



The Antenna

December 2015



Indoor Flying season in full swing!

New Junior Member Lee Coulter taxis his Champ after a successful flight. The other usual CARFF suspects also enjoyed some good flying last Sunday.

**Next Club Meeting: New Years Day: Friday Jan 1, 2016, ~1:00PM,
at the CARFF Clubhouse**

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New Executive

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The Knife Edge

PLEASE CHECK & LOCK THE CLUBHOUSE, TOILETS & THE GATE when you are last to leave the field.

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Indoor Flying, Penhold Multiplex, Dec 20, 1:00 – 3:00PM. \$10/pilot.

Arctic Aviation Adventure, 11:00 AM Friday Jan 1, 2016 – New Years Day!

2015 Executive, Standing Committees and Contacts

CARFF EXECUTIVE

President Jon From, 403-886-5515, jon@cloud9aviation.ca
Vice Pres. Harvey Fodor, 403-347-9256, hfodor@transwest.com
Secretary Chris Warner, 403-589-0298, warner_c@hotmail.com
Treasurer Gale McCoy, 403-347-1363, rgmccoy@shaw.ca
Director Brian Davies, 403-318-4577, ve6ckc@gmail.com
Director Tony Lindhout, 403-347-8463, tslindhout@shaw.ca
Director Will Gross, 403-346-6119, ti2wgo@hotmail.com

CLUBHOUSE MANAGEMENT

TBA

FIELD AND MAINTENANCE COORDINATOR

Rob McCoy (403) 347-1363

INSTRUCTOR COORDINATORS

Will Gross 403-346-6119,
 Rob McCoy 403-347-1363, cell: 403-396-5747
 Travis Sayler 403-986-7581

AUCTION

Rob & Gale McCoy

NEWSLETTER EDITOR

Eraldo Pomare, 403-343-2072, pomare@telusplanet.net
 snail-mail: 1 MacKenzie Crescent, Red Deer, AB, T4N 0H6

WEBMASTER

Vince Mulhall, 403-755-1953, cell: 403-872-1911, vmulhall@shaw.ca

COUNTY OF RED DEER BYLAW ENFORCEMENT

403-343-6301 (Call will be forwarded to member on duty). Primary contact: Stephen Poburan

If no answer call Bob Dixon 403-505-9030.

Fire Burning Permit: Not Required.

Field GPS Coordinates: N52° 12' 6", W113° 42' 18" (N52° 12.106', W113° 42.304')

CARFF on Facebook <https://www.facebook.com/groups/1418503868392501/>

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TELEMETRY RADIOS

Eraldo Pomare

Telemetry systems for RC are really hitting their stride now. I've been researching these systems for my new sailplane so thought I'd share my observations.

Why would you want telemetry anyway? What is telemetry in the RC context?

RC telemetry sends a signal back from your plane to your transmitter to provide real-time information on what's going on up there. Many systems have sensors built into the receiver to send back flight pack voltage and signal performance - how well/strong the receiver antennae are seeing your signal and any "fades"/lost information packets. The Tx will alert you through a synthesized voice, sound or vibration if your plane is in danger, or if you exceed a preset parameter limit like temperature, low voltage, speed, distance, altitude etc.

For glow/gas engines, sensors can be added to monitor:

- Engine RPM - optical sensor.
- Glow fuel level.
- Engine temperature(s).
- EGT for jets.

For electric motor power planes, sensors can be added to monitor:

- LiPo voltage & balance (individual cell voltages)
- LiPo & motor temperatures
- Motor RPM - electronic sensor
- Motor/battery current.

For all planes, the most popular sensors are:

- Variometer (rate of climb/descent - really useful for sailplane flyers), also reports altitude.
- GPS - how far out are you? Where are you? Ground speed.
- Airspeed sensor (pitot-static system).

Practical considerations:

In my opinion, a display screen is the most useless and dangerous feature of an integrated telemetry system. A voice synthesizer is the most useful. While flying, your eyes have no business being anywhere but on your plane; a pilot should never look down at the Tx to see a telemetry screen or to see where the trims or switches are! Pretty well all the systems will record your flight parameters for download and review after you flying is over.

In my limited research, the following radios have well integrated telemetry systems that will give you useful real-time information. The more research I do, the more impressed I am by the 16 channel FrSky Taranis X9D Plus, so I've just ordered one - more info in a future newsletter.

- **Jeti DS-16** (Probably the best telemetry integration available; pricey)
- **FrSky Taranis X9D Plus** (outstanding features, programability, but not most user friendly)
- **Spektrum DX9, DX18 Gen 2** (Gen 1 has no voice/speaker). Great telemetry options/integration.
- **Graupner MZ-24** (Excellent telemetry integration & voice)
- **Futaba 18SZ**, (14SG has limited or no voice; I have not researched the 18MZ due to price point)
- **Hitec Aurora 9X** (limited or no voice but excellent range of sensors)

Not all radios noted have all the features discussed above - you will need to research them based on your needs & preferences.

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Will Gross is on the cover of this month's K-Factor Magazine - a US Precision Aerobatics publication. The picture was taken at the F3A Contest in Langley BC in May this year.

