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Ampeer

May		The EFO Officers		2009	
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Ampeer subscriptions are \$15 a year US & Canada and \$20 a year worldwide		<p>The Next Meeting:</p> <p><b>Date:</b> Saturday, May 9 <b>Time:</b> 10:00 a.m.</p> <p><b>Place:</b> Midwest RC Society 7 Mile Rd. Flying Field</p>			

**What's In This Issue:**  
 It Is Not Just the Kv – Upcoming Mid-America Electric Flies info –  
 Upcoming Keith Shaw Birthday Party Electric Fly-In info –  
 In Search of a “Good” 4-channel Trainer - Upcoming Meet In Our Area –  
 Special Thanks from Ken Myers - Upcoming E-vents

**It Is Not Just the Kv**  
 By Ken Myers

My flying buddy, Dave Stacer, and I have been talking about a new motor for his SR Batteries’ AcroPro, so that the 3S “A123” 2300mAh pack he’s made for it can get performance closer to, or better than, that of the original 3S Li-Po pack.

I had incorrectly mentioned that he’d need a motor with a Kv of about 1200 to 1250 to do that, because that is what I’m using in my Son of Swallow and Fusion 380 with a 3S “A123” 2300mAh pack. I didn’t realize it at the time, but I was actually telling him what prop to use, not what motor to look for.

The motor that he has in the AcroPro is a re-branded TowerPro 2908-10. It has an advertised weight of 91g and Kv of 1100, but both his motor and ESC are limited to 25 amp maximums. For conservative usage, that means a practical limit of 20 amps or about 210 watts in using a 3S Li-Po.

My suggested, “ideal” watts in for a sport or sport scale plane powered by “A123” 2300mAh cells is 100 watts per cell, which means about a 35-amp draw.

Dave needs to change both the motor and ESC to try and achieve the 300 watts in, which will certainly outperform his present 200 watts in system. For conservative, practical use he’ll need both a motor and ESC rated at about 45 amps, although less conservative selections could be used, if he wants to take the “risk.”

**How to Select the Motor**

I’ve suggested that a good way to find the possible motor weight is to use 3 watts in per gram of motor weight for the lightest motor and 1.75 watts in per gram of motor weight for the heaviest.  
 300 watts in / 3 grams per watt in = 100g  
 300 watts in / 1.75 grams per watt in = 171g

The data at the Progressive RC Site ([http://progressiverc.com/Brushless\\_Motor.html](http://progressiverc.com/Brushless_Motor.html)) can now be used to locate a brushless outrunner that can handle 40 amps and up and which also has a weight of between 100g and 171g.

Unfortunately there are a lot of outrunners that meet that criterion. How do you select the most appropriate one?

### Selecting the Prop Reveals the Kv

I have found that most outrunner systems in this power/weight range, when loaded to 35 amps, have a system efficiency of about 75%. That means that for the 300 watts being put into the motor, the **WHOLE** system is “letting” the motor put out about 225 watts.

The AcroPro, with the provided landing gear and suggested wheel diameter, can clear up to a 9.5” diameter prop with 1.5” of ground/grass clearance. I measured it. That means that the largest practical prop might be 10” with bigger wheels and/or extended landing gear. While the landing gear could be extended to accept an 11” or even 12” prop, the planes “stance” and “looks” would be compromised.

The smallest practical prop for a 300 watts in plane would be 8 inches. Yes, I have a formula that I use for the smallest prop. 300 watts in divided by 100 watts in per pound equals 3 lb. or 48 oz. for the target flying weight.

Smallest diameter prop to consider equals

$$(\text{SQRT}(\text{wt. in oz.}/\text{Pi})) * 2 =$$

$$(\text{SQRT}(48/\text{Pi})) * 2 = 7.82” \text{ rounded up to 8 inches.}$$

#### Expected RPM – Kv – MPH Tables

Prop	RPM	3S Kv	MPH
APC 8x6E	10956	1611	62
GWS 8x4 HD	15000	2206	57
APC 8x4E	13088	1925	50

Prop	RPM	3S Kv	MPH
APC 9x8 sport	9537	1402	72
APC 9x7.5E	9278	1364	66
APC 9x6E	10323	1518	59
GWS 9x5 HD	11839	1741	56

Prop	RPM	3S Kv	MPH
Aeronaut 9.5x7E	9684	1424	64
Parkzone 9.5x7.5	8848	1301	63
Aeronaut 9.5x6E	10483	1542	60
Aeronaut 9.5x5E	10693	1572	51

