Glossary - (c) droneflyers.com

808 camera - A common name for a range of tiny "spy" cameras often sold as "Keychain" cameras. There are very light in weight and used by many hobbyists for taking video from multirotor and winged aircraft.

accelerometer - An electronic component which measures acceleration on a given axis (direction) of flight.

AP - Aerial Photography - a field which is growing fast due to smaller cameras and better aerial platforms

arduino - An open source (free software) project centered around a low cost circuit board which allows for control of objects. It is easily programmable allowing for experimentation. Many quadcopter control boards (FC, Flight Controllers) are built using this board and software.

ARF - Almost Ready to Fly - used to describe the Drone or Quadcopter you are purchasing - as to what it comes with! ARF units often come without the transmitter and may require some easy assembly

autonomous - not subject to control from outside, often used to describe a drone which follows a preset path using GPS or other means, as opposed to being actively steered by radio control.

axis - Used to describe one plane (one line) of potential flight. Most quads have at least 3-axis control and correction built in.

balancing battery charger - A charger or internal system for Lipo batteries (or other chemistries) which uses smart technology to properly charge multiple cells within the battery and "balance" them.

barometric pressure sensor - A device which uses barometer readings to determine altitude. In combination with other sensors, these can help drones determine their height above ground.

bind - The process of making the controller (Transmitter) "talk" to the Quadcopter or drone.

BNF - Bind N (and) Fly -This usually describes a unit which is ready to BIND to your existing transmitter and then fly.

brushless motor - Lightweight brushless motors are one of the defining features of the recent growth in popularity of electric aircraft. Brushless motors are categorically far more efficient, and far more durable than brushed motors. With small props, they can also be operated without the gearbox often required of lower RPM brushed motors, saving weight and wear on several fragile mechanical linkages. (dronepedia attribution)

build - Used an a noun when discussing home-built quadcopters or multirotors - example "Here's a picture of my build".

CA - Cyanoacrylate adhesive - also called superglue. This, along with Gorilla Glue and Liquid Tape, are often used in the building and repair of aerial vehicles.

camera gimbal - This describes a camera holder, often used on drones, which may have the capability to tilt and swerve using small actuators called servos. Various camera models, including video cameras and even large DSLRs, can be fitted to these gimbals.

center of gravity (CG) - Also called mass center - on a multirotor this is likely to be the point where, if a string were attached to and the machine dangled from it, that the unit would be balanced. It is important to maintain CG when adding different batteries, cameras, mounts, etc.

CF - Carbon Fiber - a very lightweight and strong materials used in aircraft and other items requiring a high strength to weight ratio

DJI - DJI Innovations, a highly regarded multirotor manufacturer who sells both kits, completed units and parts including the popular NAZA flight controller.

drone - A newer, perhaps slang, definition is for any unmanned powered aerial vehicle, although the dictionary has not yet caught up! In terms of the news and current events, it is often used to describe aerial vehicles which can be guided from afar and contain surveillance gear, etc. Officially, "drone" defines a humming sound or a male bee which mates with the queen.

dual rates / expo - often abbreviated as D/R, these are adjustments inside the hobbyist transmitters which allow for the user to “turn up” or “turn down” the way in which the aerial vehicle responds to the TX. The “dual rates” part allows for a TX to have two modes (i.e. easy and

hard angles of flight) selectable by a switch. Expo or exponential sets the ”curve” of the throttle and other controls.

ESC - Electronic Speed controller - this to used to speed up and slow down motor "RPM". These devices are the key to modern multicopters and most have one one wired to each motor.

flash - To reset and/or add computer code to a chip or controller.... i.e. "I flashed the ESC".

FPV - First Person View - often used to describe cameras mounted on aerial (or any unmanned) vehicles which let the operator see what the vehicle sees in real time. This is done by way of goggles or screens which display the output of the on-board cameras.

GoPro - A line of small lightweight sport cameras which are often flown on multirotors to capture video. They have a wide angle of view and are built to withstand shock.

