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# Bend Aero Modelers





**APRIL 2024** 



I don't remember the year but this is a way to add insult to injury. The pilot of this plane was doing high speed maneuvers when he lost control of his plane and did a nose dive into his own car... Notice the broken windshield!

# **Next Meeting**



April 24, 2024 6:00 pm at Black Bear Diner

Food available come early to visit and eat.

# FROM THE EDITOR



by Andy Niedzwiecke

### HELLO EVERYONE,

WE ARE ON THE VERGE OF GOOD FLYING WEATHER AND THERE IS A GOOD ARTICLE IN THIS ISSUE ABOUT MAIDENING PLANES WHICH COULD ALSO APPLY TO PLANES THAT HAVE BEEN STORED OVER THE WINTER MONTHS SO BE SURE TO READ IT. PLANS ARE IN THE WORKS FOR THE "FIRECRACKER" FUN FLY WE ARE PUTTING ON THIS JULY. MORE DETAIL WILL BE AVAILABLE AT THE NEXT BAM MEETING. A WORK PARTY WILL BE SCHEDULED SOON TO REPLACE THE SAFETY FENCE AT THE FIELD. THE MATERIALS HAVE BEEN PURCHASED SO WE ARE JUST WAITING FOR A WARM DAY TO COMPLETE THIS PROJECT, HOPEFULLY BEFORE THE END OF MAY. THAT'S ALL FOLKS, SEE YOU AT THE FIELD.

and

# BAM Bulletin Board



# FROM THE PRESIDENT



# by Bill Broich



I recently completed a book on a very interesting person, with an impact on the full size planes some of us fly. The book is BOYD, by Robert Coram.

John Richard Boyd (January 23, 1927 – March 9, 1997) was a United States Air Force fighter pilot and Pentagon consultant during the second half of the 20th century. His theories have been highly influential in military, business, and litigation strategies and planning.

Boyd was commissioned as a second lieutenant in the Air Force following completion of the ROTC program at the University of Iowa. On March 27, 1953, Boyd arrived in Korea as an F-86 pilot. In the two months until the Korean War armistice on July 27, Boyd flew 22 missions in F-86 Sabres, in which he did not fire his guns or score a kill. After his service in Korea, he was invited to attend the Fighter Weapons School (FWS). Boyd attended the school and graduated at the top of his class.

Upon graduation, he was invited to stay at the FWS as an instructor. It was at this point he earned the nickname "Forty Second Boyd" for his standing bet as an instructor pilot that beginning from a position of disadvantage, he could defeat any opposing pilot in air combat maneuvering in less than 40 seconds. He never lost that bet. And this was against the best pilots in not only the US Air Force, but several other countries that sent pilots to learn air to air combat. He became head of the Academic Section.

Boyd also served to revolutionize air-to-air combat in that he was the author of the Aerial Attack Study, which became the official tactics manual for fighter aircraft. Boyd changed how pilots thought; prior to his tactics manual, pilots had thought that air-to-air combat was far too complex to ever be fully understood. With the release of the Aerial Attack Study, pilots realized that the high-stakes death dance of aerial combat was solved. Boyd said that a pilot going into aerial combat must know two things: the position of the enemy and the velocity of the enemy. Given the velocity of an enemy, a pilot can decide what the enemy can do. When a pilot knows what maneuvers the enemy can perform, he can then decide how to counter any of the other pilot's actions.

In the early 1960s, Boyd, together with Thomas Christie, a civilian mathematician, created the energy—maneuverability theory, or E-M theory, of aerial combat. A legendary maverick by reputation, Boyd was said to have stolen the computer time to do the millions of calculations necessary to prove the theory. A civilian employee had previously barred Boyd from performing the calculations, but Thomas P. Christie provided Boyd a project number. E-M theory became the world standard for the design of fighter aircraft. The Air Force's FX project (subsequently the F-15) was then floundering, but Boyd's deployment orders to Vietnam were canceled, and he was brought to the Pentagon to redo the tradeoff studies according to E-M theory. His work helped save the project from being a costly dud even though its final product was larger and heavier than he had desired. In later years Boyd looked at the F-15 as a plane "that could have been". It ended up much heavier than he wanted, so less maneuverable, with too broad a mission. It should never have been any type of bomber, but that is what it became.

