



# SMOKE SIGNALS

*Happy Holidays*



I found the following at [WANTTOKNOW.INFO](http://WANTTOKNOW.INFO)

Dear friends,

I don't know if the following inspirational short Christmas story is true, but whether or not it actually happened, it's a wonderfully inspirational story for people of any faith. In this season of love, may we all remember the beautiful love of a small child. I wish you a meaningful and love-filled Christmas season and new year ahead. May your days be filled with love, joy, growth, and inspiration.

## The Gold Wrapping Paper

*Once upon a time, there was a man who worked very hard just to keep food on the table for his family. This particular year a few days before Christmas, he punished his little five-year-old daughter after learning that she had used up the family's only roll of expensive gold wrapping paper.*

*As money was tight, he became even more upset when on Christmas Eve he saw that the child had used all of the expensive gold paper to decorate one shoebox she had put under the Christmas tree. He also was concerned about where she had gotten money to buy what was in the shoebox.*

*Nevertheless, the next morning the little girl, filled with excitement, brought the gift box to her father and said, "This is for you, Daddy!"*

*As he opened the box, the father was embarrassed by his earlier overreaction, now regretting how he had punished her.*

*But when he opened the shoebox, he found it was empty and again his anger flared. "Don't you know, young lady," he said harshly, "when you give someone a present, there's supposed to be something inside the package!"*

*The little girl looked up at him with sad tears rolling from her eyes and whispered: "Daddy, it's not empty. I blew kisses into it until it was all full."*

*The father was crushed. He fell on his knees and put his arms around his precious little girl. He begged her to forgive him for his unnecessary anger.*

*An accident took the life of the child only a short time later. It is told that the father kept this little gold box by his bed for all the years of his life. Whenever he was discouraged or faced difficult problems, he would open the box, take out an imaginary kiss, and remember the love of this beautiful child who had put it there.*

In a very real sense, each of us has been given an invisible golden box filled with unconditional love and kisses from our children, family, friends and God. There is no more precious possession anyone could hold.



**CLUB ELECTIONS ARE MOVED TO THE MEETING OF DECEMBER 5, 2013 DUE TO TECHNICAL DIFFICULTIES AT THE NOVEMBER 21, 2013 MEETING. PLEASE STEP UP, THROW YOUR HAT IN THE RING AND RUN FOR OFFICE.**

*This article was handed to me at the last meeting by Al Hammer. It's a very interesting read not to mention quite alarming.*

## Report: Pilots losing flying skills to automation

Airline pilots have lost flying skills as automation takes over mundane tasks and may be startled when systems don't behave as expected, which have contributed to crashes, a government and industry report concluded.

Airlines need to improve pilot training in autopilots and other automation in the cockpit, the report obtained by Bloomberg News said.

The issue is growing in importance as the United States installs a \$42-billion satellite-based navigation system known as NextGen, the report, commissioned by the Federal Aviation Administration, found.

"There are times when the airplane will do something that's unexpected and the pilots will go, 'Why did it just do that?'" Patrick Veillette, who wrote his PhD thesis on cockpit automation, said.

Auto-throttles, computer navigation and other automation have improved safety, said Veillette, who wasn't part of the report. Airline safety is at an all-time high, according to accident statistics.

The downside is that the new technologies may be programmed incorrectly more than previous systems and are so complex that pilots don't always understand their actions, Veillette said.

The findings were reported earlier in The Wall Street Journal.

Some recent accidents not considered in the report, including the Feb. 12, 2009, crash of a turboprop approaching Buffalo, operated by Pinnacle Airlines Corp.'s former Colgan unit, are related to how pilots are trained on automation, Veillette said. Fifty people were killed, including all 49 on the plane.

