

I - Remote-ID Design & Performance Criteria Considerations

Standard Remote-ID and Limited Remote ID

1. No commercial or recreational operators would be exempt from the NPRM rule except those flying UAS/model-aircraft that are less than 0.55 lbs. or those without Remote-ID that were purchased or built before the enactment date of the rule, or any Amateur-built (more than 50% by hobbyist) model aircraft.
2. *No longer could you fly any new model aircraft at FAA permitted locations and altitudes in controlled and uncontrolled airspace that are not FRIA sites unless you're flying a more expensive Standard RID equipped model aircraft.
3. No model aircraft may qualify as Standard RID equipped aircraft unless it has an FAA compliant and functional broadcast system integrated into the aircraft and a compliant and functional network system integrated into the ground station control system. To qualify as Limited Remote-ID equipped aircraft it must have an FAA compliant and functional network system integrated into the ground station.
4. No provisions exist within the NPRM for Limited RID model aircraft to expand the factory set 400 ft. radius range to accommodate larger model aircraft. Unfortunately, a virtual dome shaped boundary progressively reduces the flight area as the model aircraft climbs in altitude which would make flying any fixed wing model aircraft over a few pounds totally unsafe.
5. *No provisions exist within the NPRM for using broadcast or network systems that are not required to be integrated into transmitters and receivers. If allowed, a simple mobile broadcast unit installed in the model aircraft could transmit location and ID data to satisfy Remote ID compliance and it could be moved from one aircraft to another reducing costs considerably. Granted that this non-integrated system would no longer provide automatic tamper-proof capability, but AMA clubs could ensure/enforce that the systems are wired into multi-pole power switches so both systems always broadcast or transmit message data when powered up. Operations of this type could be limited to only FRIA sites.

II - Remote-ID Purchasing or Building UAS/Model Aircraft Considerations:

1. No longer could you purchase a new model-aircraft without it being Standard RID or Limited RID equipped and required to have a Declaration of Compliance on file with the FAA.

2. No longer would you be able to purchase an R/C transmitter and/or receiver that didn't have an FAA compliant integrated RID or the capability of being integrated with an FAA compliant RID system.

3. No longer would entry level R/C radios be reasonable priced since new R/C radios must be integrated with RF-broadcast and/or network systems and likely GPS/Wi-Fi for limiting flight range to a 400 ft. radius from the operator.

4. No longer could you purchase an ARF model aircraft without installing a new R/C radio system that's integrated with Standard RID or Limited RID.

5. No longer could you build a kit that contains more than 50% but less than 100% of already fabricated parts without having to equip the model aircraft with either compliant Standard RID or Limited RID.

6. No longer could you build less than 50% of a model aircraft without incorporating FAA compliant Standard RID or Limited RID. Building/fabricating more than 50% will exempt requirement for RID.

No longer could you use any RC transmitters or receivers that were purchased prior to the enactment of the NPRM rule in any new model aircraft purchased after enactment of the rule.

III - Remote-ID UAS/Model-Aircraft Flying Considerations:

1. No longer could you fly a model aircraft without having Remote-ID except if Amateur-built (more than 50% by hobbyist) or manufactured/built before enactment of the NPRM rule.

2. No longer could you fly a newly purchased Remote-ID model airplane without owning a smartphone to transmit location and ID data via the internet to a USS data handler for a fee.

3. No longer would you be able to fly a newly purchased Remote-ID model aircraft unless you have internet connectivity or a Standard RID functioning broadcast system.

4. No longer could you fly in any Class G uncontrolled airspace unless at a FAA approved FRIA site or you fly a Standard RID aircraft in permitted locations.

5. No longer could you fly your model aircraft that were built prior to enactment of the NPRM rule at any locations other than an FAA approved FRIA sites.

6. No longer could you fly a new model aircraft beyond a 400 ft. radius from yourself unless you purchase a more expensive Standard RID aircraft or fly an Amateur-built or an aircraft built/mfg. before the NPRM rule was enacted.