# FROM THE PRESIDENT



# Continued

As part of the so called Fighter Mafia, Boyd had some strong positions on what a fighter plane should be. In particular planes with moveable wings like the F-14 Tomcat and F-111 brought out Boyd's wrath. Too heavy, too complicated, and in actuality useless in combat. The F-111, being an Air Force plane, became a focus. Boyd took data comparing the energy rates of every American fighter's energy rate and compared the energy rate of Soviets at various speeds and G forces. Each plane had a chart, with blue representing where the American had the advantage, and red where the Soviet had the advantage. The chart for the F-111 was all red. When this chart was shown to General Walter Sweeney, head of the Tactical Air Command, he asked Boyd if there was something that could be salvaged. Boyd famously said to "I'd pull the wings off, install benches in the bomb bay, paint it yellow, and use it as a bus.

He inspired the Lightweight Fighter program (LWF), which produced the General Dynamics F-16 Fighting Falcon and preceded McDonnell Douglas F/A-18 Hornet.

One of the adherents of Boyd's theories on aircraft design was Pierre Sprey. Sprey was the driving force behind the A-10, a plane the Air Force has been trying to kill before it ever went into production. In Boyd's words, Spey was "doing the good work".

He also developed the decision cycle known as the OODA loop, the process by which an entity reacts to an event. OODA stands for Observe Orient Decide Act.

In January 1980 Boyd gave his briefing Patterns of Conflict at the US Marines AWS (Amphibious Warfare School), which led to the instructor, Michael Wyly, and Boyd changing the curriculum. That was with the blessing of General Trainor, who later asked Wyly to write a new tactics manual for the Marines.

Boyd is credited for largely developing the strategy for the invasion of Iraq in the Gulf War of 1991. In 1981, Boyd had presented his briefing, Patterns of Conflict, to US Representative Richard "Dick" Cheney. By 1990, Boyd had moved to Florida because of declining health, but Cheney, now Defense Secretary in the George H. W. Bush administration, called Boyd back to work on the plans for Operation Desert Storm. Boyd had substantial influence on the ultimate "left hook" design of the plan.

In a letter to the editor of Inside the Pentagon, the former Commandant of the Marine Corps General Charles C. Krulak is quoted as saying, "The Iraqi army collapsed morally and intellectually under the onslaught of American and Coalition forces. John Boyd was an architect of that victory as surely as if he'd commanded a fighter wing or a maneuver division in the desert."

So this man revised fighter pilot tactics, was instrumental in the development of the F-15, F-16 and A-10, a strategic planner for the Army and Marines, yet he was never embraced by the Air Force. Upon his death, he was buried in Arlington Cemetery, but the Air Force only sent two representatives, neither of them knew John Boyd. The Marine Corp, on the other hand sent a large contingent. One Marine Colonel even placed a Marine Corp insignia next to Boyd's urn.

The book is a fascinating read, and I can loan it out to anyone that is interested.

# SHOP TALK



# Featured this month is member Scott Roberts's shop. Scott did not provide verbiage describing his shop so you can just enjoy what you see. Thanks Scott!











# MEMBER'S PROJECTS

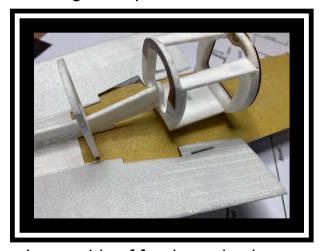
Member Bill Broich shares with us the build of his Microaces Sopwith PUP. Looks like a lot of fun. Good job Bill!



Fuselage frame is built with a central keel and formers for structure



Fuselage skin prior to attachment



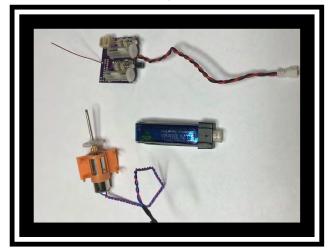
Lower side of fuselage glued on. Note scoring to assist forming.



Tail Feathers

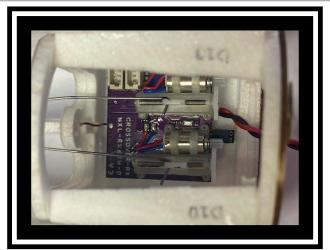


Rudder and elevator hinged and control horns in place.



Electronic components and battery. Receiver and two servos are all one unit.

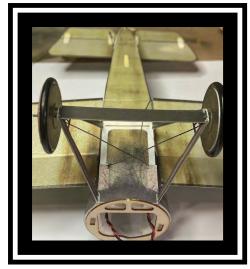
# MEMBER'S PROJECTS CONTINUED



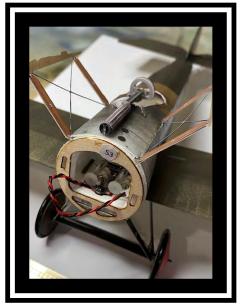
Receiver installed and control rods attached



Half of lower wing with "rib" in place. This gives some curvature to top and bottom wings.



