

FlightLines

December 2021

Newsletter of the North Vancouver Radio Control Flying Club

News

Well 2021 is almost done! The club made it through Covid restrictions, and our membership is intact at 72 members, down by just two under 2020.

Our affinity program with Magic Box Hobbies netted the club \$118 in 2020 and \$95 for 2021 so far. Thanks to the members who support the club while supporting Magic Box!

The AGM in November (via Zoom) was attended by 19 members. The 2021 exec team was re-elected. We already have several initiatives in the works, including a facelift for our website, a club logo and hopefully a return to club social activity in 2022.

We have a new Social Director - new member Fraser Uitdenbosch. Club BBQ next summer!

Thanks also to Fraser for placing a pail of sand in the storage box. Use the sand in case of a battery fire (the fire extinguisher won't work on LiPo fires).

Club member Phil Haddad is the new National Chair, MAAC Insurance Advisory Group. Kudos to Phil for taking on this important role.

In this issue of the newsletter, you'll find reports from our president-at-large Paul on his close encounter (by design) with an FPV drone, on recording RC sound effects with Vaudeville Sound, and on a couple of interesting maidens by Tim and Amir.

Look forward to seeing you at the field! - *Mike P.*



Another two bite the dust! Amir and I thought runway lights would be the next big thing. Lights worked great...pilots not so much. Amir is a night flying ace but we both crashed our planes in stall/spins on landing. Judging airspeed in the dark, while turning, is a challenge! Who knew?

WhatzzUp ↗



Tim has been experimenting with an automatic guidance system for his Bixler (aka the “Bixinator”). For the test flight, Tim plotted a route around the field on his laptop using ArduPilot software. The route was then uploaded to a PixRacer flight controller installed in the Bix to fly the mission autonomously.

The test flight got off to a great start with the Bix following the flight plan as programmed. But then Murphy showed up - the plane’s power switch failed. The transmitter robotically announced “telemetry signal lost” as the Bix spiralled into the field from about 50 feet. The Bixinator got twisted but far from terminated. It will fly again!

All Tim needs now is a Google car; an autonomous ride to the field to fly his autonomous plane!

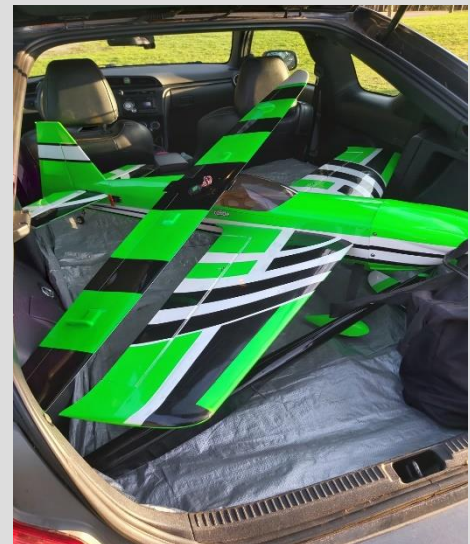




Amir maiden his new Robbe Amplitude 2 metre moldie. This is an ultra fast, fully composite hotliner with an 1150Kv 8S motor putting out up to 3000 watts!

Controls are ail/elev/flap. For the maiden Amir only used 4S while he awaits delivery of a bigger ESC. Still plenty fast. The Amp has super crisp control and perfect tracking says Amir.

This model will be super quick on the slope too. Will my 3 metre Twister be able to keep up? We'll find out at Hedley next summer....



Styling! The Amplitude is a perfect color match to Amir's 3D MXS plane



Members: If you have an interesting model to maiden contact me so it can be featured in the newsletter!

Vaudeville comes to InterRiver

By Mike Poser



Vaudeville Sound Design is a leading international sound studio with offices in North Vancouver. They recently approached us for assistance. They are building a sound effects library and were looking to include RC aircraft. The call went out to members and Fraser, Tim, Amir, Valdy and me volunteered to make them some RC “music”. Move over Mozart!

On Nov 19th, we met with Kalen from Vaudeville at the field. Kalen set up his omni directional mic at the flight line. The omni mic records sound in 3D, making it fully immersive. If used in a VR game, for example, the plane flying on the left remains on the left as you turn your head.



Recording day was windless, overcast and about 9 degrees. Valdy flew his impressive Bell Long Ranger with Trex 600 mechanics. The model has a very scale start-up and wind down sequence.

Amir did some high speed fly pasts and loops with his nitro powered Twist. Fraser flew his mini FPV drone. I flew my 60 powered electric Ventique and included some motor-goosing hovers near the mic. The tight covering on the Ventique's wings amplifies the servo motor sounds, so back on the ground, we recorded those as well.

We missed having any EDF jets, but maybe next time, if the occasion come up.

Overall, it was an enjoyable and mind-expanding experience to focus on the sound rather than the sight of RC flying.

This week we received a grateful note from Vaudeville including the link below to some sample Ambisonic sound files. The sound quality is amazing and very immersive. Listen in Surround Sound or on headphones, close your eyes and it feels like you are there.

[NVRCFC - Drone Recordings.zip](#)

(If you don't have WinZip download 7-Zip to unzip these files)

<https://www.7-zip.org/download.html>



Droning On in Victoria

A Fresh Perspective

By Paul Cox

During a recent stay in Vancouver Island, I was able to fly as a guest at the Victoria RC Modelers Society field about 14km south of Schwartz Bay (special thanks to Bruce Watson for making this possible). One of many friendly members I met included Doug Neal, who has developed the specialized skill of being able to manoeuvre his small FPV (first-person view) drone up close and personal to other flying model. Here are some air-to-air stills of the author's Cub, demonstrating the dexterity of Doug's drone coverage. Once he's locked onto you, it's almost impossible to "shake him off your tail."