A pilot on an Asiana Airlines plane that struck a seawall while attempting to land in San Francisco July 6 said he thought the plane's auto throttle was maintaining speed, the NTSB said after the accident. The Boeing 777 had slowed to almost 40 mph below its target speed before losing altitude and striking the seawall. The NTSB hasn't yet concluded what caused the accident. — Bloomberg News

## BIRTHDAYS

- DEC 2 Alan Hammer
- DEC 2 Ray Maramara
- DEC 6 Abramson Ellis
- DEC 11 Mel Brenner
- DEC 11 Tom Dutton
- DEC 11 Robin Smith
- DEC 12 Chris Mantzaris
- DEC 21 Nelson Ramos
- DEC 22 Bill Streb
- DEC 30 Tony Pollio

## Calendar

**December 5, 2013**  
Club Meeting

**CLUB ELECTIONS**

**December 7, 2013**  
ANNUAL AWARDS DINNER

7:00 pm

See next page for Details

**December 19, 2013**  
Club Meeting

If you want to view The Long Island Aero Modelers (LIAMA) website go to: [www.liama.org](http://www.liama.org)

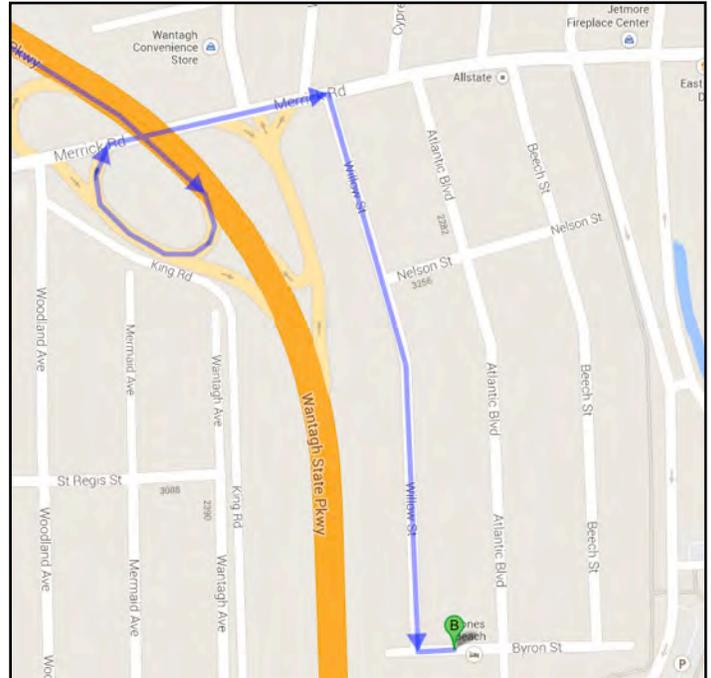
Send all suggestions to:  
[newsletter@meroke.com](mailto:newsletter@meroke.com)



### 2013 MEROKE AWARDS DINNER

The Annual Meroke Awards Dinner will take place on December 7, 2013 at 7pm at the THE JONES BEACH HOTEL located at 3275 Byron Street, Wantagh, NY 11793

Take the **Wantagh State Parkway South** ramp to **Jones Beach**  
Take exit **W6E** for **Merrick Road**  
Turn right onto **Merrick Rd**  
Turn right onto **Willow St**  
Turn left onto **Byron St**  
Destination will be on the right  
**3275 Byron St**  
**Wantagh, NY 11793**





Recently The Meroke RC Club had the honor of Jim Plackis as a guest speaker at our club meeting on October 17,2013. From Mr Plackis' first word to his last every member in attendance was mesmerized. Below is a brief and I mean brief synopsis of his distinguished career. I think I can speak for the club and say "Please sir can we have more".



The speaker, James G. Plackis, ATP<sup>1</sup> #589616, is a Lifetime Member of the SETP<sup>2</sup>, and was previously a guest speaker at the European Symposium in Varesse, Italy many years ago.

His Airplane and Helicopter Airline Transport Pilot Certificates have 24 Type Ratings on them, based on his 70 years and 13,500 hours as a Professional Pilot. He holds a current CFI and CFII in Landplanes, Seaplanes, Helicopters, Gliders and Instruments.

