

SMOKE SIGNALS

NEWSLETTER

THIS THE FIRST INSTALLMENT OF THE NEW BI-MONTHLY INSTALLMENT OF "SMOKE SIGNALS".
Our newly elected President Lou Pinto asked that I include in this issue of "Smoke Signals" the 2015 list of Club Officers, Board Members & Club Volunteers.

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EDUCATIONS PROGRAMS

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ED WIEMAN

CLUB PHOTOGRAPHER

MARC TRAGER

MONTHLY FUN FLY

RICHARD BOLL
PATRICK BOLL

SMOKE SIGNALS

YOU NEED TO RENEW YOUR FLYING PERMIT FOR 2014 BEFORE YOU WILL BE PERMITTED TO FLY OR STAY IN THE PIT AND/OR IMPOUND. AREAS.

2015

CALENDAR

January 1

Club Meeting
CANCELLED

January 15

Club Meeting

January 25

Nassau Flyers Swap Meet
Levittown Hall
The Meroke RC Club has reserved 1 table for its members exhibits.

BIRTHDAYS

- Jan 5 **Mike Elbers**
- Jan 7 **Jerry Leibman**
- Jan 22 **Charles Lando**
- Jan 23 **John Raparelli**

JANUARY



CALENDAR

February 5

Club Meeting
Show & Tell

February 19

Club Meeting
Cross wind Landings

February 20-22

WRAM Show
Meadowlands Exposition
Center at Harmon Meadow,
Secaucus, NJ.

BIRTHDAYS

- Feb 12 **Jack Tramuta**
- Feb 16 **Gene Kolakowski**
- Feb 17 **Michael Canale**
- Feb 19 **Richard Boll**
- Feb 23 **Ed Wiemann**
- Feb 26 **Joe Petrozza**
- Feb 29 **Roger Scanlon**

FEBRUARY

Send all suggestions to:
newsletter@meroke.com

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President Lou Pinto suggested that this year I include biographies of our younger club members and show what fine young men they are as well as dedicated club members. We start with Patrick Boll with Robby Wenk's biography to appear in the MARCH/APRIL edition.

Patrick Boll was born March 13th 1997 at Franklin General Hospital, the second of Richard and Mary Boll's three children. Patrick lives in East Rockaway, New York with his parents and siblings Daniel and Lauren where he is a Senior at East Rockaway High School, working part time at Hewlett Point Beach in maintenance.

His favorite sports to play and watch are lacrosse and hockey with his favorite hockey team being the NY Islanders and being a diplomat he says he likes all college lacrosse teams. Patrick hopefully will attend Vaughn University next year and plans to study Aviation Mechanics.

As one of the teenage members of the Meroke RC Club he is a very skilled pilot and has frustrated many a club member when competing in club events, winning most all he competes in. Patrick's father Richard has been a Meroke member since 1998 and sponsored Patrick when he joined the club at the ripe old age of 8.

Patrick's favorite plane to fly, he says, is his EXTREME FLIGHT 50cc EDGE 540t.



QUESTION: How did you get into our hobby?

ANSWER: I got into the hobby of radio controlled airplanes through my dad when I was very young. He had a flight simulator (real flight 2.0 to be exact) that he had gotten from my mom for Christmas. So one day he let me try it out and I could not put it down. That soon turned into the real thing and when I flew for the first time I was hooked.

QUESTION: What are your favorite subjects in school?

ANSWER: My favorite subjects in school would have to be Physics and English.

QUESTION: What career path do you want to pursue?

ANSWER: The career I would like to pursue is Aviation Mechanics.

QUESTION: What do you want to accomplish in your life?

ANSWER: What I want to accomplish in my life is to finish college and go on to have a successful job in the aviation industry as an aviation mechanic.

QUESTION: What are your interests other than R/C flying?

ANSWER: Some of my interests other than R/C flying are cars and music. I have been playing the trumpet since the 4th grade and I am currently learning how to play the guitar. I have also always been interested in cars from a young age and grew up around them with my dad's 1967 Chevrolet Nova and my brother's 1987 Chevrolet Monte Carlo SS. With my interest in cars being so strong I am now driving a 1987 Chevrolet Camaro.

QUESTION: What is your favorite maneuver when you fly?

ANSWER: My favorite maneuver when I fly is the rolling harrier. It is a maneuver that makes the plane look out of control but is actually in complete control. The rolling harrier is a maneuver that can and always will put a smile on my face when I perform it.

QUESTION: What is the one thing that would surprise us about you?

