BFM R/C CLUB TRAINING

Welcome new members. This section describes the training and procedures for the Billings Flying Mustangs (BFM) R/C club. If you are a beginning pilot, you are required to read this section and contact one of the instructors who will work with you until you pass your solo certification test.

The instructors are not responsible for your aircraft.

The instructors are here to volunteer their time for the purpose of teaching you to fly, they are competent pilots. They will, to the best of their ability, check out your aircraft and instruct you to its safe operation. The use of a "Buddy Box" is strongly encouraged. If for some reason there is a mishap, the repairs are up to you. You need to be very certain that every part of your aircraft is correct and airworthy. You are encouraged to review the Pre-Field and Pre-Flight Checklist Included in your new member packet.

Our goal for the training and instruction program is to provide our new members with quality personal training and proper education of aircraft safety. The staff names that will volunteer their services for training will be provided to you after registration.

Regular training nights are scheduled for Thursday evenings around 5:30 if weather is permitting. Training for any other day should be pre-arranged with one of the instructors. Please keep in mind that these instructors need flight time as well, most of the trainings should be conducted on Thursdays.

Purpose of the training program

- Make every new pilot aware of safety issues
- Help each pilot become familiar with their aircraft
- Teach the basics of flight
- Teach control of aircraft
- Teach battery safety and awareness
- Follow through with Solo Certification

The following training will be conducted in Four phases.

1. Aircraft familiarization
2. General flight with Buddy Box
3. Take offs and Landings
4. Solo Certification

1. AIRCRAFT FAMILIARIZATION INSTRUCTOR_____

- ☐ Control surfaces all operationally safe
- ☐ Proper radio setup.
- ☐ Review of Expo and Dual Rates.
- ☐ Safe Aircraft Handling
- ☐ Battery safety
- ☐ Fly zone and no fly zone (Respect of our neighbors)
- ☐ Range Check of aircraft

2. GENERAL FLIGHT WITH BUDDY BOX INSTRUCTOR_____

- ☐ Student will be taught to keep aircraft at recommended altitude using proper throttle control.
- ☐ Student to demonstrate both Left Handed and Right Handed turns maintaining altitude.
- ☐ Student to demonstrate figure 8 maintaining altitude.
- ☐ Student demonstrating free flight in front of flight line.
- ☐ Stutent will be taught to recover from a stall

3. TAKE OFFS AND LANDINGS INSTRUCTOR_____

- ☐ Minimum of Five touch and go's to simulate landings.
- ☐ Five takeoffs (must demonstrate control and safety)
- ☐ Five Landings (must demonstrate control and safety)
- ☐ Ability to demonstrate controlled flight during approaches.

4. SOLO CERTIFICATION INSTRUCTOR_____

- ☐ Knowledge check of club safety rules and no fly zones.
- ☐ Preparation of aircraft prior to flight
- ☐ Battery safety and charging
- ☐ Proper take-off and landing
- ☐ Demonstration a figure 8 with holding altitude.
- ☐ 180 degree turn while holding altitude
- ☐ Touch and go
- ☐ Taxi and shut down.

Action Items

Instructor's names for 2022:

Jim Fuller

Lee Godfry

Art Mulkey

Training safety committee:

Dave Brown

Don Jones

Jim Fuller

Art Mulkey

Formal dates and times for training night (Thursday at 6:00pm to 7:30 or Dusk. Start date 5/18/2023

Safety check off list:

New members will be subjected to safety inspection prior to flying solo at the field.
These new members can test out with the Solo certification.
New training students must follow the above process then be tested to fly solo.

PREFLIGHT CHECKLIST

Name		Aircraft			
Date	**Pre Flight Aircraft Check List**	**Instructor**			
Yes / NA	Checklist Items	Notes			
	All control surfaces in working order				
	Wheels are and landing gear tight and in working order				
	Motor is securely fastened and in working order. Properly spinning in correct manor.				
	Center of gravity is checked and plane is properly balanced.				
	Servos securely mounted and in working order				
	Propeller is free of nicks and spinner not touching prop.				
	No slop in control surfaces.				
	Check trim in transmitter to ensure control surfaces leveled.				
	Check throttle and demonstrate throttle cut in radio.				
	Check for control surfaces in both radios with buddy box.				
	Steering is aligned and straight.				
	Battery fully charged.				
	Range check radio for first time.				