He retired from a 38 year career with the FAA, where he served as a Test Pilot, Aerospace Engineer and Manager; for the concluding 29 years of his FAA career, he served as the Manager of the Flight Test Branch in the Eastern Region.

In 1944, at the age of 19, he served as the Aircraft Commander of the largest bomber in the sky at that time, the B-24, 4-engine "Liberator"; he completed 40 combat missions in the Pacific, and was awarded the Distinguished Flying Cross plus the Air Medal, with 6 Oak Leaf Clusters, by the U.S. Army Air Corps. The FAA has subsequently awarded him the "Wright Brothers Master Pilot Award". He is also an active FAA Safety Team Representative, as well as a Designated Engineering Representative in four categories.

His education includes a B.S. degree from Virginia Tech and an M.A. degree from the University of Richmond, in addition to a year of post-graduate studies. He holds current membership in the NTSB Bar Association; the International Society of Air Safety Investigators; the Lawyer-Pilots Bar Association; and he served as an Adjunct Professor in the Aviation Department at the State University of New York, at Farmingdale.

More information is available at: <http://www.linkedin.com/pub/james-plackis/b/95a/34b>



*I received this in an e-mail from a dear friend who knows that I am the Newsletter editor for the club and she passed this along to me. I do not know where she found it so I can't give credit where credit is due.*



The Black Hornet nano drone, which can be carried in a soldier's pocket, has an onboard camera that gives troops video and still images of hard-to-access places.  
Richard Watt/Ministry of Defense



Unmanned aerial vehicles or UAVs are becoming more and more common. They're commonly by the military to spy in insurgents and more recently, they're being used by law enforcement to investigate criminal behavior in the United States. But it doesn't take a soldier or a police officer to own and operate a UAV. And research labs around the world are advancing the technology, developing a new, diverse generation of UAVs designed to perch on walls, bust drug dealers, fly into storms, look for nuclear disaster survivors and even be controlled with smartphones. Demanding duties mean these vehicles need to be able to fly nonstop for hours, days, and longer. Forget refueling. UAV development is pushing the limits of solar and hydrogen power. It's also pushing the Federal Aviation Administration to open airspace to smaller unmanned vehicles. "The fact that they're finally coming up with small unmanned aircraft system regulations that look reasonable, that's going to take the lid off an industry that's been waiting for this to happen for years," says Kevin Kochersberger, director of the Unmanned Systems Lab at Virginia Tech. He gives these ten UAVs high marks for technological prowess, risk and potential for spin-offs:

**A. R. Drone/Parrot**



Perching UAVs Earlier this year, Stanford University researchers created a model-plane sized unmanned aerial vehicle that can fly directly to a wall and then land vertically on it, superhero style. Miniature spines on its feet allow the vehicle to cling to a surface. The feet, with help from the propeller, can be manipulated so the UAV walks the wall to get a better view. "I am impressed with the engineering on the aircraft and the iterations they went through to get that configuration," Kochersberger says. "It's going to lead to new technologies." He says the UAV has the potential to sense data that would otherwise be unobtainable. According to the Stanford team, the weather-resistant

vehicle consumes very little power and can quietly monitor an area for days. No bat signal required. In the same vein, a team at MIT designed a control system that allows a foam glider with a single motor on its tail to land on a perch.

Stanford University

Reaper The U.S. Army's MQ-9 Reaper isn't exactly new but, along with the Predator drone, it has come a long way in flying continuous missions. The Reaper is a specialty airplane designed for surveillance and equipped with highly accurate laser-guided AGM-114 Hellfire missiles, infrared cameras, and electro-optical cameras on stabilized gimbals. It certainly isn't cheap -- a four-vehicle Reaper system with sensors costs a cool \$53.5 million -- but the advantage is that one can be operated entirely from the ground for customs and border protection. "They're flying 24 hours a day. If you look at the cost of a manned aircraft flying that many hours, it's cost effective to keep them up," Kochersberger says. "When you look at the manpower and the risks that are there to the operator, you're not putting a pilot at risk."

