

- January 2017 -



With the passing of Len Litwiller this month, Lee Coulman kindly put together a brief slideshow for the January meeting to memorialize Len before we moved on to the guest speaker Terry Fisher.

President's Message

Happy New Year everyone!

2017 started with an unscheduled presentation by Lee Coulman, who put together a brief slideshow for the January meeting to memorialize Len Litwiller who passed away this month. In this issue you will find a short article about Len written by Gary Wolf who likely knew Len longer than most of us. The article gives a little insight into who Len was and why our members will miss him.

Terry Fisher was kind enough to return this month to do a presentation on 3D printing, a topic that is of interest to many of the members. There is a short article and a couple of pictures from that presentation in this newsletter.

The February meeting will be our annual opportunity for recurrent pilot training with Fred Grootarz.

We are always looking for input from the members regarding ideas and topics for the monthly meetings. Bring your ideas forward!

The executive will be meeting again in March to continue the chapter building process. We will also be discussing the topics carried forward from 2016 including:

- An ATC Tower tour and presentation
- Auto engine conversions and PRSU's
- Shoestring budget aircraft projects
- Aircraft paint and covering systems
- CYKF update and future plans
- Gliders and Ultralights
- Show and Tell night
- Aviation Movie Night

2017 is going to be a great year for KWRAA!

- Dan Oldridge

3D Printing

We are grateful that Terry Fisher returned to KWRAA again to present some ideas on 3D printing for amateur aircraft builders. Terry presented some ideas at the November meeting on micro-processors and agreed to let us know some of the things he has been doing personally with 3D printing.

Several types of printing technologies as well as a variety of printing mediums were covered from plastics to various metals like titanium that can be used in suitable 3D printers.

The hobby version of 3D printers use a technology known as FDM to deposit layers of plastic to print a model from a software package that is used to provide the print instructions for the print head, which melts and feeds the appropriate amount of plastic as required to form each layer. Over time, the model is built up from the printer bed.



Terry powered up the printer and ran a program to print a small plastic airplane while he continued with the presentation. He passed around a number of parts that he had printed previously to show what was possible with FDM printing.

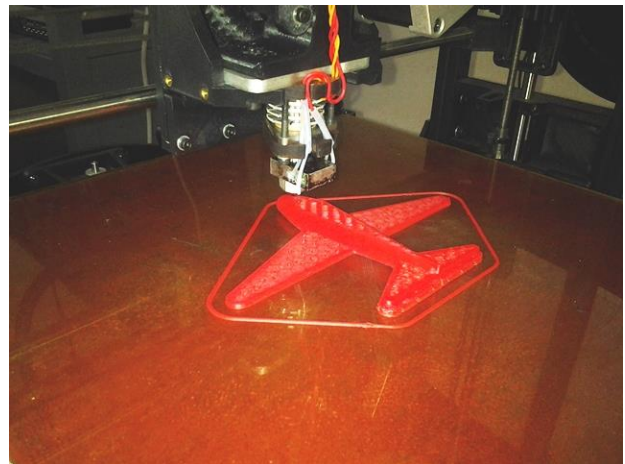
Terry described the advantages and disadvantages of various materials like ABS, PLA, and others. He also provided information on various CAD programs that can be used to

design parts for printing such as FreeCAD, Open CAD, Tinker CAD, and Solidworks, which he uses most of the time and is available in the student version from EAA for free.

Terry showed us how easy it is to design a part using Solidworks by designing a vortex generator that could be printed on the 3D printer. It took about 10 minutes to design, but would be used to print any quantity desired.

Terry talked to us about the First Robot competition in Waterloo that he is involved in. In March Terry holds a class on robot construction and helps the students 3D-print parts for their robots, which autonomously perform various tasks and travel up to 10 metres per second!

Terry then answered several questions about 3D printing and showed us the finished part (4 inch long plastic airplane) that he printed during the presentation.



A copy of Terry's presentation will be available on the KWRAA website for a few months.

<http://kwraa.weebly.com/uploads/4/3/1/8/43188173/3d-printers.pdf>

To see the 3D printer in action go to:

<https://youtu.be/c-pV2HmwWBs>

Gone West – Len Litwiller

Len Litwiller was for many years a member of KW-RAA and an enthusiastic pilot. He came to aviation late in his late sixties, realizing a lifelong ambition to build and fly an airplane. Tom Mills was the instructor who trained him in his Zenith 701, and signed Len off for his Ultralight Permit. Len had been building his own 701 and after earning his license he flew C-FTFJ all over Southern Ontario after completing it in 1994.

Len made a lot of friends in aviation, especially among the many pilots who frequented John Kunz's field near New Hamburg. This is where I met him and I was impressed that someone his age could be so determined.



Len sitting in a car of similar vintage to himself.

Len owned his own rural property on a hilly area near Owen Sound and he cleared a field on the side of a hill and kept it mowed as a strip. It was one way in and one way out and flaring for the uphill approach was a challenge. Nevertheless Len mastered this and flew there regularly. He built a small hangar to house the plane and raised the ire of the Niagara Escarpment Commission but he eventually proved them wrong and his hangar still stands there, albeit now somewhat dilapidated.

