



# TASK



Volume 34 Issue 2

## Spring 2018

Web page: [www.soggi.ca](http://www.soggi.ca)

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### From the Editor...

Finally! Spring! And a Spring edition of TASK! The flying season unofficially began Monday, May 7, when I went to the field, called in the NOTAM, and flew a powered glider and my Sport Cub. According to some members of the executive, since I was being a responsible flyer, I didn't one-hand the radio to capture pictures of my planes in the air, it didn't happen. They claim flying season officially began Tuesday, May 8 when they showed up at the field to do some flying. Which we did, and had a splendid day of it (Lyle has pictures as proof, this time).

So it's flying season! Get out there and get some stick time! Assuming the weather will cooperate...



Marc Freeman

## SOGGI HLG Build Workshop – Lyle Jeakins

For the past number of years, our club has organized various workshops during the winter non flying months. This year was no different! Last fall a decision was made to organize a workshop for this Spring to build a small 24" WS, hand launch glider. Accordingly, our regular meeting hall in Rockton, Ontario was rented for Sunday, April 22, 2018.



The cost was a paltry sum of \$5 each for materials. Our club is blessed with skilled members. Two of them, Ed Smith and Marc Freeman teamed up to lead the build. Ed Smith is a retired tool & die maker and was the chief instructor for the build. He put his work experience to good use by making up a number of amazing jigs that allowed the participants to achieve consistent results. Marc Freeman supplied about 20 kits & building materials that he prepared with the help of his of laser cutter.

We had a lot of fun and made piles of sawdust just because we could! :) By noon, the majority had finished making their gliders so we took a break for lunch. After lunch, we made up a slingshot affair which will be use to launch the glider. We finished up around 2 pm., cleaned up the hall then some of us headed to a nearby community centre to try our hand at launching our creations.



What a hoot!  
Fortunately, the ground was still quite soft as we managed to lawn dart a number of them. Establishing the correct cg seemed to be critical and before long we had a number of casualties! No worries, these gliders are easily repaired.



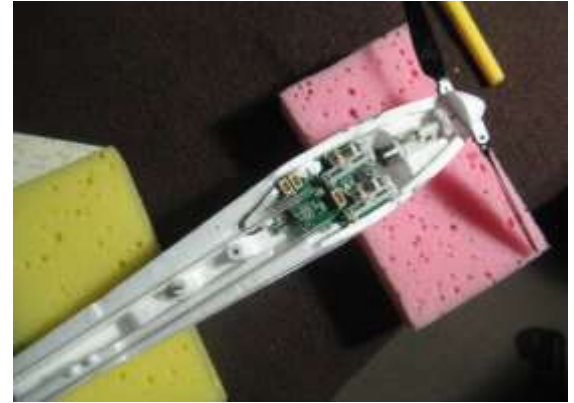
All in all, it was a very rewarding & pleasant day spent with like minded individuals.....who could ask for more?

## My Experiences with Chinese Mail Order – Terry Dawson

It all started when my little 30" UMX Radian augered in. The sun blinded me, ... really!

Anyway the elevator servo wouldn't work anymore so I looked for a replacement. These little Micro Planes use all-in-one Bricks for radios. The Linear Servos are really Jack-Screws mounted on the Receiver board. They work hard and are not likely to last forever, so more replacements would be needed in the future.

I bought two Hobby King bricks at \$23 each. Neither of them worked. Since all this electronic stuff is made in China I reasoned that replacements were just as likely to fail as the originals. Perhaps more alternatives should be sought. So began an experience with mail-order suppliers which continues to this day. Here are some notes on that experience.



*The UMX Radian opened up. Two linear servos are up front.*

### Hobby King ([www.hobbyking.com](http://www.hobbyking.com))

They list these bricks as “Supermicro”. The product list is varied, and prices are good but will vary. CAD\$ are not offered. The brick's current price is \$21.90US and the postage at US\$3.98 is reasonable.

Note the “Out of Stock” label. This can be genuine. It can also mean “hold all sales... these things are coming back”. In this case I believe the latter might be true. There is anecdotal evidence on forums (eg RCGroups) that their Customer Service can be difficult. There is also contrary evidence. Perhaps we should call it spotty.



