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Bend Aero Modelers

Flight Report

March, 2016

Next Meeting

March 23, 2016
6:30pm At Black Bear Diner
Food Available
Come early to visit and eat!

FROM THE PRESIDENT

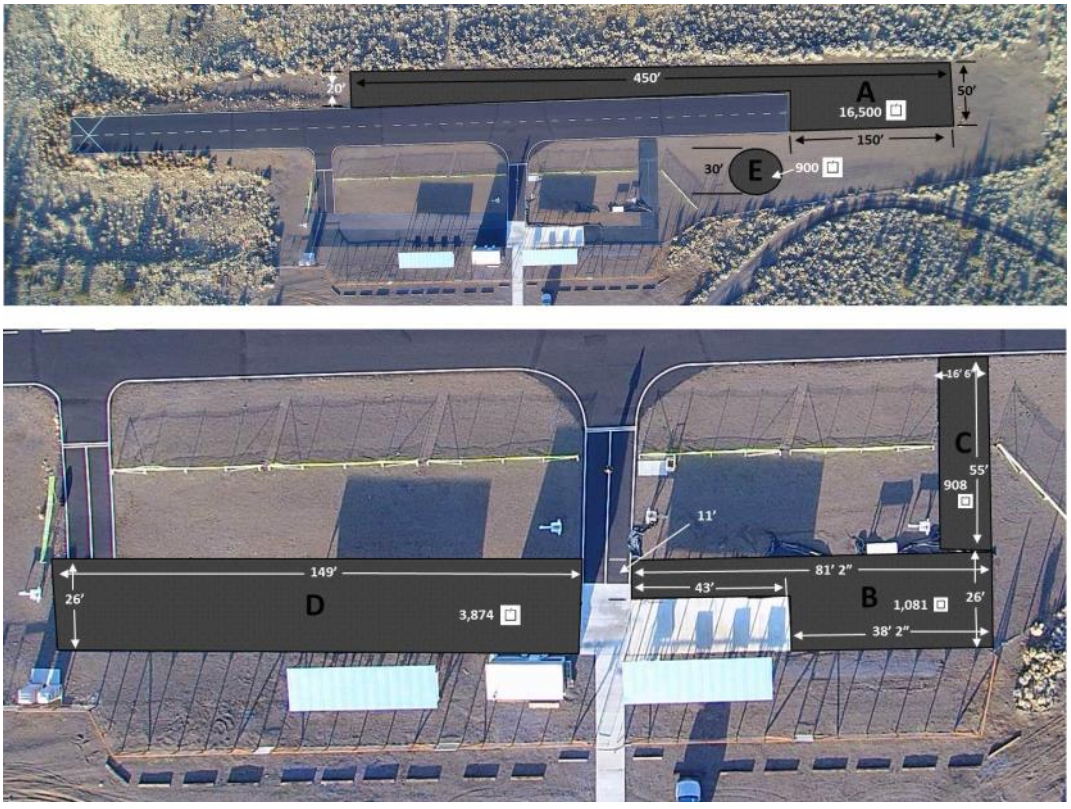
Message from the President

Dear Members & Interested Readers:

We had a great turnout for our February meeting at The Black Bear Diner on February 24th. The meeting was full with 39 members and/or guests attending. On top of that, we had some awesome planes for the Show and Tell portion of the meeting.

Perhaps the highlight of the evening came when we discussed the modifications that our ***Safety Committee*** and ***EC*** made to our ***Safety Guidelines***. I am very happy with the modifications that were made and I want to thank all of the members who submitted suggestions to our Safety Committee. I believe our new guidelines will help us continue to promote a safe and fun flying environment at Popp's Field.

We also discussed ideas for improving our flying field in 2016. We settled on replacing the infield geo-tech fabric that continues to deteriorate in the sun, wind, snow and rain at Popp's Field. The fabric to be replaced, is located in sections B,C,D&E (picture at right). Instead of replacing the damaged areas with the same fabric, we decided to go with a heavier duty liner material available from Bend Tarp & Liner (BTL). The liner material is designed to be exposed to the sun. Since we seem to have plenty of sun here in Central Oregon, the liner material should give us a life of 10 years or more. The geo-tech fabric that we used in the past would begin to deteriorate after about three years of exposer to the elements. Additionally, we agreed to purchase a used "handicap" porta-pottie. **Dave Reiss** has a friend who is in the business. We may be able to purchase a good quality handicap porta-pottie at a very reasonable price. As soon as our weather improves, we will schedule a work party so that we can remove the old fabric, prepare the soil (grading) and then install the new liner material.