Prop	RPM	3S Kv	MPH
APC 10x9 sport	7873	1158	67
Master Airscrew 10x8 G/F 3 Series	8590	1263	65
APC 10x8 sport	8446	1242	64
Aeronaut 10x8E	8085	1189	61
Master Airscrew 10x8 wood	7961	1171	60
Aeronaut 10x7E	9055	1332	60
APC 10x7 sport	8979	1320	60
APC 10x7E	8757	1288	58
GWS 10x6 HD	9951	1463	57
Master Airscrew 10x7 wood	8431	1240	56
Aeronaut 10x6E	9802	1441	56
APC 10x6 sport	9461	1391	54

Prop	RPM	3S Kv	MPH
Aeronaut 10.5x8E	8386	1233	64
Aeronaut 10.5x7E	8714	1281	58
Aeronaut 10.5x6E	8884	1307	50

Prop	RPM	3S Kv	MPH
APC 11x8.5E	7672	1128	62
APC 11x10E	6411	943	61
APC 11x8E	7496	1102	57
APC 11x8 sport	7357	1082	56
Master Airscrew 11x8 wood	7179	1056	54
APC 11x7E	7919	1165	52
Master Airscrew 11x7 wood	7588	1116	50
APC 11x7 sport	7501	1103	50

Prop	RPM	3S Kv	MPH
APC 12x10 pattern	6636	976	63
APC 12.5x10 pattern	6187	910	59
APC 12x9 pattern	6751	993	58
APC 12x10E	6058	891	57
GWS 12x8 HD	7078	1041	54
APC 12x8E	7069	1040	54
APC 12x8 sport	6519	959	49

Prop	RPM	3S Kv	MPH
APC 13x10E	5770	849	55
APC 13x10 pattern	5476	805	52
APC 13x9 pattern	6144	904	52

Prop	RPM	3S Kv	MPH
APC 14x12E	4953	728	56
APC 14x12 pattern	4816	708	55
APC 14x10E	5247	772	50

The tables were created using 225 **watts out**. Some motor/ESC combinations will be somewhat less efficient and some will be slightly more efficient. The Kv provided in the tables provides a close estimate within about 2%.

Looking at the tables for the 9”, 9.5” and 10” props that should work on the AcroPro, there is a Kv range that allows a possibility of 5 different props; APC 9x8 sport/1402, Aeronaut 9.5x7E/1424, GWS 10x6 HD/1463, Aeronaut 10x6E/1441 and APC 10x6 sport/1391.

Does that mean that **ONLY** those props may be used? **NO!** They are the props that are expected to draw about 35 amps with about a 1400 Kv motor and a 3S “A123” 2300mAh pack. Only trying them with a power meter will prove if they are the proper choice power-wise, and only flying them will prove if they are the correct choice for the airframe and desired flight performance.

All of the pieces are now together for selecting a motor that might work. The motor must be able to handle at least 35 amps, weigh between 100g and 171g and have a Kv of about 1400 to 1450.

The candidates, from the list at Progressive RC, include the following, plus one, the AXI, that I’ve added. All of them have 4mm shafts.

**Suppo 2814-06**

103g, Kv 1410, 40 amps, \$26.95

[http://lightflightrc.com/HTML/products/SP\\_2814-06.htm](http://lightflightrc.com/HTML/products/SP_2814-06.htm)**Model Motors AXI 2814/12 Gold\***

106g, Kv 1390, 35 amps, \$73.35

<http://www.bphobbies.com/view.asp?id=B0658308&pid=AXI105>**PJS 3D 1700**

125.7g, Kv 1400, &gt;37 amps, \$68.79

<http://www.visionhobbies.com/1148186.html>**Hurricane Flight Systems Storm HFSS 3542-1450**

126.7g, Kv 1450, 45 amps, \$67.44

[http://www.flyhurricane.com/product\\_info.php?cPath=22\\_40&products\\_id=132&osCsid=ecc34087d13f2559cd94f1b6f19862b7](http://www.flyhurricane.com/product_info.php?cPath=22_40&products_id=132&osCsid=ecc34087d13f2559cd94f1b6f19862b7)**HexTronik HXT 35-42A**

132g, Kv1450, 45 amps, \$24.95

[http://www.hobbycity.com/hobbycity/store/uh\\_viewItem.asp?idProduct=4917](http://www.hobbycity.com/hobbycity/store/uh_viewItem.asp?idProduct=4917)**Other Considerations**

**Weight?** The weight question is not, which is the lightest, but which one has the weight needed to balance the plane. In some cases, the lightest may not be the “best” choice.

