

BEND AERO MODELERS



FLIGHT REPORT

MAY 2013

"I'll Never Get That Crash Trophy"



Well, at least that's what we heard was said on Friday night April 19. On Saturday morning, April 20, when we started to arrive at the field we heard stories about the prior night's flying and what had happened.

Dave Lawler is a long time member of BAM and an excellent pilot so this is somewhat unusual. For more on this and pictures see the obituary page in this newsletter.

NEXT MEETING

May 21, 2013

6:30 pm at Jake's Diner

Food available
come early to visit and eat.



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FLIGHT REPORT Editor

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The Calendar Has Been Revised. Please Double Check The Dates So You Are Aware of The Changes!

Bend Aero Modelers - 2013 Event Calendar

Club Meeting	Practice Pylon Race Contest Pylon Race	BAM Renewal Deadline	Pine Nursery Park Fun-Fly	Pathway/Club House Project
National Holiday	BAM Christmas Party	Family Pylon Race Warbirds over the Meadow	Firecracker Fun-Fly	

January							
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	30	31	1	2	3	4	5
2	6	7	8	9	10	11	12
3	13	14	15	16	17	18	19
4	20	21	22	23	24	25	26
5	27	28	29	30	31		

January 1st - New Year's Day

February							
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
5						1	2
6	3	4	5	6	7	8	9
7	10	11	12	13	14	15	16
8	17	18	19	20	21	22	23
9	24	25	26	27	28		

March							
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
9						1	2
10	3	4	5	6	7	8	9
11	10	11	12	13	14	15	16
12	17	18	19	20	21	22	23
13	24/31	25	26	27	28	29	30

March 31st - Easter Day

April							
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
14		1	2	3	4	5	6
15	7	8	9	10	11	12	13
16	14	15	16	17	18	19	20
17	21	22	23	24	25	26	27
18	28	29	30				

May							
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
18				1	2	3	4
19	5	6	7	8	9	10	11
20	12	13	14	15	16	17	18
21	19	20	21	22	23	24	25
22	26	27	28	29	30	31	

May 12th - Mother's Day
May 27th - Memorial Day

June							
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
22							1
23	2	3	4	5	6	7	8
24	9	10	11	12	13	14	15
25	16	17	18	19	20	21	22
26	23/30	24	25	26	27	28	29

June 16th - Father's Day

July							
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
27		1	2	3	4	5	6
28	7	8	9	10	11	12	13
29	14	15	16	17	18	19	20
30	21	22	23	24	25	26	27
31	28	29	30	31			

July 4th - Independence Day

August							
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
31					1	2	3
32	4	5	6	7	8	9	10
33	11	12	13	14	15	16	17
34	18	19	20	21	22	23	24
35	25	26	27	28	29	30	31

September							
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
35	1	2	3	4	5	6	7
36	8	9	10	11	12	13	14
37	15	16	17	18	19	20	21
38	22	23	24	25	26	27	28
39/40	29	30					

September 2nd - Labor Day

October							
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
40			1	2	3	4	5
41	6	7	8	9	10	11	12
42	13	14	15	16	17	18	19
43	20	21	22	23	24	25	26
44	27	28	29	30	31		

November							
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
44						1	2
45	3	4	5	6	7	8	9
46	10	11	12	13	14	15	16
47	17	18	19	20	21	22	23
48	24	25	26	27	28	29	30

November 28nd - Thanksgiving Day
NOTE: Due to Thanksgiving and a conflict with the calendar of Jake's Diner, the November meeting is on a Tuesday and a week earlier.

December							
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
48	1	2	3	4	5	6	7
49	8	9	10	11	12	13	14
50	15	16	17	18	19	20	21
51	22	23	24	25	26	27	28
52	29	30	31				

December 24th - Christmas Eve
December 25th - Christmas Day
December 31st - New year's Eve

FROM THE EDITOR



by Andy Niedzwiecke



Well, a lot has happened in the last month and most of it good except for the constant wind that we have had to put up with.

Although the weather has been less than perfect, several members have made every park flying session and a large group of members have made it to the field every weekend trying to get in flights between wind gusts. Very few accidents have occurred so that is a good thing.

