

# STARDUST

May-June 1999

## Quest Micro Maxx Log

by Jeff Vincent

The following is a log I've begun to keep on my experiences with the new Micro Maxx motors. For the latest, visit <http://www.wizvax.net/jvincent/qmm.html>

### Day 1 - Thursday, June 24, 1999

I took another trip to the Colonie Toys R Us, ready for another disappointment. I had been looking for these, stopping in once a week or so, since availability was first announced on rec.models.rockets (RMR) in mid-May. We even made a quick pit-stop on our way back from RAMTEC in a Toys R Us near the PA/NJ border to see if they had some, with no luck. Today was to be different, though. They had six starter kits: two Space Shuttle/Saturn V, two SR-71 Blackbird/Tomahawk cruise missile, one UFO/Spacefighter, and one with plain rockets. No motor packs, though. I opted for both a Space Shuttle/Saturn V and a UFO/Spacefighter. I didn't *need* two launchers, but for the extra motors — they include eight per starter kit — and yeah, the rockets are kinda cool looking. :)

I got them home and, after a quick call to rocket buddy Wolf, opened up the UFO/Spacefighter starter kit. There is a four page instruction sheet that explains how to set things up and fly them and a one page troubleshooting supplement. All quite sufficient. One interesting note is the recommendation to fly these models only in winds of 5 or 7 mph or less (depending on which part of the instructions you read).

The launcher is a thermos-like plastic canister, which folds open (much like the panels on the old MPC Pilgrim Observer). The central base forms the

*(Drawing on page 7)*



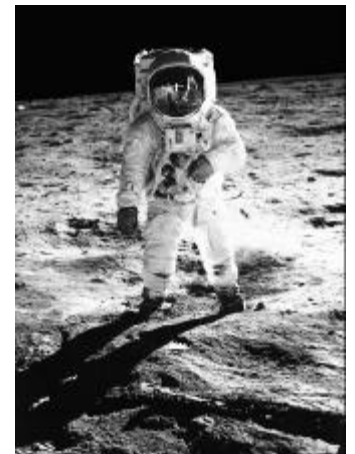
## Apollo 11 - 30 Years On

Photos by NASA

The events of July 20th, 1969 were the culmination of a great adventure for the human race. In less than a decade, we went from our

first simple steps in manned spaceflight to visiting and exploring our nearest neighbor in the solar system, a quarter of a million miles away. This will stand as one of the great accomplishments of the 20th century, one even now looked back upon in awe.

For those of us who were lucky enough to experience this, it was a very exciting time. I was born in 1960 and wish I had been born a bit earlier, to better appreciate just what was happening. It was a fascinating time, an era that spawned the



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Editor's Thermal

## Look at this!



The Quest Micro Maxx finally arrived a couple of weeks ago and I am in Nirvana, but you can read about that elsewhere. A group of us went down to the RAMTEC regional (37 competitors!) and had a great time (just ask us). We have our own Apollo 11 commemorative launch coming up shortly. However, what I'd like to share with you here is a great picture found on Bob Fortune's website, one that really tells a story of early space exploration. I've been using it as my Windows wallpaper for several months. You can find it at these URLs:

<http://www.fortunepaint.com/rockets.htm>

[http://www.fortunepaint.com/photo\\_library/1946\\_V2\\_WSPG.jpg](http://www.fortunepaint.com/photo_library/1946_V2_WSPG.jpg)



*(Continued from page 1)*

interest in rockets and space in many of us who are model rocket enthusiasts today (both BornAgainRocketeers and NeverLeftRocketeers).

At our July 17 launch, we hope to revive some of those memories and show the kids just what it was all about. So please bring out and fly any space models that pertain to that period and share them with us. In the meantime, to get you in the mood, here are some WWW sites on the Apollo project:

NASA's Apollo 11 30th Anniversary

<http://www.hq.nasa.gov/office/pao/History/ap11ann/introduction.htm>

National Air & Space Museum's 30th Anniversary of Apollo 11

<http://www.nasm.edu/apollo30th/a11online.htm>

The Contact Light Project Apollo Archive (by Kipp Teague)

[http://www.retroweb.com/apollo\\_archive.html](http://www.retroweb.com/apollo_archive.html)

The Apollo Saturn Reference Page (by John Duncan)



# KOW-4 Open Meet/Sport Launch A Great Success

By Chuck Weiss

ASTRE's KOW-4 (Kind of Wimpy) Open/Sport meet on June 5, 1999 rewarded everyone with some fantastic contest/sport flying and basic rocketry camaraderie. The weather was great with sunny skies, mild breezes and good thermal activity through most of the day. Breezes picked up slightly later in the day. Most flights, including some over two minutes, were landing in the field. Southerly breezes provided a long drop zone in the direction of the golf course. Though the hay was a little high, it wasn't as high as other years primarily due to the dry spring. Very few models were actually lost because of the hay.

