

Cedar Rapids Skyhawks
LOG BOOK

Established 1962 - AMA Charter 1007



crskyhawks.org

AUGUST, 2018



**Todd's new Spitfire
Photo by Todd Davis**



Officers:

President

Todd Davis295-7311
tjdavis510@gmail.com

Vice President

Gary Owen393-3768
glowen@fmtcs.com

Secretary

Randy Lepsch447-0422
rnsiowa@msn.com

Treasurer

Geoff Barrance373-0345
gbarrance@juno.com

Senior Advisor

Wendell Maakestad366-2650
wmaakestad@imonmail.com

Appointed:

Safety Coordinator/Publicity

Todd Davis295-7311
tjdavis510@gmail.com ..

Newsletter Editor

John Spargo393-0171
jspargo@spargoconsulting.com

Webmaster

Randy Lepsch447-0422
rnsiowa@msn.com

Field Coordinator

Jim Buttleman364-7333
tanyabear933@msn.com

<http://www.crskyhawks.org>

Upcoming Events.

Saturday and Sunday, August 18-19, 2018, Skyhawks Pattern Contest. (See details in the Logbook and on the web site)

Sunday, September 9, 2018, 7:00 PM, General Club Meeting at the Hiawatha Library.

The flight ain't over till you shut the engines down and walk away. Then you look back, and if she ain't bent and she ain't burnin', your flight is over.

~ A very old and experienced pilot

“The Skyhawks are a great partner and add a wonderful recreational element to our city.”

Daniel Gibbins, ISA

Parks Superintendent

Cedar Rapids Parks & Recreation Department

All club members must read and follow the safety rules. They are available on the website.

Reminder: You must have your current Skyhawks Membership Card to fly at the field.

Your current Skyhawks identification badge must be worn when you participate in a flying activity. If you are flying on a 72 MHz frequency or Ham band, you must use a frequency clip. Thanks.

Cover photographs needed for the Logbook

We would really appreciate people submitting photos for consideration for use as the Logbook cover. Cover photos need to be in portrait mode, and should be as high a resolution as possible, preferably 2000 by 3000 pixels or more. Furthermore, the top third of the photo should be sky or some other appropriate background so as not to interfere with the banner of the Logbook.

Skyhawks Meeting Minutes

August 5, 2018

Todd opened the meeting at 7:00 PM.

There were 6 members present for the meeting.

Geoff was unavailable to give the treasurer's report; we are currently at 72 paid up members for the 2018 season.

Old Business

The electric fly in event attracted 17 members. The fly-in had a lot of good flying and comradery.

The 2018 warbird event was another big success, look for an email from Todd giving us an overview of the event.

Next event is the pattern event August 18-19. Field will be closed to open flying.

New Business

Not much for new business, which is good, that means people are getting plenty of flying in and doing a good job of following field rules. For new members please take time to read through the field rules on the website. It is also good for everyone to read through once a year. It is all our responsibility to make sure everyone is flying safe. If you see someone not being safe with flying or in the pits make sure to let that person know in a polite way.

Jim is looking to upgrade to club trainer with a newer radio system. 2.4GHz would be preferred. Anyone with an extra radio that would be willing to donate to the club, contact Jim Buttleman.

Show and Tell

Randy brought an airplane stand for larger aircraft that he made. It is made from conduit and welded together. If he gets time he will try and make some for the field.

Meeting closed at 7:40PM

Skyhawks Secretary, Randy Lepsch

Randy's airplane stand



The Wind Beneath My Wings

By Mark Barnett

Have you ever wondered why some days are windy and some days calm? Why does the wind come from the northwest one day and the southeast the next? Why is it so windy in the spring time? How much cross wind is there really? Let's try to answer some of these questions.

Three loops of rising and descending air flow towards the poles at high altitudes. Over the mid latitudes including the US this air flow generally south-to-north. Over the tropical latitudes air tends to flow in a north-to-south direction. Because the earth rotates large loops of air circulation are greatly distorted by the Coriolis force. This makes the prevailing upper level winds over the US westerly.

Moisture content of an air mass depends on its temperature and affects its density. Variations in pressure, density, temperature and moisture content define air masses.

