

Charles River Radio Controllers

Flight Log

February, 2022



February Meeting:

Wednesday, February 16th, 7:45 PM

via Zoom / Online

(details via mailing list)

President's Message

Dear Members,

Whether they go on your feet or on your plane, it's the time of year for skis, so use 'em if you've got 'em. As I write this, the coming weekend looks relatively warm, so I'm hoping I get on the sticks for the first time in several weeks.



Last month, AMA District 1 held a Zoom meeting for club officers via Zoom, and 47 club officers from the district attended. I joined to represent CRRC. The meeting was headed up by VP Andy Argenio and AVP Daren Hudson. It cover topics including altitude limits under the upcoming FAA rules, the TRUST test, FRIA applications, and RemoteID. If you have any questions you'd like to bring to District 1, send them to me and I'll ask at the next District 1 officers' meeting.

Don't forget to join our next meeting via Zoom on February 16th at 7:45pm. Details will be shared on the groups.io mailing list.

Fly well,

- Mike Whidden, CRRC President



February Meeting - Online via Zoom

Our next general meeting is scheduled to be **online via Zoom** on **Wednesday, February 16th, at 7:45PM.**

We had hoped to mix in-person and virtual meetings this winter, but for the moment the Omicron variant seems likely to keep the next couple online. Stay safe and in touch via Zoom - reach out to the BoD if you need help connecting.

Club meetings are open to the public, we welcome visitors and guests to learn about model aviation and CRRC!

The information to join the Zoom meeting will be distributed via the Groups.io email list before the meeting.

Soliciting Newsletter Content

Do you have something to contribute? An article about a recent build or a flight with a new model, a picture from a day out flying (recent or remote), or a memory of a favorite club meeting or event would all be appreciated by readers. It just takes a bit of initiative for any of us to share something.

As an extra incentive, if content that you send in is used in the Newsletter this winter, you'll get a free entry in the next raffle held!

- Adam Smith, Newsletter Editor

3D Printing Airplanes!

Thanks to my son my love for airplanes of all scales and types has rekindled. I introduced him to R/C flying using HobbyZone Sports Cub S. The ability to get out of trouble without destroying the airplane made him feel successful and not be discouraged to try again. As he progressed, I realized I wanted to get more involved in this hobby. My son liked the idea of building a FliteTest Simple Storch foam plane (we are big fans of what FliteTest does!). The Simple Storch is a phenomenal plane and Sebastian continued his learning with this airplane. The ability to withstand impacts and ease of patching makes it a wonderful trainer and better than the HobbyZone because of its size and gentle demeanor, IMO. The airplane is still in one piece (even after a nose dive without wings!) and has not required building or patching.

The downside of all this is that it put me on the sidelines again! Luckily, one day I came across a video of a 3d printed Corsair (my favorite WWII airplane) from 3d Lab Print (<https://3dlabprint.com/>). As cool as this airplane was, it did not seem wise as a starting point. With the help of CRRC, we narrowed it down to Eclipsion's Model C. We really liked the wing tips and the streamlined look of the airplane. We could've chosen the free Model A but the free plans did not include landing gear and my son and I agreed it was not cool to have an airplane without landing gears (snobs!).

When you purchase the plans from Eclipsion you get STL files, and the gcode files (what the printers need to print) for 2 types of material: regular PLA and a lightweight version of PLA (LW-PLA).

Printer Requirements and Tuning

The first thing to check is your printer's volume. My printer volume is 200mm x 200mm x 200mm - big enough to meet Eclipsion's requirements. Next, watch all 4 videos at: <https://www.planeprint.com/print>.



They are great to get you started in 3d printing and specifically the things to look out for when using 3d printers to print airplane parts. After watching these videos I used Eclipsion's print profiles to print the "stringy test" and PlanePrint wing to make sure all was within weight tolerances (and don't forget to read and understand <https://www.eclipsion-airplanes.com/readbeforestartprinting>). PlanePrint says 5g for PLA and 3g for LW-PLA for their test wing, but I ended up with a 6g PLA wing using Eclipsion's profiles because it created a sturdier wing surface.

Expect a lot of trial and error! Each printer/material will behave differently.