ANSWER: One thing that would surprise you about me is that I can ride the Unicycle.

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DAVE BELL SENT ME THE FOLLOWING E-MAIL WITH A LINK TO US NAVY VIDEO OF THE X-47B UCAS ALL I CAN SAY IS "WOW".

THE PAGES FOLLOWING THIS WERE FROM FORBES MAGAZINE, THE OCTOBER ISSUE AND SENT TO ME BY CHARLIE LANDO.

Notice a theme...DRONES!



On Saturday, March 8, 2014 1:11 PM

Can't argue with success. Way to go X-47Bers. (The Wright brothers are smiling for sure.) So why does the US Navy also need to put lipstick on an expensive hog like the F-35?

Herb

Just a few months ago (July 10, 2013), the Navy successfully conducted take-offs and landings from a fairly new nuclear aircraft carrier, the USS George H.W. Bush, with a new stealth jet called the X-47B.

What is so different about this plane is the fact that it is a 'drone'. Yes, it is completely unmanned. Drones come in all sizes and the X-47B is likely one of the larger ones.

What is so ironic about all of this is the fact that the enemy cannot detect a plane like this in the first place. In the unlikely event they get lucky at shooting one down, there will be no human loss of life or captivity. As you view the flight deck crew signaling the plane, they are simply signaling the on-board cameras, who in turn are being manned by staff inside the command intelligence center (CIC) onboard the ship.

Also check out the short distance this plane needs for a takeoff. Impressive indeed.

X-47B UCAS Aviation History Under Way - YouTube

http://www.youtube.com/embed/WC8U5_4lo2c?feature=player_embedded

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Get ready for 'Drone Nation'

by [Clay Dillow](#) @[cwidillow](#) October 8, 2014, 3:58 PM EST



Photograph by Stephen Lewis for Fortune

In demand by Fortune 500 companies and heavily funded by Silicon Valley, unmanned aircraft are rapidly invading the world of business.

We're taking the drone out for a spin. It's a sun-drenched Friday in Indianapolis's Broad Ripple neighborhood, and though it's late afternoon the wind hasn't picked up. Perfect flying conditions. T.J. Johnson, 29, co-founder and chief engineer of a local consumer drone startup called AirDroids, kneels on the

untrimmed grass in the middle of a city park. He unzips a small black carrying case no bigger than a regulation football and extracts an almost-final version of his company's sole product.

The Pocket Drone—a collapsible, three-rotor aerial vehicle—folds up small enough to fit in a backpack easily, but its three independent propeller motors are powerful enough to carry a GoPro camera. Johnson and his partners think it could be the first in a huge, new category of personal electronics—the small, easily portable flying robot that goes everywhere with you to capture overhead imagery on demand.

In a few swift motions, Johnson snaps the rotors into place and connects the battery. Stepping back a few paces to give the machine clear passage to the airspace above, he taps in some guidance “waypoints” onto the satellite image of the park displayed on his Android tablet. Then he gives the command to fly. The propellers whir to life, and the drone zips into the air with startling speed, hovering for just a moment directly overhead before streaking off to autonomously execute its flight plan. As we watch it soar, we're updated on the drone's progress via a female robotic voice emanating from Johnson's tablet: “Waypoint one ... waypoint two ...”

Johnson's company has achieved liftoff almost as quickly as his invention. Along with co-founders Timothy Reuter, 37, and Chance Roth, 40, Johnson developed a rough prototype of the Pocket Drone and put it on Kickstarter in January. The partners were hoping to raise \$35,000. But they ended up getting \$929,212 in just 60 days to produce roughly 1,800 drones. Pre-orders on the AirDroids site have pushed sales still higher, to some \$1.2 million. “To do a million? We felt like we really had something here, but we were definitely surprised,” says Johnson, an engineering major in college who has a day job as an intellectual-property attorney. “None of us were expecting that kind of demand.”

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AirDroids co-founder T.J. Johnson flying the company’s Pocket Drone. The Indianapolis startup has already received \$1.2 million in orders for its compact UAV
Photograph by A.J. Mast for Fortune

AirDroids is just the tip of the propeller. Think of this as a Model T moment—when a new industry finds its commercial footing, and thereafter the world is never the same. The idea of unmanned aircraft as consumer devices or commercial tools is a relatively new one in the U.S. Drones, as they are more commonly known, own a place in the American public consciousness right next to the war on terrorism and America’s shadow conflicts in places like Pakistan and Yemen. Predator and Reaper drones—the hulking, matte-gray unmanned aircraft now synonymous with “drone strikes”—have loitered in foreign skies for decades. But five years ago consumer drones didn’t exist. Even two years ago, low-cost and easy-to-use commercial drones were largely the subject of futurism. Today the business world is on

