

LAUREL HIGHLANDS MODEL AIRPLANE CLUB FIELD RULES AND REGULATIONS

(revised 05/04/2015)

I. PURPOSE

The purpose of the LHMALC Field Rules and Regulations is to promote safe and orderly operations of model aircraft by club members. The safety of the people in the flight area shall always be given the highest priority.

II. ENFORCEMENT GUIDELINES

- a. The Field Control officers will supervise field operations to ensure that all activities conform to the field rules; however, all members are expected to be vigilant in anticipating and avoiding potentially unsafe situations.
- b. It is recognized that it is not possible to anticipate all possible situations; therefore, the Field Control Officer shall use his judgment in enforcement to meet the intent of these rules.
- c. Members may request waivers for specific situations, which the Field Control Officer may grant if the request does not in his judgment constitute a safety risk.
- d. The club may waive or alter flight rules for special sanctioned events. For any such event, the specific exceptions shall be documented in the minutes of a meeting prior to the event.

III. GENERAL

- a. All users must have a valid AMA card in their possession at all times. All non-club members must obtain a special use permit from the Department of Parks and Recreation and the same must be available for inspection upon request by any club or Westmoreland County parks representative.
- b. No alcoholic beverages are permitted at the airfield.
- c. Permitted hours of flying are from 10:00 AM until dusk.
- d. No more than three (3) aircraft are permitted in the air at one time except on Sundays when (5) aircraft are permitted.
- e. All gas/glow powered aircraft must be fitted with mufflers.
- f. Flying must be carried out within boundaries shown on the field map.
- g. All automobiles or other vehicles must be parked in the designated area.
- h. Spectators will remain in the designated areas.
- i. All transmitters must be labeled with the owner's name and telephone number.
- j. All airfield users are responsible for familiarizing themselves with the rules and regulations of the "home" club. To facilitate this, a copy of said rules will be available for public inspection at all times.
- k. All pilot qualifications will be recorded in a log maintained by the club Secretary. This log is a permanent club document. Log entries will include:
 - i. Qualified Pilot First / Last Name and AMA number.
 - ii. Qualifying Instructor First / Last name and AMA number.
 - iii. Date Qualified.
 - iv. Internal Combustion (all types of aircraft) / Electric Only (including Park Flyer) / Park Flyer Only.
- l. All pilots including guests must adhere to all flight rules and Mammoth Park Rules during their visit at LHMALC.
- m. The club will appoint designated instructors annually for the purpose of training new students, and will provide a list to the membership.

IV. FLIGHT RULES

- a. All Radio Control field users shall thoroughly familiarize themselves with the AMA Safety Code and shall strictly adhere to its provisions.
- b. The "home" club reserves the right to require all Radio Control Field users to exhibit safe and competent flying skills in accordance with the guidelines established in section VI., GAS/GLOW FLIGHT QUALIFICATION AND ELECTRIC FLIGHT QUALIFICATION, of this article. Those who do not meet the minimum requirements will not be permitted to fly without the supervision of a flight qualified member.

