



REPORT

August 2010
Issue 289

ONLINE!



**Racing Anyone?
Pylon Trainer? YES!!**

RC REPORT ONLINE

August 2010 INDEX

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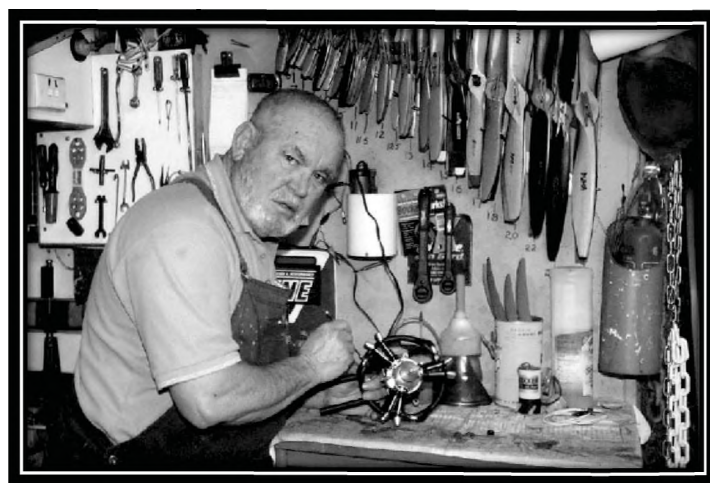
THE OILY HAND

BRIAN WINCH

THE OILY HAND: Covering engine topics and working with metal for models. Send your comments or questions to: oilyhand@bigpond.net.au or write to Brian Winch, 33 Hillview Pde, Lurnea NSW 2170. Australia. International Response coupon (Post Office) required if you want a written reply.

WHAT SIZE PROPELLER?

I was at my float fly flying field yesterday and one of the members looked up at me (I was sitting; having lunch.) with a quizzical look relating to an engine he had running in a model. I could hear that it was not pulling full RPM and that the tuning by the modeler (and several bystanders) went from lean to rich and back many times in their efforts to gain more RPM. I got up and stopped the engine then checked the throttle throw. It was no more than 5/8 of full movement. I thought to myself, "Why the hell do modelers set up a model on the bench and not check all actions and movements before coming to the field?" Anyway, with a bit of adjusting and fiddling, the throttle was moving fully both ways, so I wound the needle out three turns; a safe starting point for a four stroke of this capacity and brand (OS 70FS). Started the



engine, and slowly wound the needle in until I could hear it was not making any difference so I wound it back out a bit richer. The engine was running full RPM as it was, but it did not seem to be running as fast as a (reasonably new) OS70 should. I grabbed a tachometer and this confirmed that the engine was down on the potential RPM, but it was running okay. "What size prop are you running?" I asked. "A 12 x 10," was the answer. "Why that prop?" "Because the hole in the prop was the right size for the engine. Besides, it flew on that prop before." Yes, I remembered, it did NOT fly. It ALMOST flew, but the performance was so bad on the water it took a lot to get it in the air and then it was so quirky in its flying, the instructor bought it down again. As I explained, the

default propeller of that engine, a 70 four stroke, is a 13 x 6 and it will run at the factory stated RPM quite well and with a good broad tuning. Variations on that propeller will be mandatory according to the type of model and the type of flying. To fly off water, the 13 x 6 is okay for a reasonably light model with a good flying wing; a wing that 'wants' to fly. Add a bit of weight or other drag factor and the diameter needs to be increased. Now, this means that the maximum potential RPM will be lower unless you drop the pitch size. Here now we consider again the type of model. If it needs a good turn of speed to keep flying then you need a healthy pitch, but it still needs diameter for pull - off the water, climbing maneuvers, good landing control, for example. It might be that you have to accept a lower RPM which is not great bother as the model will still fly quite well if the RPM and prop matches the needs of the model. As well, we have to consider the engine timing and this comes into tuning for a glow engine.

For some reason many modelers are frightened or wary of experimenting with propellers and using the engine at a lower than maximum RPM. I wonder if they drive their car in LOW all the way to keep up full RPM? These modelers are the type who start their engines, run them at high speed from the pits to the takeoff area, blast off as if something horrible is going to grab the model, ("A weird monster came out of the ground to get my model! Must get it in the air quick.") climb the model at next to stall speed then fly simple circuits with the throttle stick in the one position, full pedal to the metal, until the engine stops. Then they scream out, "Dead Stick" and flop the model onto the ground, with the engine still smoking

from heat. I sometimes wonder why these characters buy engines with carburetors when they use only one speed setting. Why not buy an engine set up for U-control. They run only at full speed and cost less than an R/C engine?