The turn out for KOW-4 was great with several new ASTRE members coming out for both competition and sport flying. ASTRE welcomed Elliott Van Antwerp Junior as a new A Divisioner, Ed Eades who made both contest and sport flights along with Mark and Heather Hutchinson and Ben Patrone who flew some really nice sport models. Denise von Kiparski has also taken up contest flying with this being her second meet. We think Mark and Heather must have enjoyed themselves because they joined ASTRE as a family at the meet. The Eades and the Patrone families indicated that they would also like to get their sons involved with flying.

## Contest Highlights

Some contest highlights of the meet include Vince Giovannone's 2 minute 17 second A SD flight and the HOBBOB team's 1 minute and 50 second B RG flight. Vince is trying to fly so well that he is losing his models and has graduated to complainer class :). Vince will soon be whining and advocating all 1/4A events like some of the other fliers who lose their models. Vince was one of the few who lost a model to the hay - and it had to be a helicopter model :(.

It appears Jeff Vincent of the HOBBOB team took

KOW-4 quite literally landing his RG and some of his other models in the middle of the K(C)OWS. Seems to me I recall Jeff having COW- POW- WOWS at past meets. Perhaps Jeff has a hidden desire for a pet COW. I'm not sure his family or the neighbors would appreciate one grazing on his front lawn. Thank God for Bruce's farm!

Elliott Van Antwerp Jr. qualified in 1/4A PDMR, 1/2A HD and A SD — pretty darn impressive for a seven year old at his first NAR contest meet. Now all we need is a couple more A Divisioners so Elliott doesn't have to fly against adults. I'm not worried about Elliott. With his qualification rate, I'm afraid he will start humiliating the adult fliers. Elliott Sr. has been doing some practicing himself, qualifying and turning in some impressive scores in the same three events.

I think Ed Eades has been bitten by the contest bug. He qualified in A SD and gave it a good try in 1/4A PD. Unfortunately his model was just a little too heavy for the 1/4A event. He told me he'll be back next time to avenge for himself. I believe him.

KOW-4 was Denise von Kiparski's second contest meet. Word has it that a secret trade took place between Chuck Weiss and Denise involving A SD flying secrets for rice and beans recipes. Denise has been making some impressive SD flights. Her husband Wolf has yet to top her flight times at the last two meets. Gee, I hope it doesn't start a family feud :). I doubt it. Wolf did some impressive flying himself in some of the other events including his tight turn B R/G which landed nicely on the flying field.

Last but not least, after RSO'ing the first half of the meet and letting his team partner Jeff have all the fun, yours truly Chuck Weiss got off some decent A SD flights. With the first flight drifting out of the field, Chuck made the return the hard way by cutting down his streamer on the second flight and landing the model just inside the field at the east hedge-row. Chuck got lucky however and found his model from the first flight after the meet. It was a red speck just visible from the road. Wolf could find no peace. Chuck tracked him down at

McDonalds to get the return verified and to rub it in :).

## Contest Results

### 1/4A Parachute Duration MR (60 sec maximum)

(A and Team Division combined)

Contestant	1	2	3	Total	Div	Plc	Pts
HOBBOB Team	Max	Max	-	120	T	1st	220
E.D. Van Antwerp	24	-	-	24	A	2nd	132
E. Van Antwerp	DQ	33	53	86	C	1st	220
Ed Eades	DQ	-	-	0	C	-	0
Wolf von Kiparski	DQ	-	-	0	C	-	0

### 1/2A Helicopter Duration

(A and Team Division Combined)

Contestant	1	2	Total	Div	Place	Pts
HOBBOB Team	30	-	30	T	1st	380
E.D. Van Antwerp	4	5	9	A	2nd	228
Wolf von Kiparski	24	47	71	C	1st	380
E. Van Antwerp	32	DQ	32	C	2nd	228
Vince Giovannone	35NR	-	0	C	FP	38

### A Streamer Duration

(A and Team Division Combined)

Contestant	1	2	Total	Div	Place	Pts
HOBBOB Team	118	102	220	T	1st	160
E.D. Van Antwerp	43	39	82	A	2nd	96
Wolf von Kiparski	69	77	146	C	1st	160
Vince Giovannone	138	-	138	C	2nd	96
E. Van Antwerp	70	49	119	C	3rd	64
Denise von Kiparski	80	-	80	C	4th	32
Ed Eades	14	DQ	14	C	FP	16

### B Rocket Glider Duration

(C and Team Divisions Combined)

Contestant	1	2	Total	Div	Place	Pts
HOBBOB Team	110	-	110	T	1st	420
Vince Giovannone	72	-	72	C	2nd	252
Wolf von Kiparski	50	-	50	C	3rd	168

NR = no return FP = flight points DQ = disqualification

The divisions were combined where necessary. Divisions were also combined to optimize points. In particular, combining Team with A division gave E.D. Van Antwerp 2nd places instead of lower or no places if he were combined with C.