The above screen grabs were taken from a remarkable FPV video of the flight (duration 2min 44sec): <https://www.youtube.com/watch?v=Cp9BTfso8uU&t=24s>

The video recordings from Doug's goggles are outstanding and I'm sure his talent will be appreciated by professionals also. Many other of these aerial "dances" are available on his dedicated YouTube channel (see link below).

Doug explains how he learned how fly a drone with such precision:

"I started with First Person View (FPV) drones by flying for many hours in my basement with tiny whoops and cheap analog goggles. When the DJI high definition FPV system became available I upgraded to a larger outdoor sub-250g drone with onboard HD recording and the DJI FPV Goggles. I transitioned to flying strictly in "acro" mode and learned to adjust both throttle and rate limits to suit flying situations. I cautiously started formation flying in the summer of 2021 and, thanks to the willingness of my fellow club pilots, have flown over 300 flights with 70 different aircraft. Some of the key things I've learned are:

- *practice flying through racing gates to refine your skills*
- *reduce the roll and pitch rate of the drone to about 50% to give finer control and enable "air mode" to enhance stability when throttle reduced*
- *use a prop guard to protect the aircraft in case of collision - I chose to 3D print a custom oversize guard*
- *never, ever, take your eye off the aircraft you are following when close - I won't even blink sometimes (back away to check battery level, etc.)*
- *position yourself 10ft to the side in a chair of the model's pilot, not behind (to avoid radio interference), and ask that they fly very scale-like and smooth*
- *if you lose sight of the aircraft, quickly move to a safe location/altitude and communicate with pilot and spotter in order to avoid collision*
- *avoid flying when multiple aircraft are in the air as you won't be able to see and avoid them and they won't see you - especially risky if you lose formation*

Doug also requests that pilots...

- *warn you before making any major turns or maneuvers*
- *never cut the throttle quickly (to avoid running into them)*
- *tell you if they are going below 20 ft (so you don't run into ground)*
- *focus on safety, always fly with a spotter and practice, practice, practice!*

Doug concludes:

“There's nothing like the immersion of high definition FPV while flying within a few feet of another aircraft. Add the beautiful scenery of the Victoria R/C Modelers Society field along with some late day sun and the transformation is complete. The camera has a 15mm lens (equivalent) in a fixed position with no gimble. What you see in these videos is what I see in my goggles whilst flying. So far, I've flown 280+ flights with 70 different aircraft. I hope to have all posted by early 2022.”



Size comparison – Doug Neal’s FPV drone next to author’s Cub (1.2m wingspan)

It is so rewarding to see a video of one of your own flights. It provides the ultimate scrutiny of your flying prowess (or lack of it) which is not possible from terra firma. We have several drone and FPV flyers at NVRFCF. For those considering trying FPV, hopefully Doug’s videos and tips provide some inspiration!

Related Links

Split-screen of FPV drone filmed from the ground - synchronised with drone’s POV of a “Bush Plane” model piloted by Bruce W:

https://www.youtube.com/watch?v=hCSYv8mbwa4&list=PLdFhMBxV5tVbCUg4nRPEtI5FZU_UMjAK9

Doug's YouTube Channel (includes equipment list):

<https://www.youtube.com/channel/UCC4UjMVUYNXmQviM0Xuhmvw>

DJI FPV System website:

https://www.dji.com/ca/fpv?site=brandsite&from=insite_search

Victoria R/C Modelers Society – Facebook Page:

<https://www.facebook.com/VRCMS>

Links of Interest

1...Introducing the Phractyl Macrobat. Phractyl, a South African start-up, has designed a bird-like VTOL aircraft which the company believes will transform personal air travel. Did the Macrobat result from watching too many Star Wars films? You decide. Either way, it would make a great RC project for an innovative modeller. Thanks to Norm S. for forwarding.

https://newatlas.com/aircraft/phractyl-macrobat-nvtol-africa/?utm_source=New+Atlas+Subscribers&utm_campaign=28e15504ee-EMAIL_CAMPAIGN_2021_12_10_02_47&utm_medium=email&utm_term=0_65b67362bd-28e15504ee-92987509

2...E-Glider fans check out this self-launching 13.5m full-scale MiniLAK. It runs on a 4.2kWh LiPo battery powering the 20kW motor. A bit large and heavy for our field perhaps...but think of the fun you could have soaring over Mt Seymour! It comes with a very nifty transport trailer.

<https://www.youtube.com/watch?v=5wEwg7X-fj4> (Bonus: some gratuitous 3D RC flying at 2:54)

3...This is an excerpt from MAAC President Peter Schaffer's message in the Sept/Oct issue of MAC Magazine. It is re-printed here because it bears noting:

"We now live in a regulated world with many eyes upon our every move. I'll remind you that, as always, clubs cannot afford to allow any members to disregard club, MAAC, or government regulations. Allowing such activities can cause damage to the club's and hobby's image and has resulted in lost flying sites. Ultimately, the government now expects MAAC and all its member to act in a responsible manner and safeguard public and aviation safety. Transport Canada regulatory enforcement of MAAC activities through monetary fines is not a path anyone should consider lightly. Nostalgia for the good old days, when life was simpler, is common when we experience rapid changes. However for us, today's world is a regulated world. Under the exemption, we can still enjoy all aspects of our hobby but must be mindful of the changes required from all of us".

You can view the full message on page 5 of the Sept/Oct issue of the magazine here:

<https://www.maac.ca/en/magazine.php>



Happy Holidays NVRCFCers!