I look forward to seeing you at Popp's Field in the near future.

Greg McNutt

From the Editor

By Bob Ingram

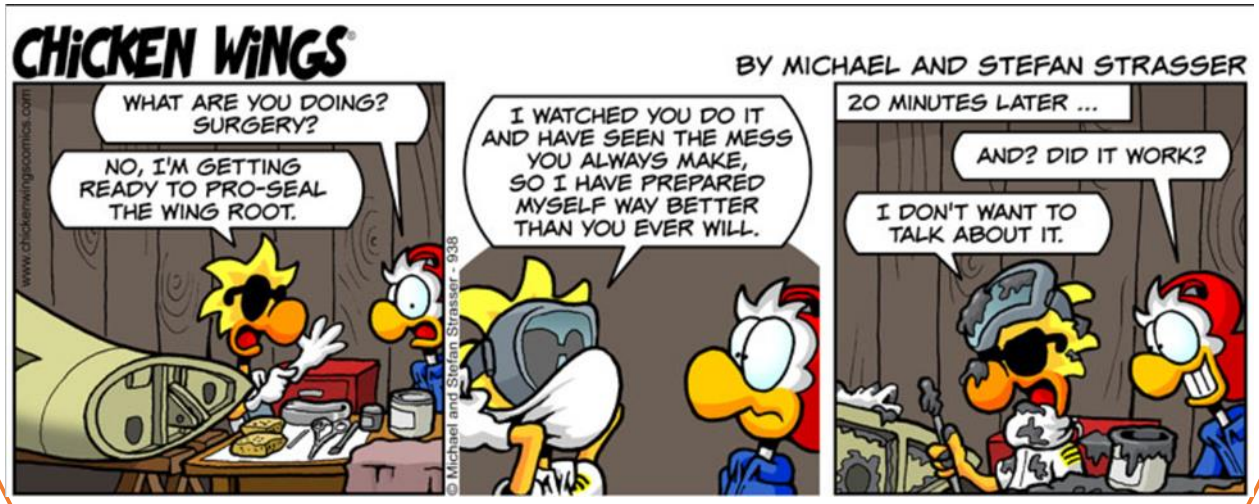
March

Since the last edition of Flight Report there have not been many days of flying … wind / rain … however there are better days in the future.

Continue to feel free to submit pictures and stories during 2016. Without your contributions the BAM Newsletter would not exist at the level you expect it.

So do not be shy, lets see those pictures and stories.

Remember the Editor can't be everywhere but someone is usually there to report that CRASH (take pictures, and tell who made it happen) or some other event.



Safety First: Using the Throttle Cut Function

As popular as electric planes have become, the arming process does impose an added risk that glow or gas airplanes don't have: Once the battery is connected to the Electronic Speed Control (ESC) and the arming sequence is completed, the throttle stick is live and ready to operate the motor. Any accidental motion of the throttle stick would immediately start the motor and could, if the pilot is not paying attention, cause injuries to the pilot and bystanders.

It is not unusual for R/C pilots to carry their armed smaller electric airplanes over a short distance to place it on the taxiway or runway. Carrying the turned-on transmitter and armed airplane at the same time could result in an unintended bump of the throttle stick and power up the motor.

Beginners who are still trying to get a feel for proper pre-flight safety and comfortably operating their equipment are at greater risk. However, it is not an unrealistic scenario even for experienced R/C pilots to accidently advance the throttle stick of an armed airplane.

There are preventive measures that pilots can take to minimize such risks. Many ESCs come with features that require a proper arming sequence before the airplane is ready to fly. Also, several of the popular entry-level electric airplanes such as the E-flite Apprentice have different flight operation modes that provide additional safety features as well as a dedicated ESC on/off switch. Nevertheless, once an airplane is armed, the throttle stick is fully functional.

Fortunately, there is another way to manage the described risk when getting ready for flying. Most transmitters (6-channels and up) have a **Throttle Cut** function. Historically it was designed for use with combustion engines (e.g., glow engines) as a way to shut down an idling engine. However, you can also program the Throttle Cut function to temporarily "disable" the throttle function, which solves the mentioned risk with electric airplanes.

NOTE: A quick note about the difference between the **Throttle Cut** function and the **Throttle Hold** function. The **Throttle Hold** function is traditionally used with R/C helicopters. As the name implies this function holds the throttle at a preset (fixed) engine idle value to ensure that a helicopter does not unintentionally lift off the ground when starting the engine or motor.