All of the anxious club members that are going to be racing in the Club 40 pylon races have had a chance to get their planes in the air and fine-tuned for the up-coming start of the season on May 18 at Popp's field.

The field is in decent shape although there are several projects pending that should make it even better.

On another note, your newsletter editor had a milestone birthday on April 20, one of our flying days. I was surprised by my good friend, Greg McNutt and my wife Judy with a surprise 70th birthday party at the field. Greg cooked a lot of hot dogs for the crowd and there was a big cake for all to enjoy. I really want to thank Greg, my wife and all the people for their well wishes and efforts and also to Chris Rankin who made a special effort to fly his Elan jet when he learned it was my birthday and also at the prodding from my wife. He even had to make a special trip home to get a part of the plane he had forgotten....Thanks Chris!

Until next month have a ball with your planes!!!



BAM Bulletin Board

FOR SALE
OS MAX 55AX
(Has only been on one plane)
\$100.00
Contact by email or phone
Darrel Loveland
541-550-0866

FOR SALE AND WANTED ADS
are
Free
to members

FROM THE PRESIDENT



by Waldemar Frank



Message from the President

Dear Members, Fellow RC Pilots, and Interested Readers:

Things are picking up for us and we are eager to move forward with our field improvement projects. As you probably know by now, we have scheduled a work party for May 25 to get the concrete pathway installed (main gate) and the floor inside the club house. These initial improvements will add immediate benefits for our members and visitors. Further, we are exploring a DIY option and a contractor-provided solution. Both have advantages and disadvantages as you can imagine, and we will likely go with the solution that is most feasible (technically and financially).

A big THANK YOU goes to everybody who supported our interests and represented our hobby during the hearings concerning Oregon State Senate Bill 71. Our hobby community together with key supporters showed great solidarity, which halted further progress of this bill. A special thank you goes to the *Salem R/C Pilot Association* club and AMA for their persistence and professionalism in dealing with this threat to the R/C model aviation community—all is good now and we can move on to enjoying our hobby without unnecessary restrictions. There is one specific subject that I would like to bring up in this message, which we each need to manage effectively and together as a club: SAFETY. With the regular and well-attended weekend flying, there is a higher chance of things not going as intended. We all have had these moments in the past and nobody is immune from making mistakes, including myself.

However, we had a few incidents at the field recently that involved out of control airplanes in the pit area. These incidents are good reminders that we each have to take personal care in preparing our planes for flight operation—it is easy to forget or skip critical safety precautions, for example, when turning on a transmitter and powering on the airplane (electrics) without the plane being held by another member or secured by other means to prevent the airplane from accidentally taking off. These concerns apply at any time when starting airplanes regardless of the propulsion system. And for some members, a safety routine might be common sense and a natural process because of the airplane they fly, or simply because they have made it a habit to follow specific (preventive) steps to avoid problems before take-off.

Having said this, I would like to coordinate with our Safety Officer, Steve Younger, and prepare a club-specific safety card that captures some of the critical precautions and rules for our field so current and new members have a common approach for flying at BAM. The goal is not to lecture folks—this will be a personal responsibility. However, I am hoping that it will help members develop a consistent safety routine for their own benefit as well as that of other members. If you would like to provide input for a BAM Safety Card, please email me with your suggestions when you have a moment.

Fly safely!

Sincerely,

Waldemar Frank

BAM President

COMMUNITY OUTREACH



Redmond Cub Scouts Meet BAM



We recently (April 18) had the opportunity to meet with the Redmond (OR) Cub Scouts at Lava Ridge Elementary (Bend) and tell the kids about our hobby and club. The school was a bit difficult to find because the parking lot access was not obvious and not very intuitive. It also did not help that a middle school was right next door, making us scratch our heads at first.

Once we figured it out, we quickly set up our gear and planes and patiently waited for the arrival of “the” kids.

Thanks to Greg McNutt, we had access to a projector so we could use the school’s large screen and my PC running RealFlight 6.5 simulation software.

The flight simulator was a great hit (same as last time) because it allowed kids to test their flying skills without causing a lot of “damage.” In addition, these kids are used to virtual worlds and felt right at home “taking over” the controls. It was helpful, though, to have the scout leaders available to establish some discipline so the kids would take turns without causing chaos—I sure have a lot of respect for the scout leaders and their handling of these energetic kids.