The global market for nonmilitary drones has already ballooned into a \$2.5 billion industry, one that’s growing 15% to 20% annually. And that’s under the current law. One of the biggest potential markets for commercial drones—the U.S.—isn’t even open for business yet. At least not officially. While the use of unmanned aerial vehicles (UAVs) for commercial purposes is soaring in countries like Japan, Australia, France, and the U.K., the U.S. Federal Aviation Administration has yet to institute regulations governing the operation of commercial drones, and in the meantime it has issued a blanket ban prohibiting their use in nearly all endeavors. Further complicating things is the gray area in defining the difference between “recreational” drones (which aren’t restricted by the FAA) and commercial drones (which are). In September the FAA issued exceptions to six film companies to use drones, and it has approved their use to monitor oil operations in Alaska. Regulators aren’t expected to issue a full set of guidelines for at least another year.

But the buildout of the drone industry is racing along even as Washington dithers. Everyone from Fortune 500 companies to venture capitalists to startups is pouring vast amounts of money into the technology. Amazon, Google, and German shipping giant DHL have made headlines by experimenting with drones for deliveries. Facebook says it is developing a drone the size of a 747 that could fly for months at a time, beaming down wireless signals.



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Meanwhile, unmanned aircraft have already begun to gain traction in big businesses, ranging from agriculture to mining (see box below on “Five Industries Where Drones Are Taking Off”). The industry has even recently retained a Washington, D.C., lobbyist—funded in part by Google and Amazon—to make the case for drones on Capitol Hill. So, strictly legal or not, America’s drone revolution is already well underway. The question is not whether drones will have a real impact someday. Rather it’s, Which businesses will be the most disrupted? And which entrepreneurs and investors will make the biggest windfalls in the process?

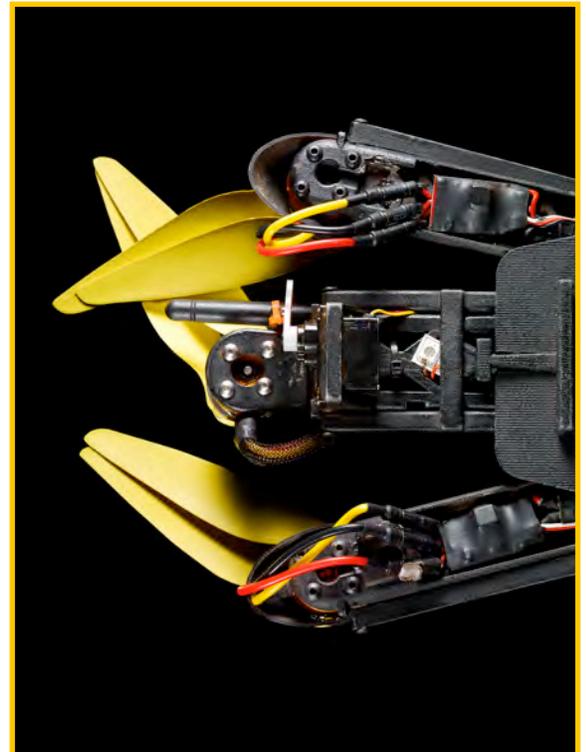
Mark Heynen wants to make one thing perfectly clear: “We’re a data company, not a drone company,” he declares moments after we meet.

Heynen is the senior vice president of client operations for San Francisco commercial-drone startup Skycatch, a company whose business model is based on the manufacture and sale of drone hardware and software to commercial customers. So in that sense, his comment may seem counterintuitive. But it’s a refrain I heard repeatedly over several days while exploring the Bay Area’s burgeoning drone corridor.

Over the past 18 months, a host of drone startups have sprung up amid the region’s more traditional software companies. Many, like Skycatch, have recently closed major funding rounds and are starting to take on the sheen of proper Silicon Valley tech startups, moving into modern, open workspaces accented with reclaimed wood and high, exposed ceilings beneath which platoons of twenty-something coders perched at adjustable sitting/standing desks hammer away at their keyboards

This UAV boom in the heart of techland makes a lot of sense once you realize that America’s drone industry is tied up inextricably with the ongoing explosions in data analytics and the so-called Internet of things—areas that Silicon Valley and the larger technology sector have a vested interest in developing. “For us, this is just another increase in step function in the sources of information we can work with,” says Aaron Levie, co-founder and CEO of enterprise cloud company Box, of the proliferation of commercial drones. “Where will the next trillion files be created? Broadly: the Internet of things. But UAVs in particular are going to be a massive source of that information.”