Landing gear and rigging finished.



Upper deck detail.



Lower wing installed and rigging loosely in place.



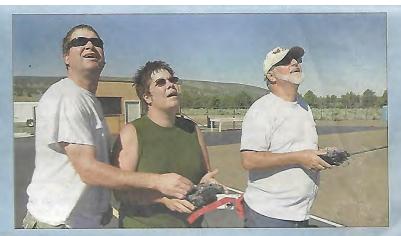
Finished Sopwith PUP.

# NOSTALGIA

FORGE

Thanks to former president of BAM, Jim Young, I found this article that was published in the July, 2007 Bend Bulletin. Bob Brownell is no longer a member but Greg Lancaster just re-joined this year.

Greg Lancaster, left, of Bend, helps reporter Julie Johnson fly a model airplane while Bob Brownell, right, of La Pine. handles the master controller.



"Once you get it, it's a feeling like you're in the plane. It's euphoria."

- Bob Brownell, flight instructor with the Bend Aero Modelers

# g blue skies r fancy rides

Bend Aero Modelers can put you in the pilot's seat

Greg Lancaster readies his model Cessna for flight at the Bend Aero Modelers airfield east of Bend. The field includes a paved runway, work tables and a shelter in addition to plenty of open skies

By Julie Johnson

The Bulletin

he sky was clear, the desert sun not too high, and Bob Brownell was trimming his airplane. With the help of Greg Lancaster, a fellow member of the Bend Aero Modelers radio-controlled aircraft club, Brownell adjusted the ailerons and other flaps that control the model airplane's elevation and direction of flight. The goal was to make it fly straight and true, an aspiration I very much supported, since I was going to be holding the controls to the nearly 5-foot-long, single-prop plane in just a few minutes.

Brownell is a flight instructor with the Bend Aero Modelers. He and a few other instructors for the club teach newcomers like myself the ups and downs of RC flying. Using a "buddy" controller — one that's linked to the instructor's controller so the instructor can take over if the student threatens to crash the plane - Brownell takes newbies through the paces of elevation change, turning and recovery. There's a lot to learn, as I found out

Love of flight

Model airplanes aren't the balsa-wood gliders of youth nor the inanimate assemblages of punched-out plastic parts glued together and dangling from an 8year-old's ceiling. Today, model aeronautics can include high-tech electric or gas motors, radio-controlled servo motors that operate any number of moving parts and state-of-the-art materials used to create powerful but lightweight aircraft. Bi-planes, sport planes, float planes, military aircraft, helicopters, gliders and even real turbine jet planes are available in radio-controlled miniature. They fly with precision and, because of their increased power-to-weight ratio, are capable of more maneuvers than most full-scale airplanes.

At the Bend Aero Modelers flying field east of Bend, pilots take off and land from a paved runway marked with yellow and while paint. The whine of plane engines reverberates off nearby Horse Butte as Lancaster, 39, takes a model Horse Butte as Augustian Horse Butter of the Gelers / E7

# Here's Greg Lancaster getting his Cessna 182 ready for flight.



# **Modelers**

Continued from E1

Take off, circle around, land. Take off, circle around, approach, rise, circle, land. The sun glints off the white wings of Lancaster's fiberglass plane as it

Meanwhile, Brownell prepares his wooden trainer plane

"It's a pre-flight check," he says. "Just like when a pilot walks around the plane at the airport before taking off, that's what I'm doing, checking to make sure everything's working

Batteries, radio receiver, landing gear, servo motors. All are looked over and tested before Brownell adds fuel - a fuel and lubricant mixture of methanol (alcohol), nitromethane and castor or synthetic lubricants called glow fuel - to the plane's gas tank. He fiddles with the engine a bit before taking the plane up for a test flight. The engine stalls, forcing a dusty, off-runway landing, but Brownell soon has the engine set to the right fuel mixture and running smoothly.
Brownell got into RC airplanes

15 years ago, when his son took

an interest.

"I thought, 'I'm driving him out here every day, so why don't I start flying," said Brownell, 69. His son, Scott, 27, is now a pro-fessor in the University of North Dakota's aerospace program.

And Brownell, who lives in La Pine, is the proud owner of 20-25 model aircraft, many of which he stows in a custom trailer towed behind his pickup. The trailer is replete with padded nooks for the controllers and berths for his many planes.