Will has been our leading light for Pattern Flying (precision aerobatics) and has rekindled interest in pattern for several of our CARFF pilots. Also see his "The Knife-Edge" article below.

Will usually runs a competition at the beginning of August each year. So, as Will says "Practice, Practice, Practice" before August then go out and have fun at the competition.

2016 CARFF EXECUTIVE

Eagle-eyed readers will already have noticed there is no change to page 2 of the newsletter. Yes, the 2016 CARFF Executive is carried over from 2015! Thank-you 2015 executive for all you have done for the club over the past year, and a huge thank-you for letting your names stand for 2016!

Arctic Aviation Adventure - Jan 1, 2016

Yes, 2016 is just around the corner and once again Rob & Gale McCoy are hosting the first event of the year: the Arctic Aviation Adventure. Flying starts at 11:00 AM on New Years Day, hot dogs around noon. The first club meeting of the year will also be held in the afternoon at about 13:00.

EDITOR'S SOAPBOX

Eraldo Pomare

Merry Christmas, Happy Holidays, have a Happy & Prosperous New Year.

Many thanks to Will for submitting the article on knife-edge flight, and to Rob McCoy for the web links.

Also, Indoor Flying continues to be well supported - it's great to see club members & visitors out flying at try Penhold Multiplex. The next session is December 13 - hope to see you there!

Note: "The Antenna" needs your articles, photos and sketches! Previously published articles must be accompanied by a release (permission) from the copyright holder.

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The knife Edge

Will Gross

I increasingly hear guys at the field discussing various aerobatics maneuvers, one of them is the knife edge. I kept thinking of ways to help people understand the basics behind flying certain maneuvers. Most of these entail giving proper inputs while the plane changes its attitude in the air. While the majority of beginner sport pilots only have to contend with keeping aileron and rudder inputs straight as the plane is flying away from and coming towards them, when you start flying 3D, you have to keep track of the plane's attitude and instinctively make your mind shift orientation with the plane. But this doesn't have to be as hard as it sounds. There are very simple ways to teach new pilots the basics of keeping track of which inputs you should give as the plane changes attitude. This month I will give an intro to the basics of knife-edge (KE) flight; if you practice this fairly simple maneuver, you'll master the fundamentals quickly.

Although I only discuss rolling your plane 90 degrees and adding rudder input to maintain level flight, you might save yourself some cash if you practice these moves on a simulator to teach your thumbs the proper movements before you transition to the airfield. One of the key things to remember when trying to learn any aerobatic maneuver is that you really need to view the throttle channel as nothing more than another control surface. If you can get the notion out of your head that "throttle" means "speed," you'll progress much faster as you learn how to fly the various aerobatic maneuvers.

Mode2



Depending on your aircraft, you'll need to be at about 1/2 to 3/4 throttle. While flying level, give enough left aileron input to roll the plane 90 degrees. You should now be looking at the bottom of the plane as it passes by, and you'll most likely notice that it will quickly lose altitude. Make a few passes, and practice rolling the plane 90 degrees by using left aileron

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input, and then return to level flight. When you're comfortable with that, move to the next step adding rudder.

OK; so you made a few passes, rolled the plane onto its side, watched it lose altitude and rolled it back to level right? Good. Now it's time to add rudder to keep it flying level without losing altitude as it passes by. Normally, you would use the elevator to change your plane's pitch: down-elevator causes the plane to descend and up-elevator causes the plane to climb. But when flying with the plane rotated at 90 degrees, the rudder, in effect, becomes the elevator and is the control surface you'll use to maintain altitude. The trick is knowing in which direction to move the control sticks at any given time (Airplane's belly in or canopy in)Only practice will help you to overcome that! ****See editor's note below**

Nearly all aircraft exhibit some sort of knife edge coupling.

It will become evident when you attempt knife-edge flight, and you'll find that your plane will naturally try to roll either towards the landing gear or canopy to compensate for this you can mix rudder to aileron.

If your plane, during the Knife Edge pitches toward the landing gear or canopy, you'll have to feed in slight up or down-elevator to maintain a straight flight path without yaw. If you have a computer radio, you can program a rudder-elevator mix to eliminate this coupling.

The CG and incidence on your plane plays a big factor on your knife edge coupling as well.

I believe that this is one of those "seed" maneuvers, once the knife edge is mastered, your plane is properly setup and the maneuver looks clean, the next step is the 4 point roll, 8 point rolls, slow rolls, two rolls reversed etc, rolling harriers etc.

In the end...there is nothing more than practice, practice, practice....

See you at the field.