### Total Contest Points

Contestant	Div.	NAR Points
E.D. Van Antwerp	A	456

Wolfram von Kiparski	C	708
E. Van Antwerp	C	512
Vince Giovannone	C	386
Denise von Kiparski	C	32*
Ed Eades	C	16*
HOBBOB Team	Tm	1,180
ASTRE points		3,242
Independents (*)		48

## Sport Flying Highlights

KOW-4 was the type of day for sport flying where I missed watching my old minimum diameter, staged Estes D12 to FSI F7 sport model slowly rise on a thick plume of white smoke in a windless blue sky.

We almost got the same performance out of Ed Eades Commanche. Unfortunately the second stage didn't ignite. Ed kept his good sense of humor when wise guy Chuck offered to ask our field owner Bruce for his back-hoe to retrieve the model. Actually, the model was in better shape than anyone expected after Ed dug it out. Ed followed up with a great flight with his Mongoose on a C6-5.

Ben Patrone flew a variety of sport models including his Big Bertha, Fat Boy, Jayhawk, Venus Probe, Silver Comet, and a little yellow/green something (?) that was flown when Jeff was RSO. Please tell us what it was Ben :). One thing I recall was the mirror finish on the Fat Boy. It looked like it came out of a professional body shop.

Mark and Heather Hutchinson blazed the skies with their Prowler, SDI Evictor, Wizard (Heather), Estes 1965 Pencil Rocket, and Condor. I think Heather said that the Wizard was her first rocket. I recall her searching out towards the east hedge row for it. I hope she found it. We are glad that the Hutchinsons have finally found us and joined ASTRE. Last but not least, Jeff Vincent flew his orange badminton birdie model on an A10-3T. Cows and birdies - Jeff definitely needs a pet :) !

What impressed me was the high success rates of the sport flights. Generally, most flights exhibited good trajectories, proper delays and good recovery devices, not to leave out well crafted models.

The following is a record of most of the sport flights. We may have missed a few. Sorry if we missed yours.

Flyer	Model	Engine(s)
Ben Patrone	Big Bertha	D12-3
	Fat Boy	A8-3
	Jay Hawk	D12-3
	Venus Probe	C6-3
	Silver Comet	D12-3
	yellow/green ?	A10-3
Mark Hutchinson	Prowler	B6-4
	SDI Evictor	B6-4
	Pencil Rocket	A8-3
	Condor	A8-3
Heather Hutchinson	Wizard	B6-4
Ed Eades	Commanche	D12-0/C6-0/A8-3
	Mongoose	C6-5
Jeff Vincent	Pet Birdie	A10-3T

Overall KOW-4 was a very successful meet. Contest flying boasted a qualification rate of 84 percent. Fifteen to twenty impressive sport flights were also flown with a multitude of rocketry information exchanged. The meet went off very smoothly with everyone appearing to enjoy themselves. As pointed out by some other fliers, the success was a result of several factors including the good turnout, good weather, cooperation and flying the meet within our means of support and the limitations of the field.

## Manufacturer News

by Wolfram von Kiparski

**Black Sky Research** has announced that it will send one of their Standard Rails and five of their Rail Guide sets to the first 100 rocket clubs who apply. ASTRE is participating in this promotional campaign, and will be receiving this equipment to supplement our existing launch gear. The Standard Rail was advertised on page 19 of the May/June issue of *Sport Rocketry*. In exchange for this generous offer, ASTRE will be listed as a "Rail Ready" club on Black Sky's website ([www.blacksky.com](http://www.blacksky.com)) and must evaluate this equipment by actually using it. Since we are receiving five sets of rail guides, five ASTRE members who will be building and flying a large model rocket, or high power rocket, this summer will get a set. According to Ken Biba, co-owner of Black Sky, the Standard Rail is stiff enough for rockets weighing up to eight pounds, and with back support, stiff enough for heavier rockets.

**Pratt Hobbies** announces the release of the G-WIZ LC accelerometer. This device is small enough to fit inside BT-50 tubing, yet capable of delivering current to airstart clusters and second stages, fires an ejection charge at apogee, and report maximum altitude. The unit lists for just under \$90. Check it out at [www.prathobbies.com](http://www.prathobbies.com).

The re-release of **Estes' Saturn V** kit is still available. I saw one at JP's Trains and Hobbies in Latham. This release features parts from both the Estes and Centuri versions of this 1/100 scale model, and is reported to be the best-ever release of this kit. The Saturn V kit is a limited edition kit, which means that it will not be available for long. There's still time to buy one to build and fly at the upcoming Apollo 11 Commemorative Launch.

**Michaels** will be opening up a new store where MJ Designs used to be in Crossgates Commons. Michaels is a chain of arts and crafts stores more common in the midwest. I keep seeing people post messages on [rec.models.rockets](http://rec.models.rockets) bragging about how they are able to buy Estes and Custom Rockets

stuff for 40% off at Michaels. Unlike cold and stingy MJ Designs, Michaels moves stuff off of their shelves by regularly making 40% off-everything-in-the-store coupons available. How about C motors for \$3.40 a pack? The store should open mid-August.