Several BAM members also brought planes for static display and a few indoor planes that we flew inside the school’s gym. The kids had a lot of fun, and keeping them focused was a bit of a challenge given their age (1st-3rd graders) and energy level. Even the parents got involved and asked questions to learn more about our hobby and “what it takes to be an R/C pilot.” The flight simulator was a great illustration of the flight mechanics and different airplane types. I think if we would have had more time, some of the dads would have tried flying on the flight simulator, too. Some of the parents came straight from work and it was nice that they were able to make it.



I spent quite a bit of time talking to the grandmother of one of the kids. She had a lot of specific questions and actually took some notes—she was clearly planning ahead and making decisions about this year’s Christmas gifts for her grandchildren. Greg also engaged other parents and distributed brochures to provide additional information.



Bob Ingram and Bruce Burgess provided most of the indoor flight demonstrations while Rick talked about the static display airplanes, including a small EDF jet that he brought. He ran the ducted fan a few times, which impressed kids and parents alike.

Overall, it was a fun event and we had a good time—we will certainly do it again when the opportunity comes along.

Overall, it was a fun event and we had a good time—we will certainly do it again when the opportunity comes along.



AT THE FIELD



Well, the past 3-4 weekends have been really active at the field. I've put together a collage of some good pictures from April 20, 27 and May 11 of some of the happenings.



← So, how's this for a pretty good sized gathering of eagles, buzzards and everything in between. There was lots of flying and fun this day and it was the first day of practice for the Club 40 pylon racers. Luckily all planes survived...it was a great day!!!



I think I smell old people.

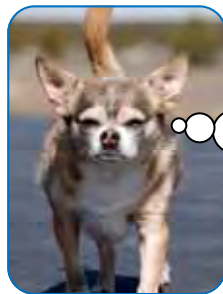
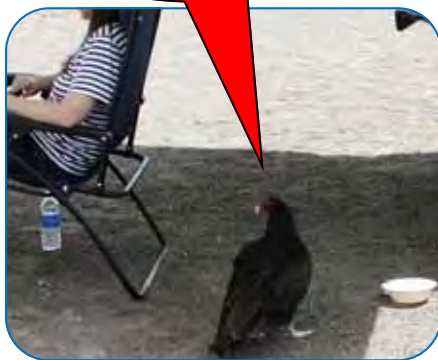
Those who were at the field on April 20, got to see Chris Rankin fly his Elan

Ok here's the deal...we're trying to economize and accommodate a lot of people so I'll give you 10 sheets of TP and 10 minutes and then you're outta here!



Hey, can I bump a drink from Diego's bowl?

While we were at the field on May 11, we had a visitor. A Turkey Vulture flew in and stayed quite a while. Several members made him feel quite at home and gave him a lot to eat.



I'm gonna have me a Turkey Vulture Taco

On April 20, grillmaster, Greg McNutt, fed a very big very hungry crowd. Looks like a happy chef doesn't he? Thanks, Greg!



← On April 27, Kim Waterhouse grilled up some hot dogs during a break in the flying action. Thanks Kim!!!



CLUB 40 RACING



On April 20, the first Club 40 Pylon Practice was held at the club field. Though the wind was up and down all day, the mighty warriors that intend to “race for the title” were there and ready for whatever nature dealt them. All but Rick Burgess flew that day but it is only appropriate we include him in this group of STARS because he maiden his racer soon thereafter.



Greg McNutt



Bruce Burgess



Tony Bass



Darrell Loveland



Waldemar Frank



Eric Suing



Jason Westlind



Rick Burgess

Bruce and Rick Burgess holding a pilot's meeting and explaining rules and procedures before the start of the practice.



Ready, Set

GO !!!



APRIL 2013 MEETING SHOW & TELL



Dave Lawler recently maiden-ed his new plane, The Adrenelan. He did not have this at our last meeting but he is justifiably proud of this plane so we just had to share it with the rest of the membership. He tells the story that he originally built it for Chris Shaker but he told Chris that he really loved the plane so Chris sold it to him. Dave looks like a happy boy!