U.S. Army



Modified RMAX Chopper Kochersberger leads a team at Virginia Tech that transformed a 200-pound Yamaha RMAX helicopter so that it could potentially be sent out after a disaster to search for survivors and gather data on the extent of the damage. The federally funded project took Yamaha's low-cost, remote-controlled crop dusting chopper and equipped it with autopilot and a special box containing a computer, payload radio, and customized circuit boards. "Our helicopter is the only RMAX that's flying any missions these days," Kochersberger says. "Two people can easily handle it and set it up. In this case, it's to get it up after a nuclear disaster and learn about the nature of the

accident, and gather data without putting people in harm's way in a radioactive environment." He adds that the team is working on a tethered robot.

Virginia Tech

Fire Scout The U.S. Navy's pilotless robocopter, Fire Scout, had an adventurous test flight in the spring. Aviation Week reported that while the Fire Scout was completing surveillance sea trials from the USS McInerney, its operators spotted a speedboat suspected of drug smuggling. The Northrop Grumman vehicle is 31 feet long, ten feet tall, and has a 600-pound lift capacity. Fire Scout's remote operators wrapped up the test flights and decided to go after the speedboat. The chopper watched the boat for three hours and when it linked up with a fishing boat, law enforcement stepped in and seized about 60 kilos of cocaine. In August, however, Navy operators lost control of the robocopter in restricted airspace above Washington, DC. Ultimately they regained control and landed it safely. The Navy blamed the incident on a software anomaly, and resumed unmanned flights in September. Usually human error is the issue, Kochersberger says. "The majority of the accidents are human ground control operator based."

U.S. Navy





Zephyr In July, British defense company QinetiQ's solar-powered Zephyr broke the world record for flying nonstop without refueling. The thin 110-pound carbon fiber UAV stayed airborne for two weeks straight in Arizona. This version is about 50 percent larger than QinetiQ's original version, and more aerodynamic. Kochersberger gives the Zephyr high marks. "QinetiQ has been at this for years," he says. "It stores enough during the day to fly all night." Paper-thin solar arrays cover the wings, providing power to the lithium-sulfur batteries that kept it aloft in the darkness. The defense company expects its record-breaking UAV will be ideal for conducting environmental research, providing remote communications, and monitoring areas during a natural disaster.

QinetiQ

Tempest When everyone else is running for cover from a violent storm, the Tempest unmanned aerial vehicle is going straight into it. The UAV and its instruments are part of a large-scale scientific research project called VORTEX2 that aims to understand tornadoes. The 10-foot-wide, 20-pound can move at 100 miles per hour, and has sensors to measure air pressure, moisture, wind speed, and temperature. Initially, researchers from the University of Colorado and the University of Nebraska who developed the Tempest were unsure that their UAV would be able to make measurements in a supercell storm, the kind that spews heavy rain, hail, wind, and sometimes a tornado. Yet last May, when the team got the green light from the FAA, they flew the Tempest into a supercell thunderstorm over northwestern Kansas. The UAV flew for 44 minutes, successfully transmitting meteorological data, along with its position and status, wirelessly to a control station and tracker vehicle on the ground. Kochersberger, who has seen the Tempest up close, says it's a novel use for a UAV. "I've talked to their researchers. I like their design philosophy," he says. "They certainly got closer to bad weather."

