the page button to get to the "Setup" menu. Scroll down to "Bind" and press the scroll wheel to select it. The radio will beep every few seconds indicating the Taranis is in bind mode. *Figure 2*

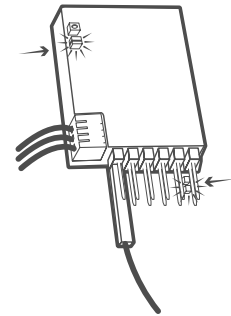
8. Hold down the bind button on X4R receiver and power up the quad by plugging in a battery, while continuing to hold down the receiver bind button. The green LED will turn solid, the red LED will flash indicating it has bound. After this has happened, you can release the bind button. Select bind on the radio's setup menu one more time to stop the Taranis binding process, now that the receiver is bound. Cycle power by unplugging and replugging battery to check bind process is successful. A solid green LED will confirm bind is correctly set up. *Figure 3*
9. Replace the top plate and install the eight arm screws.
10. Re-install props in correct rotation positions. Double check they are spinning the correct directions.



*Figure 2*

SETUP	
Ch. Rename	CH1 - 16
RxNum	04 [Bnd] [Rng]
Failsafe	No pulses
External RF	
Mode	OFF
Trainer port	
Mode	Master/Jack

*Figure 3*



# CHANGING CHANNEL, FREQUENCY BAND AND TRANSMIT POWER ON THE TRAMP VTX

1. With props removed (never ignore us when we tell you to remove props!) and power connected, hold down the button on the Tramp FPV transmitter (through top plate access hole) for 3 seconds to access the channel menu.
2. Menu 1 (indicated by one long LED flash) will show what channel number you are currently on by the number of short flashes. Quick presses of the button will select the next channel and the change will be indicated by the number of short flashes.
3. One more 3 second long press will move to Menu 2. This will be indicated by 2 long LED flashes and the short flashes will correspond to the band you are on (Note that ready to fly battery packs supplied with FatShark Predator Goggles will only work on the IRC/Fatshark band). If needed, short presses will change the band.
4. One more 3 second long press will move to Menu 3. This will be shown by 3 long LED flashes and the short flashes will correspond to the transmit power level you want to use. Short presses will change the power level. Note: Many countries regulate that 25mw is the highest level you can transmit on without an Amateur HAM radio license.
5. One more 3 second button press will exit the menu. All variables on the Tramp vTx can also be configured using the ImmersionRC Wand. The NFC zone used to communicate between the drone and the wand is indicated by the embossed circle on the top cover. Hold the wand near this circle to program. [Picture of the Tramp vtx looking through the top plate with the red LED turned on]

**NOTE: FPV REGULATORY NOTICE** – The use and operation of this type of RF product in the USA and many other countries may require a license and some countries may forbid its use entirely. In the USA, you will need a "HAM" amateur radio license to broadcast any vTx signal stronger than 25mw. Learn more about HAM licenses. It is your responsibility to ensure that the use of this product meets the requirements imposed by your government's rules and regulations for RF devices.

## International Version

	1	2	3	4	5	6	7	8	
1	5740	5760	5780	5800	5820	5840	5860	5880	IRC/FS
2	5658	5695	5732	5769	5806	5843	5880	5917	Race Band
3	5705	5685	5665	5645	5885	5905	5925	5945	Band E
4	5733	5752	5771	5790	5809	5828	5847	5866	Band B
5	5865	5845	5825	5805	5785	5765	5745	5725	Band A

## ITU Region 2: The Americas

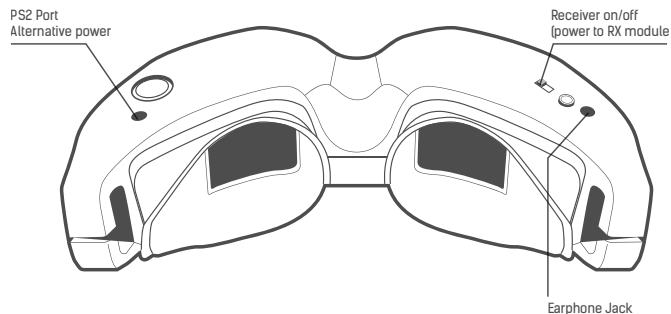
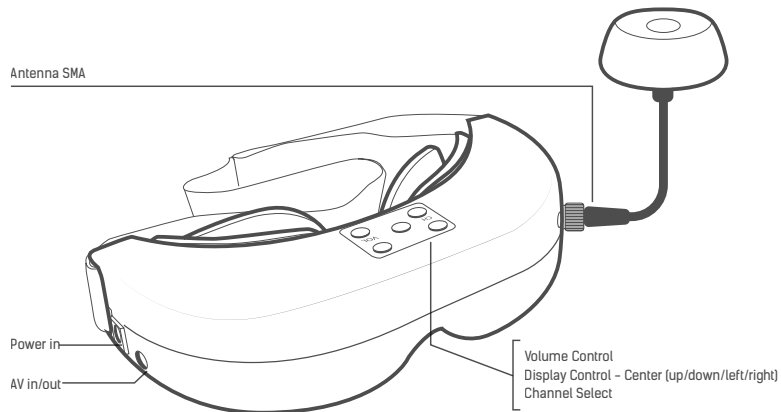
	1	2	3	4	5	6	7	8	
1	5740	5760	5780	5800	5820	5840	5860	5880	IRC/FS
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4	5733	5752	5771	5790	5809	5828	5847	5866	Band B
5	5865	5845	5825	5805	5785	5765	5745	5725	Band A