Drones have the unique ability to fly lower than manned aircraft and higher than cranes and other ground-based vehicles can reach. They offer everyone from film producers to civil engineers to open-air mining operations to individual photographers a wholly new perspective on the world below.



The rotors of a Pocket Drone prototype by AirDroids fold up for easy storage.
Photograph by Stephen Lewis for Fortune

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Using multispectral sensors, they can capture data impossible for the human eye to see—like gas leaking from a pipeline and food crops suffering from lack of nitrogen—faster and at greater volume than has ever been possible in the past. Tapping into the ever-increasing power of the cloud, they can quickly produce high-resolution 3-D maps of vast geographic areas. It's the data that many companies are after. Drones are just the means of getting it. "If we could get this data some other way, we would," says Curt Smith, technology director for the information technology and systems office at BP, one of the only companies currently cleared by the FAA to use drones for commercial purposes in the U.S. "We do this because it allows us to do things that we couldn't do before."

Skycatch founder and CEO Christian Sanz launched his company last year after he spent two weeks using a drone he had built himself to shoot aerial photographs of a construction site. Sanz had approached the builders hoping to make a business case for drone photography, and it turned out they had a voracious appetite for images to track the project's progress. Sanz walked away overwhelmed by the demand for affordable, high-quality aerial images. "Two weeks into it I couldn't keep up," says Sanz, chuckling at the memory. "I was disappointing people, and I was doing it for free."

He decided to build a company around the idea of automating the process. So Sanz developed an industrial system that includes GPS-guided drones to capture imagery and automated ground stations that can charge and swap the drones' batteries between flights. By the end of 2013, Skycatch had 10 clients buying the units at \$100,000 apiece. The company closed a \$13 million funding round in May—investors include Google Ventures—and Sanz says he is already working on a far more substantial Series B round.

Skycatch's customers include construction industry giants like Clayco, DPR, Bechtel, and France's Bouygues. But it also quickly found data-hungry customers in other industries such as mining (Rio Tinto) and energy (Chevron, First Solar) who are eager to exploit efficiencies made possible by regular and accessible overhead imagery and 3-D mapping. Skycatch says that it's doubling the number of systems it sells each month. Drones are no longer just an experimental extravagance to many enterprises; increasingly they're viewed as an operational necessity.

"There's an ongoing shift from a focus on cost to a focus on the value of data," says Jonathan Downey, founder and CEO of Airware, another San Francisco-based drone technology startup. Downey started Airware in 2011 to develop what amounts to a common operating system for drones—a set of software tools interfacing with an ecosystem of sensors that can be installed to make any unmanned aircraft interface-friendly with other drones within a company's fleet.

"There's this gray area with the rules," says one entrepreneur. "But people are going ahead and using these things."

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Like Skycatch, Airware has gained a lot of momentum over the past year, raising \$11.7 million in Series A funding in 2013 from backers including Andreessen Horowitz and Google Ventures and an additional \$25 million in July. Also like Skycatch, Airware just moved into nice new digs in San Francisco's SoMA neighborhood. And Airware also works with customers to apply drone technology to commercial ends. Which means, like Skycatch and almost every other company trying to develop the commercial-drone industry, Airware has a problem. As Downey says: "A [U.S.] customer can't buy our product today and be legally compliant."

In the 2012 FAA Reauthorization and Reform Act, Congress gave the FAA a mandate: Develop a process for integrating small unmanned aircraft systems (UAS) into the national airspace as well as a set of regulations to govern their use. The FAA plans to release a proposed set of rules by the end of this year, and after a period of review by industry and lawmakers the agency will issue finalized regulations sometime in the second half of next year. Drone makers are obviously eager for a resolution. Meanwhile, because the FAA lacks the manpower to police the entire national airspace at all times, many companies get away with flying their commercial drones until someone brings it to the agency's attention, at which point a cease-and-desist letter goes out.

Over the past year the status quo has changed somewhat as money and commercial interests have aligned themselves behind the commercial-drone business. In August consumer-drone makers DJI, 3D Robotics, and Parrot teamed up with Amazon to form the Small UAV Coalition, hiring D.C. lobbying group Akin Gump to represent the industry on Capitol Hill (Airware, GoPro, and GoogleX have since joined the group). Elsewhere in Washington, D.C., a consortium of institutional investors and aerospace companies has assembled a \$2.2 billion fund to invest in infrastructure critical to the safe integration of commercial drones into the national airspace and to advocate for commercial drones. The UAS America Fund, as the group is known, has already filed a lawsuit challenging the FAA's blanket ban on small commercial drones with the hopes of creating some legal headroom for companies that simply want to conduct small-drone R&D flights while the FAA works on its broader regulations.



