

Senate Judiciary Committee Testimony on SB 71

March 20, 2013

Chair Prozanski, members of the committee . . .

Thank you for the opportunity to testify before you today.

My name is **Rick Dunn**
300 N. 8th St. Aumsville Oregon

Member of Salem R/C Pilots Association

30 years building and flying R/C Airplanes
12 years - US Scale Masters competitor

Past President, Secretary and Webmaster – Fly-A-Ways R/C Club
Former US Scale Masters Regional Advisor
Co-Founder and former Vice Director – Northwest Scale Aero-Modellers

I neither support nor oppose the legislative measure; I am here seeking explicit exception language for Model Aircraft in this legislation.

I am concerned the proposed legislation could inadvertently harm the activities of Model Aircraft enthusiasts if the legislation passes in its current form.

There will be others who will testify here today or that have submitted testimony that will attempt to link their use of a remote control aircraft or drones to the definition of a Model Aircraft. I refer you to Public Law 112-95 Section 336c Item 3 which clearly states that a Model Aircraft is flown **“flown for hobby or recreational purposes”**. This one item on its own clearly delineates us from all others and leaves no doubt as to where the line is drawn. Anything that falls outside of **“flown for hobby or recreational purposes”** is not a Model Aircraft and can not be considered a Model Aircraft and clearly separates us from any and every definition of a drone or commercially flown remote control aircraft. I submit to this committee that any Remote Control aircraft which is flown for any other purpose other than what is specified in P.L. 112-95 can not be a considered a Model Aircraft.

This is why we (the model aircraft community) are seeking clear “exception” language for Model Aircraft so it leaves no doubt in anyone’s mind that Model Aircraft can not be linked to other aerial vehicles in any way.

Building and flying Model Aircraft is a community based activity that is enjoyed by almost 2000 Academy of Model Aeronautics members in Oregon and little over 150,000 nationwide.

This activity is governed by club rules, bylaws and a safety code; Academy of Model Aeronautics (AMA) rules, bylaws and safety code and Federal Aviation Administration (FAA) laws and oversight.

Nationwide in 2012; 2,500 AMA sanctioned Model Aircraft events plus approximately 750 unsanctioned events totaling 3,250 Model Aircraft events were held.

2012 in Oregon, we had 74 AMA sanctioned events and approximately 22 unsanctioned events for a total of 96 Model Aircraft events. These events drive economic opportunity in the cities, towns and communities in which they are held through fuel, food, lodging and other miscellaneous purchases.

For years, model aviation has been the catalyst that has energized young people to pursue careers in the sciences, aviation and aerospace. One example is the support of the Salem R/C Pilots Associations involvement in the Experimental Aircraft Association's (EAA) Young Eagles Program. We partner with local EAA Chapter 292 in Independence, Oregon to introduce young people to all aspects of aviation. Chapter 292 provides young people with their first flight in a full scale airplane. Our club gives each young person a model flying lesson and shows them how they can continue their interest in aviation through model aviation.

In the 77 year existence of the Academy of Model Aeronautics, the list is long of both male and female members that have gone on to accomplished careers as military pilots, airline pilots and aviation and aerospace engineers and even astronauts. All influenced by flying models as kids. Most notably are astronaut and first man on moon, Neil Armstrong, aviation and aerospace engineer, Burt Rutan who designed Voyager, the first airplane to fly non-stop around the world and SpaceShipOne, which completed the first manned private spaceflight in 2004. And, our own AMA Ambassador and five time space shuttle Commander and pilot, Robert "Hoot" Gibson. Hoot will be inducted into the National Aviation Hall of Fame this fall.

For some building and flying model aircraft is the closest they will get to fly a full scale aircraft due to health, economics or other circumstances. For others, they use this venue to pay tribute and remember their service to our country while supporting or flying military aircraft.

Another aspect of Model Aviation is building and flying Model Aircraft that are replicas of the full scale aircraft they represent. These aircraft are shown in various venues which give everyone a chance to see unique and often rare aircraft examples up close and flying which may only be available in pictures, artist renditions or static museum displays. Everything from the Wright Brothers "Wright Flyer" to the exotic B2 Bomber are modeled and flown; we are not only preserving history we are "**Keeping History Alive**" through our hobby and our passion for Model Aviation.