## ITU Region 1: Europe

	1	2	3	4	5	6	7	8	
1	5740	5760	5780	5800	5820	5840	5860	5880	IRC/FS
2	5658	5695	5732	5769	5806	5843	5880	5917	Race Band
3	5705	5685	5665	5645	5885	5905	5925	5945	Band E
4	5733	5752	5771	5790	5809	5828	5847	5866	Band B
5	5865	5845	5825	5805	5785	5765	5745	5725	Band A

## FATSHARK TELEPORTER FPV GOGGLES

- The battery for the FPV goggles can be charged via the USB cable.
- Install receiver antenna to the SMA connector sticking out of the front left hand side of the goggles. Ensure connector is hand tight for best results.
- Insert battery into elastic strap on right hand side of goggles and plug in the barrel connector. Never power up the goggles without first attaching the antenna. Damage will occur.
- The 4-way button on the top of the goggles controls brightness and contrast. Sideways is contrast, forward and back is brightness.
- The "CH" buttons cycle through the 7 channels available on the IRC/ FatShark band. Select the same channel that the Teal Sport Drone is transmitting on.
- Remember to unplug the battery when not in use.
- Never leave the lenses of your goggles facing direct sunlight. Damage may occur.



## PRE-FLIGHT CHECKS

**NOTE:** Conduct your first flights in an open, flat field, away from people, animals and obstacles.

- Verify wind conditions are below 15–20mph for your first flights.
- Bring a spotter friend with you when you fly. Otherwise, locating a crashed drone when you're flying FPV can be difficult when you're alone.
- Check that the props are in the correct orientation, in good repair and prop nuts are tight. Mismatched and incorrectly installed props are one of the most common reasons drones are having trouble getting airborne.
- For your first flights it is recommended to have the FPV camera in the flat position. (zero to ten degrees of tilt) You can tilt it more as you gain experience and want to go faster by loosening the camera mount screws and adjusting the camera angle. Advanced pilots often fly with 30–40 degrees of camera tilt.
- Always power on your Taranis QX7 Radio Transmitter before plugging in your drone's battery, move the throttle stick to the down position and move all switches to the away position. Always ensure the Transmitter is turned on before the Teal Sport is powered on or you risk a drone flyaway and/or unsafe drone misbehavior.
- Ensure the radio's Arming switch is in the disarm position (away from you) before powering up the Teal Sport.
- Plug in drone's battery, place drone on a flat surface and wait up to 10 seconds for the drone's flight controller chip to calibrate. The Teal Sport will beep three times which will indicate it has powered up and calibrated its sensors. The drone will not arm until the sensors have calibrated.
- If conditions are safe to take off, the Teal Sport is ready to fly.

## FIRST FLIGHTS

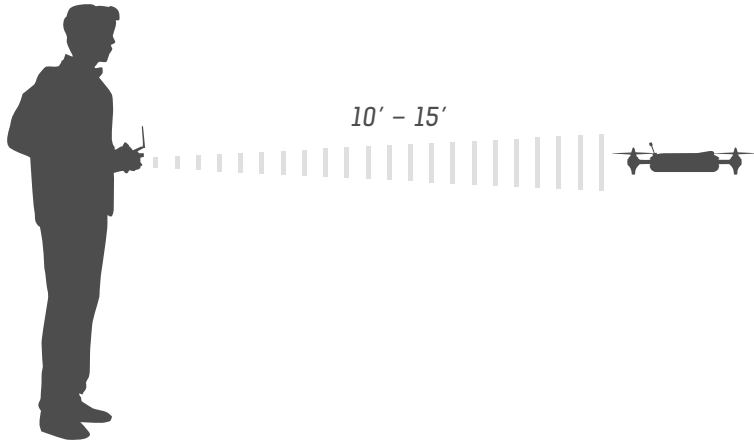
It is recommended for new pilots to start-off flying in "Stabilized" mode. "Acro" mode gives the pilot more freedom and control to fly in all axis' but is harder to master. It is recommended to fly your first 10–20 full battery charges in Stabilized mode before switching to Acro mode.