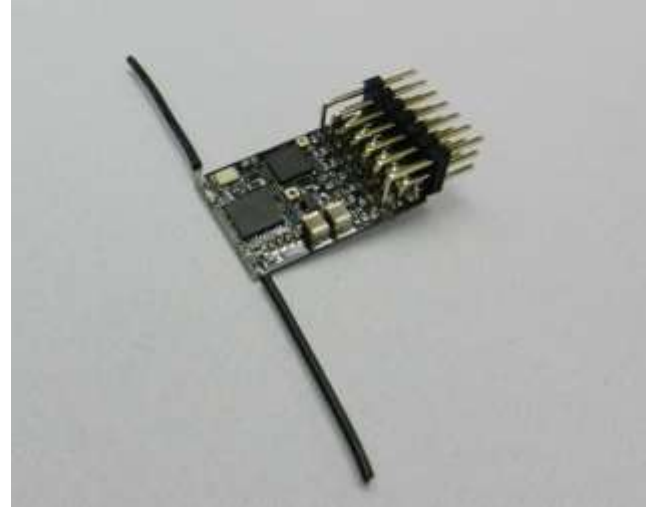
*Current Hobby King page for their brick.*

Manuals are non-existent. These bricks are what's called “stick programmed”. To put the rudder on the right stick, for example, requires a set of stick movements in programming mode. These are only available from third parties, not Hobby King. Mine came from a dealer in Australia.

**Lemon RX ([www.lemon-rx.com](http://www.lemon-rx.com))**

This company offered 5 receivers for \$26US and 5, 8.1g Servos for \$24US. Postage was \$6US. The order totalled \$75CAD. I felt this was good value for the money and placed an order which came in 15 days.

Their product line is limited to radios, servos, and a few motors. Manuals are obtained on RCGroups and are excellent. Customer Service is great. When people asked for receivers with soldering pads instead of pins, Lemon complied in a week. Their forum on RCGroups is up to 783 postings and they have a huge following.



*Receiver, Lemon DSM2 6-channel Featherlite End-Pin.*

**Banggood ([www.banggood.com](http://www.banggood.com))**

These people are my biggest suppliers. They have supplied radios, bricks, servos, scales, tools, magnets, Guitar Tuners, a microscope, Loupes, and all manner of Arduino stuff. Postage is mostly free. Delivery is usually 21 days, although many have taken just 14. In one isolated case, micro servos took 85 days.

-Each listing carries an ID number. This makes ordering much easier. After searching out my shopping list, I save the pages. The product pictures, by the way, are quite exhaustive. When ordering, one can search on the ID number. The page comes up and the item added to the cart. Banggood can list in CAD\$ and designate shipping to Canada. Paypal is accepted as well as many other options.

I feel that adding insurance and tracking is a good idea. The cost is trivial and it seems to speed delivery.

Once you are signed up with them, they are very aggressive with their advertising with email promotions sent out almost on a daily basis. Clicking on an item takes you directly to its product page. I enjoy checking out their offerings. Of course you can decline the emails if you so desire.

The products are not always compatible. One radio I ordered didn't accept any servos they sell. Nor did they sell the plugs that would fit. Many, but not all items have manuals, and comments good and bad are freely listed.

The catalog is truly vast. Their magnets listing, for example, lists 812 items. Tools are first rate. I bought some tweezers (Swiss made) for \$6 which are the best and strongest I have ever had. Laser

Cutters and 3D Printers look attractive with accessories to extend them and parts to replace. Strangely, their RC planes are not so cheap nor is the list extensive.

Arduino Nano boards (for my telemetry project) are listed for around \$4. I have searched the retail stores around our area. There is nothing less than \$40 for sale. That seems overpriced as Arduinos are Public Domain!

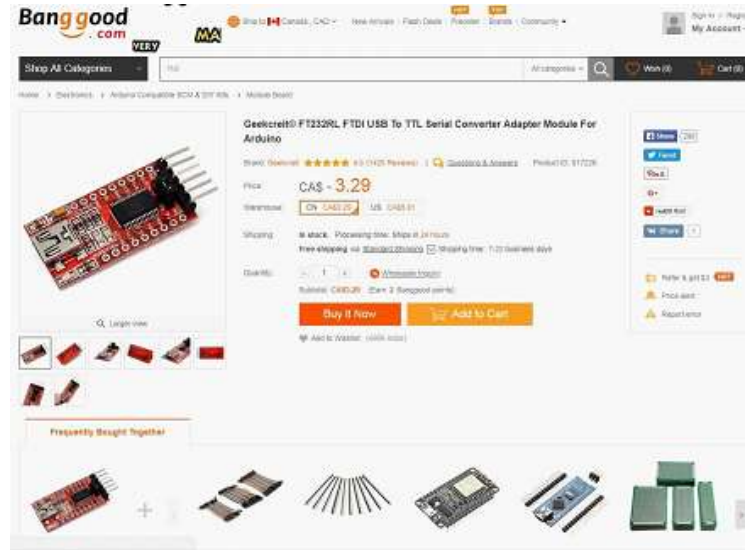
With these low prices from China, one can order something entirely on spec. A recent example: an Adapter Module for Arduinos? I had no idea what that was but for \$3 I will find out!

