...

PRESIDENT
Fried Baitis
pa18fred@hotmail.com

VICE PRESIDENT
John Wytsma
jwytsma@hotmail.com
SAFETY OFFICER
Richard Carlson
rcmickey.minnie@gmail.com

SECRETARTY/TREASURER
Tom Rainwater
trainwater157@gmail.com

FLIGHT REPORT EDITOR
Bill Hand
wgh4740@gmail.com

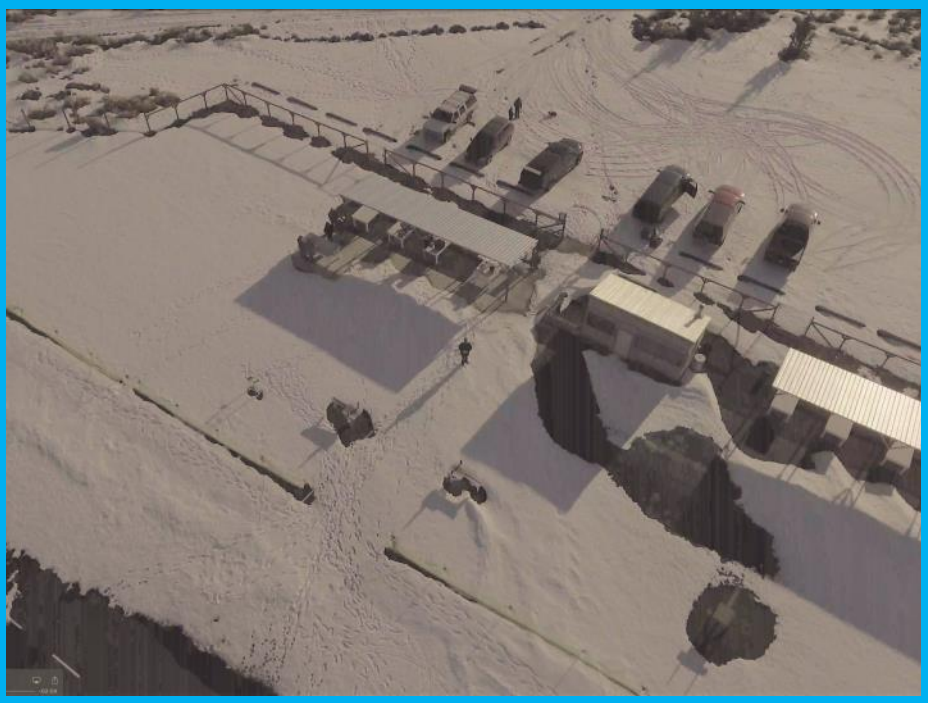
FLIGHT INSTRUCTORS
James Fredericks
541-350-5564
Greg McNutt
541-306-0633
Mike Wissing
541-491-7352

AMA District XI VP
Chuck Bower
360-632-9211

Bend Aero Modelers

Flight Report

March 2017



Next Meeting

March 29, 2017
6:30pm At Black Bear Diner
Food Available
Come early to visit and eat!

From the Editor

By Bill Hand

March 2017

This month's newsletter highlights RC History with an article edited from the 1991 January Model Airplane News.

In addition, a new feature "Off the Wall" provides links to interesting YouTube videos.

Local news:

Our event calendar is coming together, with a Fun-Fly being organized by Andy Niedzwieke, and a multi-month *ALES* rules glider competition organized by yours truly.

During the last meeting, Dave Reiss signed up to be "Field Marshall". We all owe Dave and his wife a big applause for their prior work on the Field.

Tom Rainwater is organizing a group run to the Giant Scale event in At-water CA (Castle AFB) over Memorial Day Weekend. More to come next month.

Enjoy

Notes from the President

Hello all -

As I write this, the last days (I hope) of winter are here and the 2017 flying season should begin full force. Should be bunches of new aircraft coming out, judging from the winter's show and tell models we've seen. It's going to be nice when I can finally spend a bit of time in my (unheated) garage again, and do some of the things I intended to do over the winter. I need to get a gas heater like Greg has for the next winter season.

Hope to see a lot of you at the next meeting. There will probably be some field improvement/repair items brought up by our new field maintenance manager (Dave Reiss), and some more planning for the glider and fun fly days we have scheduled. Come add your ideas to the mix, and have a night out with the boys.