Looking down on the IRIS+ drone
Photograph by Stephen Lewis for Fortune

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“The big paradox is that this is all about safety, but in order to make this safe, companies have to test,” says Michael Drobac, executive director of the Small UAV Coalition and senior policy adviser at Akin Gump in Washington, D.C. “We don’t want to cede the opportunities to other nations when we have such a base of companies and innovators that are already at the cutting edge in this space. Let’s move forward responsibly, but let’s move forward.”

We can solve most of these problems with technology,” Jono Millin says of the FAA’s safety concerns. “We personally have the capability to solve so many of their problems.”

From a hill overlooking an expanse of salt flats in Menlo Park, Calif., Millin can see the future of commercial drones. Drones of all stripes will be extremely easy to use, he believes. They’ll be accessible from anywhere, no matter where they are flying. They’ll be extremely safe; both the authorities and the companies that specialize in helping their customers deploy their drones will be able to monitor what drones are doing in real time. And absolutely everyone will use them. No one will be able to afford not to.

Millin is the 28-year-old co-founder and chief of product at -DroneDeploy, and along with co-founder Nick Pilkington he’s brought me to the very heart of Silicon Valley—Facebook’s sprawling headquarters are visible on the far side of the cracked, chalk-white flats—to see this future in action. The company flies almost weekly, Millin says, typically to give the team back in the office the chance to debug software and address issues brought up by the company’s two-dozen beta customers scattered across 10 U.S. states.

Those customers are mostly companies trying to figure out how best to integrate drone technology into their operations, Millin says. Nobody wants to be left behind. “People are going ahead and doing this,” he says. “There’s this gray area with the rules—and it is a messy gray area—but people are going ahead and using these things.”

With just nine full-time employees, DroneDeploy is still in its lean-and-scrappy phase. Its three founders launched the company out of a shared one-bedroom apartment in San Francisco. Its current office more closely resembles a loft in Bushwick, Brooklyn, than the flashy, polished workspaces that dot the surrounding area. There’s no reclaimed wood to be seen, no brightly painted conference rooms full of beanbag chairs, nothing in the way of Silicon Valley swagger—just a group of twenty-somethings intensely focused on their computer screens.

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My thanks to Phil Friedensohn for sending this article to me. If you are like me you have no clue but I think this article will have you say "So that's how you do it." Otherwise attend the build club on Saturdays and learn first hand from our pros.

MODEL Airplane NEWS electric flight

Video Workshop Tip: How To Bend Landing Gear Wire

by Gerry Yarrish - Dec 03, 2014



Above) Here's a typical unbent wire nose wheel landing gear strut.

Enjoying any hobby requires you to learn and develop new tasks. Most conventional RC airplanes have wheels and if you are building your own or are repairing one, sooner or later you will be dealing with the landing gear. After all, these are the parts that take most of the beating with taxiing, landings and takeoffs. Many modelers will try to bend a new nose gear by hitting it with a hammer. This often times proves to be counter-productive as it is likely you'll damage the landing gear and maybe even break it. In this new video tip, DU-BRO's own Ed Bojan shows a simple and fast way to precisely and effortlessly bend your wire nose gear to the proper angle without fear of breaking it. The only items you'll need are a bench vise and a small piece of 1/4-inch water pipe.

Figure out how long your nosewheel strut needs to be and mark it on the wire. Now simply secure the landing gear in the vise with the bend location flush with the top of the jaws. Place the pipe over the wire and bend it slowly. Once you bottom out, (when the pipe hits the vise), adjust the landing gear position by lifting it out of the jaws a little higher and complete the bend. This final step is needed since the gear will maintain a little "reflex" and you need to adjust it to get a full 90-degree bend so the wheel will be positioned vertically for proper tracking.



(Above) Here the wire gear has been clamped into a bench vise with the bend position at the top of the jaws.



That's it. A simple and effective way to bend wire landing gear. Watch the video at https://www.youtube.com/watch?feature=player_embedded&v=6FZjfFW7fE to see how easy it really is.



Above) your nose gear should be long enough so the model sits level or very slightly nose down for easy takeoffs and landings.

For more information on types and sizes of landing gear available, checkout the DuBro Products website at: www.dubro.com