Brownell is a member of four RC plane clubs: the Bend Aero Modelers, two clubs in Arizona, where he spends winters, and a club in his former home of Taco-

ma, Wash. It's a hobby he loves.
"Once you get it, it's a feeling like you're in the plane," he said. "It's euphoria."

Like Brownell, club member

Dave Arato got into RC aircraft

because he loved planes.

"My father used to take me down to the San Francisco airport when I was a kid just to watch planes take off and land," said Arato, 32. "These things fly like real planes," he said, gesturing to the models for sale at D's Hobbies, where he works. "They just do incredible stuff."

#### Flying high

Flying a model airplane is not

One stick on the complex radio controller determines elevation and directional changes, the other throttle and - oops, I forgot

That's OK. There are seemingly dozens of other buttons, dials and switches on the controller, and Brownell assures me the only one I need to be concerned about for now is the right-hand stick: elevation and rudder.

Because Brownell isn't going to let me try to take off or land the plane. That's a more advanced skill level than a novice



When an instructor connects these two radio controllers, a student can learn to fly a model airplane without fear of crashing; if the student pilot loses control of the plane, the instructor can take over with the master control.

can handle. For now, I'm just going to try to turn the plane in the air without crashing it.

The trick, Brownell says, it to bring the nose of the plane up while you're turning. Using tiny movements of the control stick, I try. The blue plane responds by banking left, but before I know it, it's also slipping into a nosedive. Brownell recovers the plane before it pitches into the sagebrush surrounding the flying field, which is situated on a piece of rented BLM land. He positions the plane "three mistakes high" in the sky, then lets the student take control.

Again, my thumb twitches the controller left and down, the correct directions for trying to turn the plane left. Again, the plane angles downward. Brownell coaches me to pull the plane out of its turn, but I can't manage.

A few more of these experi-

#### IF YOU GO

What: Bend Aero Modelers Firecracker Fun Fly

When: 9 a.m. to 4 p.m. Saturday, July 21; 9 a.m. to 1 p.m. Sunday, July 22

Where: Flying Field, U.S. Highway 20 east of Bend, just past milepost 17

Cost: Free for spectators; \$10 per pilot landing fee Contact: 410-9524, www.corca.us or www .modelaircraft.org

ments ensue. Brownell coaches, I point the plane toward the ground, Brownell takes over the controls to prevent an immi-nent crash. I recall saying at one point: "Um, it's upside down."

But then, on the fourth or fifth try, I successfully navigate a left turn, straighten out the plane's trajectory and keep the craft at a consistent altitude.

While I can't say it's like being in the cockpit of a real plane, it

was exhilarating. And although it may be discouraging to average five near-crashes for every successful turn, Brownell assures me that it's not unusual.

"I don't care how good you are, eventually you're going to dump one in," he said. "I've dumped my fair share. We have a thousand excuses out of the excuse book, but it's usually because of these dumb thumbs," he said, hold-

ing up his digits.

My dumb thumbs just couldn't manage the tricky controller well. The stick is just that, about 2 inches long and it moves freely in its spherical socket. Manipulating it with precision is almost as difficult as transferring your perception to the plane. Brownell and Lancaster, a video game writer for Sony, say experienced

video gamers tend to be good at flying RC planes; pilots of actual aircraft sometimes struggle with RC planes. They didn't specify what my problem was.

# 20NTINUE



Photos by Melissa Jansson / The Bulletin

Greg Lancaster, left, and Bob Brownell trim Brownell's model plane before testing it at the Bend Aero Modelers airfield east of Bend.

### Club fun

RC fliers like to hang out together. They help each other test out airplanes, they talk gear and

they talk trash.

"Everybody shares everything. You steal everybody else's ideas and you razz the heck out of everybody," Brownell said.

And, it's a hobby that's grow-

ing in popularity.

The Bend Aero Modelers has doubled its membership over the past year, said club secretary/ treasurer Dan Clark, and now has some 58 members.

Later this month, the club will get together for a fun fly, two days of aeronautic demonstrations, contests, and general fun (see "If You Go").

It's a fun event, said Brownell, especially for children, who like to see the planes swoop and whoosh. Kids, he says, take well to flying models.

"A 12-year-old kid can be cut

loose after three 10-minute lessons," said the retired junior high principal. "They have good hand-eye coordination."

Model airplane clubs have also formed in Sisters, Redmond, Prineville and Madras.

But for those who are intrigued by the hobby, be warned: it's not cheap. While you can build a basic plane for \$6 out of plasticized cardboard and gutter downspout, the electronics will set you back more than \$100. A basic out-of-the-box plane could be as cheap as \$300 to \$400, but most cost a fair bit more. Those who fly model jets could pay from \$8,000 to \$30,000 for the machine.