Printing

As I said, I used PLA to print all the parts and carbon rods to provide some extra rigidity in the fuselage.

Instructions indicate the need for carbon rods when using LW-PLA, but I wanted to add more rigidity. The CG ended up just fine and I don't think the weight penalty is something to sweat about.

After printing all the PLA parts, I experimented with TPU for the main and tail wheels. In the end I decided to use FliteTest's 2.75" wheels (<https://store.flitetest.com/wheels-2-75-pair/>) and the TPU printed wheel for the tail.



During assembly and painting (Krylon colormax primer+paint), I left the airplane drying outside and the direct sun did a number on the PLA material (using black material did not help either). I used this opportunity to practice how to fix this type of airplanes. Hot Xacto knife, and 150 sandpaper. I cut right at the joint which was another mistake. I should've cut right above it (towards the part that needs replacement) and then sanded it down.

Fly, crash, rinse, and repeat

The first few flights showed a very twitchy airplane. We fixed this by setting expo to 30% (thanks to the tip of a fellow RC flyer in the field).

Here is a video with the build summary and first flights:



Since that video was made the airplane had 2 crashes. One crash resulted in the rear fuselage splitting in two and the right wing detaching from the fuselage. I was able to fix it in the field with CA glue, sand paper, extra carbon rods and 3d printed 10x10mm tabs. After that it continued flying until one day it flew too slow and low; stalling and spinning into the ground. The damage was substantial. It required printing and patching a lot of parts. Instead of patching it we decided to keep flying the Storch and print a second version of the Model C using LW-PLA during the winter. (Since then we decided to move on and print Eclipsion's Pitts S12 using PLA. When it crashes we will print both models using LW-PLA.)



Specs

Ready to fly weight	796g * 679g without battery
Battery	1500mAH 3S Turnigy nano tech (117g)
Motor	2212-1050kV (FliteTest Power Pack B)
ESC	35A ESC w/XT-60 connector
Prop	9x4.5
Wing surface	18dm ²
Wing span	1100mm (43")
Wing loading	44.2 g/dm ² (796g/18dm ²)
PLA	47g/dm ²
Wheels	2.75" https://store.flitetest.com/wheels-2-75-pair/

* Eclipson's website says 920g with TPU printed wheels (not recommended) and 850g with commercial foam wheels. For us, the weight is a lot lower than that.

Links

- Eclipson's Model C <https://www.eclipson-airplanes.com/modelc>
- PlanePrint: <https://www.planeprint.com/>
- 3d printing thin walls: https://youtu.be/TZ_-AespXDw
- 3d printing beginner's guide: <https://youtu.be/b2Od4YHcLAQ>
- MexuXD (aka my son) YouTube channel: <https://mexuxd.tv/>

- Emilio Arce

COVID Updates

CRRC requests all members to follow state guidelines and any location- or facility-based requirements at all fields & meetings. Please maintain safe and healthy practices for our own and other members' sakes, as well as for the sake of other users of our shared fields and meeting rooms.

Update: January 2022 - CRRC has not received specific guidance from the Town of Sudbury recently. Please continue to be aware both of state & local guidance and requirements each time you fly, as well as considerate of the health and preferences of those around us, as the situation with Omicron or other major variants evolves.

Free Money?

Support CRRC by renewing your annual membership before March 1st, and you'll save \$5 on dues.

See the last page of the newsletter for info, or contact our Membership Secretary, John Eppling!

FAA Registration

Please remember to visit <https://faadronezone.faa.gov/#/> to check and renew your FAA registration ID. Also, beware some commercial entities who are claiming to process registrations - often for increased prices. The FAA charges \$5 for a three-year registration, or extension.

Check your registration when you mark each new plane/drone, so you don't forget!

TRUST Test

The FAA has authorized several organizations including the AMA to administer the knowledge and safety test required by congressional action.

You are now required to show proof of passing the test (along with your FAA ID number) to law enforcement or FAA representatives upon request.