Bruce Brugess shared his new Telemaster 40 with us. This is a kit and he did a great job, as always, on the covering. The Telemaster is powered by an Evolution 10cc gas engine. Weather conditions have not allowed the maiden flight of this bird. Maybe soon!



Rick Burgess shared his new Club 40 racer with us. This is a kit build and the custom graphics are really great! Rick had a chance to maiden this bird on May 11 and it flew great and fast. This will be a plane to watch in the races on the 18th of May!



Be sure to bring stuff to the meeting to share and have it appear here for the entire membership to see!!!!

LEARNING AT THE MEETING



At the April meeting, Jon Putnam put on a very good and informative presentation about the steps you should go through to select the proper electric motor for the size plane you have. Since electric model airplanes are soaring in popularity, this was some very valuable information to have. Hopefully, Jon will be following up with more on this subject and his always informative tips on flat foam airplane construction.... Thanks Jon!!!

4 Steps to Motor Choice Success

1



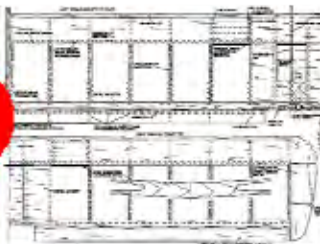
Weigh What You've Got

+



Weigh What You Don't Have

2



Determine the Wing Loading

+



Determine the Plane Type, Your Comfort Zone

3

Do the Math

Weight in Pounds x Watts Needed = Size Motor Needed

4



Choose the Right Motor Option

+



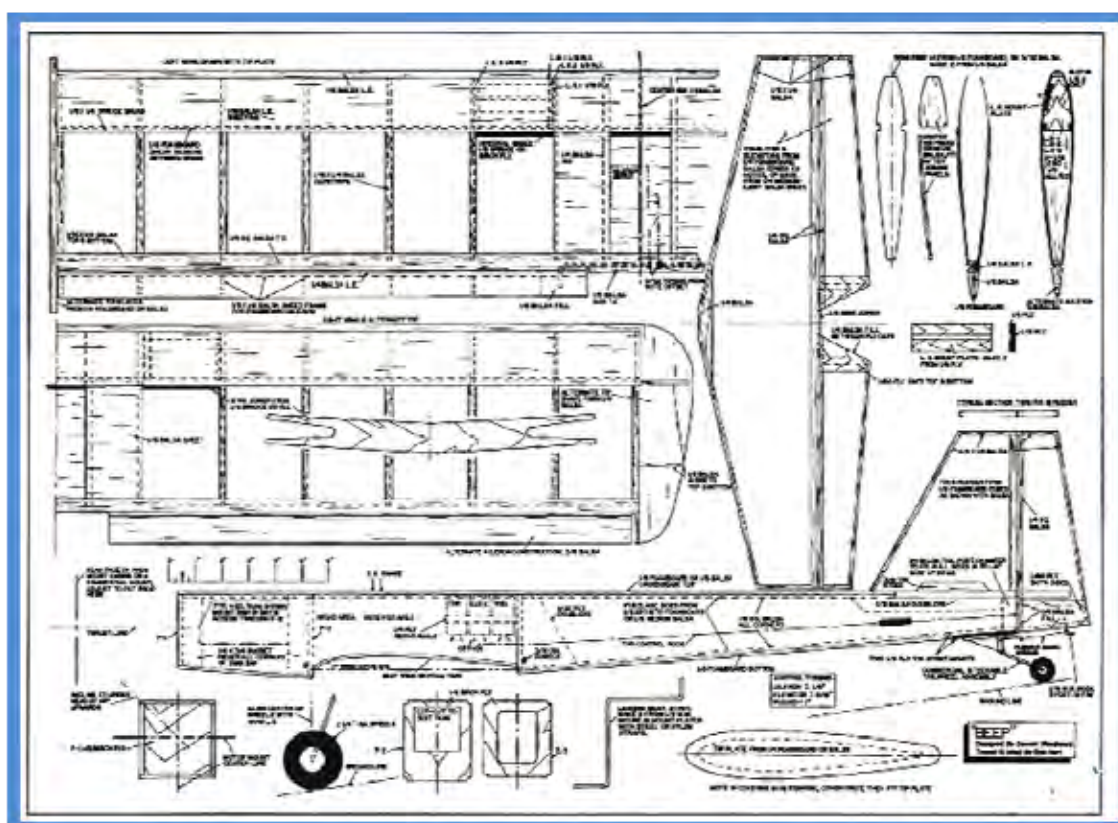
Choose the Right ESC

Beep



- **Designer:** Derek Woodward
- **Published:** Flying Models, 4/96
- **Specifications:**
 - **Type:** Taildragger, Basic sport or pattern-capable trainer
 - **Construction:** ¼ foam board with 1/32 ply fuselage reinforcements and spruce spars.
 - **Channels:** 4
 - **Engine:** OS.25FP – OS .32 SF ABC
 - **Wingspan:** 44-50"
 - **Wing Area:** 352 in²
 - **@Weight:**

Beep Plans



Weigh What You've Got

Airframe
493 Gm



- **Airframe: 493 Grams**
- **4 Servos: 198.5 Grams**

Total: 691.5 Grams / 28.3
= 24.43 Ounces

Servos
198.5
Gm



Weigh What You Don't You Have



- **25 Size Outrunner: 193 Grams**
- **60 Amp ESC: 60 Grams**
- **6 Ch. Receiver: 12 Grams**
- **16 Ft² Ultracote Covering: 104 Grams**