### Aliexpress (www.aliexpress.com)

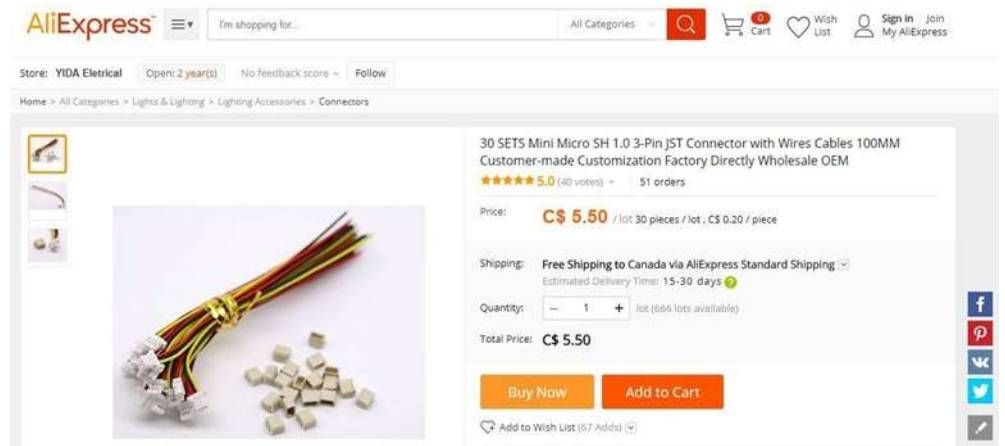
Aliexpress is a near cousin of Banggood's from China. Their pages are suspiciously alike. Different suppliers retain their identities, though. Sometimes you see the same thing listed for two different prices. Prices are good although the product line is not so vast. The plugs I couldn't get from Banggood, I could get from Aliexpress. Postage is not always free, but one can choose another item where it is free. Strange?

You will notice there is no product ID. To counter this, I leisurely search the items I want, and leave their pages open on the screen. When ready to order, I punch them up one at a time to add to the cart.

-They don't offer Paypal for some reason. They do offer the usual credit card options. I don't have any experience with deliveries as my first order was only 2 weeks ago.



*A typical Banggood listing, this one for an adapter module for Arduinos*



*A typical page from Aliexpress which also shows the plugs I couldn't get from Banggood.*

## Other comments

I would freely recommend Banggood, Aliexpress, and Lemon. I would not recommend Hobby King. I have ordered items from US suppliers but postage rates can sometimes kill the deal. European firms have some staggering shipping costs. One supplier from the UK offered a telemetry unit for \$20 which wasn't bad; but the postage was \$92. Instead I bought a Chinese version for \$8.

Notice all the items are small. At no time have Customs demanded money. They might if the value was big enough so we should check such things out carefully.

In the longer term, the low price of Chinese goods cannot last. Their rising standard of living must eventually drive up prices. Free postage will only last until the authorities discover it is a one way market. Then that too will rise. Maybe Africa will be next. Who knows! I would prefer to patronize the local hobby shops and do so quite often. Items such as Planes, Transmitters, batteries, and building materials are better bought here. For other things though, multiple levels of distribution drive the prices up sky high. Too high to ignore. Why not get them direct from the Chinese?