University of Colorado and University of Nebr

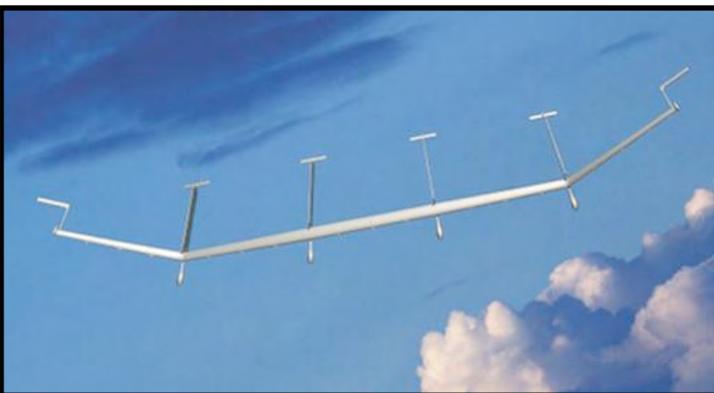


Phantom Eye In July, Boeing unveiled a prototype for its hydrogen-fueled UAV, Phantom Eye. Designed to fly at 65,000 feet for up to four days straight, the vehicle has two 2.3-liter, four-cylinder engines, can carry 450 pounds of payload, and is scheduled to have its maiden flight in early 2011. Kochersberger compares the Phantom Eye with DARPA's Vulture program to create a five-year battery-powered UAV that can carry more than 1,000 pounds. While Vulture is more ambitious, he says there's probably a two- or three-year development cycle before it flies. The Phantom Eye is still on the ground, too, but closer to flying. An airplane that will stay up for several days in orbit as a communications hub is novel, Kochersberger says. "It's a radical design."

Boeing

Automatic Supervisory Adaptive Control When several million dollars' worth of technology is airborne, it also better be able to keep going after getting shot. The aviation technology company Rockwell Collins designed a flight control system that figures out what goes wrong when an airplane sustains catastrophic damage. The automatic system readjusts instantly to safely land the plane. The system was successfully flight tested in 2008 on an unmanned FA-18 subscale model air vehicle sponsored by DARPA. In Aberdeen, Maryland, the test blew more than 60 percent of the plane's wing off. The system automatically righted the plane, allowing it to land normally. Last summer, Aviation Week reported that the company has a contract to put its system in an operational UAV. Rockwell Collins' automatic supervisory adaptive control is based on the known flight control laws that govern the aircraft's characteristics, Kochersberger says. "They developed a nonlinear flight control algorithm. It will sense the aerodynamics and fly in spite of those inefficiencies," he says. "It's really fast, too. If the wing comes off, it's immediately stable again." The technology has the potential to keep military personnel and civilian passengers safe.

Rockwell Collins



Solar Eagle DARPA's Solar Eagle unmanned aerial vehicle is like a low-altitude satellite, Kochersberger says. The solar-powered UAV has loftier goals than the company's hydrogen-powered Phantom Eye. Currently the Solar Eagle is being designed to have a 400-foot span between wings, carry 1,000 pounds of sensors and payloads, and remain at 65,000 feet for five years. Yes, years. The \$89 million project aims to begin flight-testing in two years. Kochersberger expects that the Solar Eagle will spin off new tech related to communications. "Temporary wide area communications that are similar to satellites -- that's a new industry that would spring up from the use of the airplane," he says.

Boeing

A. R. Drone Parrot When one thinks of UAVs, a toy isn't the first thing that comes to mind. But that's exactly what the A.R. Drone by French company Parrot is. The half-pound quadricopter is now on the market and costs around \$300. Its Wi-Fi system works with Apple's platforms so the small chopper can be controlled using an iPhone, iPod Touch, or an iPad, and multiple players on a network can compete against one another with the vehicles. Other smart devices should work with the toy in the future, according to the company. Kochersberger credits associate professor Mary Cummings for creating a similar vehicle in her Humans and Automation Lab at MIT. She and her students designed a one-pound quad-rotor UAV that has sensors and a built-in camera, and can be controlled using an iPhone. "The Parrot toy, you could say it's a game," Kochersberger says. "But you could put a radio repeater in there to drive it behind the building and relay radio messages."

