

# PALM BAY POLICE DEPARTMENT PARAMOTOR SEARCH UNIT



The Palm Bay Police Department has created a new aviation unit call S.O.A.R, which will be using an unconventional aircraft call a Powered Paraglider. No other agency in the United States currently uses this form of aircraft for law enforcement purposes making this program the first of its kind.



A powered paraglider is the most portable and inexpensive motorized aircraft ever invented. This ultralight aircraft requires no airport, hanger or runway. It can be packed so small that most units can fit in the backseat of a standard size patrol vehicle.

The major advantage of this aircraft for law enforcement is in its ability to fly “low and slow”. Most conventional aircraft are regulated to fly at altitudes above 1000 feet. At this high altitude it becomes difficult to properly survey designated areas to be searched. Large items such as cars can be spotted, but if the vehicle is hidden under tree lines or the items being searched for are small, searching at this altitude becomes much more difficult. The Powered Paraglider typically flies under a 1000 feet. Because of its maneuverability, the pilot’s incredible unobscured view of the surroundings and the ability to fly less than 30 mph makes it an ideal aerial platform to effectively and efficiently search large areas.



The Powered Paraglider has a maximum legal altitude limit of 18,000 feet. The motor weighs between 45 and 60 pounds making it relatively easy to carry around on the pilots back. A Powered Paraglider flies up to 42 mph. Speed is increased with a tail wind and reduced with a headwind. Fuel capacity is limited to 2 to 3 gals allowing for a maximum flight time of about 2 to 3 hours. Standard distances covered with this ultralight aircraft is about 70 miles.

The Palm Bay Police Department selected the Dudek Synthesis reflex wing to use with its S.O.A.R. program. Dudek Paragliders are designed and produced at their factory in Poland-[www.dudek.eu](http://www.dudek.eu). These reflex gliders are faster and inherently more stable than traditional classic style gliders. Dudek has applied a custom logo on the underside of the Synthesis glider specifically for the Palm Bay Police Department. This logo will distinguish the Palm Bay Police Department’s ultralight aircraft from the recreational users. Part of our objective is to be visible to the public letting our residents know we are in the air and patrolling the neighborhood. The motors being used are the Paratoys Mz 100, which will be used for foot launch and the Paratoys Mz 34, which will be used on a quad buggy. Ray MacMahon, owner of Ray MacMahon Powered Paragliding Equipment, is assisting the Palm Bay Police Department by providing the use of the powered paragliding equipment during the development and initial implementation phase of the S.O.A.R. program.



The Palm Bay Police Department intends on using this aircraft for search and rescue operations for missing endangered children and adults, surveillance and reconnaissance, locating stolen and discarded vehicles and other property, identifying hazards within the City, photographing crime scenes, and damage assessment after disasters. There are also plans to use this ultralight aircraft for crime prevention through routine aerial patrols over sections of the City which experience higher numbers of residential burglaries. By being more visible from the air than on the ground, we hope our aerial presence will be a deterrent.

This aircraft should prove to be a valuable asset to the Palm Bay Police Department. As this type of aircraft becomes more common place in law enforcement its uses and applications will also expand.

