

Draganflyer Stabilized Aerial Video System Technical Specifications

Physical specifications:

Dimension: (length x width x height)	- 32" x 32" x 6"	(80cm x 80cm x 15cm)
Weight:	- 19 ounces	(538.65 grams)
Flight time:	- 12 to 15 minutes	(720 to 900 seconds)
Range: (line of sight)	- 1500 feet	(457 meters)
Payload:	- 3 ounces	(85.05 grams)
Construction materials:	- Carbon fiber - glass reinforced super tough nylon	
Gear ratio:	- 1:5.6	
Rotor size	- 12.5 inches	(31.25 cm)
Motor size	- custom wound Mabuchi 370 brushed electric motor	

Systems:

Radio system:

- Operates frequency: 72 MHz
- Available frequencies: 37 (72.530), 41 (72.610), 47 (72.730), 50 (72.790), 53 (72.850)
- Digital 6 channel computerized FM transmitter
 - two flying modes
 - 9.6 volt, 600mah NiCad battery
 - high gain detachable antenna
 - end point and travel adjustment
 - exponential adjustment
- 6 channel dual conversion FM receiver integrated into the circuit board

Flight Battery:

Cells:	Lithium polymer with balance taps
Voltage:	11.1 volts
Amperage	1320mAh
Discharge rate	17.16 ampere continuous discharge
Weight:	3.27 ounces (92.7 grams)
Dimensions:(length x width x height)	2.7" x 1.4" x 0.9" (6.8 cm x 3.5 cm x 2.2 cm)

Battery Charger:

- Digital peak lithium polymer and NiCad charger
- NiCad charge rate: 50mA
- Lithium charge rate: 0.75 amps

Flight Stability Systems:

- Draganfly Thermal Intelligence self leveling system with 4 infrared sensors
- Piezo gyros on pitch, roll and yaw axis
- Yaw axis gyro has heading hold

Flight training software:

- FMS simulator software
- Specific Draganflyer Models and training landscapes
- Requires: - Windows operating system
 - USB port

Camera System:

Video Camera:

Effective Picture Element:	1/3" High Resolution CCD 768(H) x 494(V)
Horizontal Resolution:	480 Lines
Sync System:	Internal
Minimum Illumination:	0.5 Lux @F1.2, 50 IRE
Gamma:	0.44
White Balance:	manual or full auto
Electronic Shutter:	1/60 to 1/100,000 sec
Operating Temperature:	14°F to 113°F (-20°C to 45°)
Power Supply:	12 volts DC
Dimensions (length x width x depth):	1.28" x 1.28" x 1.04" (32 mm x 32 mm x 20 mm)
Lens size:	4 mm
Diagonal field of view:	80 degrees
Horizontal field of view:	62 degrees
Vertical field of view:	48.5 degrees

Camera transmitter:

Operating frequency:	2.410 GHz 2.430 GHz 2.450 GHz 2.470 GHz
Power consumption:	5 volts DC
Transmission range:	1500 feet
Transmission Power:	50mW
Operating temperature:	14 to 104 degrees F (-10 to 40 degrees C)
Operating humidity:	20 to 80 %

Diversity Receiver:

- Switches between two individual receivers to get clearest signal
- Operates on both NTSC and PAL

Operating frequency:	2.410 GHz 2.430 GHz 2.450 GHz 2.470 GHz
Power consumption:	600 mA at 12 volts DC
Operating temperature:	14 to 104 degrees F (-10 to 40 degrees C)
Operating humidity:	20 to 80 %
Receiver sensitivity:	- 83 dBm
Switching time:	< 2 ms
Processor speed:	20 MHz
Video output:	standard composite, 1 volt peak to peak
Antenna connections:	SMA style
Dimensions(length x width x height):	5.4" x 7.2" x 1.6" (13.5cm x 18.0 cm x 4.0 cm)

Receiver patch antenna:

- right and left circular polarized

Operating Frequency:	2.4 to 2.5 GHz
Gain:	8 dBi
Horizontal beam width:	65 degrees
Vertical beam width:	65 degrees
Impedance:	50 Ohm
Operating temperatures:	-40 to 85 C
Dimensions(length x width x height)	4.5 x 4.5 x 0.9 (114 x 114x 23mm)
Radome material:	UV- inhibited Polymer
Receiver connections:	SMA style

Ground Base Station Case

Accommodates:	- Diversity receiver - Two patch antennas - 11.1 volt 1320 mAh battery
Dimensions:	13.4" x 8.9" x 5.6" (33.5 cm x 22.25 cm x 14 cm)