And most fliers have more than one plane.

"It's addictive," said Brownell. But for those with the knack, the challenge and thrill of controlling that plane in the air is enough to send them back to the

hobby shop again and again.
"The hobby gets a hold of ya," said Arata.

Julie Johnson can be reached at 383-0308 or jjohnson@ bendbulletin.com.

# TIPS AND TRICKS

# So you are ready to maiden that plane Maiden Flight Tips BY RICK BURGESS

This is an article written by former member Rick Burgess quite a few years ago but I thought it beared repeating seeing as to how we are approaching a new flying season. This would not only apply to a new airplane but one that has set over the winter months and needs a good going over before a "Spring" flight or a plane that was crashed and is ready to take flight again.

Everyone in this sport/hobby gets to experience maiden flights. I don't know about you, but I'm always a lot more nervous with maiden flights than flying an airplane I've flown many times. However, there are a number of things you can do to make a maiden flight less stressful and successful. Here are some tasks I perform before, during and after a maiden flight.

### Pre-Maiden flight tasks

- Make sure all your control throws are set up per the instructions. This sounds obvious but Bruce and I have both flown a maiden flight without the control throws set properly. But, if you enjoy a wild ride with a lot of adrenalin coursing through your veins, just set the control throws to the maximum. Personally, I like going home with an airplane in one piece so I always set the control throws to the manufacturers specifications.
- Make sure the airplane is balanced as per the instructions. This is true even with Chinese airplanes where the instructions are worthless. With those instructions, I still use the control throws and the balance point as a starting place.
- Make sure the servo arm screws are in place. Yeah, yeah, another obvious one, but I'm sure you've worked on an airplane the night before a flight and left off the servo arm screws.
- Make sure all the clevises are secure and won't come off. Some have clips, while others use fuel tubing around the end to keep them from coming off and some snap in place. Regardless of the type of clevis, make sure they won't come off the control horn.
- Make sure all screws are tight and thread lock has been used on all the appropriate screws (motor mount screws (for glow and gas engines), wheel collar set screws, ez connector screws, etc.)
- Make sure all the controls move in the correct way. When you move the aileron stick to the right, does the right wing aileron go up and the left aileron go down? It's amazing how many times I've seen an experienced pilot take off with the ailerons reversed and this ALWAYS ends badly.
- Make sure all the batteries are charged and ready to go. I know some of you prefer charging batteries at the field and that's OK, but the point here is to make sure everything is charged before the first flight. BTW, a battery checker is an invaluable item for your field box. After charging, plug in the battery checker and make sure your batteries are good. I just had two batteries go bad on me and I found them with a battery checker BEFORE I flew.

## Pre-Flight tasks

- Perform a range check. This should be done every time you go out flying but it's especially important for the maiden flight. If your new airplane is a gasser, perform the range check with the engine running. The ignition system can impact the RX performance.
- Check the controls AGAIN. I check my controls BEFORE EVERY FLIGHT. If the controls aren't working properly, check your TX and make sure the TX is set to the correct model. This also includes making sure the prop is turning the correct way with electrics.

# TIPS AND TRICKS



- Make sure the TX is set to the correct model. Even though the controls may seem to work correctly, the settings will
  still be entirely different and will make flying very difficult if the TX isn't set to the correct model.
- In the case of a glow or gas engine run a tank of fuel through it before the first flight and make sure it's running well and consistently. The last thing you want is a dead-stick landing on a maiden flight.

## Flying the maiden flight

Flying a maiden flight is different than flying an airplane you've flown many times. A maiden flight isn't a "fun" flight. A maiden flight is part of building and getting an airplane ready for "fun". A maiden flight is no different than any other task in the instruction manual where the airplane isn't ready for normal flying until the maiden flight task is complete. Here are some guidelines I use when I fly a maiden flight.