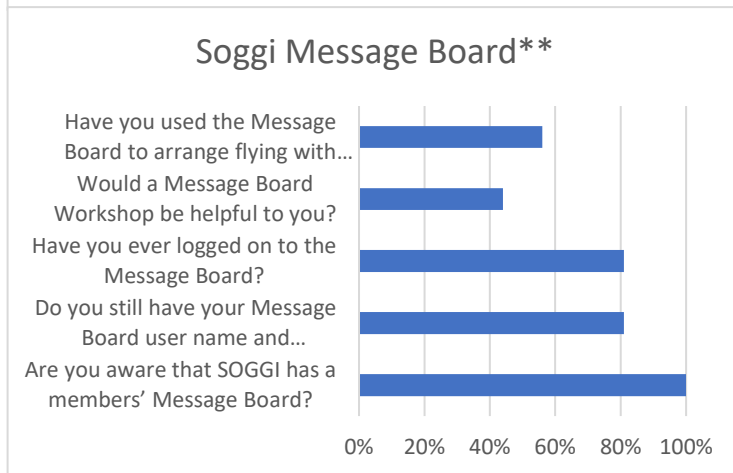
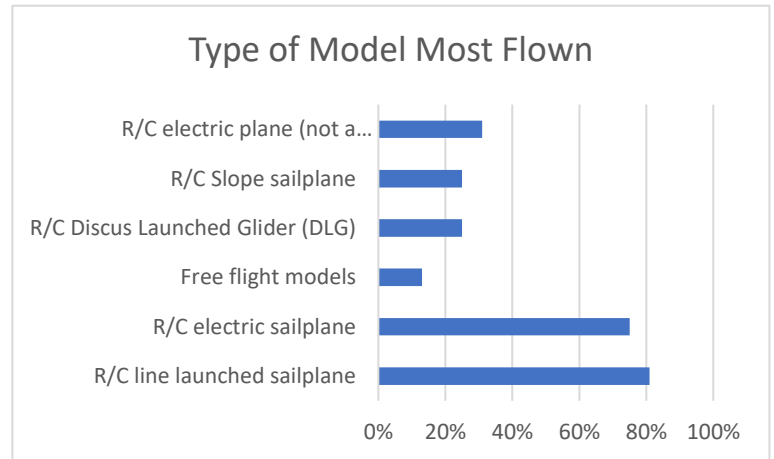
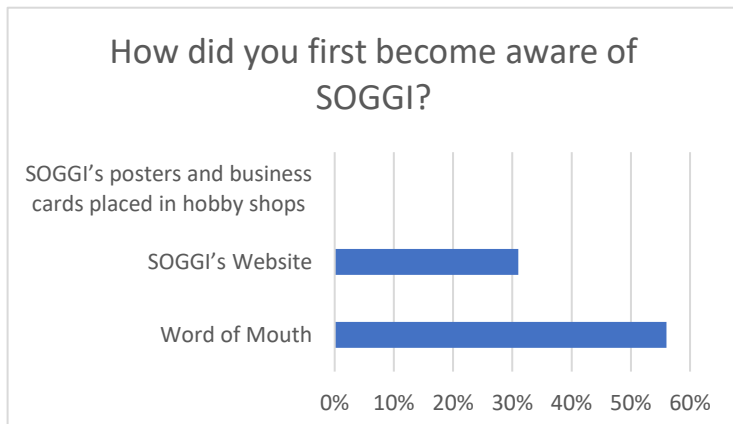
## SOGGI's February 2018 Survey Results - Compiled by Andy Meysner

In late 2017 the Executive pondered the fact that only approximately 33% of our membership come out to fly at the fields. To try and understand whether we could improve on this we decided to conduct a survey. At the same time we took the opportunity to find out what other activities or help members would like the Club to provide.

Sixteen members responded to the survey and the Club appreciates and thanks those that did. However, those that responded were primarily the members that we do see regularly at the field. So we did not achieve our primary objective of understanding whether there is more we can do to encourage people coming out to fly. We did however gain some ideas of other activities that members would appreciate.

The results are shown below followed by other initiatives gained from the survey that we intend to follow up on. The survey did indicate that:

- The average membership term was 12 years.
- Word of mouth and the website are how most respondents found out about SOGGI.
- As expected most respondents fly a line launch or electric sailplane.
- Most respondents can use the message board, and a workshop would be helpful to some.
- The vast majority are able to activate the NOTAM at the Hwy 6 field.



*\*where numbers should add to 100% but do not, is because not all questions were answered.*

*\*\* We will get in touch with those members who we know no longer have their message board user name or password.*

The Executive have discussed other ideas provided in the survey. As a result, the Club will follow up on the following activities starting in the Fall of 2018.

- We will try and arrange a message board workshop. This will likely require a member to provide a computer that has mobile internet access.
- Before and at each general meeting we will ask whether any member(s) need help or assistance with any aspect of our hobby. We will then arrange at the next meeting, a future meeting, or at a specific workshop, to provide that assistance.
- Some members will be gathering for coffee meetings during the off season, for anyone who wishes to participate.
- We will hold a SOGGI swap meet in the morning before a general meeting in early Fall. This did not result directly from the survey, but credit to Lyle for suggesting it.

A BBQ at the field was also suggested and the Sailplane Fun Fly on July 21 will include a BBQ.

Please do not hesitate to let us know if there is anything else you would like the Club to consider.