For those of you who picked up the 1/200 "Man In Space" plastic rocket set, the next thing you'll need is the full set of scale decals produced by **Tom Prestia**. They go for \$20.00 (ouch!), but they are well worth it. Email him at BakerTom@aol.com for further details.

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## NYSPACE

by Wolfram von Kiparski

The weekend weather was outstanding, even though the meet attendance was not like it was the last time ASTRE hosted NYSPACE. The Rochester and Syracuse rocketeers didn't show, and we had to downgrade the meet from a regional-class meet to an open meet. By default, ASTRE "won" NYSPACE. Jeff Vincent (HOBBOB Team) set a new U.S. performance record in the B rocket glider event.

Saturday the field was nearly windless, with only a light breeze starting up late in the afternoon. We could have flown F Altitude, and been able to recover our models in the field. It was a fantastic day to be out flying rockets. Between Eric, Kevin, and Denise and I, we also had more children scrambling around the range than I've ever seen. Sunday was breezy, but still good enough for what we were doing.

Please welcome Kevin and Travis Loucks to ASTRE. They spent both days with us flying rockets from our excellent field. Kevin and Travis come from Ft. Edward, and plan on attending more ASTRE launches this summer.

## NYSPACE Results

all units in s=seconds and m=meters

### B Rocket/Glider Duration

Contestant	Flt1	Flt2	Total	Points
HOBBOB Team	141s	215s	355s	420
Wolfram	DQ	107s	107s	240

### B Eggloft Duration

Contestant	Flt1	Flt2	Best	Points
Wolfram	61s	—	61s	340
HOBBOB Team	41s	DQ	41s	204
Eric Schadow	35s	—	35s	136
Vince G.	19s	—	19s	68

### A Streamer Duration

Contestant	Flt1	Flt2	Total	Points
HOBBOB Team	168s	DQ	168s	140
Wolfram	68s	92s	160s	84
Vince G.	42s	60s	102s	56
Eric Schadow	7s	DQ	7s	28
Denise v.K.	126s (NR)	—	FP	16

### 1/2A Superroc Altitude

Contestant	Flt1	Best	Points
HOBBOB Team	10400 (104m)	10400	280
Wolfram	6600 (66m)	6600	168
Eric Schadow	5400 (54m)	5400	112
Vince G.	5135 (79m)	5135	56

(shorter model)

### Total NAR Points

HOBBOB Team	1044 pts
Wolfram	832 pts
Eric Schadow	276 pts
Vince G.	180 pts
Denise v.K.	16 pts
ASTRE	1876 pts
Independents	472 pts



(Continued from page 1)

launch pad, with internal wiring for the special igniters, while the panels just look cool, right down to the little fold-up "WARNING - Stand back 15 feet before launching" warning placards. The bottom of the base is removable and serves as storage for the Quest launch controller. That looks like a black yo-yo or hockey puck and it glows and chirps when you have continuity. It's powered by a fresh 9 volt alkaline battery (remember that).

The launch rod is a tiny 11" long piece of 0.047" music wire. It is placed in one of two positions in the base in relation to the ignitor, depending on the particular rocket. The igniters look like the old Cox igniters -- a plastic plug which positively locks into the launcher base, with a thin nichrome (with no pyrogen) for ignition. The model is gently lowered onto the ignitor for flight.

The rockets themselves are pretty cool looking. The UFO is the neatest, measuring a whopping 2.75" in diameter and tipping the scales at 7.7 grams (about 1/4 ounce). It is molded in black plastic with colorful

stickers and "Made in China" embossed on the underside (now we know where our advanced technology has been going to :). UFO recovery is the standard featherweight. The Spacefighter is a futuristic little blob, with a fuselage and fins somewhat reminiscent of the Bullpup. It weighs 8.3 grams and is 4 3/8" long. It's black with blue and yellow accents. It's nose separates, revealing a tiny shock cord and 0.5" x 8" aluminized mylar streamer. Some of the other models reportedly use a constrained internal piston, where the nose slides outward and deploys the streamer, but does not separate. Another characteristic technology of these models are motor mounts that lock the motor in place.

Now to the motors, ah yes the motors... You won't believe these little guys. They are 0.25" in diameter and 1.0" long. They feature a one-piece injection-molded plastic casing and nozzle assembly (the nozzle is approximately 0.045" diameter and 0.25" deep -- tiny!). A clay cap covers the ejection charge. Loaded weight is 1.25 grams, propellant weight is 0.4 grams, empty weight is 0.85 grams. NAR Standards & Testing (May/June '99 *Sport Rocketry*, page 42) rates them as 0.20 Newton-seconds (or, as the Quest packaging refers to it "200 Mil N-sec"), with a burn time of 0.82 seconds and a measured delay time of 1.07 seconds. I can quote you numbers, but you can't appreciate them until you hold them in your hand and see how absolutely positively TEENY WEENY they are!