This activity also allows families to spend quality time together, fathers and sons, fathers and daughters, mothers and daughters or sons and entire families. They explore and share

their joint love of aviation and instill good old fashion pride and discipline while doing something meaningful together. How many other activities are still available that provide this opportunity in our fast paced electronically dominated lives?

Building and flying model aircraft is more than just playing with toys, it is a tangible way of sharing your love of aviation with others and doing it in a safe and managed environment while passing your passion along to future generations.

I would be happy to answer any questions you may have... Thank you for listening.

PUBLIC LAW 112-95 — FEB. 14, 2012
SEC. 336. SPECIAL RULE FOR MODEL AIRCRAFT
Section C

MODEL AIRCRAFT DEFINED — In this section, the term “model aircraft” means an unmanned aircraft that is—

- (1) capable of sustained flight in the atmosphere;
- (2) flown within visual line of sight of the person operating the aircraft; and
- (3) flown for hobby or recreational purposes.

Monday, March 11, 2013

Senate Committee on Judiciary

- Sen. Floyd Prozanski, Chair
- Sen. Betsy Close, Vice Chair
- Sen. Jackie Dingfelder
- Sen. Jeff Kruse
- Sen. Arnie Roblan

Re: SB 71 Exemption for Model Aircraft

Dear Sen. Prozanski, Members of the Committee;

Thank you for taking the time to consider our concern. We are a coalition of radio control aircraft enthusiasts representing Willamette Valley model aircraft clubs Oregon. We have come together to discuss potential – and we believe unintended - negative impacts of SB 71-4.

While we understand and respect the general intent of the bill, it could as written result in the loss of radio control aircraft flying sites across the state and create other unnecessary negative impacts to the practice of model aviation. We believe this unintended consequence – and the resulting economic and social disruption – could easily be eliminated by exempting model aircraft from the bill.

We therefore respectfully submit the following amendment for consideration. The amendment would define model aircraft in the same way that the Federal Aviation Administration defined them in the “FAA Modernization and Reform Act of 2012”. By defining model aircraft in this way, they are essentially exempted from statute, and state law remains consistent with federal law. We urge you to consider this amendment.

SECTION 1. As used in sections 1 to 7 of this 2013 Act:

(1) ‘Drone’ means an unmanned flying machine that is not a model aircraft.

(2) ‘Public body’ has the meaning given that term in ORS 174.109.

(3) Model aircraft” means an unmanned aircraft that is:

(a) capable of sustained flight in the atmosphere;

(b) flown within visual line of sight of the person operating the aircraft; and

(c) flown for hobby or recreational purposes.

We have attached a copy of the language from the FAA Modernization and Reform Act of 2012 for your review (Attachment A).

Oregon has a vibrant and growing model aircraft community. Our state hosts numerous contests including the West Coast Freestyle Championships featuring 30% scale model aircraft drawing contestants from across the US. I’ve participated in this hobby since I was 13. My son has built and flown model aircraft since age 8 and is now an aircraft technician working on F-15s. This is

an exciting, family-friendly, highly education and fascinating hobby. We need your help to protect its viability into the future.

We would be happy to answer any questions you may have. You can reach me at (503) 930-6727 at any time for additional questions. We can also bring in the expertise of the government affairs representative from the Academy of Model Aeronautics, the national organization to which we all belong, who helped develop the appropriate language used by the FAA.

Sincerely

Randy Henry, Mt. Silverwood RC Club
Gregg Marshall, Sky Nights Radio Control Club
John Stroup, Salem R/C Pilots Association
Van Moore , Salem R/C Pilots Association
Michael Cohen, Eugene Radio Control Aeronauts
Bill Fisher Jr., Salem R/C Pilots Association

Attachment A:

FAA Modernization and Reform Act of 2012, SEC. 336. SPECIAL RULE FOR MODEL AIRCRAFT.