The test is free and can't be failed!
Take it at:

<https://trust.modelaircraft.org/>

Club Information

Officers - 2022

President

Mike Whidden
[president at charlesriverrc.org](mailto:president@charlesriverrc.org)

Vice President

Dan Sullivan
[vicepresident at charlesriverrc.org](mailto:vicepresident@charlesriverrc.org)

Treasurer

Dave Marshall
[treasurer at charlesriverrc.org](mailto:treasurer@charlesriverrc.org)

Membership Secretary

John Eppling
[membership at charlesriverrc.org](mailto:membership@charlesriverrc.org)

Recording Secretary

Roger Silva
[secretary at charlesriverrc.org](mailto:secretary@charlesriverrc.org)

Webmaster

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Dick Williamson
[chiefinstructor at charlesriverrc.org](mailto:chiefinstructor@charlesriverrc.org)

Safety Coordinator

Jimi Two Feathers
[safety at charlesriverrc.org](mailto:safety@charlesriverrc.org)

Raffle Chairman

Scott Ritter
[exofficio at charlesriverrc.org](mailto:exofficio@charlesriverrc.org)

Instruction

To inquire about instruction please call the Chief Instructor, Dick Williamson.

Types of instruction

B = Building
 G = Glider
 E = Electric
 F = Fuel
 H = Helicopter
 Q = Quadcopter/
 Multirotor

Dick Williamson - B,G,E
 Sudbury - 978-618-5475

David Spielman - B,E
[dspielma \(at\) gmail.com](mailto:dspielma@gmail.com)

John Weigel - B
 Natick - 508-655-2138

Richard Gammon - B,G,E,F
 West Boylston -
 508-835-2049

Ken Antonellis - G,E,F
 Natick - 508-653-8369

Lincoln Ross - G,E
 Waltham - 781-891-0332

Dave Walter - G
 Hudson - 978-562-5400

Jon Leehey - F
 Wayland - 508-358-5721

Tony Davids - H
 Stow - 978-568-9598

Scott Ritter - Q
 Sudbury - 978-443-2373

General Info

Flying Sites

Go to charlesriverrc.org and select the Flying Sites tab to see the various sites. CRRC reserves time seasonally on Davis Field in Sudbury, and shares Bill Martin Field in Medfield with the MMAC.

Keys to the

Bill Martin Field

To get a key for Bill Martin Field in Medfield please email Ken Antonellis at kxa@verizon.net. Ken is the key-master. The key for the 2021 season is key #15. Ken may have keys at the meeting. A \$5 deposit is required the first time you receive a key.

Tree Climbers

Tom Hurney
 508-272-7489

Scott (Sudbury)
 508-203-3845

Stephen Canessa
 The Tree Guy
 978-460-1000

Hartney Greymont (Medfield)
 Sean Comer
 781-444-1227
thescomer@gmail.com

Membership Application - 2022

Name					
Street					
Town		State		Zip	
Telephone		Email			
AMA No.		Birth Date			
I agree: []	Club membership and activities are bound by the CRRC handbook, available at: http://charlesriverrc.org/newsite/Documents/CRRC%20Handbook%202020.pdf				

IMPORTANT: You must be an Academy of Model Aeronautics member to join CRRC.
AMA Junior membership is free! <http://www.modelaircraft.org/membership/youth.aspx>
 By submitting this membership application you agree to comply with the AMA safety code,
 including documents 550 and 560 found at: www.modelaircraft.org/documents.aspx

To receive a membership card, bring this application to a club meeting or
 mail to the membership secretary:

John Eppling
Membership Secretary CRRC
43 Nylander, Acton, MA 01720
membership@charlesriverrc.org

You may pay by check or use PayPal.

Make **checks** to **Charles River RC**, or send **PayPal** to the email above.

Member category	Before March 1, 2022	After March 1, 2022
OPEN Member	\$60	\$65
SENIOR member If age 60 before July 1st	\$50	\$55
SENIOR member If age 75 before July 1st	Free if AMA member (Voluntary donation appreciated - e.g. \$50)	Free if AMA member (Voluntary donation appreciated - e.g. \$50)
JUNIOR Member Under 19 before July 1st		
NON-FLYING member If age 75 before July 1st	(Voluntary donation appreciated)	(Voluntary donation appreciated)
Full time STUDENT	\$40	\$45
Family member additional to OPEN membership		
Additional / optional donation (supports field rental)	Voluntary \$10 / \$25 / \$50 / etc	