Len earned everything he had by dint of hard work and determination. At age 14 during the Depression his father kicked him out of the house, so Len and another young fellow lived rough for the next two years in a boxcar on the outskirts of Kitchener. When WW11 broke out Len lied about his age and joined the Royal Canadian Navy, first as a stoker on a steam

powered ship, later as a mechanic who kept the engine running properly. Despite his many trips across the North Atlantic his ship was never sunk by a U-boat and when VE day occurred he took a train west to crew on a ship in the Pacific. Halfway across Canada there came news of Hiroshima so he returned to Kitchener and got work at Canadian Blower and Forge, maintaining the plant machinery. He married, built his own house near the approach to the old Lexington Airport, and raised a family. One night when he was working on the house a plane assumed that his light was the approach to the strip and Len got a very close look at the underside of a Cub.

Len's pride and joy was his rural property, and although there was no electricity he built a fairyland of buildings, ponds, and climbing structures in the woods, felling the trees himself and having the local sawmill turn them into lumber. The local schools used to bring children out for a day of climbing, swimming, and picnics.

Len also built a metal Quonset building in the woods at the rear of the property and outfitted it with a gas water pump and solar panels for electricity. There was no hydro on the property and there is still none. When he built his Zenith 701 every one of the 7000 Avex rivets was pulled by hand, and all holes were drilled with a small battery drill that was charged from his pickup truck's battery. Len was completely independent.



Len and Paul Litwiller in front of Lee's Piper Warrior.

The Leading Edge



Len enjoyed going to the KWRAA fly-ins to check out the amateur-built aircraft. Here he is enjoying a little shade under the wing of Ed Nagel's Kitfox at the 2015 Largo Woods Fly-in.

Len's last few years were somewhat slower moving but he still liked to spend a week at a time alone at his Quonset. He cooked on a wood stove and kept food cool in the spring nearby. I used to drive him up and bring him back, but eventually had to stop when my grandchildren began taking all my time. Lee Coulman then took over, bringing Len to the hangar for Wednesdays, and took him for a ride in his Searey when the opportunity arose.



Len enjoyed flying with Lee Coulman in his Searey, but mobility issues made it rather challenging.



Len enjoying a bit of camaraderie at Cam Wood's hangar and fly-in in 2015.

Eventually Len became too weak and could no longer climb into an airplane and he had to use a walker to get around.



In spite of mobility issues, Len enjoyed getting out seeing the guys on Wednesdays and attended the charity luncheons as often as possible.

On January 6th he went to sleep and on the morning of the 7th he did not wake up; not a bad way to go after ninety years. Len had brightened the days of many of our members and he will be missed.

So long old friend.

- Gary Wolf

Easy Airspeed Switch Calibration

At the January meeting, Lee Coulman showed us a low noise USB port charger for his Searey and described a rangefinder system that he is working on to sound-off altitude during water landings.

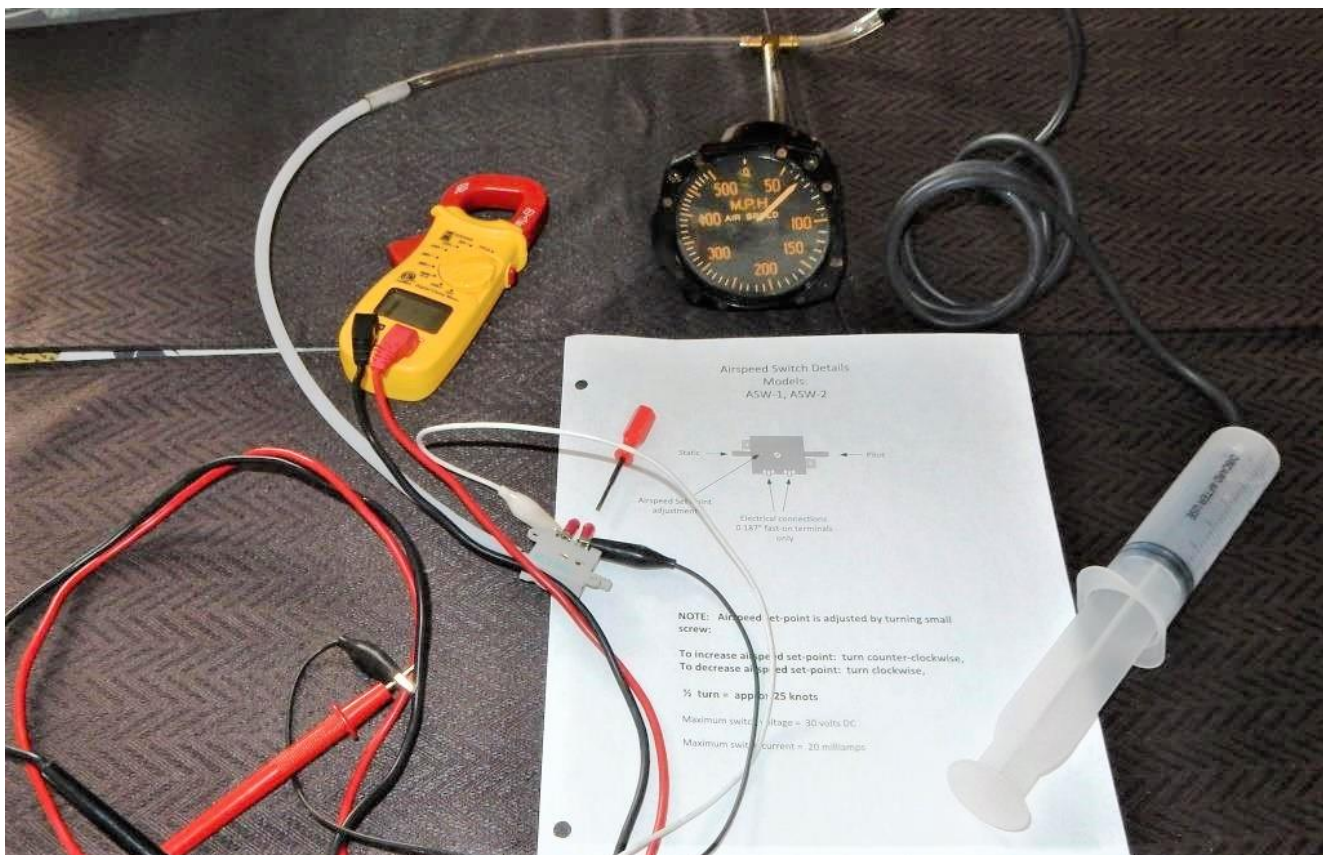
An integral part of this system is the airspeed switch, which is part of the activation circuit. Lee is using an ASW-1 airspeed switch.