The actual programming of the Throttle Cut function is straightforward and can be set up in less than a minute on many popular transmitters models that provide this function. The important thing is that the setting (value) for disabling the throttle signal should apply to the entire range of motion of the throttle stick.

For example, you should set a maximum negative value (%) to ensure that no positive throttle input is sent to the motor as the throttle stick is moved from the low to the maximum position. Please note that the setup can differ depending on your transmitter brand and model. Always consult the user's manual for ensuring the correct setup.

In addition, you will have to assign one of the available transmitter switches to trigger the Throttle Cut function so you can turn it on and off as needed. There is no specific switch that should be used and it is more or less a preferential decision to assign a switch that feels most appropriate for you and the respective airplane.

Before you use the selected Throttle Cut setting, make sure to test it first. You should do the test on the airplane that is bound to the respective transmitter and for which you would like to use the Throttle Cut function. Please don't forget to secure the airplane so it won't take off as you test your settings.

Taking advantage of the Throttle Cut function is a quick and easy fix for containing a real safety risk. If you have never used the Throttle Cut function on your transmitter, give it a try as it is one of the simpler functions to set up.

Take care and fly safely,

Waldemar Frank

What else is happening

Bend Aero Modelers - 2016 Event Calendar

Last Update: 1/24/2016

Club Meeting
Pylon Race Practice
Contest Pylon Race
BAM Renewal Deadline
Last Chance to Renew
Pine Nursery Park Fun-Fly
National Holiday
BAM Christmas Party
Family BBQ & Scale Fun-Fly
Annual National Model Aviation Day

January

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

January 1st - New Year's Day

February

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

March

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

April

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

April 5th - Easter Day

May

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

May 10th - Mother's Day / May 25th - Memorial Day

June

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

June 21st - Father's Day

July

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

July 4th - Independence Day

August

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
31		1	2	3	4	5	6
32	7	8	9	10	11	12	13
33	14	15	16	17	18	19	20
34	21	22	23	24	25	26	
35/36	28	29	30	31			

September

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

September 7th - Labor Day

October

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

November

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
45			1	2	3	4	5
46	6	7	8	9	10	11	12
47	13	14	15	16	17	18	19
48	20	21	22	23	24	25	26
49	27	28	29	30			

November 24th - Thanksgiving Day
NOTE: Due to Thanksgiving the November meeting is a week earlier.

December

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

December 24th - Christmas Eve
December 25th - Christmas Day
December 31st - New year's Eve
January 1st - New Year's Day

Show & Tell

For the February 2016 BAM club meeting … Bruce Burgess / Bill Hand / Darrell Loveland had nice airplanes for show and tell.

Bill Hand brought in a beautiful Maxford USA Hornet. This glider has a 70” wingspan providing lift for the 40” long fuselage. This glider is an ARF that only requires 3 channels and has a 10x8 folding prop. Bill purchased it at only $109 — a steal.

Bruce Burgess brought in his beautiful Pilot RC Extra 330SC. It weighs in at just under 13 pounds and is powered by a Valley View 40cc twin with a 2 into 1 exhaust made by Pinnacle. Bruce is using Hitec 5685 servos and redundant 2100 maH Lipo batteries. This beauty also has a magnet radio switch, Tech-Aero ignition battery eliminator, 17 oz fuel tank and a hand painted pilot figure. This will be a nice plane to see fly.

Darrell Loveland has been working on his beautiful Aeroworks Checkmate Pitts Model 12 Biplane. The aircraft is modeled after the full scale airplane flown by Kendall Simpson in many airshows across the country. Darrell’s

model is powered by a DLE55 gas motor turning a 22x8 prop and Tru-Turn spiner with a JTEC Pitts style muffler made specifically for this airframe. It employs a Smartfly EQ6 power regulation and distribution board with 3 lithium ion batteries for redundancy. This is one beautiful aircraft and we can’t wait to see Darrell wring it out!

39 members and guest attended the February 2016 Club Meeting

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.

Academy of Model Aeronautics National Model Aircraft Safety Code

Effective January 1, 2014

A. **GENERAL**: A model aircraft is a non-human-carrying aircraft capable of sustained flight in the atmosphere. 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 any additional rules specific to the flying site.