See you there.

Field Day

We had one good fly-day the end of February. Nice day, about 40 degrees with warm sun, no wind and lots of planes. Here are a couple of pictures of the group.

Flying " SAFE"

Many of us have adopted the SAFE Technology pioneered by Horizon Hobby. SAFE is not a crutch, but a way of better controlling a plane under a variety of conditions. SAFE or *Sensor Assisted Flight Envelop* **provides attitude guidance to the aircraft**, thereby giving real-time X,Y,Z positioning. Used in conjunction with a gyroscope, it can control the amount of pitch, roll, and yaw the plane will be capable of. In a "beginner" mode, by restricting turn angles. In advance mode, it is turned off although you still have the ability (with a programmed switch) to bring a plane to horizontal flight regardless of it's current flight profile . What you gain are fewer crashes resulting from a pilot error.

SAFE is a nice feature to have with maiden flights where untested and potentially poor flight characteristics may be present. For advance pilots, the system may be programmed to be off or on in 3 (beginner, intermediate, advance) modes. Several Spectrum receivers (AS3X) are capable of SAFE programming. There are a series of videos on how to program.

https://www.youtube.com/watch?v=LnYiKgrL_bU&index=1&list=PL3xicOtuJ602kOPBWj-RshoLuMZKu_Gi1

"Go Big or Go Home"

Late in May, you have the opportunity to enjoy and participate in a Giant Scale RC event. My first question is "What is Giant Scale". The rules for Giant Scale are administered under the AMA through the International Miniature Aircraft Association (IMAA). Giant scale is pretty simple: **IMAA Criteria**

- Minimum of 80" wingspan for Monoplanes
- Minimum of 60" wingspan for multi-wing planes

Ducted Fan and Turbine aircraft must have 140" combined length and width.

One exception: A true quarter scale RC airplane will be permitted regardless of the above requirements.

Over Memorial Day Weekend, we can experience an IMAA event at Castle AFB in the California Central Valley. Tom Rainwater has gone several times and is encouraging us to join him this year.
Here are some YouTube links you may enjoy:
https://www.youtube.com/watch?v=yX-alYzSRmE
https://www.youtube.com/watch?v=lvI-r7B1NDE

How to get there using Google: https://www.google.com/maps/dir/Pilot+Butte/Castle+AFB,+5050+Santa+Fe+Dr,+Atwater,+CA+95301/@40.6093098,-125.6043234,6z/am=t/data=!3m1!4b1!4m14!4m13!1m51m11s0x54b8c604cbe72d23:0xc5afe9738ceb4f9c!2m2!1121.28336442d44.06067311m51m11s0x80916ae0edea1c39:0x67f234f4b4ed8999!2m2!1d-120.5779088!2d37.3648271!3e0

With our first practice coming up on April 1, it is probably a good idea to review the current abbreviated rules for ALES (Altitude Limited Electric Soaring) competitions.

ALES Contest Rules

Objective-

- To provide a Man-On-Man (MOM), electric launched, thermal duration soaring event with a consistent launch altitude for all competitors.

Rules -

- Any electric powered sailplane meeting the definition of an electric powered sailplane is permitted to fly in this event (see below).

- The flight is initiated with a launch buzzer. All pilots must launch their planes within a 10 second launch window. A plane launched before the launch buzzer or after 10 seconds from the buzzer will receive 0 points for the round. (It is the CD (Competition Director) or his representative's responsibility to account for the launch window)

- Time will start when the model aircraft leaves the hands of the competitor or helper. The model aircraft must leave the hands of the competitor or helper under the pull of the electric drive motor. (No wing tip launches are allowed (discus, side-arm, etc.)

- At the end of the motor run (30 seconds or 200 meters whichever comes first. The launch buzzer will again sound: BAM will use the 30 second rule; you don't have to use the full time), no other activation of the motor is permitted for the remainder of the flight. The penalty for violation of this rule is a zero for the flight and landing. The CD can choose to lower the launch settings to something under the 200/30 set if all contestants have a switch that will allow the same settings.

- The launch must be followed by a pure 10 min (marked by buzzer) gliding flight with no further motor assistance.