Wind is a part of weather and the major source of all variations in weather patterns is the sun and unequal heating of the earth's surface. As we move away from the equator the earth and air surrounding the earth gets less heat. Also cloud cover causes variation in the heating of the earth's surface. Warm air rises due to lower pressure since the molecules are farther apart and cold air descends since the molecules are closer together and relatively higher pressure. Areas of land change temperature far more rapidly than water and deserts change temperature more rapidly than forested areas. When rising air has cooled it descends and creates areas of high pressure near the ground level. These high pressure areas with cooler air move toward and into low pressure areas with warmer air which creates wind. Air from a high pressure system circulates clockwise and travels away from the center. This cooler air rushes to fill a low pressure system and rotation occurs in a counter clockwise direction around this low pressure area. This movement combined with the Coriolis force causes weather systems to move across the country in a west to east direction. Winds can be from northwest one day and the southeast the next due to the movement of these high and low pressure systems.

Surface wind is affected by local conditions; mountains, valleys, buildings, trees, etc. At 2000 feet above ground level wind tends to change in a clockwise direction 20 to 40 degrees from the direction at the surface.

Straight head winds right down the runway are not as problematic as a significant cross wind for full sized and model airplanes. There is increased lift and the relative air speed is increased with a head wind making takeoff and landing distances shorter. What about cross wind? How much is too much to fly safely? Full sized planes are rated for the amount of cross wind they can safely take off and land in. An F15 is rated for 30 knots of cross wind; a Cessna 172 is rated for 15 knots. In radio control flying it is simply a matter of feel or comfort level. A beginner or someone flying a new model will usually wait to fly until there is very little wind of any kind. A pattern flyer must practice in moderate cross wind in order to prepare for contests that invariably fall on days with cross winds. This cross wind component can be calculated if you know the wind speed and direction. There is a flight computer used by pilots to

“spin the winds“ for cross winds and course corrections. There are also web sites that calculate the cross wind for you. However, there is an easy way to calculate the cross wind without computers or web sites if you know the direction of your runway and the wind speed and heading. A 30 degree cross wind is multiplied by 0.5, a 45 degree cross wind is multiplied by 0.7, and a 60 degree cross wind is multiplied by 0.9 to get an approximate cross wind vector.

Cross wind angle	Multiply by
30	0.5
45	0.7
60	0.9

Example: Runway 36 (360 degrees) due north

Winds from the northeast at 045 degrees at 10 miles per hour multiplied by 0.7 gives a 7 mile per hour cross wind vector or approximately 10.3 feet per second.

In one pass with your pattern plane across the box that takes 10 seconds your aircraft will move 103 feet closer in or farther away from you depending on whether the cross wind is in or out (without correction). If you do a complex maneuver that takes 30 seconds like a Cuban 8 from the top with quarter rolls and half rolls reversed on the 45s the plane could move 309 feet laterally without correction on one pass (103 yards)! Now you can see why your airplane can fly over your head with a moderate cross wind in or fly way out too far with a steady cross wind out.

Table	miles per hour	feet per second
	1	1.5
	2	3
	3	4.5
	4	6
	5	7.3
	6	9
	7	10.3
	8	11.7
	9	13.2
	10	14.7
		5 yards per second!

Large cross wind vectors make landing an RC plane more challenging. Techniques for landing in these conditions include; holding a crab angle all the way down to the runway (this can be harder on landing gear), angling in or out on the runway to convert some of the cross wind vector to head wind vector, or tip the aileron into the wind and hold some opposite rudder to keep the plane lined up with the runway. This low wing into the wind keeps the plane moving sideways into the cross wind and the opposite rudder keeps the plane lined up.

Sporty cross winds can be challenging to fly in due to movement of the plane relative to the pilot's position on the ground. There is a need to practice in these conditions because on the day of the contest conditions are never perfect. Rudder corrections and a slight wing tip in or out can hold a plane at a good judging distance in a stout cross wind. Some turnarounds can be used to move the plane in or out depending on the cross wind such as a humpty bump with quarter rolls, or a top hat with $\frac{3}{4}$ roll up. It is important to be able to do these maneuvers in both directions to keep the plane at the best judging distance.

Luckily in District 5 the spring and early summer winds are highly variable due to high and low pressure systems passing through and provide ample opportunities to fly in either direction in plenty of sporty cross winds. Later in the summer the winds die down and this gives the bugs a chance to feed while you have a plane in the air and you can't swat them off. In September and October the winds pick up again and we can brush up on our cross wind flying techniques again.

Wind speed and direction can be obtained on line for local airports. I use an app called ForeFlight which is free for one month then costs \$80 per year. Other on line sources I use includes The Weather Channel for radar imaging, Intellicast, NOAA (National Oceanic and Atmospheric Administration) and Weather Underground.