## Adventures in Laser Cutting: Part 2 – Marc Freeman

Whether you choose a CO<sub>2</sub> or LED laser, there is a large, helpful internet community available to help you sort out your machine. And should you feel you don't want to invest the time or money in a machine of your own, many commercial shops now offer laser cutting at reasonable rates for small or one-of jobs. Next issue I'll go into more detail about my choice of an LED laser cutter, and what was involved in getting it assembled and working satisfactorily.

### Taking The Plunge

I'd done quite a lot of reading on the interweb about the pros and cons of various laser cutters, and had decided that for my budget, one of the Eleksmaker LED open-frame laser engravers was the best place to start. I had a few considerations when I chose this, but first and foremost was budget. I didn't have several thousand dollars to spend on a "hobby" version of a commercial CO<sub>2</sub> laser system. There are cheap CO<sub>2</sub> Chinese units appearing on EBay for ~\$400 USD, but these have a small bed (more on this in a moment), and further reading found they were of questionable build quality and reliability. So for the under \$500 budget I was working with, the LED machines were my best choice. Second, I wanted to be able to cut leading and trailing edges, fuselage sides and large formers – ultimately I'd want to be able to cut 36" stock. Although the largest Eleksmaker kits at the time had a 30cm x 40cm bed, because they used standard aluminum extrusions for the frame, I would be able to expand the length and width of the frame at a later time. Thirdly, I applied the 95% rule – that is, what would I be cutting 95% of the time? For me, since I want to build some classic free flight designs, it would be balsa, less than 1/8 thick. Based on my reading, a 2W or 2.5W LED would fit the bill.

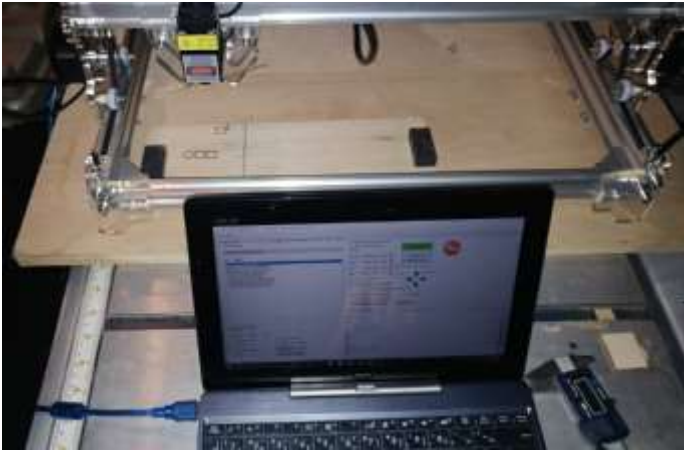
There's a range of suppliers in China from which to purchase these machines, either the main manufacturer (Eleksmaker), or any of the Chinese internet retail sites (AliExpress, Banggood, GearBest, etc). Based on the experience of people I'd talked to, I went with Banggood, and chose a 2.5W A3 (30cm x 40cm work area) kit. About \$300 and 3 weeks later, a package arrived via courier, and I was ready to start!

I knew from my reading that this wasn't going to be a plug-and-play enterprise, that there would be some setup and tweaking required to get things working reliably, but I was surprised how easy it was to start and begin getting reasonable results. While there were instructions packaged with the kit, I relied on several YouTube videos to help put the machine together. This largely consisted of assembling the various components in the correct order. The kit consists of aluminum extrusions which make up the frame and gantry that the laser is suspended on, and laser-cut acrylic pieces that support the gantry and laser. Stepper motors and belts move the gantry along the main frame, and the laser carriage across the gantry. Assembly largely consists of fixing the components together with socket cap screws and T-nuts or nuts. The kit included all the needed wrenches, but if you have a



*One laser cutter, ready to assemble!*

ratcheting driver with replaceable bits, you'll find it's much faster than twiddling Allen-wrenches. Initial assembly took less than an hour, but tweaking the belt tensions, squaring up the frame and gantry took (over the course of a few days) a few more hours.



*Making smoke for the first time!*

One of the things I noticed early on was that the machine wouldn't cut straight lines in a certain direction. This turned out to be the result of two things, one – out of round wheels, and two – too much play in the carriage on the gantry. I wound up ordering higher-quality wheels, and had to modify the bolt holes in the acrylic sheets to allow for a better tension adjustment. If I weren't so cheap, you can get eccentric nuts, which have an offset hole and allow you to adjust how snug the wheels are to the rails. I have since extended the bed by adding 1m side rails, so now I'm able to cut 36" stock, and in it's current configuration, I can cut hard balsa, basswood and craft plywood up to 1/8" thick.