The ASW-1 airspeed switch from ACS can be re-calibrated from 100Kt to as low as 50 mph.

Lee used a 60ml plastic syringe connected to a spare ASI and then to the ASW-1. By pushing the plunger and watching the airspeed, Lee was able to set the switch for about 62 mph.

Lee advises that there is some hysteresis, so don't expect a rock solid threshold. You can also use a water manometer to calibrate the ASW-1 airspeed to the desired threshold.

(Airspeed (in H₂O) = SQRT(mph) * 1980)



What's happening in February?

Join us February 13, 2017 for our annual recurrent training with Fred Grootarz ... always educational, informative and often entertaining. At the end of the meeting, Fred will issue a

sticker for everyone's pilot logbook for proof of the two year training currency requirement. Don't miss the **February 13, 2017** KWRAA meeting!

Put it in your calendar now... and be there!

The Leading Edge

Upcoming Events in 2017: (Highlighted lines are KWRAA Events*)

February 13	-	February Meeting at 7:30 in the Cadet building at CYKF
March 13	-	March Meeting at 7:30 in the Cadet building at CYKF
April 4-9	-	Sun-n-Fun in Lakeland Florida
April 10	-	April Meeting at 7:30 in the Cadet building at CYKF
May 8	-	May Meeting at 7:30 in the Cadet building at CYKF
June 23-24	-	COPA National Convention in Kelowna, BC
June (TBA)	-	KWRAA Fly-In at Cam Wood's in West Montrose (Tentative)
July (TBA)	-	KWRAA Fly-In at Tom Shupe's (Tentative)
July 24-30	-	Air Venture Oshkosh in Wisconsin
July (TBA)	-	KWRAA Fly-In at CPR3 in Teviotdale/Palmerston (Tentative)
August (TBA)	-	KWRAA Fly-In at CM22 – Metz/MacPat Field in Arthur (Tentative)
August 18 (Est.)	-	Aviation Fun Day at CYKF
August 18-20	-	UPAC Convention – Lubitz Field, Plattsville ON
Sept 2-4	-	Canadian International Air Show – CNE Grounds
September 11	-	September Meeting at 7:30 in the Cadet building at CYKF
October 16	-	October Meeting at 7:30 in the Cadet building at CYKF
November 13	-	November Meeting at 7:30 in the Cadet building at CYKF
November 24 (TBA)	-	KWRAA Christmas Party in lieu of a December meeting

* KWRAA events are fly-in and/or drive-in (Please advise the host in advance if you plan to attend whenever possible.)

Executive Contact Information:

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Director AFS:	Lee Coulman	(519) 664-8217	lee.coulman@gmail.com
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Hangar for Sale in Roseville:

- 8' high at the back, 9 '2" at the front
- 39' x 24' overall
- Asking \$7000 for the hangar
- Land rent is about \$400/yr

Contact: Allen Mattice at allenjattice@hotmail.com

Reminder: Don't forget to bring your RAA Canada membership card when paying your 2017 KW-RAA Chapter dues. There is a bylaw on the books requiring all local members to also be a member of RAA Canada. Please pay your 2017 KWRAA annual \$25 dues to Mike Thorp at the February meeting if you missed the January meeting!

Be sure to check out the KWRAA website regularly for the latest information regarding KWRAA events and get more chapter information at: www.KWRAA.net