**Can it do the job?** The AXI is right on the cusp for both Kv and amps.

**Obtainable?** Can the motor be located and purchased easily.

**Budget?** Does the motor fit the budget for this plane and the overall “family” budget?

**Summary**

Outrunner Motors for a 3S “A123” 2300mAh pack being used at about 100 watts in per cell should -

\*Weigh between 100g (3.5 oz.) and 171g (6 oz.)

\*Have the Kv selected by the prop. Use the largest practical diameter prop and the Kv tables and select the Kv accordingly.

\*Take the “other considerations” into account and then buy it, and try it.

\*Let Ken Myers know your results so that he can share the information with others! ☺

**Homework Assignment (oh yuck!)**

Using the tables, see if you can explain why I would consider using the following outrunner motors for a plane that has good ground clearance for a 10” to 10.5” prop and powered by a 3S “A123” 2300mAh pack.

Also, I have them in the order that I would consider purchasing them. Can you figure out why?

**Scorpion S-3014-16**

122.1, Kv1187, Shaft 5mm, 43 amps, \$49.99

[http://www.innov8tivedesigns.com/product\\_info.php?cPath=21\\_25\\_38&products\\_id=74](http://www.innov8tivedesigns.com/product_info.php?cPath=21_25_38&products_id=74)**Scorpion SII-3014-1220**

129g, Kv 1220, Shaft 5mm, 46 amps, \$64.99

[http://www.innov8tivedesigns.com/product\\_info.php?cPath=21\\_25\\_80&products\\_id=520](http://www.innov8tivedesigns.com/product_info.php?cPath=21_25_80&products_id=520)**Hacker A30-10L**

143g, Kv1185, Shaft 5mm, 40 amps, \$84.99

<http://www.nesail.com/detail.php?productID=3550>**Model Motors AXI 2820/10 Gold**

151g, Kv1200, Shaft 5mm, 42 amps, \$85.60

<http://www.bphobbies.com/view.asp?id=B0658308&pid=AXI106>**Turnigy Aerodrive C3542-1250**

132g, Kv 1250, Shaft 4mm, 45 amps, \$25.20

[http://www.hobbycity.com/hobbycity/store/uh\\_viewItem.asp?idProduct=3887](http://www.hobbycity.com/hobbycity/store/uh_viewItem.asp?idProduct=3887)**KD 36-10L**

152g, Kv 1185, Shaft 5mm, 40 amps, \$29.95

[http://www.hobbycity.com/hobbycity/store/uh\\_viewItem.asp?idProduct=4656](http://www.hobbycity.com/hobbycity/store/uh_viewItem.asp?idProduct=4656)**Hurricane Flight Systems Storm HFSS 3542-1250**

126.7g, Kv 1250, Shaft 4mm, 45 amps, \$67.15

[http://www.flyhurricane.com/product\\_info.php?cPath=22\\_40&products\\_id=131&osCsid=ecc34087d13f2559cd94f1b6f19862b7](http://www.flyhurricane.com/product_info.php?cPath=22_40&products_id=131&osCsid=ecc34087d13f2559cd94f1b6f19862b7)**Great Planes Rimfire 35-36-1200**

102g, Kv1200, Shaft 4mm, 55 amps, \$59.99

<http://www3.towerhobbies.com/cgi-bin/wti0001p?&I=LXLWU3&P=7>

## Mid-America Electric Flies 2009

At the 7 Mile Road MRCS Field

### Same Field as Last Year!

AMA Sanctioned

Saturday, July 11 &amp; Sunday, July 12, 2009

Hosted by the:

### Ann Arbor Falcons and Electric Flyers Only

Flying Site Provided by the:

### Midwest R/C Society

Your Contest Directors are:

Ken Myers phone (248) 669-8124 or

KMyersEFO@mac.com -

<http://homepage.mac.com/kmyersefo/>

**Keith Shaw** (734) 973-6309

Flying both days is at the Midwest R/C Society Flying Field - 7 Mile Rd., Northville Twp., MI

Registration: 9 A.M. both days

Flying from 10 A.M. to 5 P.M. Sat. & 10 A.M. to 3 P.M. Sunday

Channels 00 through 60, the six 27Mhz frequencies, the eight 53MHz frequencies and 2.4Ghz, will be in use. Flying on five 49 MHz frequencies may be accommodated on request - Narrowband receivers are recommended for flying on Channels 00 - 60 - Very Wideband 27, 49, & 53 MHz, receivers may be accommodated on request - 2.4Ghz controlled at impound

