AR.Drone Overview

Background

- Parrot SA is a wireless manufacturing company based in Paris, France
- Products include bluetooth car systems, wireless speakers, wireless digital frames
- AR.Drone quadricopter introduced in 2010 at Las Vegas International Consumers Electronics Show and received Innovations award for best electronic gaming hardware

Key Features

- Controlled by iPhone, iPod Touch or iPad using WiFi over a distance of 50 metres
- Forward and downward facing video cameras which stream to iPhone
- Separate indoor and outdoor hulls
- Compatibility with augmented reality games

Tech Specs

- Ultrasonic transceiver and receiver to measure height up to 6 meters
- Inertial guidance system - 3 axis accelerometer, 2 axis gyrometer, 1 axis yaw precision gyrometer
- LiPo battery life of 12 minutes with recharging time of 90 minutes
- Custom chips with upgradeable firmware

weight is less than a pound
flying speed up to 18 km/hour
4 brushless moters, 35K rpm
front camera, wide angle 640x480 pixels (VGA)
altimeter range up to 6 meters for vertical stabilization
detection distance 30 centimeters to 5 meters
validation of shots fired at enemy drones
vertical camera video frequency of 60 fps which allows stabilization even with light wind

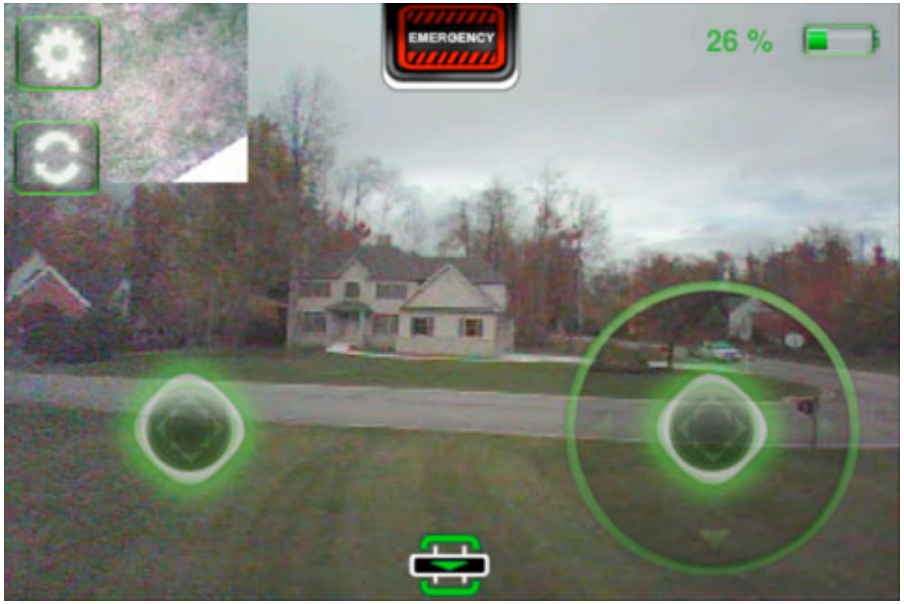
Fail Safe

- Auto hover - if you get in trouble, let go
- Hull with protective loops for indoor flight
- Automatic locking of propellers in event of contact
- Emergency button to stop the motors
- Autopilot landing if battery runs out

AR.Drone Apps

- *AR.FreeFlight* - free controller from Parrot
- *DroneControl* $3 - full screen iPad support plus optional joystick control
- *Flight Record* $3 - records streaming video from cameras as Quicktime movie
- *AR.Pursuit* $3 - hunt another AR.Drone with augmented reality machine guns & missles
- *AR.Flying Ace* $3 - dogfight between drones

AR.FreeFlight
v1.5.1
Drone firmware 1.3.3
AR.Drone up to date
Launching Application...
Connecting
Checking version


EMERGENCY
26 %

How Much?

- $350 at Best Buy with one year warranty
- Good web site with instructional videos
- User group with over 8000 user videos
- Individual spare parts available from http://ardrone.parrotshopping.com/ca

http://ardrone.parrot.com/parrot-ar-drone/usa/

Example Videos
AR.Flying Ace demo
Paris Eifel Tower
Paris Over Town
Bull Fight (top rated on YouTube)