- Landing points will be added to the normalized flight score to determine the overall score.

- Landing points/tasks will be at the discretion of the CD but the normal is 50 points maximum using a 10 meter tape.

- BAM will use lines painted on the runway to define point scores for landing.

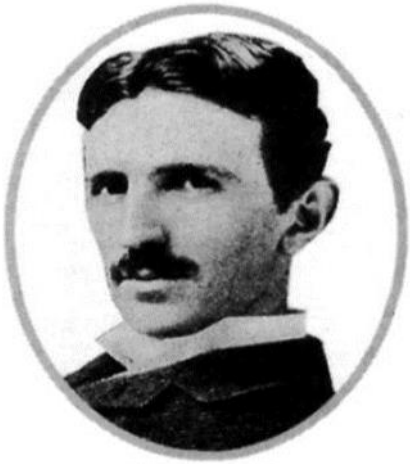
the first days of Radio Control

by FRANK GUDAITIS

Edited from the original article in:

Model Airplane News Jan 1991

The very First example of radio control was demonstrated in New York City in 1898. Its inventor—Nikola Tesla—was a 43-year-old immigrant who was duly awarded U.S. Patent no. 613,809 on November 8, 1898. It was only one of 113 U.S. patents that this prolific genius received during his lifetime. Many electrical engineers and historians regard his basic inventions as the foundation of the 20th century as we know it. In the decades that followed, the military and its suppliers attempted to implement Tesla's work in various R/C projects—including boats and aircraft—without very much fanfare.



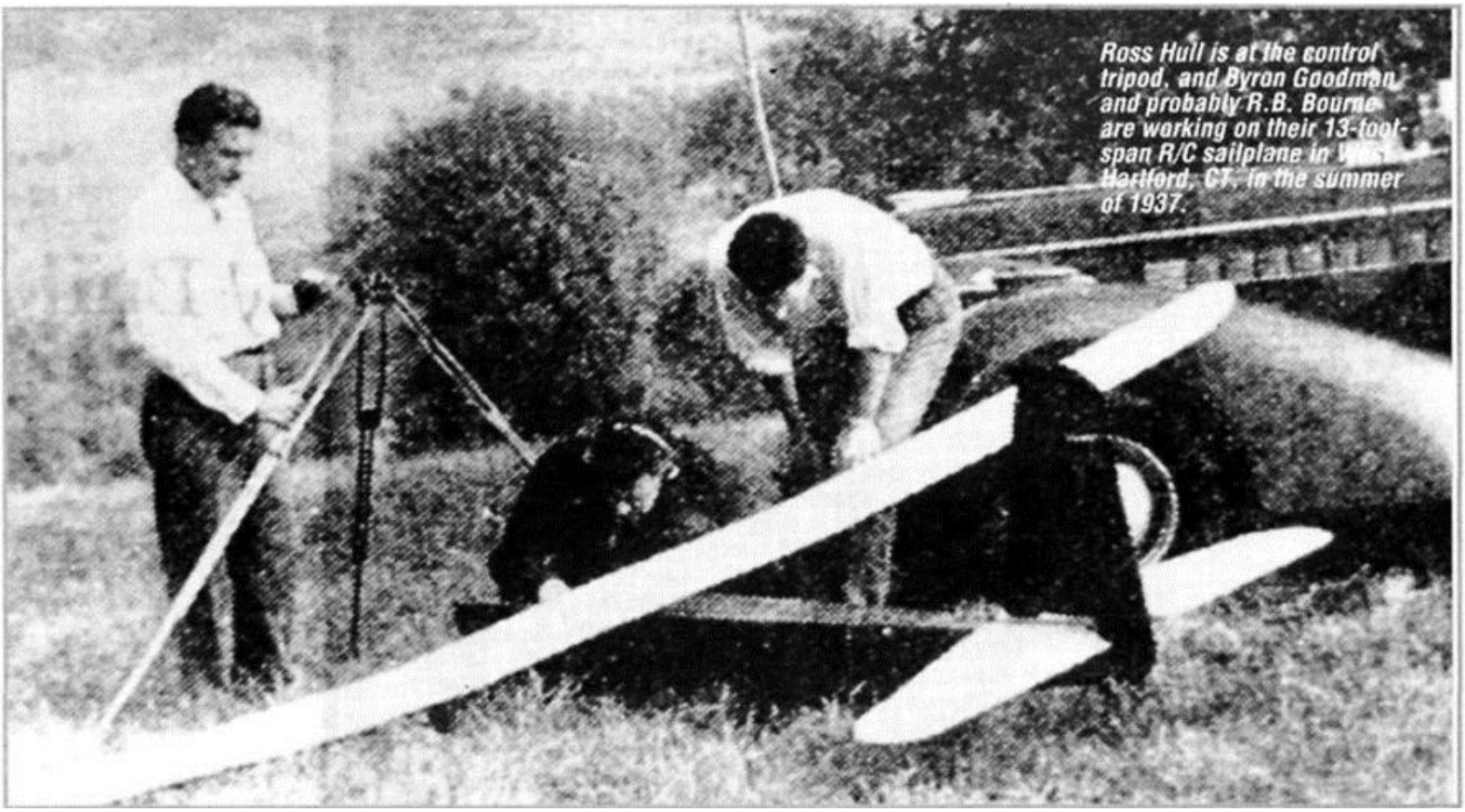
This is Nikola Tesla—the father of R/C and much of today's electronic technology.