A good simile that comes to mind is from days past. The great river boats that plied trade (also a floating casino trade) along the river stretches carried immense loads. We had them here carrying, as an example, tons of wool bales. No great speed, but the paddle wheels dug deep and with powerful authority; likened to a very course pitch propeller. The boats themselves were no fine example of streamlining with smooth shaped lines. Of need to carry loads, they were not much better than a barge; but they did a great job with the wheels at a slow speed. Compare a paddle wheeler with an outboard speedboat. Super slick hull shape designed for maximum speed, screaming engine; like, really screaming and a smallish propeller (water screw). These ultra light boats will skim along at a very fine speed with a greater part of the hull more above than in the water. Bit much like a large, draggy scale bipe and a pylon model.



Large Beaver on floats - draggy model - needs a large prop area.

Both do their intended job, but due to the vast difference in that task, the engine speed and propeller size is vastly different. Stop the engine of the paddlewheeler (with a full load), hitch the outboard 'speedy' to the front and see how things go. I would say, 'a whole lot of cavitation going on' and not much forward movement; if any. Of a similar story, consider a tugboat. Nicely shaped, a bit beamy (wide), but designed to have little resistance cutting through the water (as opposed the planning like the speedy outboard), but they have a very low turn of speed. They have a large and powerful engine and a very large prop (water screw) which turns rather slowly. However, consider the great amount of power at their disposal. From a standing start they will move incredibly large ocean liners or cargo vessels and tow them with all authority while the tug engine just 'pump - pumps' along without a fuss. In each of our marine examples, the engines have been set up to do the job for which they are designed.



A slicker model: still needs good prop area to get off the water, but can handle more pitch for higher flying speed.

RPM and timing match the load imposed on the engine. We can adapt most of our model engines in a similar manner in order to use a

greater range of propellers than is usual and pull large, draggy, heavy or slow models in a very realistic manner. We do this by changing the propeller and timing and by not expecting the engine to run at maximum RPM, and .no harm will befall the engine. As one example, a friend of mine flies WW11 biplanes in scale competitions. His main winner is a very large and draggy biplane powered by a Saito 180 glow engine. The engine does not have a muffler - just the header pipe - and, from a reasonable distance, you can't hear the engine running. He uses a 20 x 10 homemade, scale type wooden prop with very wide blades. At full speed the engine might just reach 5,000 RPM, but he runs it around 3 to 3,200 RPM for flying. He retards the engine by running a very rich mixture; main needle out five turns and the engine is so reliable he has never had a dead stick landing in five years. Last time (recently) I saw him at a scale comp, he said he might pull the engine out and get me to do a bearing job on it as he had never had a spanner on the engine other than the occasional plug change in the five years. He considered he had run quite a lot of 'buckets' of fuel through it so the bearings probably needed a bit of doctor Winch.



Super slick model, very high speed, very small diameter and maximum pitch; fully advanced timing (leanest possible mixture).



Photo 1: NO prop - VERY high speed - a real grass burner.

TIME FOR A CHANGE

As is often written and said, the internal combustion engines we use to power models differ considerably in their style. First is a diesel with, mostly, variable compression (some early types had fixed compression) and this is the way in which we change the timing. Modelers who have had a diesel engine in their past or present will know that you can fit a great range of propellers to an engine and it is 'tuned' by decreasing the compression and richening the fuel mixture as you go to very large props. Really, the only limiting factor, within reason, would be the strength of the crankshaft to handle the larger load. If you are not diesel oriented, as one example, a 14 or 15 x 6 prop on a .40 diesel would be nothing to raise an eyebrow amongst diesel modelers. Coming in as a close second is a spark ignition engine. Our early engines had a 'spark lever' that you moved to select the best ignition timing to suit the load (propeller). As another good example, an English made .60 size Merco engine had a small micro switch that could be activated by a movable (plastic) cam on the throttle to retard the ignition so you could use 18" or so

propellers. An 18" on a .60 is quite a load, but the engine ran quite well on large props around that diameter. Modern petrol engines have a similar capacity for extra loading, but these days it is all done electronically to a certain extent. You can move the sensor on some engines a little to vary the timing, but most of it is done inside the CDI (Capacitor Discharge Ignition) box. The very commonly used Rcexl CDI units have an advance curve of 18°. At idle the setting is around +8° with the full advance coming in around 4,000 RPM. There is considerable scope for using a good range of propellers on an engine fitted with this (type) of ignition. Last week I was testing (for a review) a very nice 50cc petrol engine, the Pterodactyl, and it was quite happy swinging a 24 x 10 propeller. I considered it would have swung an even larger prop, but I did not have one drilled for the hub bolt pattern and I was not too inclined to drill a new prop just for my own benefit. (Large wood props are a bit heavy on the wallet when you need a lot of them as I do and I will drill only one pattern of holes per prop for safety reasons.).