**Pilot Entry Fee \$15 a day or \$25 both days - - - -**

**Parking Donation Requested from Spectators**

### Saturday's Events

Best Scale  
Most Beautiful  
Best Ducted Fan  
Best Sport Plane  
CD's Choice

### Sunday's Events

Best Scale  
Most Beautiful  
Best Mini-Electric  
Best Multi-motor  
CD's Choice

### Merchandise drawing for ALL entrants

#### Possible Places to Stay

**Please note that this list is not updated and some phone numbers may have been changed.**

Novi Hilton  
21111 Haggerty Rd.  
236 rooms  
800-445-8667  
248-349-4000

Sheraton Oaks  
27000 Sheraton Dr.  
206 rooms  
248-348-5000

Travelodge Detroit  
21100 Haggerty Rd.  
124 rooms  
800-578-7878

Detroit Marriott Livonia  
17100 Laurel Park Dr. N.  
227 rooms  
800-228-9290

Hampton Inn Northville  
20600 Haggerty Rd.  
125 rooms  
800-426-7866  
313-462-1119

Wyndham Garden Hotel  
42100 Crescent Blvd.  
152 rooms  
800-222-4200  
248-344-8800

Holiday Inn Livonia  
17123 Laurel Park Dr. N.  
225 rooms  
800-465-4329  
313-464-1300

Hotel Baronette  
27790 Novi Rd.  
149 rooms  
248-349-7800

Days Inn Livonia  
36655 Plymouth Rd.  
72 rooms  
800-325-2525  
313-427-1300

Comfort Inn Livonia  
29235 Buckingham Ave.  
112 rooms  
800-221-2222  
313-458-7111

**Planes Must Fly To Be Considered for Any Award**

**Open Flying Possible on Friday  
Night Flying Possible, Weather Permitting,  
Friday & Saturday Nights**

Refreshments will be available at the field both days.

**Potluck picnic at the field on Saturday evening.**

Come and join us for two days of fun and relaxed electric flying.

**Come, Look, Listen, Learn - Fly Electric - Fly the Future!**

**Saturday's & Sunday's Awards:  
Plaques for 1st in each category**



Photo of Entrance to MRCS Site off 7 Mile Rd.

**To locate the Midwest R/C Society 7 Mile Rd. flying field**, site of the 2009 Mid -America Electric Flies, look near top left corner, where the star marks the spot, near Seven Mile Road and Currie Rd. The field entrance is on the north side of Seven Mile Road about 1.6 Miles west of Currie Rd.

**Address:** 7419 Seven Mile Road, Salem Twp, MI 48167-9126 - numbers on the fence

**Mid-America Flies Hotel List – 2009** Please call the hotels for current rates

**Upcoming Keith Shaw Birthday Party Electric Fly-In**

From Dave Grife grifed@yahoo.com

The Balsa Butchers will once again be hosting the “Keith Shaw Birthday Party Electric Fly-In” at their field near Coldwater, MI. The event will take place on June 6 and 7, 2009.

Contest Director: Dave Grife - E-mail: grifed@yahoo.com or Phone: 517.279.8445

Please e-mail or call with any questions

The Flying Field will be open Friday, June 5 for early arrivals

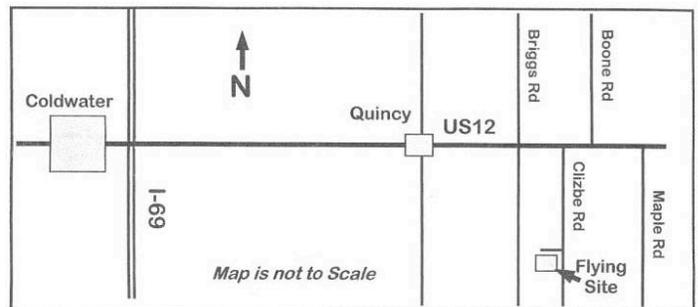
Saturday, June 6, hours are from 9 a.m. 'til 5 p.m.

Sunday, June 7, hours are form 9 a.m. 'til 3 p.m.

Landing Fee is \$10 for the weekend.

**Directions:** Quincy is approximately 4.5 miles east of I-69. Clizbe Road is approximately 1.6 miles east of

Quincy. The Flying site is approximately 1.5 miles south of US-12 on the west side of Clizbe Road.



**In Search of a “Good” 4-channel Trainer**

By Ken Myers

Last year I really returned to flight instruction once again. I volunteered to be the head flight instructor for the Midwest RC Society for both glow and electrically powered models. I’ve been contacted by a lot of folks about training them to fly RC planes. Unfortunately, most of these folks have contacted me

after purchasing a plane. I've yet to find anyone who has purchased the **best** trainer plane, sometimes even with my recommendations! Darn!