7. No longer could you continue to fly after receiving a warning message to land as soon as practicable while flying a Standard RID aircraft that lost its broadcast capability or flying a Limited RID aircraft that lost its network connectivity.

IV - Remote-ID Youth Education Consideration:

1. There are no educational accommodations as Congress called for in Section 350 for recreational UAS/model-aircraft operated by an institution of higher education for educational purposes to continue to instruct and train new generations.

2. Model aviation holds a strong position in our nation's classrooms.

Model aviation is an effective tool for inspiring young people to explore careers in STEM-related fields. Building and flying model airplanes is a gateway to aviation for legions of aviators and engineers. It's a "hands-on" experiences for future generation of problem solvers and inventors.

3. In a time when our nation is experiencing a shortage of aviation professionals, we need to find ways to make flying model aircraft easy, not hinder the experience.

In order to fulfill future aviation roles, it is imperative to introduce newcomers to the exciting and engaging hobby of model aviation. We can accomplish this by making aeromodelling easily accessible to everyone without unnecessary restrictions.

4. The FAA's registration requirement and proposed Remote ID technology will hinder the ability of educators to share these experiences with their students.

The AMA currently has more than 50,000 members between the ages of 13 and 18 and more than 13,000 members under the age of 13. For these AMA Youth members and their families, the FAA's registration requirement and Remote ID technology could be a deal-breaker for continued participation in the hobby.

The high costs and time commitment associated with a registration effort on this scale is insurmountable for many. The price of aircraft is already a potential burden, and adding in costly Remote ID technology in the manufacturing process will only exacerbate this problem. Model aviation has been and should continue to be available to all children, regardless of their socioeconomic status.

5. Fixed flying sites are not the only viable solution.

Our students learn and fly not only at school facilities such as gyms and school grounds outdoors but also at community parks and at home. Many of our kids don't have cell phones and want to fly at locations that don't have Wi-Fi or mobile phone/data cellular service. The proposal would severely limit those options and require expensive and burdensome restrictions that would disallow the model aviation activities while having no significant impact on the overall safety of the National Airspace System.

Although it is helpful that the proposal includes an option to comply with Remote ID by flying at an approved fixed site, it is concerning that the proposal limits the number of approved sites and prohibits the establishment of new sites. The rule appears designed to phase out these sites over time, rather than treat them as a viable long-term option for complying with Remote ID. Please consider viewing fixed flying sites as part of a viable long-term solution to Remote ID, and to amend the rule to allow for the establishment of new sites in the future.

6. Remote ID makes sense for autonomous flight operations.

In the case of fully autonomous UAS that are equipped to fly via GPS coordinates and waypoints with no continuous, positive input via a pilot, it makes sense to have Remote ID requirements. However, a UAS that requires continuous, positive input from a pilot to maintain its flight within line-of-sight should be exempted from requiring Remote ID.

7. The flight envelope needs to be expanded.

Unfortunately, a 400-foot altitude limit is too small a space to accommodate all of the model aviation activities our students require. We need an easy way to accommodate flights outside of the proposed 400-foot bubble or our educational opportunities will suffer.

8. Model aviation has been and continues to be a safe activity.

Since 1936, AMA members have been safely flying model aircraft. Our safety record is overwhelmingly positive. We have safety standards in place that allow us to operate safely and without incidents in the National Airspace System. By operating within the safety guidelines the AMA provides for its members, the skies have been and continue to be safe for all aviation activities.

V - Remote-ID NPRM Rule Consideration:

1. Impose significant costs on the model aviation community and unnecessarily restrict existing, safe model aircraft operations.

2. Limits the number of approved sites and prohibits new sites. The rule is designed to phase out these sites rather than see them a viable long-term option for complying with remote ID.

3. FAA must create a pathway for remote ID compliance at AMA events and competitions, which may not take place at fixed flying sites. These events take place in defined locations for a short period of time, like an air show. For remote ID compliance purposes, they should be treated like fixed flying sites. I encourage the FAA to create a light process for event organizers to apply for waivers since many these events support local charities.