By the middle of the 1930s, miniature airplanes were just beginning to be powered by very small gasoline engines. An R/C contest event was even scheduled for the 1936 model aircraft Nationals in Detroit. It was a little premature; not one entrant showed up! The following year however, must be regarded as the true beginning of R/C.

R/C PIONEERS

Several men who were active in amateur radio became interested in the possibility of controlling model planes by radio. Two of these early pioneers were Ross Hull and Clinton DeSoto. Both were officials of the American Radio Relay League (ARRL), which is the governing body of ham radio operators. Hull was a very gifted radio designer whose achievements include the discovery and eventual explanation of the tropospheric bending of VHF radio waves. Since his youth in Australia, Hull also happened to be an avid modeler. Hull and his associate DeSoto successfully built and flew several large R/C gliders in the first public demonstration of controlled flights. Their sailplanes made more than 100 flights. (See the January and August '38 issues of Model Airplane News). Tragically, Hull died one year later in 1939 when he accidentally contacted 6,000 volts while he was working on an early television receiver. DeSoto died a decade later.

Ross Hull and Clinton DeSoto—early R/C pioneers.


Ross Hull is at the control tripod, and Byron Goodman and probably R.B. Bourne are working on their 13-foot-span R/C sailplane in West Hartford, CT, in the summer of 1937.

COMPETITIVE FLIGHT

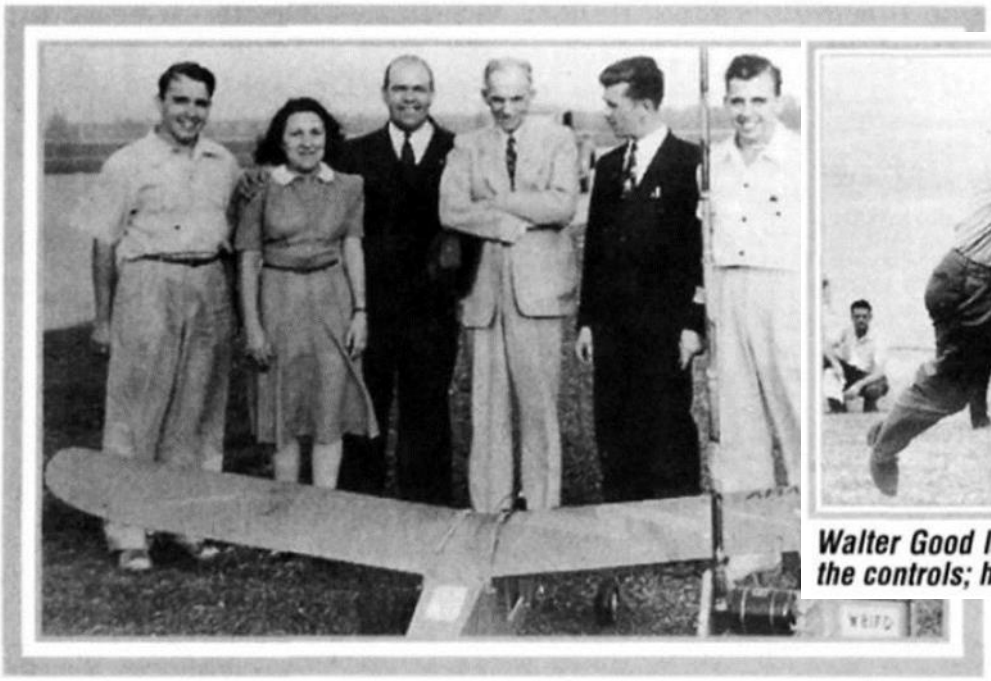
The 1937 Nationals R/C event attracted six entrants: Walter Good, Elmer Wasman, Chester Lanzo, Leo Weiss, Patrick Sweeney and B. Shiffman. Lanzo won with the lightest (6 pounds) and the simplest model plane, although his flight was a bit erratic and lasted only several minutes. Sweeney and Wasman both had extremely short (5-second) flights when their aircraft took off, climbed steeply, stalled and crashed. Sweeney, however, had the distinction of being the first person to attempt an R/C flight in a national contest. The other three entrants weren't able to make any flights at all.