- c. Upon arrival at the field, pilots will impound their transmitter and wait their turn to fly or otherwise operate their transmitter. Prior to turning on their transmitter, pilots will place their frequency control pin on the proper active frequency location, as the sole pin at this location. When finished flying (or otherwise operating their transmitter) pilots will return their transmitter to the impound location and remove their frequency control pin from the active frequency pin location. No one other than the owner of a transmitter is permitted to touch or move a transmitter from the impound. 2.4 users, while required to impound their transmitters, are permitted to operate concurrently and are exempt from the "sole pin" provision of this impound procedure.
- d. The Field Control Officer of the "home" club has complete authority over all flight activity and is responsible for strictly enforcing all rules and has the authority to ground any unsafe aircraft or pilots.
- e. Every transmitter will be equipped with a proper frequency number flag or steamer. 2.4 users are exempt.
- f. Troubleshooting of equipment must not be permitted to impede others from flying (e.g., tying up a radio frequency). The person experiencing trouble shall yield to pending fliers after a reasonable period of time.
- g. All radios should be checked for range prior to flying or by arrangement with the Field Control Officer. Engine break-in will be permitted only in designated areas.
- h. Consideration must be given to the pilot while the airplane is in the air. Distractions must be kept to a minimum.
- i. Pilots of radio-controlled aircraft must make every effort to keep the aircraft within the boundaries of the flying site. There will be no flying behind the Safety line. All pilots will generally fly in one (1) direction over the runway. Pilots may fly in alternate directions over the runway when deemed reasonable under then-current airspace circumstances. All pilots are expected to be situationally aware and take care to maintain adequate spacing among aircraft. Pilots who stray from the current pattern will return to the pattern as airspace conditions warrant. Direction of landings and take-offs will be determined by the Field Control Officer each day. All take-offs and landings must be announced by the pilot or spotter.
- j. There will be no flying during times designated as work details at the field. Work parties may be called when necessary to maintain safety or to keep the flying field in good condition.
- k. All flying is to be conducted from the designated pads along the safety line; however, pilots are permitted to stand adjacent to one another along the safety line in cases where verbal communication is needed. Under no circumstances will flying be permitted from the benches or other pit areas. Any members needing to fly in a sitting position must have a portable chair that can be placed at the designated flight stations and must be accompanied by a spotter while flying. Crossing the safety line will result in immediate grounding of the pilot for the day. Any further action is at the discretion of the field control officer.
- l. Hand launching of any aircraft is only permitted in front of the pilot's station. Aircraft should be aimed in the general direction of the flight pattern. Launching from behind the pilots station will be treated as an infringement upon the Safety line.
- m. Special considerations will be given in emergency situations

V. MUFFLER REGULATIONS

- a. All radio controlled aircraft shall be equipped with a suitable muffler. Mufflers may be commercial units or home built units of acceptable constructions.
- b. Prohibited muffler types are:
 - i. Flow through (with inner tube intact)
 - ii. Pulse Modulated (Murphy and Dubro types)
- c. An exhaust extension or an un-baffled manifold is unacceptable.
- d. Commercial units may not be modified in any manner that will reduce their noise abatement.
- e. The Field Control Officer will be responsible for accepting or rejecting home built or modified units as well as enforcement of the preceding regulations.
- f. If there are serious disagreements as to the acceptability of certain mufflers, the club will purchase or construct a DB meter and set an acceptable noise level in accordance with national or AMA standards.

VI. GAS/GLOW FLIGHT QUALIFICATION AND ELECTRIC FLIGHT QUALIFICATION

- a. Qualification sessions must ensure that the flyer shows knowledge of and practices the field rules and can safely and competently execute the following:
 - i. Set-up and check aircraft, engine and radio correctly prior to flight.
 - ii. Make take-offs to the left and right smoothly and under control (three each).
 - iii. Make left and right hand rectangular patterns with proper turns at a safe altitude (two each).
 - iv. Make horizontal figure 8 patterns parallel with the flight line with proper turns at a safe altitude (two each).
 - v. Make landing approach and landings from the left and right smoothly and under control (three each).
 - vi. Make simulated or real dead-stick landings on the flying site safely and under control (one each).
 - vii. Keep within the designated field boundaries at all times.
 - viii. Any fail on a section of testing will require a re-test of that section.
 - ix. Qualification is only valid if completed in the presence of a qualified club member and a class-qualified (gas class or electric class) designated instructor.
 - x. Pilots with a gas/glow qualification may fly any aircraft that is AMA legal.
 - xi. Pilots with an electric qualification are not permitted to fly gas/glow aircraft without the use of an instructor.
- b. This section does not apply to pilots flying under Park Pilot rules.

VII. PARK PILOT DESIGNATION FLIGHT RULES

Park Flyer models, as defined by the AMA, shall be flown in accordance with applicable FIELD RULES AND REGULATIONS contained herein as well as the AMA Park Pilot Rules.