Many times for me this information is gathered on the drive home from work. I look at wind indicators such as flags, windsocks, or banners. If the wind speed looks good and the clouds are above the 1000 foot tower on Tower Terrace Road then I can fly. Usually my batteries are charged and the plane is in the van and I can head directly to the field.

Iowa Pattern Championships

August 18 & 19 2018

Cedar Rapids, Iowa



Host and Sponsor Cedar Rapids Skyhawks AMA 919

Sanction #885.

**NSRCA Club class, Sportsman, Intermediate, Advanced and Masters (401-404)
FAI Silver**

Club class and Sportsman: up to 85 wingspan and no weight limit

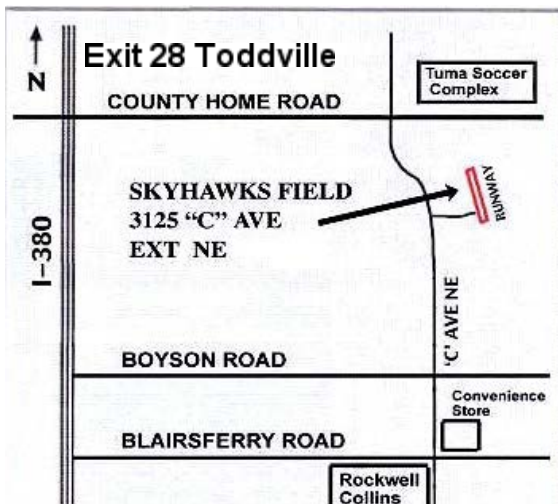
Club class is open to Local fliers competing in their first contest

Field open to practice Friday Afternoon

Pilot's Meeting 10 AM Saturday Lunch provided both days

Information and preregister Contact Mark Barnett 319-310-2783 email sharp11blade@gmail.com

Hotels	Days Inn & Suites 2215 Blairs Ferry Rd	319-378-3948
	Comfort Inn 2025 Werner Ave NE	319-378-8888
	Country Inn & Suites 4444 Czech Lane NE	319-294-8700
	Holiday Inn Express 1230 Collins Rd	319-294-9407



Cedar Rapids Skyhawks Instructors

We want you to have a positive experience learning to fly. The more successful you are starting out determines if you will enjoy the hobby. The most important first step is to find an instructor to help you get off to a good start. The best way to contact an instructor is to call and make an appointment. There is also an Instructor Availability Calendar on the Skyhawks Website.

Airplane Instructors

NAME	PHONE	EMAIL
Todd Davis	361-2513	tjdavis510@gmail.com
Wendell Maakestad	366-2650	wmaakestad@ImOnMail.com
Mark Barnett	310-2783	sharp11blade@gmail.com

Helicopter Instructors

NAME	PHONE	EMAIL
David Shema	398-0995	dkshema@mchsi.com

Cedar Rapids Skyhawks Radio Control Club

Membership Application

Date: _____ Date of Birth: _____

Name: _____ Spouse's Name: _____

Address: _____ City: _____ Zip: _____

Phone: (H) _____ (W) _____ Email Address: _____ AMA#: _____

Proficiency Level (Circle One): Student Pilot Instructor

Xmitter Frequencies Used: _____ / _____ / _____ / _____

Active (Circle all that apply): Power Glider Helicopter Other _____

How did you hear about our club? _____

Membership Fees

Family \$78.00	Open \$60.00	Senior Citizen (65 and up) \$42.00	Junior (up to 14) \$12.00	Senior (15 to 18) \$30.00	Associate \$20.00
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All fees paid after October 1st each year will pay for the balance of the current year as well as for the following year.

If you are unable to pay at a club meeting, send your renewal with PROOF OF AMA (Photocopy of your current AMA membership card) to: Cedar Rapids Skyhawks, 1590 17th Avenue, Marion, IA 52302. AMA MEMBERSHIP REQUIRED TO FLY MODEL AIRCRAFT. YOU MUST SHOW YOUR CURRENT AMA MEMBERSHIP CARD OR PROVIDE A PHOTOCOPY TO A CLUB OFFICER IN ORDER TO OBTAIN A CLUB MEMBERSHIP CARD. ASSOCIATE MEMBERS WHO DO NOT FLY ARE EXEMPT.

Cedar Rapids Skyhawks
1590 17th Avenue
Marion, IA 52302

Deadline for submissions is the Tuesday following the Board meeting or the fifteenth of the month, whichever is later.
 Consideration for exceptions will be made where the information was not available in time and is of wide interest.