Right now, I am satisfied with starting a beginner out using the **Multiplex EasyStar RTF** (ready-to-fly) to learn the basics of control and orientation. This is really an excellent "introduction to RC flight" plane. My article on the **Multiplex EasyStar RTF** can be found here:

<http://homepage.mac.com/kmyersefo/easystar/easystar.htm>

I still recommend this as THE plane to start with if you absolutely have to train yourself!

The main problem, when using the EasyStar RTF for training, is that the supplied NiCad battery takes quite a while to charge on the supplied charger. Multiple batteries are required to keep the flight training going during a given session.

**I solved the problem** by using a 2S "A123" 2300mAh pack as the power source, but this "fix" requires a special, relatively expensive charger or other device to safely charge the pack.

Also, the supplied 3-channel/3 function radio system, while more than adequate, doesn't allow for the student's growth.

Next, **I move them to the parkzone T-28** 4-channel, rise off the ground (ROG) flight trainer using a buddy box. The parkzone T-28 RTF comes with an unacceptable radio system, due to the supplied receiver being useless. If the receiver is changed to one that actually works with the supplied transmitter, the RC system becomes acceptable.

In my opinion, the provided Li-Po charger is inadequate and dangerous.

<http://homepage.mac.com/kmyersefo/t28/parkzonet28.htm>

If the supplied charger is used for flight training, it takes a long time to charge the battery and multiple batteries are required for several flights during a given flying session.

After struggling through Horizon Hobbies' less than helpful phone help line information, Gorilla gluing the main landing gear plates in, changing the receiver and purchasing a spare transmitter for a buddy box and changing the battery to a 3S "A123" 2300mAh pack, my parkzone T-28 is a good 4-channel, buddy box, ROG trainer.

Once my students can successfully and consistently fly around the sky with good control, land and take off, my students are transitioned to "their" trainer of choice, glow or electric power.

While this "system" works for me, it is hardly universal. I'm probably the only person in the world to do it this way.

A new student, who actually wants to start out and do it correctly from the beginning, has recently approached me. His final goal is to fly electrically powered models, but it could just as well be glow-powered models.

My main goal was to find a "trainer" that would work with a **3S "A123" 2300mAh pack**. Why? It requires no charger. Why is that important? It keeps the initial cost down and as the student develops a "taste" for the hobby allows the student to choose a charger to suit his or her interests or, if going the glow route, not have a charger that isn't needed.

If the student wants to move onto glow and gas powered planes, it eliminates learning how to care and feed a 2-stroke or 4-stroke engine and allows the student to concentrate on learning to fly.

All that is needed to "fuel" a 3S "A123" 2300mAh pack is a 12v battery, a power meter, some "lamp cord" and appropriate connectors.

I spent a lot of time researching 4-channel/4 function ARF trainer type planes (the flying season has started here) with a shoulder or high wing design that could possibly be used for training purposes.

**What Makes for a Good RC Flying Field 4-Channel Trainer with the Help of an Instructor?**  
**Rugged:** This is especially important for the landing gear. It also must have the landing gear placed correctly.

**Relatively Stable:** A high or shoulder wing is usually appropriate.

**Appropriate CWL:** The wing cube loading should not be too light. It is true that the lower the CWL, the "easier" a given plane is to fly. A CWL that is too low limits the plane to light wind conditions and restricts the amount of flying time a beginner can acquire in a given amount of time. For a "trainer", with help of an instructor on a buddy box, an appropriate CWL is between 7 oz./cu.ft. and about 9.9 oz./cu.ft. If a plane has a CWL under 7 oz./cu.ft. it can be "too light" and limit flight instruction to calmer days.

**Appropriate Wing Span:** A wing span of 50" or better is good for visibility and orientation. Smaller planes are harder to see and orient on at the distances that beginners tend to allow their aircraft reach.

**Radio:** The best trainer radios are 4-channel or 5-channel 2.4GHz full range types with as few

“options” to learn as possible. The transmitter should be easy to buddy the box. I found out the hard way last year that many systems, while incorporating a buddy box function, are not very buddy box “friendly”!

**Field appropriate:** The plane should be able to rise off of a typical grass RC flying field.

**Looks:** The student should not love the looks of the trainer. My current students are using a J-3 Cub, T-34 Mentor and nicely painted parkzone Corsair. They really have too much “emotional” investment in their planes, as well as the financial investment. It makes teaching and learning more difficult than it should be.