Parrot



Phil Friedensohn sent this to me since we had two "NIGHT FLIGHTS" this year and more planned for 2014. The article comes from "MODEL AIRPLANE NEWS" from October 2013 and was written by John Reid.

## LIGHT UP THE NIGHT SKY

Why not customize your aircraft so that night flying will be as simple to do as flying during the day? (That is, for those of you who find it easy to fly during the day!) For me, flying at night has a couple of benefits. I live in the desert and it is hot and windy during the day with nights that are much cooler and less windy. This makes night flying very attractive to me. I decided to give night flying a try and I have outlined here how I went about installing lights on my planes.



Photo by Erica Mesker

### Scale lights

Up until a few years ago, the only lights we would add were scale detail lights that match the full-size counterparts. Many of these lights are available from RAm Electronic Devices ([ramrcandramtrack.com](http://ramrcandramtrack.com)). They include flashing navigation lights, strobes, rotation beacons, and landing lights. Scale lights make it possible to fly at night but they mainly make our scale aircraft look good at early dawn and after sunset, or during the day at a scale contest. Scale lights are more of a scale detail that adds to your aircraft, rather than something that allows you to see your aircraft better at night.

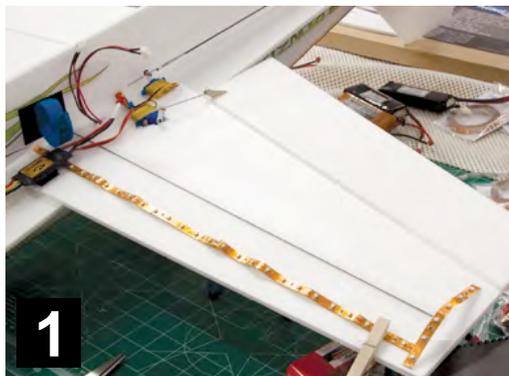
### LED lights

When LED lights were first introduced, they were not bright enough to use as a light source for our night-flying planes. But the new breeds of LED lights are plenty bright enough to make flying at night a breeze and they consume a low amount of power. This allows the lights to be powered by the same battery as the motor. Basically, LED lights are the choice for anyone wanting to get into nighttime flying. I am using LED lights from Common Sense RC ([commonsenserc.com](http://commonsenserc.com)) and DW Foamies ([dwfoamies.com](http://dwfoamies.com)).

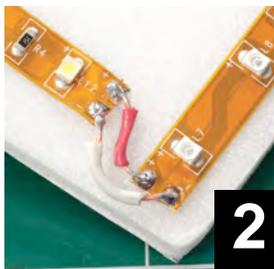
One of the biggest issues for flying at night is plane orientation and these bright lights come in many different colors, which make plane orientating at night possible and easy to do. Installation could not be easier because of the availability of adhesive backed LED lights strips in different lengths, which can be cut for a custom fit.

### Installing lights

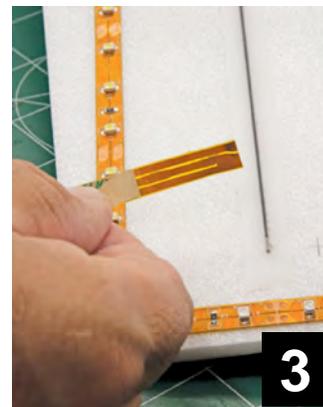
To install the lights, the first step I took was to plan out where they would plug in; from there, I just laid out the lights so they would radiate out from that point. This center spot was where the battery connects to the speed control, which was from where I started webbing out the lights. I laid out a pattern from the tip of the wing to my starting point, cut the light strips to length and then soldered on the connectors.