- After the engine is running (in the case of a glow or gas engine) and I'm satisfied with how the engine is running and I've taxied out to the runway, I check my controls again.
- Get some altitude. After liftoff, I gain plenty of altitude. You've all heard the saying "Altitude is a pilot's friend", this is especially true with a maiden flight.
- Keep it close. Many times, if the glow or gas engine is new and a little finicky and you want to make sure the airplane can make it back to the runway in the event the engine guits.
- Trim the airplane and have someone next to you. The first task you're going to perform on the maiden flight is trimming the airplane. Some airplanes require very little trim and clicking the trim controls on the TX is simple and can be performed by the pilot but sometimes the airplane is way out of trim where you can't take your fingers or thumbs off of the controls long enough to adjust the trim. I always have someone standing next to me on a maiden flight to help me adjust the trims.
- No hotdogging or low passes. Again, this isn't a "fun" flight; it's simply a task you need to complete before the airplane is considered finished and ready-for-fun. Once the airplane is trimmed for hands-off straight and level flight, fly around a bit (at altitude) and check out the controls. Are they too sensitive? Are they not sensitive enough? Do you need more expo programmed in? Once this has been determined, LAND.
- Landing the airplane. Keep your landing approaches simple and high. It may take you a couple of approaches to land because you won't be used to the new airplane. I know it usually takes me a couple of approaches to land to get a feel for how the airplane loses altitude and settles onto the ground. With each successive approach, I'll bring the airplane in a little lower which I prefer over bringing the airplane in too low on the first approach. Once the airplane is on the ground and the engine is stopped, Congratulations! But, you're still not finished.

# Post Maiden flight tasks

- Check all the bolts, screws and clevises and make sure everything is still tight and set correctly, especially on the en-
- Change any TX programming. I just maidened a friend's P-51 at the Redmond field and determined the low rates should be the high rates and I have to program in new low rates. probably take a couple of flights to get your controls set up the way you like.

## Summary

Here's the Reader's Digest version

Make sure your new airplane is ready for flight and set up properly

Fly high and close

Have a friend next to you to help with the trims (if needed).

Check the airplane out after the first flight

Change the TX programming as needed.

This is the method I use when I maiden one of my airplanes or just helping out a fellow pilot with their new airplane.

# FEBRUARY 2024 MEETING SHOW & TELL





Bill Broich brought in his Microaces Sopwith PUP. The kit includes prepunched foamboard with already applied surface designs and decals. The kit also includes a receiver, all control surface servos and the motor.



Allen Wright brought in an in the box 92"
Sorcerer slope glider, Parker Planes work kit for first offering to BAM members who might be interested in buying it before taking it to the FOD swap meet. He is asking \$50.00. He said it's a really quality kit which consists of hand sanded pieces. Because this newsletter is published a week after the FOD swap meet and if you are interested please contact Allen at 1-503-806-4349



Dennis McMahon brought in his recently built foamboard Simple Scout XL with a homemade camo paint coat which turned out really nice. See the last newsletter where he describes how he improvised the method he used to do the camo job. Dennis has since maidened the plane which flew well but was a bit tailheavy which has been resolved. He mentioned to me that he had to cut part of each wingtip off to get it in his car. Where there's a will there's a way!

# Bend Aero Modelers - 2024 Club Calendar



	January											
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat					
1	31	1	2	3	4	5	6					
2	7	8	9	10	11	12	13					
3	14	15	16	17	18	19	20					
4	21	22	23	24	25	26	27					
5	28	29	30	31	1	2	3					

	February											
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat					
5	28	29	30	31	1	2	3					
6	4	5	6	7	8	9	10					
7	11	12	13	14	15	16	17					
8	18	19	20	21	22	23	24					
9	25	26	27	28	29	1	2					

March											
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat				
9	25	26	27	28	29	1	2				
10	3	4	5	6	7	8	9				
11	10	11	12	13	14	15	16				
12	17	18	19	20	21	22	23				
13	24	25	26	27	28	29	30				

	April											
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat					
14	31	1	2	3	4	5	6					
15	7	8	9	10	11	12	13					
16	14	15	16	17	18	19	20					
17	21	22	23	24	25	26	27					
18	28	29	30	1	2	3	4					

May											
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat				
18	28	29	30	1	2	3	4				
19	5	6	7	8	9	10	11				
20	12	13	14	15	16	17	18				
21	19	20	21	22	23	24	25				
22	26	27	28	29	30	31	1				

June											
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat				
23	2	3	4	5	6	7	8				
24	9	10	11	12	13	14	15				
25	16	17	18	19	20	21	22				
26	23	24	25	26	27	28	29				
27	30	1	2	3	4	5	6				

	July											
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat					
27	30	1	2	3	4	5	6					
28	7	8	9	10	11	12	13					
29	14	15	16	17	18	19	20					
30	21	22	23	24	25	26	27					
31	28	29	30	31	1	2	3					

August											
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat				
31	28	29	30	31	1	2	3				
32	4	5	6	7	8	9	10				
33	11	12	13	14	15	16	17				
34	18	19	20	21	22	23	24				
35	25	26	27	28	29	30	31				