Okay, now we come to the glow and here we hear the common misconception so many times: "One problem with glow engines is that you cannot change the timing for a large range of props." Well, yes you can! So it IS a misconception as there are several ways to change the compression with the simplest being the tuning. More on this further on. Two mechanical changes are quite within the means of any modeler who could remove a cylinder head. The first change is very simple. You add one or two plug washers to the one already in place. By doing this you are lifting the plug up, and in doing so, retarding the ignition to prevent

knocking (pinging, pre-ignition) when the propeller load is a bit high. Be careful if you add two washers (for three in all) that the plug thread is long enough to still engage at least 3 or 4 threads in the head. The next method that gives a very broad range is to fit extra head gaskets or cylinder base shims as in the case of a Saito, for example. I have now gone as far as 0.032" in shimming a Saito barrel for a modeler who wanted to run a large prop on a Fokker Triplane. As well as being quite happy with the large prop, the engine idles a lot more smoothly and lower and the vibration has been reduced considerably. The engine is, obviously, not running at full RPM; so it was also much quieter. Actually, the characteristics of the engine are now very close to the spark ignition, petrol fueled Saitos which also have a lower compression ratio.

Our last and simplest method of having a control over the timing is by using the main mixture control: the main mix needle. One tuning factor of many modern cars is that they are run as lean as possible; great fuel economy and this is a large factor in advancing the ignition. The controlled operating temperature is higher, ignition well advanced, engine temperature as high as possible and we have super 'buzz boxes' with race bred and performing engines. My wife has a new Toyota Yaris with a 1.3 liter engine. It goes like stink! The performance is outstanding for such a small capacity engine and it has very long legs (capable of high speed) through a very well managed gear box system. Super little machine, but connect it up to the old river barge with a few ton of wool or cotton and it is going to spit the dummy or rev its rings out in first gear. Back to our model engines, the needle valve

gives us quite a good control over the timing by changing the mixture, lean for advanced, rich for retarded. On my test bench my standard procedure is to richen the mixture several clicks for each prop change up in size; either pitch or diameter. Whereas say, two strokes will run, generally, around 1.5 to 2 turns open for the smallest prop in its range, you will have to wind out to three or four turns when you fit a top of the range prop to retard the timing a bit otherwise the engine will knock in the air, often with disastrous results.

Generally speaking, a four stroke is the most amenable to these timing changes, but a two stroke is still going to change its habits if you want a special application. Actually, a two stroke engine does very well with gaskets under the head to the point where you will be quite surprised at how low the engine will rev reliably with a very large prop. For modelers who want to really experiment along these lines, fitting a smaller carburetor or a sleeve to reduce the venturi bore gives even greater control at very low compression ratios.

To close on this, don't be afraid to experiment with propeller sizes and be aware that there will be a change in RPM and tuning. As an example, with my article this month, I have included a short review of two new Thunder tiger engines: a .28 and a .18. Pushing the envelope with the lovely little .18, I had it running from 12,000 RPM on the largest propeller to 21,400 on the smallest; but I was super careful with the tuning. The timing was really advanced at the higher RPM.

SLIPPING OFF

Well, here's a bit of a pleasant break, the 'fool' is still AWOL (Absent Without Official Leave). If you remember his escapade last month with the 'fly paper' experiment, well, it appears that the blowflies WERE heading for the long dead cattle carcass and they landed in it! The whacko pilot of the Blowflyter was lost in...well, I leave it to your imagination; but it was really yucky stuff. The farmer who owns the property saw the 'thing' fly over his property, but due to farm commitments; it was two days before he had the chance to drive the tractor over to investigate. Later on he rang me after 'looney tunes' mumbled my phone number. "Seems as how I have a thing - person -whatsit here that might belong to you," he said, What do you want me to do with 'it'...it is very strong on the nose and covered with a lot of *&%\$@*" I was tempted to deny knowing him, but I knew that he would, eventually, come back to haunt me so I asked the farmer how he got him out of the rotten carcass. "☺h, well," he said, I just slung a loop of chain around one foot and dragged him out with the tractor. He is still hooked up." "If you would be so kind," I requested, "continue dragging him to the nearest swamp or water hole not used for drinking by the cattle, dump him in and leave him until he smells close to normal." "Consider it done,"

