SKYWORDS

BURLINGTON RADIO CONTROL MODELERS

JUNE 2020

It's Your Turn, Speak Up

RE MAAC LETTER

Would Continuous Improvement be a Better Approach?

I believe that Roy Rymer, our MAAC Zone Director, recently sent out an email to all members of the club. It supposedly stated why the Bronte Field is closed to flying. I am not going to get into the Bronte situation as I don't have all the facts, and Mr. Rymer's email did not provide any additional clarification. However, I am more concerned with the nature and tone of the communication. Mr. Rymer is a documented member of MAAC: therefore, everything he does and says related to MAAC business can be considered as coming from MAAC. The conclusion is that the email in question was from MAAC.

If you recall the email, it references two (2) sections of the MSD documents. It is my understanding that MAAC created these documents to assist in and/or as a result of negotiations with the Canadian Ministry of Transportation? The 24 MSD documents are an excellent read which I would recommend to all. They are a convenient packaging of common sense safety statements that most, if not all clubs currently have. It is unfortunate that MAAC did not have the foresight to include one more document and one more point in MSD 01 to make these documents more meaningful to the clubs that MAAC represents.

My concern with the nature of the communique was that I had always thought of MAAC as a benevolent organization whose intention was to promote the RC Aviation hobby which included the best safety practices for all members and clubs to follow.

Perhaps the email would have been more helpful if it had been more specific. For example, I am still confused with regard to:

1. Why is Bronte a no fly zone?
2. Can the shortfalls that make it a no fly zone be corrected?
3. If so, how long does the club have to correct the stated shortfalls?
4. If not, so be it, but perhaps if we had more information we and other clubs can learn from this. Everyone I know wants to learn and improve. Don't you?

Joe Fazzari

EDITORS NOTE: Although Skywords is non-political the following is included in this section as it is information of which club members should be aware.

LETTER OF INTRODUCTION From Jeff Grainger

I would like to take a moment at this time to introduce myself. My name is Jeff Grainger. And I am running for the zone E director's position. Some maybe remember me but I doubt it. I was a member with the BRCM club for the years 2014-15-16. And I still have my BRCM badge. I have been on the board of a couple of clubs over the past decade, and I am no stranger to the politics that seem to find any club. This hobby should not be about politics. It originally started out years ago with people interested in the field of model aviation. Not to mention just having some fun. And this is where things have gone sideways. I am no stranger to conflict. I much prefer to settle things in a more reasonable fashion and the one word that I really like to use is "compromise ". No problem is so large that it cannot be fixed. If we just work out a compromise. I have been talking to Mike Block, Vic Wells and the people at MAAC. I have been asked not to disclose some matters of those conversations. But I can tell you that this election will be of interest to many people.

A lot has happened in the last 6 days. Last Thursday morning when I got up for work, the thought of being zone director never crossed my mind.. By the end of the day things had started to move along. And by Sunday I had submitted my nomination form to MAAC. Very busy few days… a lot of phone calls.

So now, here I am. And I need your help. If I am to be successful in winning the election, we as a group need to get the votes. And we need to be at the meeting with those votes… some how. I am not sure yet how it will be handled ... but that too is in discussion..

At this time there are 701 voting members of Zone E. So we have a lot of work ahead of us. The ultimate goal would be to get 51 percent of those people. Out of those 701 members, half of them will likely not vote. So that leaves us with 350 and 51 percent of 350 is only about 155. This is not an unreasonable goal. I would personally like to see 200 of those votes. At this time I have 5 proxy votes plus my own. That leaves 194 more votes to go.

Regards
Jeff Grainger
jeffgrain@gmail.com

FROM CLUB TO MEMBERS

WINGS PROGRAM

We'd like to thank Barry Parkinson for taking on the role of BRCM Wings Coordinator. Barry has been flying for several years and has been an instructor for the last two years. Those of you who know Barry know that he is a very good RC Pilot. Tim Bidwell who held this position for the past few years has had to pass the baton to Barry due to his work commitments. However we're very pleased that Tim has agreed to stay on as an instructor to continue to support this great program.

The Wings Program is extremely important to all of us as members. It not only helps new members learn to fly, but probably even more important at this time, it provides new members with the rules and safety protocols that we must all follow. Failure to do so risks the loss of our flying field.

IT IS ABSOLUTELY IMPERATIVE THAT EVERY MEMBER SUPPORT THE WINGS PROGRAM AND INSIST THAT ALL NEW FLYERS TO OUR CLUB COMPLETE THE PROGRAM AS REQUIRED. WE, AS MEMBERS MUST ALL INSIST UPON THIS. REMEMBER "WE STAND ALONE TOGETHER".

SAFETY CONCERN:

We are now back to flying this year, the first flight on each and every aircraft will be our maiden flight for that aircraft.