- **Two 2-1/4" Wheels: 10 Grams**
- **11 x 8 Prop: ~ 12 Grams**
- **3s 2200 Battery: 185 Grams**

Total: 576 Grams / 28.3 = 20.35 Ounces



Beep Weight Table

Item	Weight in Grams
Airframe	493
4 Servos	198.5
25 Size Motor	193
3S 220 Mah Battery	185
60 Amp ESC	60
2 Wheels	10
11 x 8 Prop	12
Covering	104
Misc Hardware	20
TOTALS in Grams	1275.5
Total in Ounces	45.07
Beep Total in Pounds	2.81 Lbs

Determining the Wing Loading

Type	Wing Area in Square Inches	Wing Loading in Ounces/Square Foot
Sport	150-200	10-14
Sport Scale	150-250	17-25
Powered Glider	300-400	7-10
Racer	150-200	17-14
Sport	250-350	15-20
Sport Scale	250-400	17-25
Powered Glider	500-650	8-12
Racer	250-300	25-20
Sport	400-600	15-20
Sport Scale	450-700	20-30
Powered Glider	700-1000	10-15
Trainer	500-600	17-25
Sport Pattern	700-800	25-30
Sport	700-1000	15-25
Sport Scale	800-1000	20-30
Trainer	800-1400	15-25

Have You Built a Lead Sled?

Beep Wing Loading

Type	Wing Area in Square Inches	Wing Loading in Ounces/Square Foot
Sport	150-200	10-14
Sport Scale	150-250	17-25
Powered Glider	300-400	7-10
Racer	150-200	12-14
Sport	250-350	15-20
Sport Scale	250-400	17-25
Powered Glider	500-650	8-12
Racer	250-300	25-20
Sport	400-600	15-20
Sport Scale	450-700	20-30
Powered Glider	700-1000	10-15
Trainer	500-600	17-25
Sport Pattern	700-800	25-30
Sport	700-1000	15-25
Sport Scale	800-1000	20-30
Trainer	800-1400	15-25



Beep Calculation:

- Type: Sport, Racer?
- Weight: 2.81 Lbs = 44.96 Oz
- Area: 352 in²
- Wing Loading Calculation: 352 / 144 = 2.44 Square Feet
- 44.96 / 2.44 = **18.42 Ounces / Ft²**

Diet Options

Item	Option
Airframe	Too heavy? Rebuild with lighter material, less glue, buy a new plane, add extended tips to wings to decrease wing loading
Motor	Can you get away with a smaller, lighter motor. Can you use a motor that does not require a 4S battery
Battery	Can you use a smaller cell battery, 3s instead of 4, 2s instead of 3s. Can you use a smaller mah battery
ESC	Can you reduce the size of the ESC and save weight?
Servos	Instead of your old standard servos are there any lower weight options that meet your torque, size requirements.
Wheels	Lighter wheels, sponge instead of hard rubber for instance
Covering	Will a lighter covering work?