(a) *In General.*--Notwithstanding any other provision of law relating to the incorporation of unmanned aircraft systems into Federal Aviation Administration plans and policies, including this subtitle, the Administrator of the Federal Aviation Administration may not promulgate any rule or regulation regarding a model aircraft, or an aircraft being developed as a model aircraft, if--

- (1) the aircraft is flown strictly for hobby or recreational use;
- (2) the aircraft is operated in accordance with a community-based set of safety guidelines and within the programming of a nationwide community-based organization;
- (3) the aircraft is limited to not more than 55 pounds unless otherwise certified through a design, construction, inspection, flight test, and operational safety program administered by a community-based organization;
- (4) the aircraft is operated in a manner that does not interfere with and gives way to any manned aircraft; and
- (5) when flown within 5 miles of an airport, the operator of the aircraft provides the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport) with prior notice of the operation (model aircraft operators flying from a permanent location within 5 miles of an airport should establish a mutually-agreed upon operating procedure with the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport)).

(b) *Statutory Construction.*--Nothing in this section shall be construed to limit the authority of the Administrator to pursue enforcement action against persons operating model aircraft who endanger the safety of the national airspace system.

(c) *Model Aircraft Defined.*--In this section, the term "model aircraft" means an unmanned aircraft that is--

- (1) capable of sustained flight in the atmosphere;
- (2) flown within visual line of sight of the person operating the aircraft; and
- (3) flown for hobby or recreational purposes.

My name is Mike Mosbrooker and I am a vice president of the Academy of Model Aeronautics (AMA), a national non profit organization of 150,000 members interested in the sport of model aviation. In addition to being a member of the 15 person executive council, I have cognizance of modeling activity in Washington, Oregon, Idaho, Montana and Alaska. The Academy of Model Aeronautics provides insurance to members, clubs and site owners, assistance with flying sites, disaster relief, flying site improvement grants, scholarships and the exchange of information through several publications and other means of communication. The Academy provides interface with federal government agencies such as the FCC and FAA as well as the Congress and Senate. The AMA also sanctions and conducts contests and events from the local level up to and including international events. The AMA has a safety program that all members agree to comply with and that has resulted in an excellent safety record for the past 75 years.

Our objective is to have you exclude recreational model aircraft from pending drone or UAS legislation. Recreational model aircraft flyers that follow the AMA safety code are precluded from flying over people and structures and from the use of imaging technology for aerial surveillance with radio controlled 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 unless written expressed permission is obtained from the individuals, property owners or managers. We try to make it clear that operating a radio controlled model aircraft in a manner that does not follow the AMA safety code puts the owner and pilot at the mercy of FAA and local government statutes and regulations.

I understand the concern about unmanned surveillance and privacy rights, and I appreciate your effort in initiating legislation to protect our citizens. I know it is a complicated issue, but in finalizing the proposed legislation, I would also ask that you would strongly consider the rights of those who enjoy the model aircraft hobby. It is our suggestion that when defining a drone or UAS that may serve many commercial and civic interests, you modify the definition to include the following:

- (1) 'Drone' means an unmanned flying machine that is not a model aircraft.**
- (2) 'Public body' has the meaning given that term in ORS 174.109.**
- (3) Model aircraft'' means an unmanned aircraft that is:**
 - (a) capable of sustained flight in the atmosphere;**
 - (b) flown within visual line of sight of the person operating the aircraft; and**
 - (c) flown for hobby or recreational (non-commercial) purposes.**

While model aviation is a recreational sport enjoyed by several thousand people in your state, it also has been the entry portal for many aerospace engineers, technicians, pilots and astronauts. Please let this continue.

Mike Mosbrooker
VP AMA District XI
533 Birch St.
Oak Harbor, WA 98277



Federal Aviation
Administration

Fact Sheet – Unmanned Aircraft Systems (UAS)

For Immediate Release

February 19, 2013

Contact: Les Dorr or Alison Duquette

Phone: (202) 267-3883

Unmanned Aircraft Systems (UAS) come in a variety of shapes and sizes and serve diverse purposes. They may have a wingspan as large as a Boeing 737 or smaller than a radio-controlled model airplane. Regardless of size, the responsibility to fly safely applies equally to manned and unmanned aircraft operations.