Will Gross

**** Editors Note:**

A simple way to remember which direction to move the rudder stick:

"with the direction of flight if you see the underside, against the direction of flight if you see the canopy"

Web Links of Interest Submitted by Rob McCoy

The Sopwith Story: <https://www.youtube.com/watch?v=sgxCioiN5pQ&feature=youtu.be>

Rigging a Biplane (parts 1 & 2):

<http://a.moirier.free.fr/Conception/Formules%20sp%E9ciales/Biplans/The%20fine%20old%20art%20of%20rigging%20a%20biplane.pdf>

<http://a.moirier.free.fr/Conception/Formules%20sp%E9ciales/Biplans/The%20fine%20old%20art%20of%20rigging%20a%20biplane%2002.pdf>

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CARFF GENERAL MEETING

DATE: Dec 2nd , 2015

In attendance: Gale McCoy, Rob McCoy, Jon From, Chris Warner, Scott Nelson, Herb Curran, Tony Lindhout, Brian Davis , Wayne Mitchell, Vince Mulhall, Harvey Fodor, John Bampffield, George Rehman, Wayne Hutmacher

Call to Order: 7:45PM by Jon

Agenda:

Additions: Air Show Mall Show

Moved: Tony

Seconded: Wayne

Carried Yes

Minutes: Moved as circulated: Wayne

Seconded: Rob

Carried Yes

Financial Report: Bank account: \$11,089.94

GIC: \$5,436.45

Total: \$16,526.82

Move acceptance of finical report: Gale McCoy

Seconded: John

Carried Yes

Old Business:

1. Jan Meeting will be Held at 1:00 Jan 1, Fun Fly starts at 11 Jan 1, 2016
2. Locking the gates, no issues so far and sign posted on the gate
3. Insurance review/renewal completed

New Business:

1. AirShow date is Sunday July 24, 2016
2. Mall Show date is Saturday April 2, 2016
3. Indoor Flying Dec 13, and Dec 20
4. H-O Performance will carry some parts, Orders are welcome since Hobby Extreme has closed
5. Membership Dues Please see Gale
 - Please register and update your account at the MAAC web site
6. Elections for 2016 – No Changes
 - Executives to Stay the same , Moved by Rob , Seconded by Herb Carried Yes
 - Nominations Stop Cease , Moved by Wayne , Seconded by Job B Carried Yes

President: From, Jon

Vice President: Fodor, Harvey

Treasurer: McCoy, Gale

Secretary: Warner, Chris

Director: Davies, Brian

Director: Lindhout, Tony

Director: Gross, Will

- 7 Motion by Scott to purchase a hotdog machine for the Club for Auction and Events at Carff
- Seconded by Vince , Carried Yes

Open Discussions:

1. Snow Blower located at the field house
2. Jan 1, CARFF Fun fly and Jan 2016 meeting

PLEASE report any suspicious crime to our club exec's

PLEASE ensure Club house and gates are locked if you are the last one to leave

Adjournment:8:10 all to adjourn

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2015/2016 Calendar of CARFF Events

2015

Dec 13, 2015 (Sun) Indoor Flying, 1:00-3:00PM, Penhold Multiplex, \$10/Pilot

Dec 20, 2015 (Sun) Indoor Flying, 1:00-3:00PM, Penhold Multiplex, \$10/Pilot

2016

Jan 1, 2016 (Fri) Arctic Aviation Adventure, 11:00AM, CARFF Field. Rob & Gale McCoy

Jan 1, 2016 (Fri) Club Meeting , ~1:00 PM, CARFF Clubhouse

Jan 10, 2016 (Sun) Indoor Flying, 1:00-3:00PM, Penhold Multiplex, \$10/Pilot

Jan 24, 2016 (Sun) Indoor Flying, 1:00-3:00PM, Penhold Multiplex, \$10/Pilot

Feb 3, 2016 (Wed) Club Meeting , 7:30 PM, Red Deer Flying Club

Feb 14, 2016 (Sun) Indoor Flying, 1:00-3:00PM, Penhold Multiplex, \$10/Pilot

Feb 28, 2016 (Sun) Indoor Flying, 1:00-3:00PM, Penhold Multiplex, \$10/Pilot

Mar 2, 2016 (Wed) Club Meeting , 7:30 PM, Red Deer Flying Club

Mar 13, 2016 (Sun) Indoor Flying, 1:00-3:00PM, Penhold Multiplex, \$10/Pilot

Mar 27, 2016 (Sun) Indoor Flying, 1:00-3:00PM, Penhold Multiplex, \$10/Pilot

Apr 02, 2016 (Sat) Mall Show, 09:00 - 17:00, Bower Mall. Organizer - Jon From

Apr 6, 2016 (Wed) Club Meeting, 7:30 PM, Red Deer Flying Club

May 4, 2016 (Wed) Club Meeting, 7:30 PM, CARFF Clubhouse

Jun 1, 2016 (Wed) Club Meeting, 7:30 PM, CARFF Clubhouse

Jul 6, 2016 (Wed) Club Meeting, 7:30 PM, CARFF Clubhouse

Jul 24 2016 (Sun) Airshow 2016 - Organizer: Jon From

Aug 3, 2016 (Wed) Club Meeting, 7:30 PM, CARFF Clubhouse

Sep 7, 2016 (Wed) Club Meeting, 7:30 PM, CARFF Clubhouse

Oct 5, 2016 (Wed) Club Meeting, 7:30 PM, CARFF Clubhouse

Nov 2, 2016 (Wed) Club Meeting, 7:30 PM, Red Deer Flying Club

Dec 7, 2016 (Wed) Club Meeting, 7:30 PM, Red Deer Flying Club ****Election Night 2016****



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