Next installment I'll discuss how to get from the printed plan to actual parts.

The laser engraver is driven by an Arduino-clone micro controller. It connects to your computer via a USB cable. The controller requires you to install software drivers particular to your operating system and controller, but are generally fairly easy to install. You may need to program the controller with its own operating system, which in the world of these Arduino-driven engravers/cutters is called Grbl. This is an open-source software system for anything that moves, and has been embraced by the DIY CNC crowd.



*Less-than-straight cuts due to wobbly wheels.*

## SOGGI's 2018 Contest Schedule – Lyle Jeakins

Following the summary of our successful 2017 contest season, here's the dates for 2018!

<b>Date</b>	<b>Type</b>	<b>Contest Director</b>
June 2/18	LSF	Andy Meysner
June 16/18	LSF	Bob Hammett
July 14/18	LSF	Dick Colley
July 21/18	Open Fun Fly	Adam Maas
July 28/18	LSF	Ann Tekatch
August 11/18	LSF	Adam Maas
August 18/18	Open F3-RES	Ray Munro
August 25/18	LSF	Ann Tekatch
September 8/18	LSF	Bob Hammett
September 22/18	Open ALES	Andy Meysner
October 6/18	LSF	Dick Colley
October 20/18	LSF	Mike Sherlaw

## What's On the Bench?

Well, since I haven't heard from anyone else, I guess it's up to me to share my (limited) progress on the Jasco Floater. Since the last issue, I've managed to put the tail feathers together, and make progress on the fuse and boom. The fuselage went together with lots of cutting and cussing, for while the parts initially looked good, they aren't exactly as precise as had thought. The balsa parts all jibe with the plan, but the 1/16" ply bits seem to have been cut with some Tennessee windage... lots of sanding and trimming required. The boom is made up of scarfed 1/4" spruce booms top and bottom, laminated with the 1/16" sides. The horizontal stab is held in with elastics, and I'm going to use nylon pinned hinges for the control surfaces. I've covered the stab with Doculam, a PET laminating film. It doesn't shrink as much as other coverings, but is incredibly durable, and takes paint well. I intend to cover the wing with this as well.



## SOGGI's Website

SOGGI was one of the earliest MAAC clubs to have a website. Our website has been continuously improved through the years, and now serves many purposes. Here are a few:

- Promotes the experience of radio-controlled soaring, using words and images
- Provides the club's contact information
- Describes SOGGI's member-based organization
- Invites new members and explains benefits and responsibilities of membership
- Educates our membership concerning SOGGI's relations with external parties:
  - The Model Aeronautics Association of Canada (MAAC)
  - Owners of our flying sites
  - Sod Farm operators and the Hamilton Conservation Authority
  - Residential neighbours
  - Air-space regulators
- Supports members who are planning flying sessions, by providing:
  - A local 3 day hourly weather forecast, updated several times per day
  - A Message Board\* to invite other members to come flying; SOGGI has no fixed schedule for casual flying. Flying Sessions may occur several times per week. Plans are usually based on the 3 day weather forecast.
- Promotes Flying-Field Safety by providing links to:
  - the current version of SOGGI's Flying Field Guidelines
  - Safety documents originated by MAAC
- Provides a Calendar of scheduled Events
  - Membership and Executive Meetings
  - Special club flying events
  - Winter workshops, and technical tours
- Houses a historical archive of photographs, aircraft designs and helpful tips originated by our members
- Provides a "Buy and Sell" marketplace (on the Message Board\*)

\*Our message Board is publicly viewable, but you must be a SOGGI member to post messages on it. At their own discretion, members may also post messages on behalf of non-members. **For posting messages on our Message Board**, Members will first need their own Username and Password, which are normally provided as a part of SOGGI's New Member's Package. **Please do not lose or share your Message Board identity.**

Questions concerning the website or its' Message Board should be addressed to our Web-master Tom Crawford (905-662-3991, tomcr50@hotmail.com).

**2017 SOGGI Executive**

President	Andy Meysner	(905) 601-4228
Vice-president	Mike Sherlaw	(519) 752-1334
Treasurer	Anne Tekatch	
Secretary	Terry Dawson	(905) 318-4279
Contest Organizer	Lyle Jeakins	(905) 575-4115
Newsletter Editor	Marc Freeman	(905) 962-4113

**2017-18 Calendar of Events**

- Flyin' Season!