Because they are inherently different from manned aircraft, introducing UAS into the nation's airspace is challenging for both the FAA and aviation community. UAS must be integrated into a National Airspace System (NAS) that is evolving from ground-based navigation aids to a GPS-based system in NextGen. Safe integration of UAS involves gaining a better understanding of operational issues, such as training requirements, operational specifications and technology considerations.

The FAA's Role: Safety

Safety is the FAA's top mission, and the agency maintains the world's safest aviation system. As a provider of air traffic control services, the FAA also must ensure the safety and efficiency of the nation's entire airspace.

The FAA first authorized use of unmanned aircraft in the NAS in 1990. Since then, the agency has authorized limited use of UAS for important missions in the public interest, such as firefighting, disaster relief, search and rescue, law enforcement, border patrol, military training and testing and evaluation. Today, UAS perform border and port surveillance by the Department of Homeland Security, help with scientific research and environmental monitoring by NASA and NOAA, support public safety by law enforcement agencies, help state universities conduct research, and support various other missions for public (government) entities.

Unmanned aircraft are flying now in the national airspace system under very controlled conditions. Operations potentially range from ground level to above 50,000 feet, depending on the specific type of aircraft. However, UAS operations are currently not authorized in Class B airspace, which exists over major urban areas and contains the highest density of manned aircraft in the National Airspace System.

There are currently two ways to get FAA approval to operate a UAS. The first is to obtain an experimental airworthiness certificate for private sector (civil) aircraft to do research and development, training and flight demonstrations. The second is to obtain a Certificate of Waiver or Authorization (COA) for public aircraft. Routine operation of UAS over densely-populated areas is prohibited.

Civil UAS

Obtaining an experimental airworthiness certificate for a particular UAS is currently the only way civil operators of unmanned aircraft are accessing the NAS. Experimental certificate regulations preclude carrying people or property for compensation or hire, but do allow operations for research and development, flight and sales demonstrations and crew training. The FAA is working with civilian operators to collect technical and operational data that will help refine the UAS airworthiness certification process. The agency is currently developing a future path for safe integration of civil UAS into the NAS as part of NextGen implementation.

Public UAS

COAs are available to public entities that want to fly a UAS in civil airspace. Common uses today include law enforcement, firefighting, border patrol, disaster relief, search and rescue, military training, and other government operational missions.

Applicants make their request through an online process and the FAA evaluates the proposed operation to see if it can be conducted safely.

The COA allows an operator to use a defined block of airspace and includes special provisions unique to the proposed operation. For instance, a COA may require flying only under Visual Flight Rules (VFR) and/or only during daylight hours. COAs usually are issued for a specific period—up to two years in many cases.

Most COAs require coordination with an appropriate air traffic control facility and may require a transponder on the UAS to operate in certain types of airspace.

Because UAS technology cannot currently comply with “see and avoid” rules that apply to all aircraft, a visual observer or an accompanying “chase plane” must maintain visual contact with the UAS and serve as its “eyes” when operating outside airspace restricted from other users.

COAs Issued:

2009	146
2010	298
2011	313
2012	257

There were 327 COAs active as of February 15, 2013.

Streamlining the Process

The FAA has been working with its government partners to streamline COA procedures. In 2009, the FAA, NASA and the Departments of Defense and Homeland Security formed a UAS Executive Committee, or “ExCom” to address UAS integration issues. The ExCom established a working group that developed suggestions to expedite the COA process and increase transparency.

For new applications from public users, the FAA has an on-line process that ensures paperwork is complete and ready to be assessed. Today, the average time to issue an authorization for non-emergency operations is less than 60 days, and the renewal period is two years. The agency has expedited procedures in place to grant one-time COAs for time-sensitive emergency missions, such as disaster relief and humanitarian efforts.

Model Aircraft

Recreational use of airspace by model aircraft is covered by FAA Advisory Circular 91-57, which generally limits operations to below 400 feet above ground level and away from airports and air traffic. In

2007, the FAA clarified that AC 91-57 only applies to modelers, and specifically excludes individuals or companies flying model aircraft for business purposes.

