



THE INVERTED FLYER

NEWS of the BOULDER AEROMODELING SOCIETY
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March 2012 Edition

Ken Miller Editor #44

Chandler Field Pilots:

For several years I've stayed in touch with guys I've met while slope soaring in western Colorado, Utah, Kansas and here in the front range on RC Groups. It's a great way to stay in touch, discuss the hobby, buy and sell stuff, and even give up to the minute wind conditions reports from the slope (via smart phone), temping guys to come-on-out and join in the fun.

I have found this so useful (and fun) that I've created a thread on RC Groups for our Chandler Field and the folks who are flying there. It's intended to be a place to stay in touch with other pilots. On the thread you can...

... Announce your intention to going out to fly

... Give current weather updates at the field (using smart phones)

... Post pictures

... Upload comments

... Sell stuff

.. And use this forum thread to stay in touch about who's flying and what's happening at the field.

To read or post on the forum you'll no doubt need to register if you're not already an RCGroups user. There's no cost, and my experience is RC Groups doesn't spam. The forum is found at:

<http://www.rcgroups.com/forums/showthread.php?t=1604751>

Bookmark that.

Once on the forum, if you'd like automatic updates (I receive automatic updates), click on "Thread Tools" in the blue bar between the banner at the top, and the forum text, click "Subscribe to Forum", and decide if you want immediate updates, etc.

Give it a try. You might even enjoy joining in!

Questions? Send me a PM (personal message) on the forum by clicking on that little envelope under my name on the left or send me an email at: greghine-at-gmail-dot-com.

I look forward to seeing you at the field, and reading about it on the forum!

Greg Hine

BAS MEETING MINUTES February 8th, 2012

PRESIDENT— David Goodnow called the meeting to order at 6:30 pm with 20 members present. Motion made by David with a second by Augie Bruno to accept last months meeting minutes as they appeared in the last newsletter. Motion voted and passed.

TREASURE REPORT-- Treasure Dean Ehn gave a detailed report of the clubs finances. A discussion followed Deans report on the clubs membership dues. No action was taken.

1ST VICE PRESIDENTS REPORT- 1st Vice President Augie Bruno reported the club has 4 new members Ben Boyer, Joseph Boyer, Elijah Boyer and Rich Jenke. This brings the club total to 71 members of which 21 are also float fly members.

2ND VICE PRESIDENT REPORT--2ND Vice President Joe Sherran reported on the solar power charging station. Motion by David Goodnow with a second by Tony Kilwein that the solar power station be installed. Motion voted and passed. Joe and Tony will be working on the charging station and it should be in operation by this Summer. Joe stated no new safety problems at the field.

OLD BUSINESS-- David reported the new combination lock has to have the tumblers rotated off of the correct combination numbers of the lock or it will not be secure when you close it. He stated some vandals went thru the gate and drove a vehicle through the snow just about everywhere on the field. We will not know the extent of the damage if any until snow melts. Augie will send a email on the operation of the combination lock.

NEW BUSINESS--Greg Hine sent an email to the club asking if the club would like to open a thread on RCGroups.com It is a means of communication with other clubs and RC Flyers in our area of our activities. Motion by Ken Miller with a second by Joe Sherran for Greg to open a thread for our club. Motion voted and passed. Augie gave a report on the new FAA rules and thanked members who sent emails seeking to help our hobby with the new rules in the future. The drawing for the \$20 gift certificate this time went to lucky Al Coelho. Motion by Jerry Depoorter with a second by Joe Sherran to adjourn. Motion voted and passed.

Respectfully submitted Rudy Glick.

<p>Members, March 2012 Birthdays</p> <p>Jim Ewing</p> <p>Gerald DePoorter</p> <p>John Mack</p> <p>Steven Engelking</p> <p>Neil Huebner</p> <p>David McClintock</p> <p>Michael Farnsworth</p>	<p>A new feature has been added to our Club meetings at HobbyTown. A \$20 gift certificate for HobbyTown will be provided to one lucky attendee at the up coming meeting Wednesday March 14th at 6:30 PM.</p>
<p>BAS Meeting, March 14th 6:30 PM at Hobby Town USA</p>	<p><u>Wing Loading - oz/sq. ft.</u></p> <p>Park flyer, basic trainer _____ 5-10</p> <p>Faster sport, Sunday flier _____ 10-15</p> <p>Larger trainer, sport aerobat _____ 15-20</p> <p>Fast sport w/plenty power _____ 20-25</p> <p>Scale, large multi-engine _____ 25-35</p> <p>See Web Page for Event Listings www.boulderaero.org</p>

How to Calculate the Wing Loading of a Flying Model Aircraft

The wing loading of an aircraft is the measure of weight carried by each given unit of area. For model aircraft, wing loading is expressed as ounces per square foot. Experience with different models will make this figure more meaningful to you.

Why Wing Loading is Important

- Wing loading is the only indicator of how "heavy" an aircraft is. The actual weight of an aircraft is meaningless.
A 50 lb model having as many square feet of wing area is a lightweight. A 6 lb model having 2 square feet of wing is very heavy and will fly like a sledgehammer (or maybe not quite that well).
- The lighter the wing loading, the slower the aircraft can take-off, fly and land. It will also have a better climb.
- A larger model can have a higher wing loading and fly comparably to a smaller aircraft having a lower wing loading due to differences in the aerodynamics of different size aircraft.
For example, let's say we have two aircraft that are absolutely identical except for physical size. The smaller model has a 36" wing span while the larger aircraft has a 108" wing span. The smaller model may have a wing loading of 8 oz. and the larger aircraft may have a wing loading of 35 oz. Both of these aircraft may perform nearly identically at substantially different wing loadings due to the difference in size.

How to Calculate Wing Loading

In this example, we will use an aircraft weighing 5-1/2 lbs (5 lbs 8 oz.) with 600 square inches of wing area. Calculating the wing loading requires that the wing area be converted to square feet (ft²) and pounds to ounces.

- 1) Convert the area to square feet. There are 144 (12 x 12) square inches in a square foot.

$$600 \text{ in}^2 \div 144 = 4.17 \text{ ft}^2$$

- 2) Convert the total empty weight (ready-to-fly with no fuel) to ounces. There are 16 ounces in a pound.

$$5.5 \text{ lbs} \times 16 = 88 \text{ oz.}$$

- 3) Divide the weight by the area:

$$88 \text{ oz.} \div 4.17 \text{ ft}^2 = 21.1 \text{ oz./ft}^2$$

Using round numbers, this gives the aircraft a wing-loading of 21 oz./ft² or
You can perform the entire calculation in one shot using simple substitution:

$$(\text{Weight} \times 2304) \div \text{Wing Area}$$

Where weight is in pounds and wing area is in square inches

Plugging the numbers from this example into the above formula gives us this:

$$(5.5 \times 2304) \div 600 = 21.1 \text{ oz./ft}^2$$

Here is the easy way. Link to a Wing Loading Calculator.

<http://www.flyrc.com/tools/calculator.html>