Enough of the tech inspection, let's get down to flying them! I loaded up the UFO and Spacefighter for flight. The UFO was nominal. The nose on the Spacefighter seemed quite loose, so I shimmed it with a little Scotch tape, and dusted that with talcum powder. I had heard that the mylar streamers were susceptible to heat damage, so I put about 1/4 of a square of Estes wadding into the Spacefighter (it appears to have some sort of ejection baffling built in, but I can't be sure of the details without taking the model apart).

I had forgotten to pick up a battery so I scrounged an old 9 volt from around the house. It lit the continuity light



and made the controller chirp, so I figured we were in business. I set things up in my backyard, ready to launch... Until my battery met up with the Quest ignitors — you really do need a *fresh* battery. With daylight dimming, we made a quick trip to the local rocket shop (Price Chopper) for a rocket battery, and we were back at the rocket range before sunset.

First up was the Spacefighter. It had a nominal flight to approximately 40 feet, ejected its streamer, and recovered successfully. Post flight examination showed that the wadding had not been ejected and the streamer was scorched almost to the point of separating from the shock cord. Maybe I'll try putting the wadding just behind the streamer next time, instead of butting it against the baffle bulkhead.

Next came the UFO. Reports on RMR said it's performance was less than spectacular, and they were right (but it's still a cool model). The UFO roared to a peak altitude of about ten (yes, 10) feet at burnout, then quickly retreated back to earth, ejecting right around "impact". In the process of loading up the UFO, I broke one of the ignitors, trying to tweak it to ensure it didn't short out. It looks like some careful soldering will make it usable again.

As Del Ogren stated on RMR, "F really does equal MA!" He was referring to the performance of the Quest pre-fab models versus some scratchbuilt models (with rolled balsa tubes) he had made for the motors. The Quest literature reports that Micro Maxx can reach altitudes of 200 feet. And they can. Just not in any of the models that Quest sells! They can probably do about one-third of that, tops. It will be most unfortunate if the Micro Maxx line does not sell well due to lack luster performance characteristics. The motors are great for experimenters who build their own models (and companies like Pratt Hobbies and Totally Tubular are planning to offer parts to support these tiny motors). Let's hope they sell well and there are further Micro Maxx releases.

## Day 2 - Friday, June 25, 1999

Today's task at hand is to look into the contest potential of these motors. And, what better way than to try one of my favorite events, gliders. George Gassaway has published a photo and plans for a micro glider on his web pages:

<http://members.aol.com/GCGassaway/GENERAL/Czechmicroglider.GIF>  
<http://members.aol.com/GCGassaway/GENERAL/Microgliders.JPG>

This glider was built to use Czech micro motors, motors

even a bit smaller than the Quest motors (I have specs for them around here somewhere and will share them if I find them).

My glider was based on the plans, but with a few slight differences. I used medium weight 1/16" balsa for the fuselage, medium weight 1/32" balsa for the wing, and light 1/32" balsa for the tail feathers. The pod was an expanded Totally Tubular T-2 (slit and the fuselage and two 1/32" spacers used to increase the tube diameter to fit the motor) with a nose hacked out of scrap balsa. A small box formed by two pieces of 1/32" balsa approximately 1/16" wide x 1" long in the wing root served as a launch lug. Wing area is a whopping 3.5 square inches (while fifteen or so is typical for a 1/4A B/G). Empty weight is 0.85 grams. Loaded weight is 2.1 grams. Now you're talking...

With a bit of hand tossing, a bit of clay on the tail, it actually looked like it wanted to glide. On to the pad it went, with a custom music wire gantry in the second rod hole, holding an Estes ignitor, wired to a standard Estes controller. You have to be really selective, and look for an ignitor with a *very* slender tip. My first attempt resulted in a misfire, but I later cleaned up the motor and it should be usable in the future. My second attempt (with a new motor) worked.

The boost was spectacular (sims say the instantaneous acceleration hit about 70 G's!). I picked it up in the sky around burnout. It had pitched up (as expected) and boosted up-range about 100 feet at an altitude of about 50 feet. At ejection, tragedy struck, and it made like a lame duck and fluttered to the ground. I thought the force of the ejection might have snapped the pylon, but it turned out the fuselage had broken just ahead of the stabilizer. I don't know if it was a weak point or if the motor actually impacted the stab at ejection. Flight time was 7.3 seconds. Based on the altitude and glide performance, it probably would have stayed up for 15 seconds or so.

For future flights I plan to launch it at a 30 degree pitch-down angle to counter the pitch up tendencies. I might also adopt the launch lug positioning in George's plans, which would also help this. The hot boost on the model also takes it a bit out of the realm of "backyard rocketry" (and it sure ain't "indoor rocketry"), so I will have to be careful when and where I fly it.