VIII. GRANDFATHER FLIGHT QUALIFICATIONS:

Members are not required to re-qualify due to alterations to elements of the flight qualification requirements.

IX. FPV (FIRST PERSON VIEW) FLIGHT RULES

FPV Pilots must adhere to applicable flight rules as well as AMA Document 550.

X. MULTI-ROTOR / HELICOPTER FLIGHT RULES

- a. Multi Rotor Pilots must adhere to the Electric Flight Rules as well as AMA Document 550.
- b. Helicopter Pilots must adhere to all gas/glow/electric flight rules.

XI. INFRACTIONS / DISPUTE RESOLUTION

- a. Pilots who are issued a flying rule infraction may be subject to a "demo re-qualification" under supervision of a club officer or designated instructor.
- b. It is hoped that all members will accept input from each other if a violation of any club or County rule is thought to have been committed. If agreement cannot be reached between the parties involved, this process must be followed: A complaint must be filed with the Field Control Officer. This is to be a written report of the perceived violation with the signatures of three members in good standing. The committee will then take the complaint to the Executive Board for appropriate action. The Board and Committee must reply in writing to the complaint within 30 days of the filing.
- c. Any decision of the Field Control Officer or Club Officer regarding the grounding of a pilot or aircraft at the time of an incident shall remain in force until the Board and Committee reaches a decision and has notified the person or persons involved.

Academy of Model Aeronautics AMA Document #550

“AMA Advanced Flight Systems Committee”

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Radio Controlled Model Aircraft Operation Utilizing “First Person View” Systems

1. DEFINITION OF TERMS:

Please refer to Page 5 section 7 which contains an alphabetical listing of the definitions of the

terms in italics that are used in this document.

2. GENERAL:

FPV flying of radio control model aircraft by AMA members is allowed only for noncommercial purposes as a hobby/recreational and/or competition activity and must be conducted in accordance with AMA’s current National Model Aircraft Safety Code and any additional rules specific to a flying site/location.

3. OPERATIONS – REQUIREMENTS – LIMITATIONS:

- a) *FPV novice pilots* undergoing training at low altitude must use a buddy-box system with an *FPV spotter*, or must go to a safer altitude if no buddy-box system is used.
- b) All *FPV* flights require an AMA *FPV pilot* to have an AMA *FPV spotter* next to him/her maintaining *VLOS* with the *FPV aircraft* throughout its flight.
- c) The *FPV pilot* must brief the *FPV spotter* on the *FPV spotter’s* duties, communications and hand-over control procedures before *FPV flight*.
- d) The AMA *FPV spotter* must communicate with the *FPV pilot* to ensure the *FPV aircraft* remains within *VLOS*, warning the *FPV pilot* of approaching aircraft, and when avoidance techniques are necessary.
- e) During an *FPV* flight, the *FPV spotter* must be prepared to acquire the transmitter/control from the *FPV pilot* and assume *VLOS* control of the model aircraft at any time safe operation of the flight is in question.
- f) If an *FPV pilot* experiences a safety issue that does not appear to be a brief glitch, they must abandon *FPV* mode and fly *VLOS*.
- g) Before the initial *FPV* flight of an *FPV model aircraft* and/or after any changes or repairs to essential flight systems, the *FPV model aircraft* must have an *R/C test flight* by conventional *VLOS*.
- h) *FPV model aircraft* must use frequencies approved by the FCC for both the RC system and the wireless video system. Pilots must meet applicable FCC licensing requirements if they choose to operate the RC flight control system or the wireless video system on Amateur Band frequencies.
- i) AMA *FPV pilots* must first be capable of flying their *FPV* model aircraft manually before utilizing *FPV* flight.

4. RANGE – ALTITUDE – WEIGHT – SPEED:

a) One of the requirements in Federal Law (Public Law 112-95 Sec 336 (c) (2) February 14, 2012) for model aircraft to be excluded from FAA regulations is that model aircraft must be flown within VLOS of the operator.

b) Model aircraft flown using *FPV* must remain at or below 400 feet AGL when within 3 miles of an airport as specified in the AMA Safety Code.

c) Model aircraft flown *FPV* are limited to a weight (including fuel, batteries, and onboard *FPV* equipment) of 15lbs. and a speed of 70mph.