1. Model aircraft will not be flown:
   (a) In a careless or reckless manner.
   (b) At a location where model aircraft activities are prohibited.
2. Model aircraft pilots will:
   (a) Yield the right of way to all human-carrying aircraft.
   (b) See and avoid all aircraft and a spotter must be used when appropriate. (AMA Document #540-D.)
   (c) Not fly higher than approximately 400 feet above ground level within three (3) miles of an airport without notifying the airport operator.
   (d) Not interfere with operations and traffic patterns at any airport, heliport or seaplane base except where there is a mixed use agreement.
   (e) Not exceed a takeoff weight, including fuel, of 55 pounds unless in compliance with the AMA Large Model Airplane program. (AMA Document 520-A.)
   (f) Ensure the aircraft is identified with the name and address or AMA number of the owner on the inside or affixed to the outside of the model aircraft. (This does not apply to model aircraft flown indoors.)
   (g) Not operate aircraft with metal-blade propellers or with gaseous boosts except for helicopters operated under the provisions of AMA Document #555.
   (h) Not operate model aircraft while under the influence of alcohol or while using any drug that could adversely affect the pilot's ability to safely control the model.
   (i) Not operate model aircraft carrying pyrotechnic devices that explode or burn, or any device which propels a projectile or drops any object that creates a hazard to persons or property.
   Exceptions:
   - Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight.
   - Rocket motors (using solid propellant) up to a G-series size may be used provided they remain attached to the model during flight. Model rockets may be flown in accordance with the National Model Rocketry Safety Code but may not be launched from model aircraft.
   - Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Team AMA Program Document. (AMA Document #718.)

   (j) Not operate a turbine-powered aircraft, unless in compliance with the AMA turbine regulations. (AMA Document #510-A.)
3. Model aircraft will not be flown in AMA sanctioned events, air shows or model demonstrations unless:
   (a) The aircraft, control system and pilot skills have successfully demonstrated all maneuvers intended or anticipated prior to the specific event.
   (b) An inexperienced pilot is assisted by an experienced pilot.
4. When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

B. **RADIO CONTROL (RC)**

1. All pilots shall avoid flying directly over unprotected people, vessels, vehicles or structures and shall avoid endangerment of life and property of others.
2. A successful radio equipment ground-range check in accordance with manufacturer's recommendations will be completed before the first flight of a new or repaired model aircraft.
3. At all flying sites a safety line(s) must be established in front of which all flying takes place. (AMA Document #706.)
   (a) Only personnel associated with flying the model aircraft are allowed at or in front of the safety line.
   (b) At air shows or demonstrations, a straight safety line must be established.
   (c) An area away from the safety line must be maintained for spectators.
   (d) Intentional flying behind the safety line is prohibited.
4. RC model aircraft must use the radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.
5. RC model aircraft will not knowingly operate within three (3) miles of any pre-existing flying site without a frequency-management agreement. (AMA Documents #922 and #923.)
6. With the exception of events flown under official AMA Competition Regulations, excluding takeoff and landing, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and the pilot's helper(s) located at the flightline.
7. Under no circumstances may a pilot or other person touch an outdoor model aircraft in flight while it is still under power, except to divert it from striking an individual.
8. RC night flying requires a lighting system providing the pilot with a clear view of the model's attitude and orientation at all times. Hand-held illumination systems are inadequate for night flying operations.
9. The pilot of an RC model aircraft shall:
   (a) Maintain control during the entire flight, maintaining visual contact without enhancement other than by corrective lenses prescribed for the pilot.
   (b) Fly using the assistance of a camera or First-Person View (FPV) only in accordance with the procedures outlined in AMA Document #550.
   (c) Fly using the assistance of autopilot or stabilization system only in accordance with the procedures outlined in AMA Document #560.

C. **FREE FLIGHT**

1. Must be at least 100 feet downwind of spectators and automobile parking when the model aircraft is launched.
2. Launch area must be clear of all individuals except mechanics, officials, and other fliers.
3. An effective device will be used to extinguish any fuse on the model aircraft after the fuse has completed its function.

D. **CONTROL LINE**

1. The complete control system (including the safety thong where applicable) must have an inspection and pull test prior to flying.
2. The pull test will be in accordance with the current Competition Regulations for the applicable model aircraft category.
3. Model aircraft not fitting a specific category shall use those pull-test requirements as indicated for Control Line Precision Aerobatics.
4. The flying area must be clear of all utility wires or poles and a model aircraft will not be flown closer than 50 feet to any above-ground electric utility lines.
5. The flying area must be clear of all nonessential participants and spectators before the engine is started.