AMA Suggested Student Flight

Many clubs hold training sessions at regular intervals throughout the flying season. Most training seems to consist ofjust getting airborne and back on the ground with a flyable aircraft. Or you might see takeoffs, circles, horizontal eights, loops, rolls, and landings practiced.

Is this really enough? I know that some clubs must do this, but I have never personally seen any club provide a "ground school" before a "newbie" was allowed to put his or her airplane in the air. I've seldom seen flight emergencies such as out-of-trim airplanes, failed servos, or even engine-out emergencies taught or practiced. I've seldom seen anyone practicing crosswind takeoffs and/or landings. Yet the students get signed off as "solo" pilots without this training.

I have seen newly "soloed" pilots crash aircraft unnecessarily because of some fairly routine problems. I have even seen students crash in low crosswind situations because they were never trained to fly in the wind.

Some might say that it is too hard to learn all of these thing-this hobby is supposed to be fun, not work. I can understand that, but I also feel that learning to be a proficient and safe pilot doesn't have to be work, it can be fun.

Not everyone is into competition, but we can all still learn things from competitors. Watch the way a competitor practices. It doesn't matter if it is RC Pattern, or CL Stunt, or any other discipline. They all have one thing in common-purposeful flight. They fly with specific goals in mind. They practice until they have mastered those goals to the best of their abilities. Should we be any less demanding of ourselves as mentors or students?

The next time you observe your club training night, ask yourself what is really being taught and what is really being learned. Are the students being trained to the best of your club's abilities? Are they developing the skills necessary to become proficient and safe pilots? And when they get their solo sign-off-will they be assets or liabilities to the club and to themselves?

Basic Flight Training Phase I

Task#l ***Ground support equipment, engine starting, and taxi training***

Goals:

- Perform aircraft preparation and inspection.
- Perform engine start and radio checks.
- Perform taxi course.

Task#2 ***Orientation Flight***

Goals:

- Observe orientation flight.
- Note ground and flight safety restrictions.

Task#3 ***Basicflight skills development***

Goals:

- Become familiar with speed, yaw, pitch, and roll commands.
- Become familiar with flight trim techniques.
- Execute straight and level flight.
- Execute left and right turns.

Task#4 ***Takeoff***

Goals:

- Execute proper upwind takeoff runway alignment.
- Initiate takeoff throttle setting.
- Maintain runway centerline ground steering during takeoff acceleration.
- Execute takeoff rotation at proper speed.
- Execute proper climb speed, pitch, and bank angle.
- Perform a takeoff abort if required.

Task#S ***Turn***

Goals:

- Perform level shallow turns (left and right) at approximately a 20° bank angle.
- Perform level medium turns (left and right) at approximately a 40° bank angle.
- Perform level steep turns (left and right) at approximately a 60° bank angle.
- Execute shallow, medium, and steep turns (left and right), level flight, at low, medium, and full speeds.
- Execute turns in a designated area.

Task#6 Planning maneuvers

Goals:

- Perform level rectangular patterns (left and right) as well as figure eights over specific ground location(s).
- Apply crosswind technique to maintain proper ground tracking during planning maneuvers.

Task#I Landing pattern and go-around

Goals:

- Execute upwind landing patterns.
- Execute crosswind landing patterns.
- Execute downwind landing patterns.
- Perform go-arounds at a 2-meter height on final approach.

Task#B Touch-and-go landing

Goals:

- Perform traffic pattern(s), final approach, and touchdown, followed by power application and pattern reentry.
- Perform normal and crosswind traffic patterns with touch-and-go maneuvers.

Task#9 Full-stop landing and supervised solo

Goals:

- Execute full-stop landing followed by taxi back and takeoff.
- Execute simulated engine failure landings.
- Perform a supervised solo flight.
- Be prepared for simulated engine failure calls from the mentor, regardless of position in the pattern. Upon receiving the call, immediately pull throttle to idle and safely land aircraft on runway.