- In Stabilized (aka "level") mode the drone will level itself when you let go of the controls. **NOTE:** This is not the case for throttle.
- In Acro mode, the drone will hold the last position you gave it with the controls. If you roll upside down and let go of the controls it will stay there which means you have to concentrate on flying a lot more.
- Make sure yourself and other people are a safe distance away from the drone and always take off with it facing away from you, especially if you're not flying with goggles.
- Ease up throttle in very small increments and slowly get a feel for the throttle inputs needed.
- Concentrate on keeping the Teal Sport facing away from you and simply hovering in one spot. Hovering is the hardest thing to learn, it can become tedious or boring. You must learn to crawl before you learn to walk. Your patience will be rewarded.
- Keep the drone low to the ground while learning. The lower it is, the shorter its fall will be when you crash. You will crash. This is part of learning to fly. Stay with it. Keep extra parts and batteries on hand when you go out to the field for quick repairs and longer flight sessions.

## GENERAL CARE

Crashes and hitting objects can damage and bend props. To ensure a smooth, safe and enjoyable flight, props must be straight and not damaged. Chipped and broken props should be replaced before your next flight.

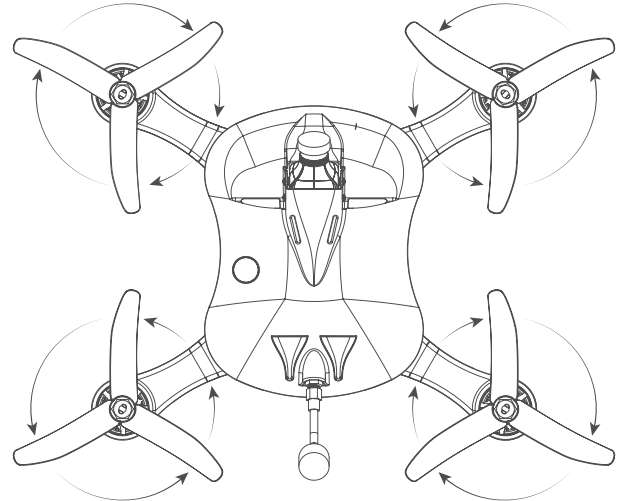
*Fly drone away from you, and stand back a safe distance.*



## CHANGING PROPELLERS

Props have specific rotation directions and orientations that are needed to fly. If even a single prop is not correct, the drone will not fly. Use the indicator dots on the props, arms and motors to ensure clockwise and counterclockwise directions are fitted correctly.

*Make sure props are in the correct rotating directions.*




## FLIGHT SAFETY (WARNINGS—PLEASE READ)

- KEEP AWAY FROM THE SPINNING PROPELLERS. They are sharp and can cause serious injury. They bite hard. Do not experiment with prop safety or ignore this warning.
- Only fly in an open area that is a safe distance from people, power lines, animals and property.
- Do not fly over people or property.
- Do not fly near roads or cars.
- Do not fly near airports. (There are phone apps available to help you with this.)
- Read the enclosed FAA Warning Sheet and your local aviation regulations regarding flying your Teal Sport Drone in your area. The FAA may pursue enforcement action against anyone operating model aircraft in a way that endangers the safety of the national airspace system.
- Only arm your Teal Sport Drone when it's on the ground and a safe distance away. Arming while holding the drone may cause the propellers to spin up unexpectedly
- Always turn on the Taranis QX7 Transmitter before powering the Teal Sport Drone.
- Do not carry your Teal Sport Drone while powered up. Accidentally arming the quad while carrying it could cause injury.
- Do not fly so far that the video transmitter and radio transmitter go out of range. Too far for the radio transmitter and the Teal Drone will cause it to go into a failsafe state and stop its motors, making it fall from the sky, so that it doesn't fly away. If the video feed is too far away it will show static in the goggles.
- Do not fly in a manner that is intrusive to others.
- Do not fly with damaged propellers.
- When flying with goggles, make sure you have a spotter.
- Do not fly in rain, snow or wet conditions.
- Do not mistreat batteries. Do not puncture or crush. This could start a large fire.
- If a battery looks like it is swelling, do not attempt to charge. Refer to battery manufacturer warnings for proper disposal or recycling.

## LEGAL

### For private households: Information on Disposal for Users of WEEE

This symbol  on the product(s) and / or accompanying documents means that figure 1 used electrical and electronic equipment (WEEE) should not be mixed with general household waste. For proper treatment, recovery and recycling, please take this product(s) to designated collection points where it will be accepted free of charge. Alternatively, in some countries, you may be able to return your products to your local retailer upon purchase of an equivalent new product. Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point. Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

### For Professional Users In The European Union

If you wish to discard electrical and electronic equipment (EEE), please contact your dealer or supplier for further information.

### For Disposal In Countries Outside Of The European Union

This symbol is only valid in the European Union (EU). If you wish to discard this product please contact your local authorities or dealer and ask for the correct method of disposal.

### FPV Regulatory Notice

The use and operation of this type of product in the USA and many other countries may require a license, and some countries may forbid its use entirely. In the USA, you will need a "HAM" amateur radio license. Learn more about HAM licenses.

It is your responsibility to ensure that the use of this product meets the requirements imposed by your government's rules and regulations for RF devices. Do not purchase this product if you are unsure of the government requirements or are not able to comply with them. Teal Drones cannot be held responsible for your actions if you purchase and/or use this product in violation of your government's regulations.

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