5. RECOMMENDATIONS & INFORMATION:

a) AMA *FPV novice pilots* should consider using a cockpit view flight simulator to become accustomed to *FPV* flight.

b) AMA *FPV pilots* should consider using a programmable *autopilot* (AMA Document #560) with a failsafe “return to launch” (RTL) feature that will maintain control of the aircraft in the event of signal loss.

c) When purchasing *FPV* operational systems, always try to select quality equipment, verify its compatibility, install components for interference rejection, and determine that signal range is adequate for maximum VLOS range.

6. PRIVACY PROTECTION SAFEGUARDS:

The use of imaging technology for aerial surveillance with radio control model aircraft having the capability of obtaining high-resolution photographs and/or video, or using any types of sensors, for the collection, retention, or dissemination of surveillance data information on individuals, homes, businesses, or property at locations where there is a reasonable expectation of privacy is strictly prohibited by the AMA unless written expressed permission is obtained from the individual property owners or managers.

7. DEFINITIONS OF TERMS:

AMA *FPV Pilot* is an AMA member who is capable of maintaining stable flight of a model aircraft within its intended flight envelope when flown *FPV* without losing control or having a collision.

Buddy-Box System is a system that has one transmitter operating as the master controller, while a second transmitter is linked/slaved to it allowing dual control of an aircraft. The operator of the master transmitter allows one or the other transmitter to control

the aircraft through the use of a spring-loaded switch. The switch provides instantaneous

transfer of control from one transmitter to the other. The buddy-box system is an efficient

and effective means of achieving a position transfer of control from one pilot to another.

Although this system is commonly used for training novice fliers, it is also useful in situations where an experienced pilot may have an increased likelihood of needing a second pilot's assistance in maintaining control of the aircraft. The use of the buddy-box

may be helpful in assisting pilots with physical limitations, flying in congested environments, during times of reduced visibility, or anytime during FPV when a timely transfer of control may be beneficial.

Essential Flight Systems are any systems or components necessary to maintain stable flight within a model aircraft's flight envelope. (This includes primary radio control systems and any stabilization or gyros required to maintain stability and heading in certain types of model aircraft that would be uncontrollable/unstable without their use).

First Person View (FPV) refers to the operation of a radio controlled (R/C) model aircraft using an onboard camera's cockpit view to orient and control the aircraft.

Flight Envelope is defined as the range of airspeeds, attitudes, and flight maneuvers which a model aircraft can safely perform/operate for its intended use.

FPV Aircraft is an RC model aircraft equipped with a video transmitter to send realtime video images from an onboard camera to a ground based receiver for display on a pilot's video monitor/goggles. (*FPV model aircraft* types include: Fixed Wing, Rotary Wing, and Multi-Rotor Platforms).

FPV Novice Pilot is an AMA member learning to fly *FPV* utilizing a buddy-box system with an experienced AMA *RC pilot* operating the master transmitter and serving as the *FPV spotter*.

FPV Spotter is an experienced AMA *RC pilot* who has been briefed by the *FPV pilot* on the tasks, responsibilities and procedures involved in being a spotter; is capable and mature enough to perform the duties and is able to assume conventional *VLOS* control of the aircraft.

Non-Essential Flight Systems are any systems or components that are not necessary to maintain stable flight within the model aircraft's *flight envelope*. (This includes *autopilot* or *stabilization systems* that can be activated and deactivated in flight by the pilot without affecting stable flight).

R/C Test Flight requires an *AMA Pilot* to manually operate an R/C transmitter to control a model aircraft's flight path and determine if the aircraft is capable of maintaining stable flight within its *flight envelope*.

Visual Line Of Sight (VLOS) is the distance at which the pilot is able to maintain visual contact with the aircraft and determine its orientation without enhancements other than corrective lenses.