R/C EVOLVES

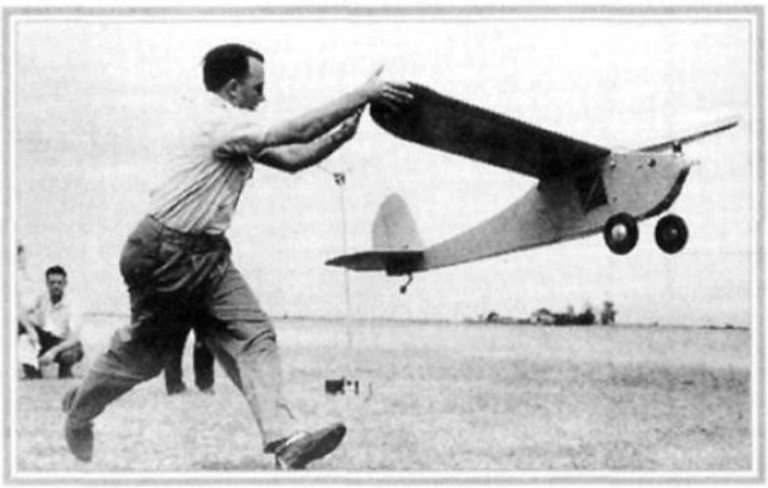
The 1938 Nationals were once again hosted by the "Motor City." Although the R/C entry list had grown to 26 entrants, only five fliers showed up on the field. One of the newcomers was DeSoto, who entered a 14-footwingspan, 25-pound, stand-off-scale model of a Piper Cub that was powered by a Forster twin-cylinder engine. Each of the four separate receivers on board used a gas-filled Raytheon RK-62 tube in a super regenerative circuit to activate its own sigma relay. His plane placed second, but it isn't clear whether or not it actually flew. Oddly enough, these first contests required only that contestants demonstrate their R/C systems in a static position on the ground to win a runner-up award.


Walt and Bill Good and their R/C model—the Guff (circa 1939).

GOOD FLIERS



The Good brothers give a flight demonstration for Henry Ford Sr. (age 80) in 1940.



Walter Good launches Guff at the 1947 Nationals. Bill is at the controls; his feet are behind Walt.

Walter Good was the only contestant who attempted a controlled flight in the face of the 20mph winds.(1938) Even though it ended in a crack-up, Walt was awarded first place. A truly convincing demonstration of R/C flight by a powered miniature aircraft would have to wait until the following year. Eleven R/C fliers showed up at the 1939 Nationals at the Detroit Wayne County airport. For the first time, a 100-point system was adopted by the judges. Points were given for craftsmanship, actual R/C operation in a static preflight mode on the ground and a variety of flight maneuvers.