Make sure that you check all aspects of the aircraft but in particular:

- All control surfaces
- Fail Safe settings and operational status

SAFETY IS EVERYONE'S RESPONSIBILITY

Mike Block the club President owns and manages his own business, a time and resource intensive endeavour under the best of conditions. He has recently brokered a deal with the city of Burlington to allow us to fly at the Bayview field while negotiating with MAAC regarding the Bronte Field.

This permission to fly at the Bayview Field, WHICH BENEFITS ALL MEMBERS OF THE CLUB, came with a few easy to follow and very reasonable, in my opinion, temporary rules. These rules were circulated via an email distributed by Trevor Brum. If you did not get them contact Trevor at treasurer@brcm.org for a copy.

It is absolutely essential that we all, as responsible members of both the club and society, follow these rules. Failure to do so jeopardizes both short and long term use of the field for all. Failure to follow the rules IS NOT AN OPTION.

Club member in action that personifies what our club is known for: following safety rules and helping a fellow member (in this case by helping to set up a new transmitter.

What's Happenin' at BRCM

EVERYTHING IS ON HOLD PER COVID 19 PROTOCOLS

NOTIFICATIONS REGARDING ANY CHANGES WILL BE COMMUNICATED VIA EMAIL MESSAGES TO THOSE ON THE CLUB EMAIL DISTRIBUTION LIST.

Please send your comments, pictures and articles to: skywords@brcm.org

To make it easier for members to submit information regarding The Focus and Show N' Tell Project section forms have been created. These forms will be modified per your requests as we all get more experience in using them. There are currently 2 forms and each should allow you to upload pictures:

- Member Information Request Form
- Project Information Request Form

These forms can be found at the website:

https://form.jotform.com/201305678922052

I am attempting to give this site a more acceptable name and perhaps allow access from the club website. You will be advised when this is done.

NOTE: THE FORMS ARE WORKING VERY WELL AS DESIGNED AND TESTED

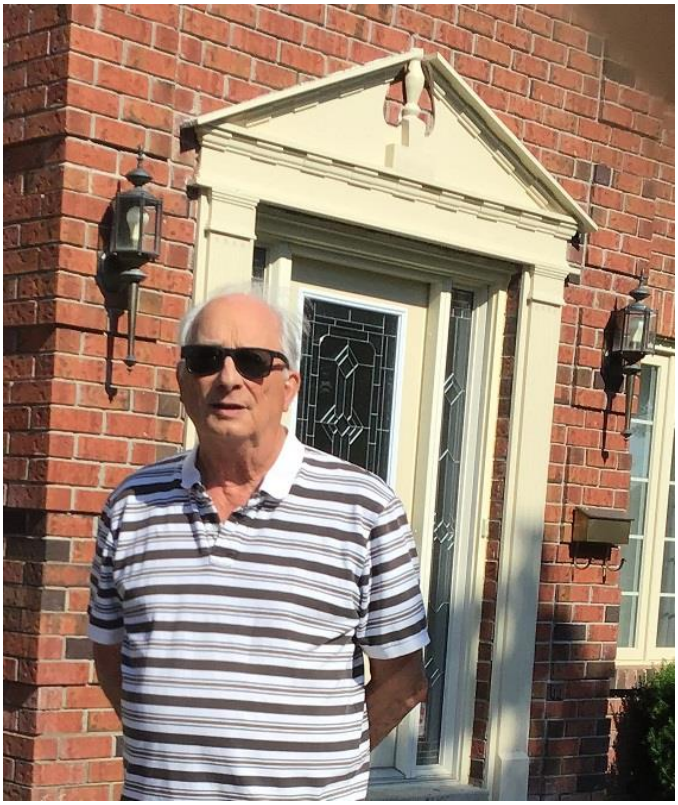
THE FORM SITE IS NOW FULLY OPERATIONAL

CLUB ELECTRONIC SITES

Club Website: www.brcm.org

Facebook Page (note: I am not all that familiar with FaceBook) To access the club page I do the following. If there is a more efficient means please let me know.

1. GO TO: www.facebook.ca
2. LOGIN IF NECESSARY
3. Select GROUPS on side bar
4. Search for: BRCM Club



Today's club FOCUS member is **Tony Madge**. Tony joined the club in 2011 although he started to fly in 1976. His father worked for an International Company so he lived in several locations while growing up. These included Toronto, Edinburgh, New Jersey and Connecticut.

His childhood hobbies included models, camping, horses, and biking.

Because he last lived in the United States, he enlisted in the United States Air Force and served as an Aerospace Medical Technician – Flight Surgeons Office from 1966 – 1970. In this capacity he was stationed at Travis AFB, California: Chin Cuan Kang AFB, Taiwan, and Ent AFB-Peterson Field, Colorado Springs. He has told me a number of stories related to his time in the service.