✓ = Things I am Going to Consider

Lighter Flies Better

Determining Power Needs

Lee Estingoy Recommendation¹

E-Flite Recommendation²

	Type / Performance Expectation	Watts Per Pound	Type / Performance Expectation	Watts Per Pound
	Sunday Flyers, Sport Models, Old timers	40-50	Lightly Loaded Slow Flyer or Park Flyer	50-70
	Mildly Aerobic Aircraft	60-70	Trainer, Slow Flying Scale Models	70-90
	Aggressive Aerobic Airplanes	80-100	Sport Aerobic, Fast Scale Models (WWII)	90-110
	Ducted Fan, Competition Sailplanes, 3-D Aircraft	100 Plus	Advanced Aerobic (Pattern) and High Speed Models	110-130
			Lightly Loaded 3D and Ducted Fan Models	130-150
			Unlimited 3-D Aircraft	150-200+

“Do You Want to Go Like the Hammers of Hell?”

¹Source: Model Aviation, September 2010, *Clean Horsepower* by Lee Estingoy

²Source : E-flite Motors Website

Calculating Power



Beep Calculation:

- Weight: 2.81 Lbs, round up to 3 lbs
 - Type: Aerobic
- Calculation: 3Lbs x 100 watts/pound
= **300 watt motor**

So You Think You're Done?

Turnigy G25 870 KV	Turnigy G25 710 KV	Turnigy G25 610 KV
		
Kv (rpm/v) 870	Kv (rpm/v) 710	Kv (rpm/v) 610
Weight (g) 193	Weight (g) 185	Weight (g) 190
Max Current (A) 32	Max Current (A) 44	Max Current (A) 48
Resistance (mh) 0	Resistance (mh) 45	Resistance (mh) 5
Max Voltage (V) 15	Max Voltage (V) 15	Max Voltage (V) 15
Power(W) 470	Power(W) 600	Power(W) 600
Shaft A (mm) 5	Shaft A (mm) 5	Shaft A (mm) 5
Length B (mm) 61	Length B (mm) 55	Length B (mm) 61
Diameter C (mm) 35	Diameter C (mm) 35	Diameter C (mm) 35
Can Length D (mm) 38	Can Length D (mm) 36	Can Length D (mm) 36
Total Length E (mm) 78	Total Length E (mm) 78	Total Length E (mm) 78

KV = RPM Per Volt, No Load

Higher KV = More Winds, Thinner Wire More Top End, Speed

Lower KV = Less Winds, Thicker Wire, More Torque, Bigger Props

ESC

Turnigy G25 870 KV



Kv (rpm/v)	870
Weight (g)	193
Max Current (A)	32
Resistance (mh)	0
Max Voltage (V)	15
Power(W)	470
Shaft A (mm)	5
Length B (mm)	61
Diameter C (mm)	35
Can Length D (mm)	38
Total Length E (mm)	78

40 -50 Amp ESC



**Max Current x 20% =
Safe ESC Choice**

Beep Calculation:
32 Amps x 1.20 =
38,4 AMP ESC

OBITUARIES

Rest In Pieces



Bill Hand was voted the Monthly Crash Trophy for this “accident” that happened on April 20. Bill went to take off and his plane went “gunny bags” and managed to stop itself before it hurt someone. Bill was not at the meeting to get the trophy so it was taken to the field on April 27th to give it to him. He was not there to receive it but read on at the end of this page to see where the trophy ended up.



It seems that Dave Lawler and some other members decided to camp out at the field on the night of April 26. While there, they decided to do some night flying. Well, I guess Dave’s famous “Magic” night flyer met an untimely end during one of the flights. The story does not end there. When the guys got to the field on Saturday morning of April 27, they heard the story and decided to immediately present the crash trophy because Bill Hand was not there to receive it. Well, just the night before, Dave was heard to say that he would never get the crash trophy. Now it even gets better: Dave took the trophy and set it in the pit area by his YAK. A wind came up and knocked over the crash trophy and broke a part off of it. So Dave now deserves a “crash trophy crash trophy!!!