GPS - Global Positioning System used to track movement or hold position on certain advanced Multirotor models.

gyro - Same as gyroscope

gyroscope - A device that measures angular velocity and helps maintain orientation.

hobby grade - describes a quadcopter or parts one step up from toy grade - these quads or parts are typically designed for better reliability and operation. Examples include quads such as the new RC Logger

Extreme Eye One (brushless motors, etc.), the DJI Phantom, AR Drone and Blade 350X QX.

hexacopter - A multirotor aerial vehicle with 6 rotors

interval shooting - Settings which allow a camera to take pictures or video at user-defined intervals. Example: a camera can be set to take one picture every 5 seconds.

intervalometer - a software or hardware mechanism which allows interval shooting.

JST - A type of battery connector (plug) used on many quads. The other popular style is called the Walkera Connector. You can buy adapters which convert one to the other.

KAP - Kite Aerial Photography - taking pictures from a kite.

LIPO - Also called Lipo or lipo, etc. These are the type of battery (internal chemistry) that most electric drones currently use.

mAh - milliampere-hour - an electrical measurement of the power packed into a battery. One thousand mAhs equals one ampere hour. Quadcopter batteries will range in size from 50 mAh to 5000+ mAh.

Mobius - a popular and lightweight sports camera designed for R/C flight.

mod - modification - quad and drone flyers love to modify their machines in various ways!

multicopter, multirotor - An aerial vehicle with multiple rotors (propellers which are horizontal). This would include tricopters, quadcopters, hexacopters, octocopters, etc.

multiwii - General purpose software initially developed to support Nintendo Wii console gyroscopes and accelerometers. It is now used to control multirotor aircraft. The software is now installed on many Arduino circuit boards, including custom models specifically for quadcopters.

NAZA - An electronic flight controller used on mid-level and above multirotors - produced by a company called DJI, The NAZA contains the main controlled chip along with a gyro, accelerometer, and a barometric altimeter. Optional GPS & Compass modules are available.

octocopter - An aerial vehicle with 8 rotors.

payload - The amount of weight your aerial vehicle may be able to lift in addition to itself and it's batteries.

pitch - used to describe the angle of flight along one axis - in the case of quadcopters, usually from level.

quadcopter - An aerial vehicle using 4 rotors, commonly using only the varying speed of the motors to achieve both stability and direction of flight.

R/C - Another way of writing RC - Radio Controlled.

RC - Radio Controlled - this refers to most multirotors and quadcopters which are controlled by radio transmitters or even by a smartphone or tablet.

RTF - Ready to Fly - In the field of Multirotors, quad (and other) copters and other R/C (radio controlled) vehicles, this means that the unit is sold complete with everything - ready to go. Note - you may still need regular (AA AAA) batteries for the transmitter)

rx - short for receiver or receive

servo - short for servomotor or servomechanism. On quadcopters and other aerial drones, these are used for various tasks (pan cameras, adjust wing flaps) and controlled by the radio from the ground.

telemetry - Refers to a back and forth connection between an aerial vehicle and your controller/transmitter/screens. This would allow, as an example, the display of the battery power remaining on the multirotor to be displayed to you at your ground station.

throttle - Control used to increase or decrease the RPM (speed) of the electric motors

toy grade - Describes many of the common quadcopters which cost less that $100 - these use very inexpensive components and are somewhat disposable. Reliability can be spotty, however they provide good value for the price.

trim - verb or noun describing the small adjustments on the TX to make a quad hover or fly correctly.

tx - Short for transmitter or transmit

UAV - Unmanned Aerial Vehicle (drone, etc.) or unmanned autonomous vehicle

ultrasonic sensor - A sensor which uses sound waves - in the case of quadcopters and multirotors they are usually used to determine the distance from the ground by bouncing sound waves off of it. In typical use, they work only for a few meters above the ground or other surface.

WOT - Wide Open Throttle - throttle stick on maximum!

yaw - used to describe the rotation of a quadcopter on a level plane around it's center axis.

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