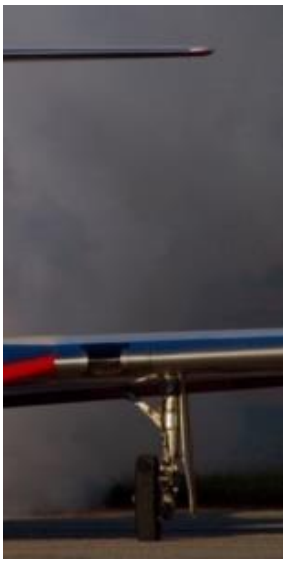
He has had the opportunity of flying on the C-141 Starlifter, C-130 Hercules, KC-135 Stratotanker, C97, H-19 and various other aircraft that were a part of the USAF fleet.

Tony was instrumental in getting me involved in BRCM (I trust you will not hold this against him) as he has been my neighbour for the past 35 years.

Make sure that you introduce yourself to Tony if you see him at the field.

AVIATION History

CLUE #1



CLUE #2

CT-114 Tutor

Snowbirds flying the Canadair Tutor c. 2005

Role	Trainer, Ground-attack aircraft
National origin	Canada
Manufacturer	Canadair
First flight	13 January 1960
Retired	2000 as a trainer (Canadian Forces)
Status	Small numbers currently in flying condition for testing and aerobatic demonstration
Primary users	Canadian Forces Royal Canadian Air Force Royal Malaysian Air Force
Produced	1963–1966
Number built	212

Show 'N Tell

We're Flying Again


83
BANGLADESH BIMAN BAHINI


NO START OR
TAXIING
IN THIS AREA
CF-VNJ
EMPIRE
N7020L

It's like deja vue all over again

FROM FEBRUARY 2005 ISSUE

Yogi Berra

Does Your Electric Flyer Really Suck?

This from Bill Montgomery

A Low Cost High Current Meter

This article describes an easy to construct external high current shunt that can be used to measure motor currents in excess of 50 Amps using a common digital multi- meter.

We all know that what keeps your electric powered plane in the air is power, but how do you determine just what power is being used by the motor? Input power to an electric motor is simply the voltage that appears on the motor terminals (in Volts), times the current passing through the motor (in Amps). Small speed 400 motors might be powered by a 9.6 volt (8 cell) ni-cad pack and typically could draw around 10 amps. So, if we multiply 9.6 Volts X 10 Amps we end up with 96 watts going 'into' the motor. Now, most cheap 'can' motors are not all that efficient so perhaps only 60% of that input power actually ends up spinning the prop. The remaining 40% is lost as heat or magnetic field losses. As a rule of thumb, electric planes require about 50 watts of power for every pound that the plane weighs to stay in the air. For a bit of extra 'acrobatic power' most designers shoot for closer to 75 watts per pound of airframe.

So say you just came home from your LHS with you Jet-O 'Little Gem' electric aircraft, you solder up the motor and speed controller, throw in the radio gear, drop in the battery and hurl the beast into the air. Rather that heading for the clouds as anticipated the Jet-O slowly loses altitude and eventually 'lands'. What went wrong? At this point it is pretty evident that you didn't have enough power but how can you fix that? Well, if you recall our 'power' formula, power is Voltage times Amperage. So, one possibility might be that you just don't have enough voltage to give you the required power. If you are running on a 7 cell battery pack (8.4 volts) you could always swap in an 8 cell pack (9.6 volts). This will give us about 14% more input power to the motor which just might keep us in the air. If we still don't have sufficient power we can look at ways to increase the current that the motor will draw. One way to increase the current would be to use a motor rated for a lower voltage. Lower voltage motors tend to have fewer turns of wire on their armatures and will draw more current, resulting in more input power. It is quite common to find direct drive 'speed 400' planes running with 9.6 volt batteries but using 6 volt can motors. Another method for increasing the Amperage that the motor draws is to increase the prop load (either pitch or diameter).

Now while all of the preceding methods will allow you to increase the power your motor produces you can go too far and force the motor to dissipate more power than it can handle. This can result in either greatly shortened motor life or complete motor failure.

The solution is to be able to measure just how much power is actually going into the motor. Voltage is easy – just connect your handy DMM (digital multi meter) across the motor terminals and record the reading. Current on the other hand is typically higher than most DMMs can handle (most top out at 10 Amps). By using the external high current shunt you will be able to use the same DMM to measure motor current well up into the 10's of Amps.