Task#IO Supervised solo proficiency/mid-phase evaluation review

Goals:

- Practice Task 1- 9 maneuvers.
- Place additional emphasis on mentor-recommended areas of needed improvement.

Task#11 Mid-phase evaluation task

Goals:

- Perform the sequence of maneuvers required during the mid-phase evaluation.
- Review mid-phase I flight evaluation results and discuss strengths and weaknesses with mentors.

Task#12 Airspeed control maneuvers

Goals:

- Perform full-, medium-, and slow-speed rectangular patterns (left and right) as well as figure eights from level flight.
- Execute a constant speed climbing rectangular pattern as well as figure eights.
- Execute a constant glide rectangular pattern as well as figure eights.
- Perform all maneuvers over designated ground locations.

Task#13 Power-on spot landing

Goals:

- Perform near stalled touchdowns on the runway with power on.
- Execute near stalled touchdowns within 2 meters of the runway centerline.
- Perform touchdowns initially within a 30-meter long touchdown zone, within 2 meters of runway centerline, graduating to a 15-meter long touchdown zone.
- Execute a go-around whenever overshoot landing conditions exist.

Task#14 Power-off (idle) spot landings

Goals:

- Perform a near stalled touchdown on the runway with power off (idle).
- Adjust landing pattern to touch down within 2 meters of runway centerline with power off (idle).
- Adjust landing pattern to touch down within 2 meters of runway centerline and within a 30-meter long touchdown zone.

Task#15 Final flight evaluation demonstration, practice, evaluation, and critique

Goals:

- Practice all maneuvers accomplished during tasks 1-14 of Basic Flight Training Phase I.
- Perform the Phase I Final Evaluation Flight.
- Review flight test results and critique with mentor(s).

Advanced Flight Training Phase II

Task#16 Introduction and overview, advanced trainer familiarization, advanced trainer orientation flight

Goals

: Balance aircraft laterally and longitudinally within recommended center of gravity (CG) range.

- Properly check and adjust flying surfaces, flight controls, and thrust alignment.
- Trim aircraft after level-off for hands-off, level, unaccelerated flight.

Task#17 Advanced flight maneuvers

Goals:

- Perform level flight, rectangular pattern, procedure turn, and figure eight over a specific ground location.
- Perform an lmmelmann, split S, and chandelle, all of which are 180° directional change maneuvers.

Task#18 Advanced flight maneuvers

Goals:

- Perform one inside loop, progressing to three consecutive inside loops.
- Perform one aileron roll, progressing to three consecutive aileron rolls.
- Execute level inverted flight, flying straight ahead, progressing to left and right turns inverted.
- Execute a stall and spin recovery.

Task#19 Advanced takeoff and landing patterns

Goals:

- Execute a takeoff maintaining centerline tracking, and rotating directly in front of the pilot position.
- Perform both rectangular and 360° overhead landing patterns in normal and crosswind conditions.
- Execute low-speed upwind and crosswind landing patterns.
- Perform a touch-and-go, touching within a 3 meter x 15 meter touchdown zone.
- Execute a go-around if overshoot conditions exist.

Task#20 High idle landing patterns

Goals:

- Execute a high engine idle trim airspeed emergency, landing near runway centerline within a 30-meter long touchdown zone, progressing to a touchdown within one wingspan of centerline and within a 15-meter long touchdown zone.
- Perform a go-around if overshoot conditions exist.

Task#21 Engine failure flight emergency

Goals:

- Perform an emergency runway landing after simulated engine failure at a high safe altitude.
- Perform a spot landing within 2 meters of runway centerline and within 20-meter long touchdown zone after simulated engine failure at a high safe altitude.
- Execute emergency landings after simulated engine failure in the traffic pattern and/or immediately after takeoff.

Task#22 Mid-phase II evaluation practice

Goals:

- Practice maneuvers covered in tasks 16-21 in preparation for the Mid-phase II Flight Evaluation.