4. The rule must consider hobbyists who fly in rural areas with little or no internet connectivity. Rural locations are frequently the safest places to fly because they are away from people, other aircraft and structures. Solutions, such as the ability to comply from home or other WIFI-enabled locations.

5. The FAA should reconsider registering each aircraft, which will impose a cost and compliance burden on modelers. Individual registration may make sense, it is an unnecessary for model aircraft designed to fly within LOS. Many of us own dozens, if not hundreds, of aircraft some fly infrequently. The time and cost involved in registering each model individually would be substantial. Also, aircraft that are built by hand do not have serial numbers, which makes registration more difficult. Selling and trading model aircraft and having to reregister would involve other costs.

6. Model aviation is a precursor to careers in aviation and engineers jobs which the U.S. desperately needs to fill.

7. Model aviation supports a \$1 billion industry responsible for thousands of U.S. jobs. We cannot afford to further harm the hobby with overly burdensome requirements.

VI - Remote-ID Flying Site Considerations:

1. No longer could you fly at AMA club flying sites without the clubs applying for FAA approval as “FRIA” sites within 12 months from the effective rule date. FAA anticipates a 90% approval. Decisions by the FAA to approve, not approve, or terminate will be based on risk assessment of the location.

2. No more applications for flying sites will be considered by the FAA after the 12 month application period.

3. No requests for renewal of FRIA sites should be submitted later than 120 days prior to the 48 month expiration date, otherwise the FAA said they may deny the request even though club leases with property owners may not be renewable 120 days before FAA’s renewal expiration date.

4. No consideration will be given by the FAA for any AMA clubs that lose a FRIA flying site to acquire a new site. The FAA advises the members to seek membership in other AMA club FRIA sites.

5. No FRIA locations that the FAA intends to list on their website will indicate whether the AMA clubs have membership openings or flying is limited to certain types of model aircraft, yet they concluded that AMA FRIA sites could and would accommodate millions of additional hobbyist.

6. No understanding seems to exist by the FAA and its security partners that AMA flying sites provide the very best risk mitigation available in the world for the safe operation of model aircraft as a result of the club’s support system of safety officers, flight instructors, and all the

members who ensure for and enforce AMA's safety programming which accounts for AMA's 84 years of an exemplary safety record.

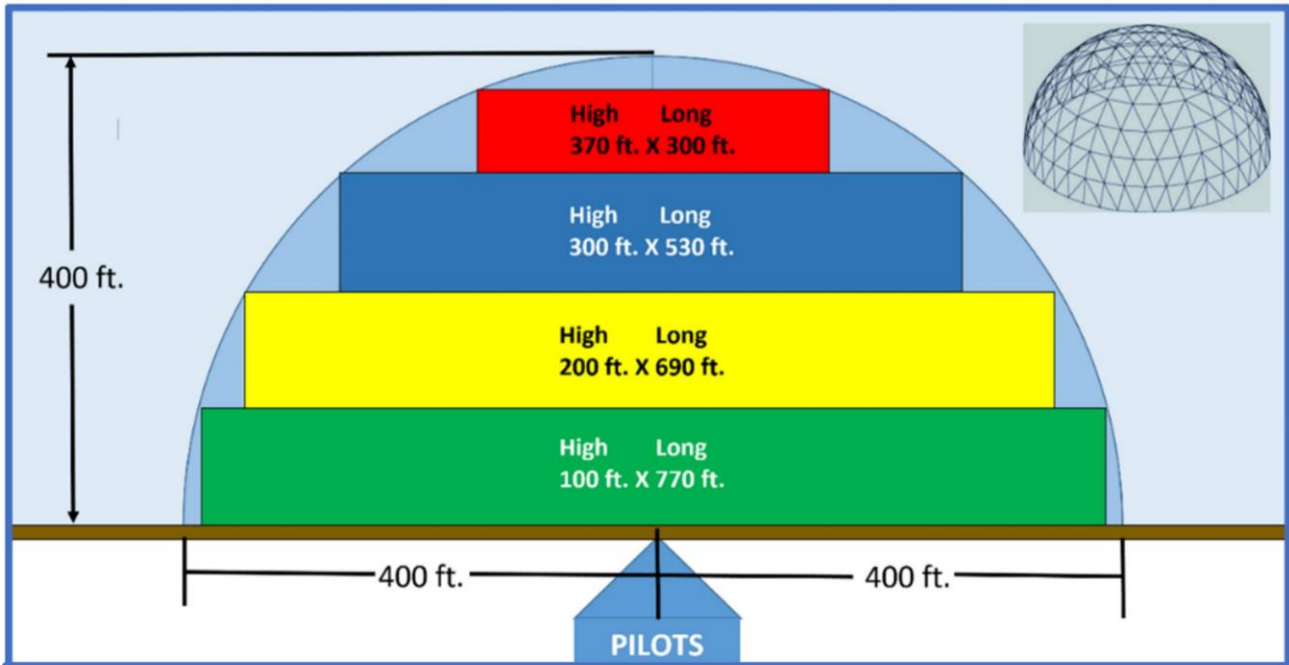
7. No consideration exists within the NPRM of the consequences of phasing-out AMA flying sites which would have little effect on multi-rotor drones capable of VTOL and hovering, but devastating results for 90% of AMA members who fly fixed-wing model aircraft that require a runway to take off and land.

