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AMA CLUB #792

CLUB CALENDAR

Tuesday, March 26th — Club Meeting at 7pm at The OP on University Ave, Cedar Falls—

April 6th & 7th — River City RC Club Mall Show — noon to 4PM at the Southbridge Mall, Mason City, IA

Tuesday, April 23rd — Club Meeting at 7pm at The OP on University Ave, Cedar Falls — **Spring Field Day Planning**

Saturday, May 4th — Spring Field Day — 9AM until Noon — set up the flying field for the Summer

Tuesday, May 28th — Club Meeting at 7pm at the club flying field in New Hartford — Come for the cookout at 6pm

BLACK HAWK R/C PILOTS - MARCH 2024

From the President — The next club meeting will be on Tuesday, March 26th at The Other Place on University Ave in Cedar Falls. Dinner and socializing are at 6PM and the club meeting at 7PM.

Gate Code — Reminder, the new gate code is on the back of your 2024 membership card.

Prairie Burn — We burn off the prairie outfield area once every three years. We coordinate the burn with the New Hartford Fire Department and the Butler County Emergency Dispatch so we don't have any false alarms responding to the flying field. The native prairie grasses will come back quickly and, hopefully, we'll keep out invasive species like wild parsnip and quack grass. It also shows how much pocket gopher activity we've had in the prairie!

2024 Event Planning—We haven't decided on a plan for summer flying events. Stan Sweet and Dave Ramsey will do the Warbird Fly-In in August 2024. We're still looking for dates and people to run the other events.

When we host an AMA sanctioned event at our flying field, we can request an increase in the ceiling height to 1200 feet above ground level. That's only during the event and not on other days and times. We can also request a waiver from the Remote ID requirement for AMA sanctioned events held at other locations. Since the waiver is processed through the AMA, the waiver is only applicable to AMA members.

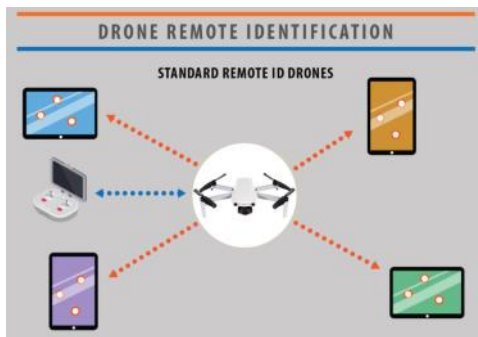
Remote ID rule — The FAA's Remote ID rule is now effective. Any radio controlled aircraft (airplane or drone) that weighs 250 grams or more and flown outside a FRIA zone is required to have an active Remote ID device. This rule does not apply at our flying field, since it's a registered FRIA zone.

Center of Gravity (CG) — How do you check the center of gravity on your aircraft? It's always shown on construction plans and usually listed in the directions. (How many of us read the direc-

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Club Meeting

The fall/winter club meetings are at 7PM at the **The Other Place at 4214 University Ave in Cedar Falls.** Come for dinner at 6PM.



tions?) Plans and instructions typically give a range for the CG and is a good starting point, but not necessarily the optimal CG location.

A tail-heavy airplane will be unstable to the point of being uncontrollable. As soon as it takes flight, it will rock its wings side-to-side and the nose will point sharply up. Excessive down elevator is necessary, if you can keep it flying long enough to trim the elevator. Landing speeds are slow, but tail-heavy airplanes seldom land where intended.

If the CG is too far forward, stability increases and the plane lands at a faster speed. A nose-heavy plane has to carry up-elevator trim to maintain lateral (horizontal) stability. This means that the stabilizer is “lifting” downward, and that creates excess drag. The wing must now develop more lift to maintain level flight, producing even more drag!

So, best practice is to start with the CG in the specified range and then work out the optimal location in the air. Fly your plane at half throttle, and adjust the elevator trim until it can maintain hands off level flight. Flying at an altitude of 100 to 150 feet, gently push the airplane into a 30-degree dive, and hold it until the air speed has noticeably increased. At this point, take your hand off the stick and observe what happens.

- ◆ If the plane pulls up sharply, it’s very nose-heavy.
- ◆ If it continues in the dive or pulls up slightly, the CG is about right.
- ◆ If it tries to tuck under or dive, it’s tail-heavy.

This happens because the increase in speed amplifies the trim corrections. If the model was carrying some up-trim to correct a nose-heavy condition, the increased dive speed makes the model pull up and vice versa.

Make a small adjustment in the CG, reset the trim and elevator to neutral, and make another flight to see how the model performs. If it flies normally—not climbing or diving with minor power changes—this is a good indicator that your CG is close to optimal. If there is still a lot of elevator up-trim or down-trim, then the CG still needs to be adjusted. A lot of elevator up-trim tells you that the CG is too far forward (nose-heavy); a lot of down trim indicates an aft CG (tail-heavy).

There are many advantages to having a correct CG location. The amount of elevator throw necessary for any maneuver will be minimal, and that means less drag and more speed. Your ability to perform acrobatic maneuvers will also increase.

That’s all for this month. I hope to see you at the club meeting on Tuesday.

Neal Leeper

President, Black Hawk R/C Pilots