Future gliders will probably be bigger, since I think this model is just too small -- it boosts too fast and is hard to



see in boost and glide, and a larger model should be a much more efficient glider. One of the "disadvantages" of the Quest Micro Maxx motors is that they have so little power, models have to be made light and tiny, and everything happens *fast!*

### Day 3 - Sunday, June 27, 1999

Rebuilt the glider and reinforced the tail. Added coloring with black and fluorescent yellow magic markers. Some more glide testing revealed that it really doesn't like windy conditions and that it likes a faster than expected glide speed.

In the evening I created a Quest Micro Maxx motor file for RASP and did some sims (I had avoided doing this earlier, for fear the anticipation of flying the models I was sim'ing before the motors were available would be too much for me :).

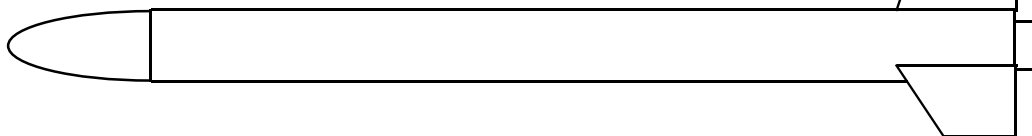
One thing which Andy Eng had warned of on RMR was the liability of the short one second delay. I didn't think it would be *that* much a problem, with the low impulse, and the low sustainer thrust. Turns out Andy was right. With the most extreme cases, a minimum-diameter and minimum-mass model would reach 500 feet and coast for up to four seconds! So while these motors will be good for draggy or heavy contest models (ie: gliders or helicopters), altitude or PD/SD events would be a balance between making your model tiny enough to get a good altitude versus the strength required to stand up to a recovery system deployment at up to 100 mph.

While there are some rumors of other Quest Micro Maxx models (even a glider), I don't know if that would include devoting the manufacturing capacity to an alternative delay. It sure would be nice, though, to have a three second delay.

### Day 4 - Monday, June 28, 1999

Today was rainy and humid, so I was limited to building. I turned my attention to PD/SD. Considering the delay situation and the undersized glider I built, I think a non-minimum-diameter model might be the way to go. The 10.5 Apogee micro tubing looks so gigantic next to these motors, though, so I thought Totally Tubular's T-3 (0.375" diameter) was a good compromise.

**T-3 SD Model  
(actual size)**



I made a small model with 4.5" of T-3 and a hand-turned 0.75" balsa nose. Fins are hard 1/32" balsa clipped deltas with a 0.625" root, 0.375" tip, and 0.75" semi-span. The motor mount is two T-2/3 rings, peeled to fit the motor and installed 0.75" apart (measured outside to outside). The motor has several wraps of 1/8" masking tape at the top, it is installed from the top, then more 1/8" masking tape is wrapped around the protruding nozzle to lock it in place. The shock cord is approximately 18" of fifteen pound Kevlar, with a 2.5" x 26" 0.75 mil mylar streamer attached. Two small launch lugs of Plastruct tubing (3/32" OD, which just *barely* fit the rod) were used. The empty model is about 1.85 grams, the streamer is about 0.9 grams. Loaded weight should be a little over 4 grams.

### Day 5 - Wednesday, June 30, 1999

Got some good weather today, so it was time to fly. Since the models I planned to fly were non-stock (and wouldn't fit the Quest launcher/ignitor scheme), I wanted to use different ignitors. After examining some more Estes ignitors, it seems the ones I found that would fit the Quest nozzles were far more the exception than the rule. So I pulled out some older Apogee micro ignitors -- these have a small enough head to fit into the Quest nozzles, or the pyrogen can be shaved down to fit. A stock toothpick (without the end removed, as done for Apogee) fit the nozzle snugly. These ignitors were used for the three flights below. They were lit with an Estes launch controller (6v alkaline), but you have to be careful to attach the clips close to the motor (to reduce the overall resistance).

First up was the B/G. To counter it's pitch-up tendencies, it was launched at a 15-20 degree pitch-down angle. The boost seemed fairly vertical. Not that you could really tell. This model is so tiny and disappears so quick, the SOP is to look up, listen for the ejection charge, and then look where the sound was. Unfortunately, the ejection charge again broke the fuselage, this time at the front pylon. It occurred at a significantly higher altitude, though, (maybe 150 feet?), so the flight (flutter) time was 24.6 seconds. I was *very* lucky to find the nose section (only about 1" long). I hope I get this right before I run out of motors. ;) I guess I need a

bit more than medium weight 1/16" balsa for this fuselage.