The FAA guidance is available at: http://www.faa.gov/documentLibrary/media/Advisory_Circular/91-57.pdf

Operation and Certification Standards

Integrating UAS into the nation's airspace presents both opportunities and challenges. However, everything the FAA does is focused on ensuring the safety of the nation's aviation system. New policies, procedures and approval processes will address the increasing desire by civilian operators to fly UAS in the NAS. Developing and implementing new UAS standards and guidance is a long-term effort.

The FAA chartered a UAS Aviation Rulemaking Committee in 2011 to develop inputs and recommendations on appropriate operational procedures, regulatory standards and policies before allowing routine UAS access to the nation's airspace.

The FAA has asked RTCA – organized in 1935 as the Radio Technical Commission for Aeronautics, a group that facilitates expert advice to the agency on technical issues – to work with industry to assist in the development of UAS standards. RTCA's technical group will address how UAS will handle communication, command and control and how they will "sense and avoid" other aircraft.

The FAA continues to work closely with its international aviation counterparts to harmonize standards, policies, procedures and regulatory requirements.

UAS Test Sites

In the FAA Modernization and Reform Act of 2012, Congress directed the FAA to establish a program to integrate UAS into the national airspace system at six test ranges. The designation and operation of test sites will be a tool for testing all aspects of UAS integration. Some facets of test site selection and operation include:

- Safe designation of airspace for integrated manned and unmanned flight operations in the national airspace system

- Development of certification standards and air traffic requirements for unmanned flight operations

- Coordinating with and leveraging the resources of NASA and the Department of Defense

- Addressing both civil and public unmanned aircraft systems

- Ensuring that the program is coordinated with the Next Generation Air Transportation System

- Ensuring the safety of unmanned aircraft systems and related navigation procedures before they are integrated into the national airspace system

The FAA issued a Screening Information Request on February 14, 2013 for proposals to manage these sites. You can read the press release here: (http://www.faa.gov/news/press_releases/news_story.cfm?newsId=14313)

http://www.faa.gov/news/press_releases/news_story.cfm?newsId=14313

(http://www.faa.gov/news/press_releases/news_story.cfm?newsId=14313)

Small Unmanned Aircraft

Small unmanned aircraft (sUAS) are likely to grow most quickly in civil and commercial operations because of their versatility and relatively low initial cost and operating expenses. The FAA is working on a proposed rule governing the use of a wide range of small civil unmanned aircraft systems.

The 2012 reauthorization bill also directed the FAA to “allow a government public safety agency to operate unmanned aircraft weighing 4.4 pounds or less” under certain restrictions. The bill specified these UAS must be flown within the line of sight of the operator, less than 400 feet above the ground, during daylight conditions, inside Class G (uncontrolled) airspace and more than five miles from any airport or other location with aviation activities.

Prior to the congressional action, the FAA and the Justice Department had been working on an agreement to streamline the COA process for law enforcement – an agreement that also meets the mandate. Initially, law enforcement organizations will receive a COA for training and performance evaluation. When the organization has shown proficiency in flying its UAS, it will receive an operational COA. The agreement expands the allowable UAS weight up to 25 pounds.

A New Office for New Technology

In 2012, the FAA established the Unmanned Aircraft Systems Integration Office to provide a one-stop portal for civil and public use UAS in U.S. airspace. This office is developing a comprehensive plan to integrate and establish operational and certification requirements for UAS. It will also oversee and coordinate UAS research and development.

Over more than 50 years, the FAA has a proven track record of introducing new technology and aircraft safely into the NAS. The agency will successfully meet the challenges posed by UAS technology in a thoughtful, careful manner that ensures safety and addresses privacy issues while promoting economic growth.