1939 was a rewarding year for Walter and William Good—23-year-old twins from Kalamazoo, MI. Bill was a licensed ham-radio operator with the call letters W81FD. Their aircraft—named K-G—was a slightly modified, high-wing monoplane.
(See the K-G story in the January '91 issue of Model Airplane News.) This first stable gas model was designed by a former editor of *Model Airplane News*—Charles Hampson Grant.
Their radio and control mechanisms were the essence of simplicity. At a time when all of their competitor's planes carried receivers with 3- and 4-tube circuits, the Good brothers' radio receiver was a one tube affair with a minimum of electrical components. Their homemade relay was so sensitive that it could be activated by a current change of 1/2 milliamp! They also designed and made their 1 -ounce, rubber-band powered escapement mechanism. Before going to the Nationals in 1939, the two brothers had accumulated over 60 controlled flights in southern Michigan. Their diligent efforts paid off with a first-place score of 89 points; the second-place winner scored only 11 points. The Good brothers repeated their first place win in the 1940 Nationals and once more after the end of WW II, in 1947.

YouTube Video: https://www.youtube.com/watch?v=jduj1wkGFT0

In Walt's shop in Florida, the 75-year-old Good twins work on a spectrum analyzer that was built by Bill.

Their historic R/C model airplane, which they affectionately named the "Guff," was presented to the National Air and Space Museum in Washington, D.C., in May, 1960, where it can be seen today. Both brothers continued their education and subsequently earned doctorates in physics. After pursuing careers in electronics research and teaching, they retired. (Bill died May 18, 2001, Walt died July 19 the following year. *ed*.)

JOSEPH RASPANTE

No story on the early days of R/C would be complete without recognizing the work of Joseph Raspante. Unlike most of the early pioneers of R/C, who were basically model airplane builders teamed up with ham-radio specialists, Joe Raspante was a superb designer and builder of early gas models as well as a competent electronic technician. His R/C system was unique in that he used a telephone dial to select various control functions. He placed second in the 1939 R/C Nationals and third in the 1940 event. Raspante was generous, and he shared his knowledge with young builders in years that followed. Walter Good remembers that when thieves stole his brother's R/C transmitter from their hotel the day before the 1940 Nationals, Raspante offered the use of his own transmitter. This gesture was especially meaningful, because the Good brothers had defeated him in the 1939 Nationals. Raspante finally won the first place he yearned for at the 1946 NY Daily Mirror contest at Grumman airfield. It was my privilege to see him fly there. With the advent of the transistor and the integrated microcircuits, today's R/C builder hardly has any of the frustrations of the early pioneers.

Here's Joe Raspante with his R/C Super Buccaneer at the NY Mirror Meet. Note the car trunk that's full of transmitter equipment (circa 1946).

In retrospect, however, we see that most of the pioneer's dedicated efforts were largely foiled by overly complex electrical designs. But without their perseverance, It would be doubtful that R/C flight would have progressed as quickly to where it is today.

Joe Raspante launches his R/C model at the 1946 NY Mirror Meet at Grumman Airport in Long Island, NY.

Editors Note:

Joe Raspante designed some of the most beautiful planes of the pre-WWII period. As an example:

1938 picture of original.

Snow White, a 96" span 1938 design by Joe Raspante.

Recreated by: Rich Minnick, Marin/Sonoma SAM 27 Club 2010

Rich does fine work, all in wood from original plans and no pre-cut parts.

We had a great Show-and-Tell session at the February Meeting:

Tom holding Richard's new P-51 from Motion RC. Landing lights, retracts, flaps, the whole enchilada!