8. No provisions are in the NPRM to alter geographic location and boundaries of FRIA sites in a timely manner to accommodate a farm owner or landowner who frequently relocates club site areas and boundaries when conducting farming or other land use operations.

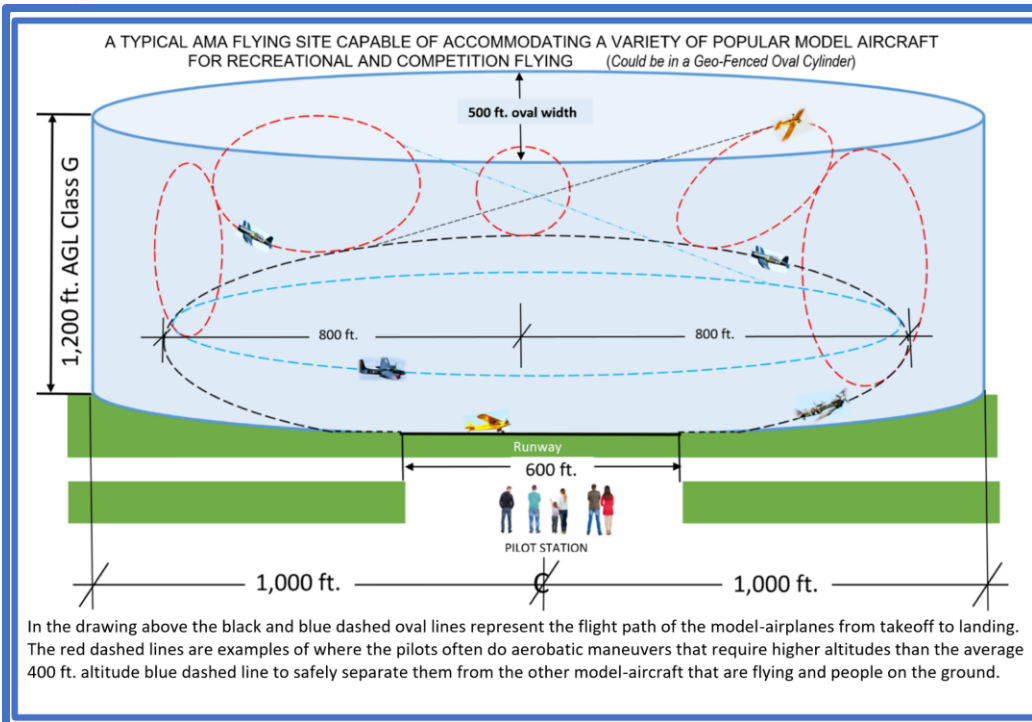
9. No longer could AMA members promote aviation and aeromodelling to engage and inspire young people's interests in STEM related programs and careers conducted at non-FRIA sites at schools, scout camps, public parks, ponds and temporary sites without an FAA recreational flying site waiver process.