For more information: <http://www.faa.gov/about/initiatives/uas/> (<http://www.faa.gov/about/initiatives/uas/>)

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This page can be viewed online at: http://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=14153

AC 91-57

DATE June 9, 1981

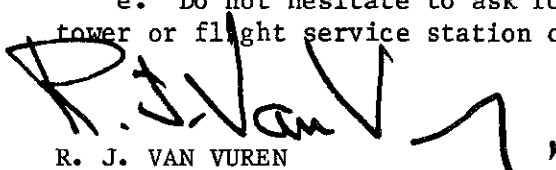
ADVISORY CIRCULAR



DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
Washington, D.C.

Subject: MODEL AIRCRAFT OPERATING STANDARDS

1. PURPOSE. This advisory circular outlines, and encourages voluntary compliance with, safety standards for model aircraft operators.
2. BACKGROUND. Modelers, generally, are concerned about safety and do exercise good judgement when flying model aircraft. However, model aircraft can at times pose a hazard to full-scale aircraft in flight and to persons and property on the surface. Compliance with the following standards will help reduce the potential for that hazard and create a good neighbor environment with affected communities and airspace users.
3. OPERATING STANDARDS.
 - a. Select an operating site that is of sufficient distance from populated areas. The selected site should be away from noise sensitive areas such as parks, schools, hospitals, churches, etc.
 - b. Do not operate model aircraft in the presence of spectators until the aircraft is successfully flight tested and proven airworthy.
 - c. Do not fly model aircraft higher than 400 feet above the surface. When flying aircraft within 3 miles of an airport, notify the airport operator, or when an air traffic facility is located at the airport, notify the control tower, or flight service station.
 - d. Give right of way to, and avoid flying in the proximity of, full-scale aircraft. Use observers to help if possible.
 - e. Do not hesitate to ask for assistance from any airport traffic control tower or flight service station concerning compliance with these standards.


R. J. VAN VUREN
Director, Air Traffic Service

Initiated by: AAT-220

- (ii) require a decision by the Administrator on approval or disapproval within 60 business days of the date of submission of the application; and
- (iii) allow for an expedited appeal if the application is disapproved;
- (B) allow for a one-time approval of similar operations carried out during a fixed period of time; and
- (C) allow a government public safety agency to operate unmanned aircraft weighing 4.4 pounds or less, if operated—
- (i) within the line of sight of the operator;
 - (ii) less than 400 feet above the ground;
 - (iii) during daylight conditions;
 - (iv) within Class G airspace; and
 - (v) outside of 5 statute miles from any airport, heliport, seaplane base, spaceport, or other location with aviation activities.

Deadline.

SEC. 335. SAFETY STUDIES.

The Administrator of the Federal Aviation Administration shall carry out all safety studies necessary to support the integration of unmanned aircraft systems into the national airspace system.

49 USC 40101
note.**SEC. 336. SPECIAL RULE FOR MODEL AIRCRAFT.**

(a) **IN GENERAL.**—Notwithstanding any other provision of law relating to the incorporation of unmanned aircraft systems into Federal Aviation Administration plans and policies, including this subtitle, the Administrator of the Federal Aviation Administration may not promulgate any rule or regulation regarding a model aircraft, or an aircraft being developed as a model aircraft, if—

49 USC 40101
note.

- (1) the aircraft is flown strictly for hobby or recreational use;
- (2) the aircraft is operated in accordance with a community-based set of safety guidelines and within the programming of a nationwide community-based organization;
- (3) the aircraft is limited to not more than 55 pounds unless otherwise certified through a design, construction, inspection, flight test, and operational safety program administered by a community-based organization;
- (4) the aircraft is operated in a manner that does not interfere with and gives way to any manned aircraft; and
- (5) when flown within 5 miles of an airport, the operator of the aircraft provides the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport) with prior notice of the operation (model aircraft operators flying from a permanent location within 5 miles of an airport should establish a mutually-agreed upon operating procedure with the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport)).

(b) **STATUTORY CONSTRUCTION.**—Nothing in this section shall be construed to limit the authority of the Administrator to pursue enforcement action against persons operating model aircraft who endanger the safety of the national airspace system.

(c) **MODEL AIRCRAFT DEFINED.**—In this section, the term “model aircraft” means an unmanned aircraft that is—

- (1) capable of sustained flight in the atmosphere;

- (2) flown within visual line of sight of the person operating the aircraft; and
- (3) flown for hobby or recreational purposes.