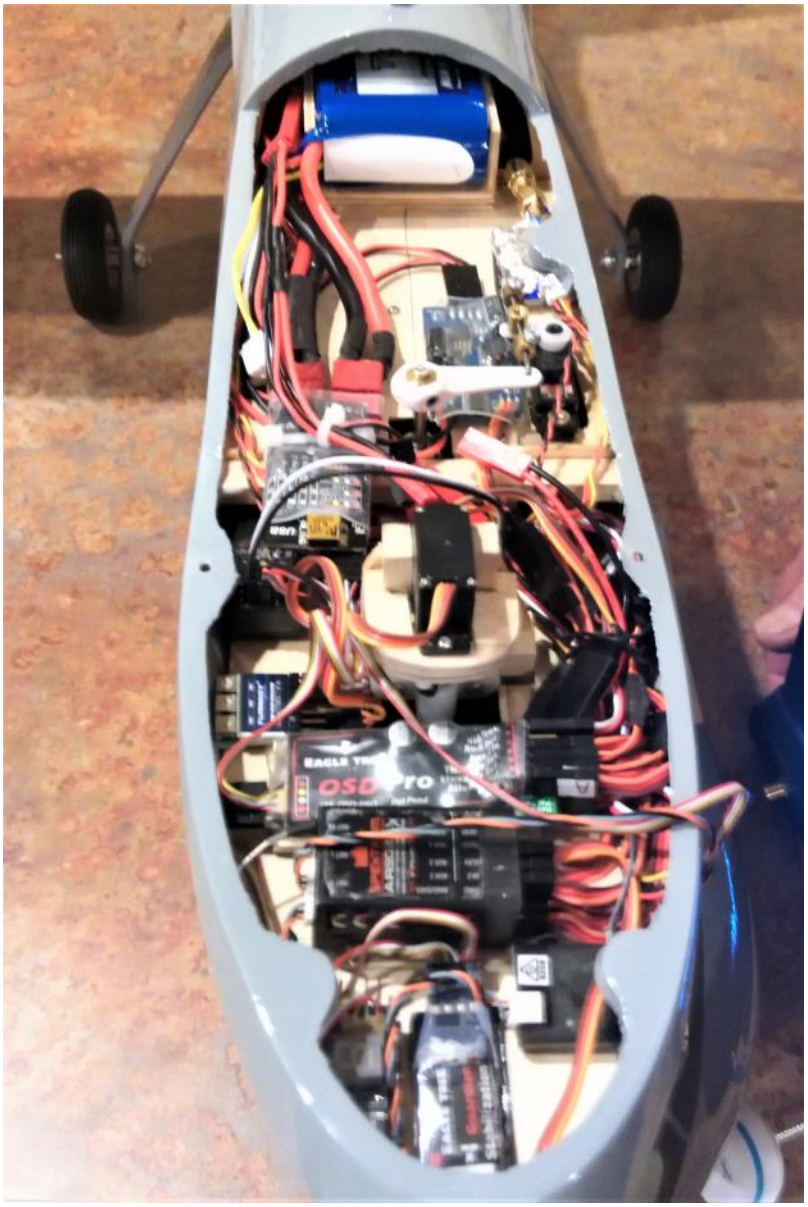
Rob's beautiful stagger-wing Beach D-17

Saved from a Shop in Colorado

Top Flite ARF

Tom with his rescued P-38 from the Christmas Party. His is not impressed with quality: so much so that he sold it for $30.

Rob's new Predator Drone. Big very complicated plane. Largely fiberglass. 8' wingspread. Takes two to fly it...one to fly, the other to take pictures using gimbal mounted HD camera with it's own transmitter/ receiver system.



Electronics include GPS, flight gyro, camera system and other goodies.

Probably as advanced as the full size original.

Now we just need some proper scale terrorists to vaporize…….

The prime candidate for this month Crash Trophy:

Greg McNutt

STICK Maiden flight 3/11/17 RIPieces

Sometimes things just don't go as planned……..

Off the Wall

If you Google the world's fastest RC planes this is what you find. Probably not what you would expect:

https://www.youtube.com/watch?v=Oix6sHKzOLU

World Speed Record:

https://www.youtube.com/watch?v=hFPJ6DUAY10

Build a bird and fly it with your smartphone……seriously.

https://www.youtube.com/watch?v=wdKgFNBB3kE

Well Chris R. Here is a "Busman's Holiday" just for you.

https://www.youtube.com/watch?v=jsoFvIqPvOM&list=PLP1RlhOjgp0-BT74Ir3WVwvwGKgrHfnu-&index=1

Anyone up for a good "float fly"? This one should do the job…..except for the landing.

https://www.youtube.com/watch?v=YQVCBr0kkd4

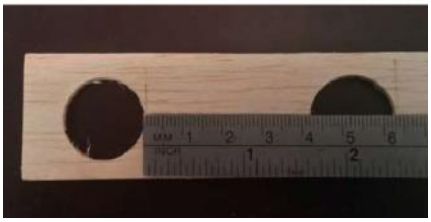
And finally….for something completely different….and close to home: Lake Shasta

https://www.youtube.com/watch?v=E41kFAL0UUo

From the *Tom's Tips* page in the current issue of *Soaring Digest*:

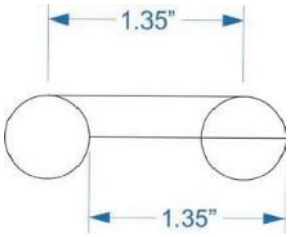
Center between two holes

Try this:



On more than one occasion, I've watched someone trying to measure the center between two holes by eyeballing the empty space and guessing the exact center. The other day this happened again (he was a millimeter off when I measured it). Sooo, I've decided to go ahead and mention this for the 10% (or more) that don't know this simple fact:

The distance between the centers of two like holes is the same as the distance between the like edges...



The edges are a lot easier to see and measure, so next time try measuring between the left or right edges. Instead of doing this:

Different diameter holes

For things like root ribs where the two holes are often different diameters (based on the easiest things to measure): Take the sum of the diameter of each hole, divide by 2; add the distance between the inside edges.(0.89 + 1.97)/2 + 2.54 = 3.97

Tom Broeski, T&G Innovations LLC, tom@adesigner.com


TEACH YOUR KIDS THE LOVE OF R/C AIRCRAFT
AND THEY'LL NEVER HAVE MONEY FOR DRUGS


PROBLEM
SOLVED


KRAKK!!
"THE PILOT HAS COLLAPSED! DOES ANYONE HERE KNOW HOW TO FLY?"


4-10
ZZZZZ...
Radio-controlled School of PIRANHAS Great fun at Pool Parties!
CARTOONSTOCK .com
Search ID: jmp090410
© John McPherson/Distributed by Universal Uclick via CartoonStock.com

Bend Aero Modelers

Bend, Oregon | AMA District XI

Field Safety Guidelines

A. GENERAL

1. All pilots shall be current members of AMA. Proof of current AMA membership is required prior to flying at BAM.
2. Visiting AMA pilots and new members of BAM shall receive a safety orientation by one of BAM's members prior to their first flight.
3. Pilots shall ensure flight operations in accordance with AMA's Safety Code and these Field Safety Guidelines at all times.
4. Pilots are responsible for the safe operation of their aircraft at all times.
5. All guests, spectators, children, and pets shall be supervised by a BAM member at all times while inside the flying field (fenced area) and are encouraged to remain behind the pit tables.
6. Pilots shall always secure/restrain running or armed aircraft.
7. R/C cars and other surface vehicles are prohibited anywhere inside the flying field (fenced area) during active flight operation.
8. Smoking is prohibited anywhere inside the flying field (fenced area).
9. The consumption of alcoholic beverages before or during flight is prohibited.

B. PRE-FLIGHT OPERATION

1. Pilots that use AM/FM radio equipment (50 MHz, 53 MHz, and 72 MHz) shall possess the appropriate frequency pin.
2. Pilots shall place their AMA card on the respective channel pin on the frequency board. This does not apply to pilots using 2.4 GHz transmitters.
3. Pilots shall not start/run their aircraft in the pit area.
4. For extended engine tuning and troubleshooting procedures (e.g., more than usually needed to start the engine), pilots shall use the marked areas designated for tune-ups, break-in and troubleshooting.
5. Pilots shall never leave their aircraft unattended while the aircraft is running or armed even if it is secured and restrained.

C. FLIGHT OPERATION

1. Pilots shall only taxi aircraft on the taxiways and runway. No taxiing is permitted in the pit area.
2. While flying, pilots must remain behind the safety fence.
3. Pilots shall verbally communicate their intentions during takeoffs, landings, low passes, touch-and-gos, and emergencies.
4. Pilots shall always fly their aircraft north of the centerline of the runway and remain within the approved fly zones (see fly zone map for details).
5. Only pilots and a supervised helper are permitted beyond the safety fence (e.g., to retrieve an aircraft).
6. Landing aircraft have the right of way. Dead-stick landings shall be called as such and given immediate right of way.
7. Aircraft shall not take off from the taxiways south of the safety fence.
8. Aircraft shall not land on the taxiways at any time.
9. Pilots shall call all maiden flights prior to flight. All other aircraft shall be grounded until the maiden flight has been completed.

Fly / No Fly Zone's for Popp's Field