### Some Planes I Looked at and Rejected

#### Great Planes ElectroStik EP ARF 50"

<http://www3.towerhobbies.com/cgi-bin/wti0001p?&I=LXUTN8&P=ML>  
589 sq.in., span 52.75", 3.5 lb. w/3S 3200 Li-Po (about the same with 3S “A123” 3200mAh pack), CWL 6.77 oz./cu.ft., recommended prop diameter 11", \$114.99

**Rejected:** CWL is slightly too light, also  
<http://www.rcgroups.com/forums/showthread.php?t=938835&highlight=Electrostik>

#### Multiplex Mentor Airplane Kit 64.2"

<http://www3.towerhobbies.com/cgi-bin/wti0001p?&I=LXVEP7&P=7>  
697 sq.in., span 64.2", 4.3 lb. w/3S 3200 Li-Po, CWL 6.46, recommended prop diameter 11" - possibly 12" okay, \$139.99

**Rejected:** CWL slightly too light, asking too much from a 3S “A123” pack at about 100 watts in per cell, also

<http://www.rcgroups.com/forums/showthread.php?t=844280&highlight=Multiplex+Mentor>

#### Sig Kadet EP-42B Blue ARF (Red available)

<http://www3.towerhobbies.com/cgi-bin/wti0001p?&I=LXTLR1&P=7>  
330 sq.in., span 42", 26 oz. w/provided motor & 3S 1400 Li-Po, CWL 7.5 oz./cu.ft., provided prop diameter 8.5" - possibly 9" okay, \$159.99

**Rejected:** The CWL is good with the stock set-up, but the supplied motor and ESC would have to be replaced for use with a 3S “A123” 2300mAh pack. The flying weight would go up to about 33 oz. for a CWL of 9.5. That is still okay, but the supplied ESC and motor would become “wasted” for the price. The wingspan is a little short, but could be okay.

#### E-flite Mini Ultra Stick ARF

<http://www.horizonhobby.com/Products/Default.aspx?ProdID=EFL2250>  
325 sq.in., span 38.75", 25 oz. w/3S 2100 Li-Po (28.5 oz. with 3S “A123” 2300mAh), CWL w/“A123” 8.4, recommended prop diameter 11", \$129.99

**Rejected:** While the CWL is “good”, the span is too short. It is really too small for good orientation.

#### Apprentice 15e PNP by E-flite

<http://www.horizonhobby.com/Products/Default.aspx?ProdID=EFL2900>  
525 sq.in., span, 58", 45 oz., w/3S 3200 Li-Po, CWL 6.46, recommended prop diameter 11", trike landing gear, \$229.99 or

#### Apprentice 15e RTF with DX5e Radio by E-flite

<http://www.horizonhobby.com/Products/Default.aspx?ProdID=EFL2725>  
includes Dx5e radio system, \$299.99

**Rejected:** CWL is slightly too light, comes with motor that would have to be replaced for use with a 3S “A123” pack. Tricycle landing gear tend to “blow over” when being taxied in the wind.

#### Mini-Telemaster ARF

[http://www.hobby-lobby.com/mini-telemaster\\_6880\\_prd1.htm](http://www.hobby-lobby.com/mini-telemaster_6880_prd1.htm)  
329 sq.in., span 47", 23 oz. w/7-cell 1100mAh NiMH, CWL 6.66 oz./cu.ft., recommended prop diameter 8", \$74.90

**Rejected:** Prop clearance barely usable with 3S “A123” 2300 pack. CWL slightly too low.

### Some Possible Planes

#### E-flite Ultra Stick 25e ARF

<http://www.horizonhobby.com/Products/Default.aspx?ProdID=EFL4025>  
480 sq.in., span 50", 3.4 lb w/3S 3200 Li-Po, CWL 8.94, recommended prop diameter 12", \$169.99

**Possible:** Good CWL for decent “windy day” flying. Motor and speed control (ESC) can be selected to match a 3S “A123” pack and 11” or 12” diameter prop.

#### Model Tech Fledgling Gen-II R/C EP ARF w/BL Motor & ESC

<http://www.hobbypeople.net/gallery/123506.asp>  
495 sq.in., span 55.5", 3.1 lb. w/3S 2100 Li-Po (54 oz. with 3S “A123” 2300mAh), CWL w/“A123” 8.47, recommended prop diameter 10” – looks like can handle up to 12”, \$169.99 but \$149.99 on sale, limited supplies

**Possible:** Good CWL for decent “windy day” flying. The provided outrunner and ESC “should” be able to use an appropriate 11” or 12” prop when running on a 3S “A123” 2300mAh pack since the recommended prop is a 10x5.