Second flight was the SD model. Post-flight measurements put the empty model mass at 2.75 grams, wadding (1/2 square Estes wadding in four pieces) and tape (to mount motor) at 0.25 grams, and the motor at 1.25 grams, for a lift-off mass of 4.25 grams. I had to use the opposite end of the launch rod as the tight lugs would bind on the painted portion of the launch rod. Lift-off was nominal, with the model reaching approximately 100 feet by ejection. It didn't seem like the delay was significantly short for the model. The streamer ejected, but did not unfurl. Total flight time was 8.6 seconds. Later examination suggested that masking tape used to reinforce the streamer mount (a common practice on my larger models) was sufficiently stiff to prevent the streamer from unfurling. This tape was removed. I had also wrapped the shock cord around the streamer 2 or 3 times, but this did not appear to be a factor (although I did not repeat that for the next flight).

A second flight attempt was made. The boost was similar, perhaps with a bit of tip-off. This time the streamer deployed promptly and fully. A really pretty flight, which took some body english to keep out of my neighbor's tree. :) Drift was minimal and I was able to catch the model. Flight time was 22.4 seconds. I don't believe this was thermal-aided, although I cannot be sure at this point. A great flight to top off a less-than-stellar day of flying.

## Day 6 - Friday, July 02, 1999

I made a couple of flights shortly before dark tonight. The first was to test the SD model again in what should be non-thermal conditions. Lift-off mass was 4.4 grams. It was flown with an Apogee micro ignitor, off the Quest rod & pad, with an Estes launch controller. The launch and boost was good, to 100 feet or more, and (again) didn't seem to have a lot of velocity remaining at ejection. Streamer deployment was good, and the model drifted ever so slightly (3 or so fps) and managed to snag itself about 40 feet up in a maple tree in my neighbor's yard. The hazards of "backyard rocketry"... : ( Flight time was 17.3 seconds, which (considering the altitude "lost" by the tree-shortened flight) would indicate that the previous time (22 sec) was representative and not thermal-aided. I'll have to wait until we get a little wind here, which may dislodge the model.

Flight two was a dual purpose test. It was the flight of a small micro-engine helicopter duration model. First, it

was a test of a 1/8A HD model. HD is one of the more difficult/complex contest models, and it was a challenge to see if it could be flown with so little impulse. A second aspect of this flight was whether 1/4A contest models could be flown with the new motors. Contest models are often highly-optimized, and it is not trivial to move one or two total impulse (letter) classes and still have the model function nominally. In this case, it's a bit like taking a model designed for an Estes D12 and flying it with an Apogee B7 (since the Micro Maxx has about one third the total impulse of 1/4A motors). Anyways...

The model is a mini/micro-Rosero, designed for 1/4A and 1/2A HD. The nose is about 0.55" diameter, the rotors are 0.5" x 6.5" with 0.5" x 6.0" flaps, and the motor mount is 10.5 mm. Normally flown from a tower, a one inch long 1/8" diameter launch lug was added to one fin. Empty weight was 5.9 grams, plus 0.7 grams of tie-down thread and masking tape (the motor was simply taped with 1/2" masking tape to fit the tube), plus a nominal 1.25 grams for a fresh engine, and the gross lift-off mass was 7.85 grams. The model was launched from a 1/8" x 18" Estes rod & pad with the Estes launch controller and a Quest ignitor. The ignitor was inserted into the nozzle and allowed to hang free. This led to the ignitor getting tweaked around by the micro clips — a less than ideal situation, but I got away with it this time. You really want something on the launch rod to hold the Quest ignitor firmly (no doubt why the clothespin was invented...).

The boost was "majestic" (ie: underpowered :), with apogee around 25 feet and ejection spot on. The rotors quickly deployed and the model quickly spun up and descended in a stable auto-rotation. Flight time was a less-than-impressive-sounding 8.4 seconds, but it featured a solid 5-6 seconds of autorotation. If I recall correctly, a typical 1/4A time with this model might be 20-30 seconds. Thus far I've only flown these Micro Maxx motors in negligible winds, so I don't know how it would fare in windy conditions — probably not too pretty. But under the right conditions (no wind, no launcher drag), it looks like these motors can loft *small* 1/4A models (ie: certainly not models that a 1/4A can barely lift). I've got a 10.5 mm Mini-Dactyl and a Bumble Bee-like B/G that are each about 6.5 grams empty that might fly acceptably on these motors (time will tell).

For further updates, check:  
<http://www.wizvax.net/jvincent/qmm.html>

CALENDAR						
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3	4	5	6	7	8	9
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# ASTRE Calendar

CALENDAR						
				1	2	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

## ASTRE Contacts :

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 Chuck Weiss        883-8312    cbweiss@telenet.net

## How to get to Jeff's house...

Your destination is 39 Cherry Avenue in Delmar. Take Rt. 85 south/west (accessible from I-90, State Offices, Rt. 20, or Krumkill Rd.). After Rt. 85 changes from divided highway to two-way, you'll see the following landmarks (note, this is a complete list of the traffic lights you'll see):

- traffic light at Blessing Road, continue straight
- traffic light at New Scotland Road, take right to stay on Rt. 85
- traffic light at Rt. 140, take a left, follow to the end (1 mile)
- traffic light at Kenwood Avenue, go straight on to Cherry Ave.
- my house is 0.2 miles in from Kenwood Ave. It is the third house in a set of three similar houses on the right side of the street. There should be parking for 2-3 cars in the driveway, or, directly opposite my house (left side of Cherry Ave.) is Oak Street, and I believe there should be no trouble parking along the road there.