Subtitle C—Safety and Protections

SEC. 341. AVIATION SAFETY WHISTLEBLOWER INVESTIGATION OFFICE.

Section 106 (as amended by this Act) is further amended by adding at the end the following:

“(t) AVIATION SAFETY WHISTLEBLOWER INVESTIGATION OFFICE.—

“(1) ESTABLISHMENT.—There is established in the Federal Aviation Administration (in this subsection referred to as the ‘Agency’) an Aviation Safety Whistleblower Investigation Office (in this subsection referred to as the ‘Office’).

“(2) DIRECTOR.—

“(A) APPOINTMENT.—The head of the Office shall be the Director, who shall be appointed by the Secretary of Transportation.

“(B) QUALIFICATIONS.—The Director shall have a demonstrated ability in investigations and knowledge of or experience in aviation.

“(C) TERM.—The Director shall be appointed for a term of 5 years.

“(D) VACANCIES.—Any individual appointed to fill a vacancy in the position of the Director occurring before the expiration of the term for which the individual’s predecessor was appointed shall be appointed for the remainder of that term.

“(3) COMPLAINTS AND INVESTIGATIONS.—

“(A) AUTHORITY OF DIRECTOR.—The Director shall—

“(i) receive complaints and information submitted by employees of persons holding certificates issued under title 14, Code of Federal Regulations (if the certificate holder does not have a similar in-house whistleblower or safety and regulatory noncompliance reporting process) and employees of the Agency concerning the possible existence of an activity relating to a violation of an order, a regulation, or any other provision of Federal law relating to aviation safety;

“(ii) assess complaints and information submitted under clause (i) and determine whether a substantial likelihood exists that a violation of an order, a regulation, or any other provision of Federal law relating to aviation safety has occurred; and

“(iii) based on findings of the assessment conducted under clause (ii), make recommendations to the Administrator of the Agency, in writing, regarding further investigation or corrective actions.

“(B) DISCLOSURE OF IDENTITIES.—The Director shall not disclose the identity of an individual who submits a complaint or information under subparagraph (A)(i) unless—

“(i) the individual consents to the disclosure in writing; or

Recommendations.

Academy of Model Aeronautics National Model Aircraft Safety Code

Effective January 1, 2011

- 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 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 man carrying aircraft.
 - (b) See and avoid all aircraft and a spotter must be used when appropriate. (AMA Document #540-D-See and Avoid Guidance.)
 - (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 Aircraft 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 which could adversely affect the pilot's ability to safely control the model.
 - (i) Not operate model aircraft carrying pyrotechnic devices which 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-Recommended Field Layout):
 - (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 operate within three (3) miles of any pre-existing flying site without a frequency-management agreement (AMA Documents #922-Testing for RF Interference; #923- Frequency Management Agreement)
 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 flight line.
 7. Under no circumstances may a pilot or other person touch a model aircraft in flight while it is still under power, except to divert it from striking an individual. This does not apply to model aircraft flown indoors.
 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.
 9. The pilot of a 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. **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.



Radio Controlled Model Aircraft Operation Utilizing "First Person View" Systems

1. DEFINITION OF TERMS:

Please refer to Page 3, 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) *AMA FPV novice pilots* must use a buddy-box system with an *FPV spotter* while learning to fly *FPV*.
- 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) The *FPV spotter* may at any time during an *FPV flight* acquire the transmitter from the *FPV pilot* and assume *VLOS* control of the model aircraft.
- f) If the *FPV pilot* experiences a problem due to a loss of video link, orientation, or is unable to safely fly, he/she must abandon *FPV* mode and fly *VLOS* or pass the RC transmitter to the *FPV spotter* to assume *VLOS* control of the model aircraft.
- 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.

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) An onboard camera equipped with a pan and tilt mount that is positioned by head tracking goggles, will improve the *FPV pilot's* situational awareness of airspace surrounding the *FPV aircraft* during flight, but does not replace the requirement for an *AMA FPV spotter*.
- d) 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.

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 real-time 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.