While both planes should work, I would not consider the **E-flite Ultra Stick 25e ARF** at this time because it is a “stick” and can be quite maneuverable. The **Model Tech Fledgling Gen-II** is a high wing/cabin type, which should make it a bit more stable. The review on RC Groups for the Ultra Stick 25e also notes that it is not really for a beginner.  
<http://www.rcgroups.com/forums/showthread.php?t=581481&highlight=E+flite+Ultra+Stick+25e>

Be sure to read Dereck’s comments.

### More Research on the

## Model Tech Fledgling Gen-II

I found that this plane is available from several other suppliers, besides the one originally noted.

<http://www.atlantahobby.com/shopexd.asp?id=6023>

<http://www.radicalrc.com/shop/?shop=1&cat=241>

### More info:

This thread is mostly about the Gen-I plane, which goes back to Speed 600 brushed, and NiCad days, but the new Gen-II is mentioned.

<http://www.rcgroups.com/forums/showthread.php?t=542894>

This thread contains mostly comments concerning the Gen-II motor and ESC but with some nice comments about the plane being a good "windy day" flier.

<http://www.rcgroups.com/forums/showthread.php?t=999222&highlight=Model+Tech+Fledgling+Gen+II>

The motor appears to be a TowerPro Brushless Outrunner 3015-7 1000kv / 470W:

[http://www.hobbycity.com/hobbycity/store/uh\\_viewItem.asp?idProduct=5113&Product\\_Name=TowerPro\\_Brushless\\_Outrunner\\_3015-7\\_1000kv\\_470W](http://www.hobbycity.com/hobbycity/store/uh_viewItem.asp?idProduct=5113&Product_Name=TowerPro_Brushless_Outrunner_3015-7_1000kv_470W)

The ESC might be a TowerPro L40-acro 40Amp Brushless Speed Controller

[http://www.hobbycity.com/hobbycity/store/uh\\_viewItem.asp?idProduct=6318&Product\\_Name=TowerPro\\_L40-acro\\_40Amp\\_Brushless\\_Speed\\_Controller](http://www.hobbycity.com/hobbycity/store/uh_viewItem.asp?idProduct=6318&Product_Name=TowerPro_L40-acro_40Amp_Brushless_Speed_Controller)

and its programming card (optional)

[http://www.hobbycity.com/hobbycity/store/uh\\_viewItem.asp?idProduct=5448&Product\\_Name=Towerpro\\_N20\\_and\\_L40\\_Programming\\_Box](http://www.hobbycity.com/hobbycity/store/uh_viewItem.asp?idProduct=5448&Product_Name=Towerpro_N20_and_L40_Programming_Box)

The only major problem that I anticipate, based on the photos, is the landing gear. My best guess is that it will be very soft "Chinese noodle" wire, and with its high "stance" it will probably bend easily.

**Other things to purchase to get the plane flying**

**Radio: Spektrum DX5e 5Ch Full Range**

**Transmitter/Receiver only MD2** (MD2 means mode

2, the most common set-up in the USA with the throttle and rudder on the left stick and ailerons and elevator on the right stick.)

<http://www.horizonhobby.com/Products/Default.aspx?ProdID=SPM5500>

Check around for best pricing, but the list is only **\$99.99**.

**3 Servos:** Possibly standard size, but without having the airframe, it is hard to say. **~\$30** for standards

**Battery:** 3S "A123" 2300mAh pack (see article at <http://homepage.mac.com/kmyersefo/M1-outrunners/M1-outrunners.htm>) for sources. **~\$40**

**Prop(s):** to be determined, but if the given Kv of 1000 is close, several 12" diameter props should work. **~\$3 - \$4** each, maybe **\$12**

**Power meter:** Astro Flight 101N Super Whattmeter With No Connectors - **\$49.95**

[http://www.astroflight.com/index.php?main\\_page=product\\_info&cPath=2&products\\_id=17&zenid=gc8pfl6mpsmrkm24n5h9ba07gvc4eimp](http://www.astroflight.com/index.php?main_page=product_info&cPath=2&products_id=17&zenid=gc8pfl6mpsmrkm24n5h9ba07gvc4eimp)

**Balancer for A123 cells:** Astro Flight 106-123 Astro "Blinky" Battery Balancer for A123 Cells - **\$29.95**

[http://www.astroflight.com/index.php?main\\_page=product\\_info&cPath=34&products\\_id=21](http://www.astroflight.com/index.php?main_page=product_info&cPath=34&products_id=21)