September										
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat			
36	1	2	3	4	5	6	7			
37	8	9	10	11	12	13	14			
38	15	16	17	18	19	20	21			
39	22	23	24	25	26	27	28			
40	29	30	1	2	3	4	.5			

	October											
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat					
40	29	30	1	2	3	4	5					
41	6	7	8	9	10	11	12					
42	13	14	15	16	17	18	19					
43	20	21	22	23	24	25	26					
44	27	28	29	30	31	1	2					

November											
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat				
44	27	28	29	30	31	1	2				
45	3	4	5	6	7	8	9				
46	10	11	12	13	14	15	16				
47	17	18	19	20	21	22	23				
48	24	25	26	27	28	29	30				

**NOTE:** November club meeting is a week earlier due to Thanksgiving.

	December											
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat					
49	1	2	3	4	5	6	7					
50	8	9	10	11	12	13	14					
51	15	16	17	18	19	20	21					
52	22	23	24	25	26	27	28					
53	29	30	31	1	2	3	4					

# SAFETY REPORT





# **Bend Aero Modelers**

Bend Oregon | AMA District XI | AMA Charter 2311



## 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 Safety Committee members or in the absence of a Safety Committee member, an Executive Committee (EC) member 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 shall ensure proper operation of their aircraft and associated equipment prior to use.
- 5. Pilots shall show courtesy toward others and apply common sense when flying at BAM.
- 6. Pilots are encouraged to verbally enforce safe flying practices as appropriate.
- 7. All guests, spectators, children and pets shall be supervised by a BAM member at all times while in side the flying field fence and are encouraged to remain behind the pit tables.
- 8. When working on armed electric airplanes in the pit area, pilots shall always secure/restrain the aircraft from moving on the ground or rolling off a pit table. No rotating propellers are allowed.
- 9. No running fuel airplanes are allowed in the pit area.
- 10. R/C cars and other surface vehicles are prohibited anywhere inside the flying field fence.
- 11. Smoking is prohibited anywhere inside the flying field fence and shall be carried out in a safe and respectful manner in the parking lot.
- 12. Consumption of alcoholic beverages or controlled substances before or during flight is prohibited.

## **Pre-Flight Operations**

- 1. Pilots shall use the run-up stands when starting fuel-equipped aircraft engines.
- 2. For larger aircraft, pilots may use the taxiway rather than the run-up stands to start or arm their aircraft while keeping it restrained with the help of another pilot or any reasonable means.
- 3. For extended engine tuning and troubleshooting, pilots shall use the run-up stand provided for such use at the West end of the field by the porta-potties.
- 4. Pilots shall never leave their aircraft unattended while the aircraft is running or armed, even if it is restrained.
- 5. Pilots that use AM/FM radio equipment (50MHz, 53MHz and 72MHz) shall attach the appropriate frequency pin visibly to their transmitter's antenna whenever in use and shall place their AMA card on the respective channel pin on the frequency board in the clubhouse.



#### POPP'S FIELD SAFETY GUIDELINES

- 1. Pilots shall taxi aircraft only on the taxiways and runway. No taxiing is permitted in the pit area.
- 2. While flying, pilots must remain behind the safety fence and never block the taxiways.
- 3. Only pilots or a supervised helper are permitted beyond the safety fence (ie, to retrieve an aircraft).
- 4. Pilots shall verbally communicate their intentions during takeoffs, landings, flights and emergencies (ie, "taking off right to left", "landing left to right", "on the runway", "dead stick", "low pass" etc.
- 5. 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).
- 6. Landing aircraft have the right of way. Dead stick landings shall be called as such and given immediate right of way.
- 7. Pilots shall not take off from or land on the taxiways. This applies to all aircraft types, including rotary-wing and micro aircraft.
- 8. No more than five (5) aircraft shall be in the air at one time. This includes rotary wing and micro aircraft.
- 9. Pilots shall call all maiden flights prior to flight. All other aircraft shall be grounded until the maiden flight has been completed.
- 10. All hand launches shall be called to alert other pilots. Hand launches shall be performed either from the runway or the area between the runway edge and the safety fence.
- 11. Hovering craft such as, but not limited to, 3D planes, drones, etc are to hover North, clear of the runway to avoid interference with fixed wing aircraft operations. Whenever 3D planes or drones are flying, it is recommended to do so when fixed wing aircraft are not in the air.
- 12. FPV (First Person View) flight is only permitted when the pilot has a spotter per AMA regulations.
- 13. Gas turbine operations are allowed as long as they are in accordance with the AMA Gas Turbine regulations on the AMA website.