Note: ASTRE events appear in **bold type**.

For the past couple years, we have held meetings in member's

homes. The meetings are usually informal bull sessions where club business is discussed first, followed by either general "what's new," or a predetermined topic or activity. This schedule can change, and it is advisable to contact Jeff Vincent, or Wolf von Kiparski to find out about any last-minute changes.

**July 12 - ASTRE Meeting** - at Jeff Vincent's house, 39 Cherry Ave., Delmar, 7:00 pm. Topic: Quest Micro Maxx!

**July 17 - Apollo 11 Commemorative Lunch** - Johnstown, NY. Bring your Apollo-era scale models and celebrate the 30th anniversary of the Apollo 11 moon mission. Contact: Wolf von Kiparski.

**July 17 - Kind of Wimpy 5 (KOW-5) Open Meet** - Johnstown, NY. Events: 1/2A PD MR, 1/2A B/G, 1/4A SD MR, Sport Scale. Contact: Wolf von Kiparski.

August 7-13 - NARAM-41 NAR Annual Meet - Northmoreland Park, Pittsburgh, PA.

August 16 - **ASTRE Meeting** - at Jeff Vincent's house, 39 Cherry Ave., Delmar, 7:00 pm.

August 21 - **Kind of Wimpy 6 (KOW-6) Open Meet** - Johnstown, NY. Events: 1/2A SD MR, 1/2A HD, 1/2A SRDur, C ELDur. Contact: Jeff Vincent.

At an upcoming ASTRE meet... Plastic Model Conversion!

For more NAR Northeast Region meet info, see:  
<http://www.wizvax.net/jvincent/nercb.html>

## ASTRE Membership Application

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_  
 State \_\_\_\_\_ Zip Code \_\_\_\_\_  
 Phone \_\_\_\_\_ Date of birth \_\_\_\_\_  
 NAR number \_\_\_\_\_ Tripoli number \_\_\_\_\_

Membership Dues (check one):

Junior member - \$5.00  
(under 18)

Senior member - \$10.00  
(over 18)

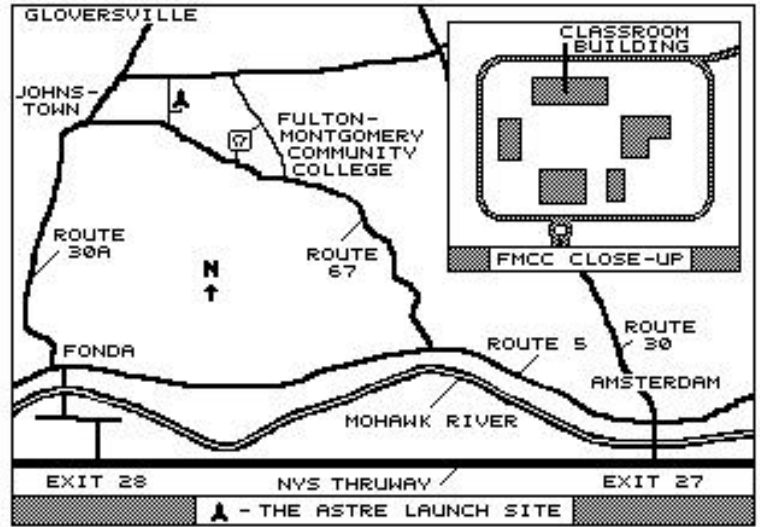
Family membership - \$15.00  
Number of newsletters: \_\_\_\_\_

Send to: ASTRE  
 c/o: Charles Weiss  
 49 North St.  
 Broadalbin, NY 12025

Please make checks payable to "ASTRE".

## How To Get To The Flying Field

- From the east, take the Amsterdam exit (#27) off the Thruway
- Take a right and follow Route 30 North for one mile.
- Take a left at the second light after the bridge onto Route 5 West.
- Follow Route 5 for three miles. Take a right onto Route 67.
- Follow Route 67 for 5.5 miles. Shortly after passing FMCC, take a right onto the small road by Ed's RC shop. After one half mile you will see **JBJ Equine** on your right. Follow the driveway and park in the parking lot and walk to the range.



ASTRE's Next Meeting - July 12 - 7pm Monday night at Jeff Vincent's house (Quest Micro Maxx!)  
ASTRE's Next Launch - July 17 - Apollo 11 Commemorative Launch & Kind of Wimpy 5 Open Meet  
In This Issue - Quest Micro Maxx, Apollo 11, and ASTRE spring event coverage

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