**Connectors:** 6 pairs of Anderson Power Poles - **~\$9**

**Lamp cord:** 9 or 10 feet \$?

**Glue** (thin CA & 15 or 30 minute Epoxy), **tools?** and **other items?:** **~\$20?**

**Total to get started from scratch: about \$480**

### Some Final Thoughts

Can an expenditure of about \$500 be justified when a "beginner's" plane like the HobbyZone Aerobird Swift RTF Electric can be had for \$136.00? <http://www.horizonhobby.com/Products/Default.aspx?ProdID=HBZ7200>

Only the individual desiring to "try" the hobby can really determine that. In my opinion, the Swift, as a trainer, is a dead end, allowing for no further growth. It is hard to train on and I personally find none of the Aerobirds acceptable for any reason. Basically it comes down to, what do you want to do with your time and money?

### Postscript

After doing the research over a three day period, I ordered the Fledgling Gen-II from Hobby People on Sunday, April 19. You know what will be coming soon. ;-)



Fledgling Photo from Hobby People Web Site

### EFO's First Flying Meeting of the Year

On Saturday, April 19, the EFO had their first flying meeting of the year. It was held at the Ribcrackers' flying field on Grand River Avenue in New Hudson, MI. A special thanks goes out to EFO member Roger Wilfong for allowing us to visit as guests!

Most of the exceptional turnout of EFO members occurred about 10:00 a.m. It was a beautiful day, with the temperature in the low 70's by noon. Unfortunately, it was also a very windy day. Most of the EFO member flying took place before 11:00,

when the Ribcracker members really started to show up.

EFO member Jim Maughan took some very nice photos to share with us all.



Leon Narozny's Biplane on final



Tom Bacsanyi's big, beautiful KMP P-38



Tom Bacsanyi's EDF Sabre at lift off



Are we too close to the road?



Roger Wilfong's ElectroStik



Denny Sumner's 4 Star on final

The next EFO flying meeting is on Saturday, May 9 at 10:00 a.m. at the Midwest RC Society 7 Mile Rd. Flying field in Salem Township, MI. Everyone with an interest is welcome. AMA membership is required to fly. See you then!

### Upcoming Meet In Our Area

On Sunday, May 3 the Radio Control Club of Detroit (RCCD) presents their 4th Annual Electric Fly-In at RCCD field. It is sponsored by Castle Creations. There is a Landing Fee of \$5 for Pilots. The contest director is Mike Pavlock, phone 586-295-3053. More details and the field location can be found at [www.rccd.org](http://www.rccd.org)

### Special Thanks from Ken Myers

I want to thank all of you who took the time to send a card or an email expressing your sympathy on the death of my mother on March 18.

It meant a lot to me and lifted my spirits and helped me through all of it more than you'll ever know.

It once again demonstrated to me what a truly great hobby this is, especially when folks take the time to drop a line from across town or across the globe. A very warm and sincere thank you to you all!

**Ampeer Paper Subscriber Reminder**

**When subscribing to or renewing the paper version of the *Ampeer*, please make the check payable to Ken Myers. We do not have a DBA for the *Ampeer* or EFO. Thanks, Ken**

**Upcoming E-vents**

**May 3** Sunday, 4th Annual Electric Fly-In at RCCD field, Sponsored by Castle Creations, Landing Fee: \$5 for Pilots, CD: Mike Pavlock 586-295-3053 Details at [www.rccd.org](http://www.rccd.org)

**May 9, Saturday** EFO Flying meeting, 10:00 a.m. Midwest RC Society 7 Mile Rd. Flying Field, Salem Twp., MI Everyone welcome. AMA card required to fly.

**June 6 & 7** Keith Shaw Birthday Party Electric Fly-In hosted by The Balsa Butchers at their field near Coldwater, MI. Contest Director: Dave Grife - E-mail: [grifed@yahoo.com](mailto:grifed@yahoo.com) or Phone: 517.279.8445 Please e-mail or call with any questions

**July 11 & 12** Mid-America Electric Flies, sponsored by the Ann Arbor Falcons and Electric Flyers Only (EFO) at the Midwest RC Society 7 Mile Rd. field, Salem Township, MI.

**Important Notice!**

**The EFO WEB site has had to move.  
Now at: <http://homepage.mac.com/kmyersefo>**



The Ampeer/Ken Myers

1911 Bradshaw Ct.

Commerce Twp., MI 48390

<http://homepage.mac.com/kmyersefo>

**The Next Monthly Meeting:**

**Date:** Saturday, May 9 **Time:** 10:00 a.m.

**Place:** Midwest RC Society 7 Mile Rd. Field

**Everyone with an interest is Welcome – current AMA membership required to fly**