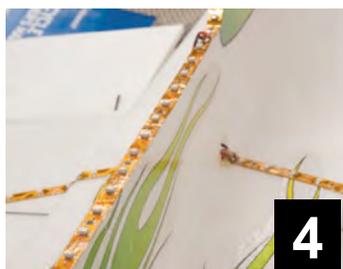
**1** First, I have to measure out the strips of lights and lay them over a design or pattern on the plane. I then plan out my route back to the connection point at the battery. I am going to use different color lights for the top and bottom of the wings and different ones running down the top of the fuselage. Three different colors will be used. The top and bottom wing will have a different light layout to aid on the orientation of the plane at night.



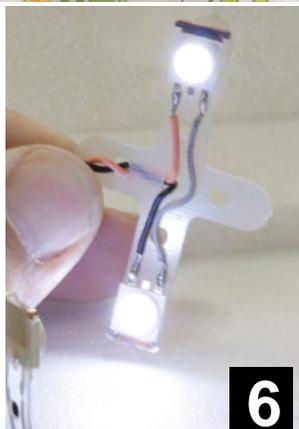
**2** The light strip starts at the battery plug and works out along the wing creating my top design. Any point that requires me to make a sharp angle with the light strip will require jumper wires to be soldered onto the ends of the light strips.



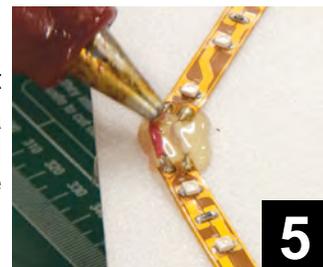
**3** On the bottom of the wings, I have a different color light strip with less of a design incorporated. This will make it easy to distinguish the top and bottom of the plane. The LED strips have a peel-and-stick surface on the bottom so installation is easy. If there is any area that is not sealing down, I just use some tape or a quick drop of hot glue to hold it in place.



**4** This strip running along the top edge of the fuselage will light up the canopy outline and give me a good reference point to keep the plane orientated in the air. This strip of lights could be ran completely around the plane but I kept them off the bottom just in case I cannot pull the plane out of the air during a hover and it has to land on its belly.



**5** To prevent any possibility of the lights shorting out (don't forget they are attached to a LiPo battery), I use a good sized drop of hot glue at all solder joints. This will insulate the connectors and prevent any possibility of the wires touching each other or the joints from pulling loose.

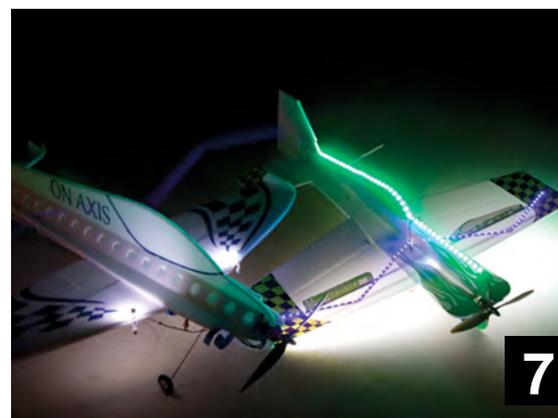


**6** These high-intensity LED lights are used to light up the side of the plane. They are mounted above and below the wing so that the light will shine on the side of the fuselage. This creates a spotlight effect on the plane regardless of its attitude. I was pleasantly surprised at how easy it was to fly a plane at night with this type of lighting on it.

**7** Here are the two planes after the lights are all installed, hooked up, and ready for some night flying. As you can see, these planes are very easy to see in the dark and the lights are simple to install and use.

### Last thoughts

Customizing my plane for night flying was a simple and straightforward project that makes it easy for anyone to add lights to their plane. I would recommend trying nighttime flying for the first time just after the sun goes down because this will give you a little more light with which to begin your journey. Another thing you can do is to fly during a full moon; you will be surprised at how much the moon can light up the flying field!



It's also a good idea to fly in an area where the ground is very flat and there are few obstacles on the ground to run into. Even though the lights do brighten up the ground when the plane gets close, things will sneak up on you in the dark before you have time to react. Trust me on this — enjoy!