https://www.modelaircraft.org/content/ama-gas-turbine-program

- 14. When gas turbine planes are being flown, all other pilots are encouraged to relinquish the airspace to the turbine operations. An agreement between the turbine pilots and all other pilots for this recommendation should be discussed and agreed to.
- 15. All planes that are reconstructed after a substantial crash incident shall be considered as doing a maiden flight and all considerations for a maiden flight shall be adhered to.
- 16. If there are any questions that are not addressed here, the AMA Safety Handbook is available for reference at https://www.modelaircraft.org/safety

Updated 12/17/2022 By Safety Officer Andy Niedzwiecke



# Academy of Model Aeronautics National Model Aircraft Safety Code

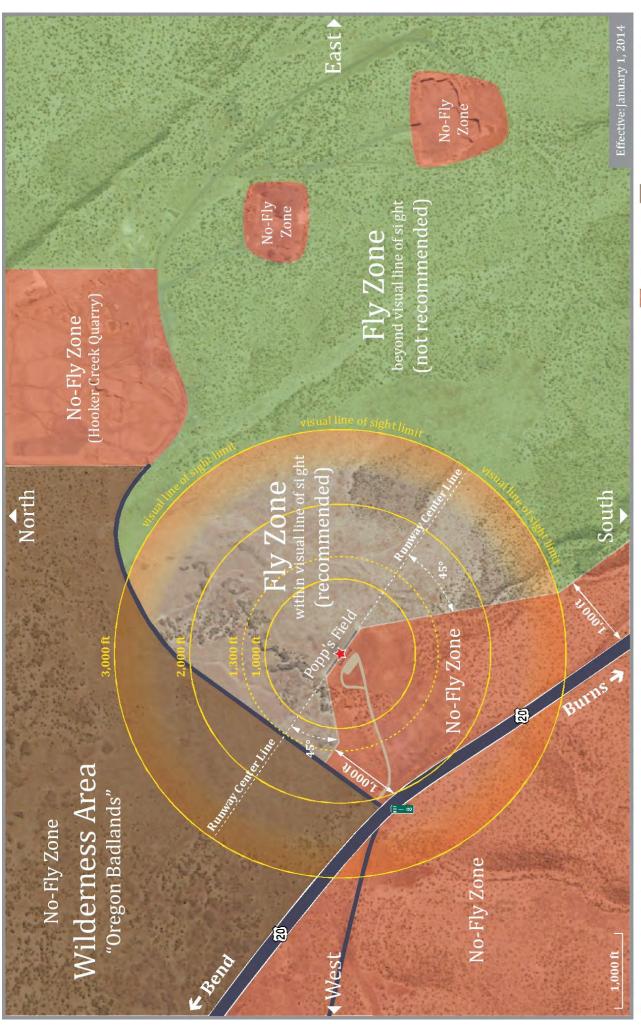
Effective January 1, 2018

A model aircraft is a non-human-carrying device capable of sustained flight within visual line of sight of the pilot or spotter(s). It may not exceed limitations of this code and is intended exclusively for sport, recreation, education and/or competition. All model flights must be conducted in accordance with this safety code and related AMA guidelines, any additional rules specific to the flying site, as well as all applicable laws and regulations.

#### As an AMA member I agree:

- I will not fly a model aircraft in a careless or reckless manner.
- I will not interfere with and will yield the right of way to all human-carrying aircraft using AMA's See and Avoid Guidance and a spotter when appropriate.
- I will not operate any model aircraft while I am under the influence of alcohol or any drug that could adversely affect my ability to safely control the model.
- I will avoid flying directly over unprotected people, moving vehicles, and occupied structures.
- I will fly Free Flight (FF) and Control Line (CL) models in compliance with AMA's safety programming.
- I will maintain visual contact of an RC model aircraft without enhancement other than corrective lenses
  prescribed to me. When using an advanced flight system, such as an autopilot, or flying First-Person View
  (FPV), I will comply with AMA's Advanced Flight System programming.
- I will only fly models weighing more than 55 pounds, including fuel, if certified through AMA's Large Model Airplane Program.
- I will only fly a turbine-powered model aircraft in compliance with AMA's Gas Turbine Program.
- I will not fly a powered model outdoors closer than 25 feet to any individual, except for myself or my helper(s) located at the flightline, unless I am taking off and landing, or as otherwise provided in AMA's Competition Regulation.
- I will use an established safety line to separate all model aircraft operations from spectators and bystanders.

For a complete copy of AMA's Safety Handbook please visit: modelaircraft.org/files/100.pdf



📌 Popp's Field: Latitude 43° 56′ 42.34" N / Longitude 121° 1′ 16.21" W