Task#23 Mid-phase II evaluation flight

Goals:

- Execute Mid-phase II Flight Evaluation.

Task#24 Degraded engine performance flight

Goals:

- Reduce the aircraft's engine thrust (on the student transmitter only) by approximately 30% for degraded engine performance flight skills development.
- Perform takeoff, figure eight, stall, spin recovery, maximum climb, chandelle, traffic pattern, touch-and-go, and spot landing in this reduced thrust configuration.

Task#25 Extended visual range flight

Goals:

- Perform figure eight and rectangular patterns at approximately 600-meter slant range.
- Perform figure eight and rectangular patterns at approximately 1,000-meter slant range.

Task#26 Engine failure flight emergency

Goals:

- Perform a runway landing after an engine failure (actual) from approximately 1,000 feet above ground level (AGL).
- Perform a runway landing after an engine failure (actual) from approximately 500 feet AGL.
- Perform a runway landing (if feasible) after an engine failure (actual) from anywhere in the traffic pattern. If a runway landing is not possible, land aircraft in the safest manner and location possible.

Task#27 Flight trim emergency

Goals:

- Fly figure eight, rectangular pattern, and traffic pattern with flight control trims slightly deflected, then fully deflected to simulate flight control malfunctions.

Task#28 Final evaluation review

Goals

: Practice maneuvers covered in tasks 23-26 in preparation for Phase II Final Evaluation.

Task#29 Final evaluation flight

Goals

: Execute Phase II final evaluation flight.

- Complete course critique.

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

Enrollment Form for Membership

Questions?
For help completing this form, contact AMA at (765) 287-1256 ext. 129.
www.modelaircraft.org

Return completed form to
Academy of Model Aeronautics
5161 E. Memorial Dr.
Muncie IN 47302
Or fax your form to: (765) 741-0057.

1. Contact Information (Only one individual per form.)

☐ Mr. ☐ Mrs. ☐ Ms.	First Name & Initial	Last Name	
Mailing Address (number and street)			Apt.#
City	State	Zip Code	Phone
Date of Birth:	Email:	☐ New Member ☐ Renewal	AMA # (Renewals only - leave blank if unknown)
Recruiter Information: If you were recruited to join AMA by a member, AMA club, or hobby shop, please indicate only one and list the name and AMA number (if known).	Recruiter Name:	Recruiter AMA #	

Primary area of interest (choose only one): ☐ Radio Control ☐ Control Line ☐ Free Flight ☐ Rocketry ☐ Multirotor

2. Membership Category

Choose only one of Adult, Park Pilot, Youth, or Affiliate memberships.
All membership categories receive membership, liability and accident/medical insurance, and competitive privileges unless noted.