10. FAA accepted the recommendation of the ARC that 400 feet is a reasonable distance for law enforcement to visually associate an unmanned aircraft with the location of its control station/pilot. According to the FAA this was the rationale for proposing the 400-foot radius limitation from the remote pilot when operating in the Limited ID UAS category.

Nearly all AMA flying sites have an entry road to a parking area with a separate pit area and flight stations for pilots. Any person, including law enforcement, can easily see the pilots and their model-aircraft at distances of 1,000 ft. or more because the models are always flown within VLOS of everyone at the flying site. Model-aircraft operated by AMA members in accordance with AMA's Safety Programming have been flying for many decades while maintaining an exemplary safety record at their flying sites.



As can be seen in the following drawing, a 400 ft. radius limit geo-fenced in area, by virtue of its dome shape, progressively reduces the flight box area to a length of only 300 ft. at an average flight altitude of 370 ft. This virtually constricted airspace poses a high risk for collisions with other model aircraft and a hazard to people on the ground. This flight area would only be safe for flying smaller *park* type model aircraft that weigh several pounds or less or hover type aircraft like helicopters and multi-rotor drones. For the average model aircraft it would not allow for a reasonably safe descent and glide path for landings and to prevent an unintended stall on takeoff nor would it allow for enough lateral distance at flight altitudes



The most commonly flown model aircrafts have 50"-72" wingspans and require a horizontal radius of 800 to 1,000 ft. from the pilot for safe uncongested flying as well as making safe landing approaches and takeoffs suitable for the model-aircrafts designed flight envelopes. The 400 ft. proposed altitude should be replaced by the FAA altitudes being granted to clubs in controlled airspace as a result of the recent process introduced by the FAA to do operational risk assessment (ORA) and mitigation at AMA flying sites in collaboration with the AMA. Club altitudes in uncontrolled airspace should also be decided through an ORA process

VII - Remote-ID Registration & Serial# Considerations:

1. No longer can you just register yourself with the FAA but every model aircraft you own will need to be individually registered with a different serial number with payment of FAA fees every 3 years.
2. The NPRM requirement to register all Recreational UAS (model) individually would impose significant costs burden on the recreational UAS model aviation community. It could deter compliance and reduce the effectiveness of remote ID.
3. Changing from a single registration number for all model aircraft to individual numbers for every UAS owned would be a major issue because AMA members on average own nine aircraft each and some members own hundreds. Many model aircraft are flown infrequently - perhaps only a few times in the lifetime of the aircraft. And when we do fly an aircraft, it is always within visual line of sight, making it easy to identify the pilot at all times.
4. Many hobbyist trade or sell aircraft often, so the requirement to register and deregister will become cumbersome. The current process would meet the FAA's stated intent by simply adding a requirement to the registration process that the owner provides a number of aircraft to be operated which is a much more accurate number of UAS that may operate in the US.
5. If the proposal to register UAS individually goes into effect as is, AMA's 180,000 members would be forced to register about 1.62 million aircraft at a cost of \$8.1 million, assuming the \$5 per aircraft registration fee does not increase over time. This is clearly a substantial investment of time and resources for our community, which has already faced challenges in recent years due to increasing regulations.
6. At a minimum, the requirement should be removed for members of a community-based organization like AMA who have operated safely in the airspace for more than eight decades and already register with their organization.
7. No longer could members apply their own serial numbers to inconspicuous locations on scale aircraft since the NPRM requires persons responsible for production to permanently affix the numbers to the aircraft. That might be fine for drones but airplane exterior polyester covering is often removed and recovered for repairs or for a new look so modelers would prefer affixing their own serial numbers.