The theory behind the current shunt is strictly ohms law. As you will recall from High School physics when a current passes through a resistor there will be a voltage drop across the resistor proportional to the current. We will use a 12 inch length of #10 AWG wire as our resistor and since it has a resistance of exactly 1 ohm per 1000' we will end up with a fairly accurate .001 ohm resistor. When we pass 1 Amp through the wire a voltage of .001 (or 1 millivolt) will appear between ends of the wire. Since it is a linear device the voltage in millivolts will directly represent the current passing through the wire in Amps. Most common DMMs will read down to millivolts with reasonable accuracy.

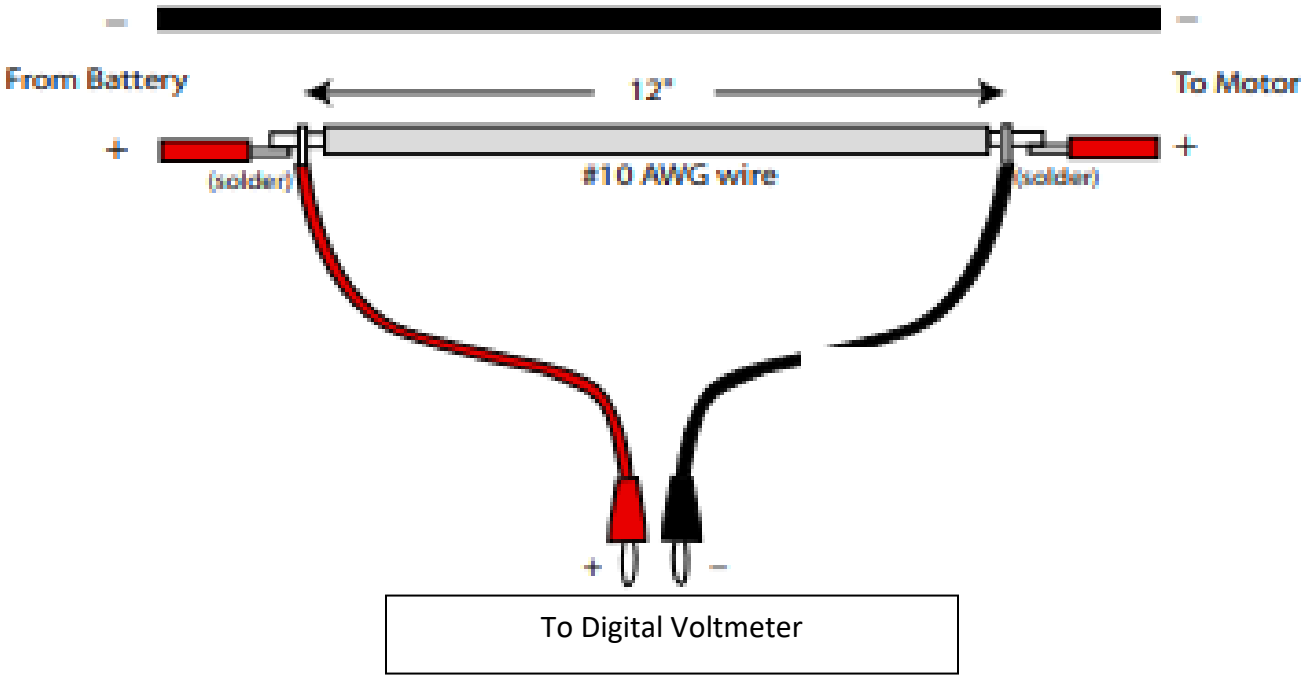
Parts List

- (1X) 12.5 inch length of #10 AWG wire
- (2X) banana plugs (red & black)
- (2X) 8 inch (or more) length of heavy gauge wire as used to wire to your battery pack and motor. (red and black)
- (2X) 6 inch (or more) light gauge wire to go to voltmeter (red and black)

Construction

- Start by cutting a 12.5” length of #10 AWG wire.
- Remove about 1/2” of insulation from each end.
- Solder the red small gauge wire (to go to the + DMM terminal) to one end of the #10 wire about 1/4” from the end of the wire. Repeat with the small gauge black wire on the opposite end of the wire. Try to position these wires exactly 12” apart on the #10 wire.
- Since the #10 wire resistor is to go in series with the motor, make up a set of heavy gauge wires (similar to the wire you use already on the motor) with connectors that will mate with you existing motor connectors. The #10 wire may be wound in a number of loops to make it more compact and then should be soldered in series with the positive wire of the heavy wires. (see diagram).

Simple Current Shunt



Use

Plug the two banana plugs into your DMM and connect the shunt into your motor circuit. Run up the motor and observe the voltage on the DMM. The current going to the motor will read out in millivolts (e.g.10 mv=10 Amps, 20 mv=20 Amps)

NOTE: Following this article in the February 2005 issue is another article by the same author dealing with the construction of a **Winter Block Heater.**

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Swap Shop/Flea Market

FROM THE BOARD