		One-Year Memberships	Two-Year Memberships	
ADULT MEMBERSHIPS				
Adult (New & Renewing)	• For adults 19 or over as of July 1, 2023. • Includes subscription to *Model Aviation* magazine.	☐ **Choose Adult $85.00**	☐ **Choose Adult $160.00**	**Membership option amt:**
Senior (New & Renewing)	• For adults 65 or over as of July 1, 2023. • Includes subscription to *Model Aviation* magazine.	☐ **Choose Senior $75.00**	☐ **Choose Senior $140.00**	
Extra Family	• For any adult who resides in the same household as a current Adult Member. • Does not include a subscription to *Model Aviation* magazine.	☐ **Choose Extra Family $45.00** _____ Current Adult Member's Name and AMA #	☐ **Choose Extra Family $86.00**	
Included Magazine Options	Adult and Senior memberships include a subscription to *Model Aviation* magazine.	**Choose magazine delivery method** ☐ Print ☐ Digital ☐ Both ($9.95) **You may choose to receive your print magazine in a protective plastic wrap.** ☐ Protective wrap ($6.00)	**Choose magazine delivery method** ☐ Print ☐ Digital ☐ Both ($19.90) **You may choose to receive your print magazine in a protective plastic wrap.** ☐ Protective wrap ($12.00)	**Magazine amt:**
				Total:
STOP	**Adult membership enrollment complete. Go to section #3.**			
PARK PILOT				
Park Pilot (New & Renewing)	• For adults 19 or over as of July 1, 2023.	☐ **Choose Park Pilot $48.00**		**Membership option amt:**
Park Pilot membership is for model aircraft weighing 2 lbs or less that fly below 60 mph and RC surface vehicles. Does not include voting rights or competitive privileges. Park Pilot membership benefits are limited to $500,000 of liability coverage.				
Extras	You may add a subscription to *Model Aviation* magazine. *Model Aviation* is the monthly flagship publication of the AMA and offers our most extensive coverage of the hobby.			**Extras amt:**
	☐ Print (1-Year) $36.00 ☐ Digital (1-Year) $36.00 ☐ Both (1-Year) $45.95	**You may choose to receive your print magazine in a protective plastic wrap.**	☐ Protective wrap(1 Year) $6.00	**Total:**
STOP	**Park Pilot membership enrollment complete. Go to section #3.**	**One Year**		
YOUTH				
Youth	For children and young adults under 19 as of July 1, 2023.	☐ **$15.00**	☐ **$27.00**	**Membership option amt:**
	Youth membership includes subscription to *Model Aviation* digital. See options for print subscription below.			**Magazine amt:**
Extras	☐ Annual *Model Aviation* print subscription ($15.00)			**Total:**
STOP	**Youth membership enrollment complete. Go to section #3.**			
AFLTE				
Affiliate	• (For non-U.S. permanent residents) • Insurance and competitive privileges only while flying in the USA.	☐ **Choose Affiliate $45.00**	☐ **Choose Affiliate $86.00**	**Membership option amt:**
Extras	You may subscribe to one or two years of the digital edition of *Model Aviation* magazine regardless of the length of your Affiliate membership.	☐ Digital (1-Year) $36.00	☐ Digital (2-Year) $72.00	**Total:**
STOP	**Affiliate membership enrollment complete. Go to section #3.**			

3. Support the AMA Foundation

Scholarship Fund	AMA Site Development	Club Support	General Fund	Museum Patron Program	Donation Total:
☐ $25 ☐ $50 ☐ $100 ☐ Other: $_____	☐ $25 ☐ $50 ☐ $100 ☐ Other: $_____	☐ $25 ☐ $50 ☐ $100 ☐ Other: $_____	☐ $25 ☐ $50 ☐ $100 ☐ Other: $_____	☐ $25/Patron ☐ $100/Supporting ☐ $1,000 / Life	

4. Payment

☐ Check ☐ Visa ☐ Mastercard ☐ Discover Card No. _____ - _____ - _____ - _____ Exp: _____ / _____

All membership benefits begin on the day a properly completed form and correct dues payment is received at AMA Headquarters. If a magazine is included with the membership, it begins with the first issue available for the year after a correct current form and payment are received. Membership rates and insurance limits are those in effect at the time of printing. Actual cost of dues and amount of insurance coverage are subject to change. Any such changes will be noted at the time of membership processing so they may be accepted or not.

If I am involved in any claim or suit I will not sue the AMA, Inc. I understand that this does not affect my liability insurance coverage. **"I agree to comply with the AMA Safety Code."**

Signature : _____

Enrollment Total:
$_____
Application Source: I

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- 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.
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- 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:
www.modelaircraft.org/files/100.pdf

Academy of Model Aeronautics
5161 E. Memorial Drive
Muncie, IN 47302
(765) 287-1256
(765) 286-3303 Fax
www.modelaircraft.org

Introductory Pilot Program
Student Pilot Registration Form #2

Club name: _____ Club number: _____

Instructor name: _____ AMA number _____

Student name: _____ Date of birth: ___/___/___

Email address: _____

Address: _____

City, state, & ZIP code: _____

Daytime phone: _____ ☐ Home ☐ Work ☐ Cell

Date of first session: _____

Safety Program Compliance Statement

I agree to comply with the AMA Safety program. If I am involved in any claim or suit, I will not sue the AMA Inc. I understand that this does not affect my liability insurance coverage.

_____ _____

Student Signature Date