said the farmer, "I have a smelly hot water bore drain here where the water is full of stinking sulfur; no good for cattle drinking; but it keeps the ground wet. I'll dump him in that and come back next week to see if he smells only of the sulfur which will be a whole lot better than how he smells at present." Well now, how neighborly of him and what a nice break for me.

Seeing as how I can get a bit of work done in my ground level workshop, I will slip off, but not before giving you beginners in the workshop an explanation of the jobs a set of vice grips are capable of. First off, they are great for rounding off the heads on bolts, winding the heads right off tight bolts, ruining the threads on studs, crushing thin wall tubing, bending spring wire in a great radius rather than at the angle you need, transferring heat from a welded or otherwise hot job to your hands and doing serious damage to a finger when you close the handles while you have a finger in the jaws. A very handy workshop tool.

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Hi gang, and Greetings from Sweltering, Humid, Hot, Hot, Hot, South Florida. It's July, and the combat season is in full swing. The Combat portion of the annual AMA Nationals is going on right now. By the time you read this it will be in the books for this year. The turnout was lower than last year, which was down from the previous year. Sign of the times that I hope will get better soon!

BE THERE OR BE SQUARE

Events for August are: 8/14, 15 "Tangerine Combat Classic", Open B, Scale 2948, and SSC, Apopka, Fl. 8/14 "Red Baron's Where Eagles Dare" Shelly, ID. 8/21, 22 "Melee Over Lenox", Limited B, Open B, SSC, Lenox Twp. MI. 8/21 "Texoma Summer Scorcher (II)" SSC, Open B, Sherman, TX. 8/22 "Battle of Britain", SSC Open B, Fallbrook, CA.

Events for September are: 9/4 "Battle for Blue Ridge" SSC, 2948, Bedford, VA. 9/4, 5 "Dogfight Over Dovre II" Lim B, SSC, New Auburn, WI. 9/4 "Wings Over Malheur Butte" Open B, Scale. Malheur Butte, Ontario, OR. 9/11, 12 "Bushwhacked Fall Furball" Open B, SSC, Scale 2948, West Palm Beach, FL. 9/18 "Fall Sussex Streamer Cuts" SSC, Scale 2948, Seaford, DE. 9/18 "Richardson Fall Combat" SSC, Scale 2948, Lucas, TX.



As you can see there's lots going on in the summer months so don't miss out! Suit up and show up! Here's the link to go to the RCCA's event calendar and sign up: <http://rccombat.net/events/index.asp>

Signing up online prior to the contest date should be done as soon as possible. This helps the event coordinators and contest directors get all the needed supplies, manpower and club resources to make the event run smoothly. Also seeing the names of other pilots you may know or want to compete with is a good draw to encourage participation, so don't be shy! Sign up early!

Be there or be square!



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EVENTS DEBRIEF

The AMA Nationals for 2010 are in the record books!

Unfortunately as the pilot's group photo shows, with only 13 showing up for a national level competition, attendance is at an all time low. I can personally attest to the difficulty involved in making the long trip and the expense of staying for the 4 days of competition having done so myself on five other occasions since my first Nat's in 2001. I and many others who would have liked to been able to appear in this photo could not afford the cost of being there this year and as in my case work also intervened.



Photo 1: AMA Nationals Pilot's Group Photo.
Shown here with prizes donated that were given away.

No surprise endings this year as Brian Gilkey performed his familiar sweep of all four classes. Younger Brother Eric who usually gives big bro a run for his money was upstaged by William Drum III who took second place in the three events he competed in. The Gilkey strategy is equipping the two brothers with the same frequency so they never compete against each

other, coupled with the fanatic support of their father Scott, "Pit Boy" Gilkey who doesn't actually fly combat much himself, but at the Nat's does everything for the boys short of fly the planes! And he's very good at what he does! From setting the planes up to turn on a dime to getting perfect engine runs every time, Scott is the mechanic to have in your corner! Let's not forget the fact that both boys are just phenomenally good combat pilots, and you have the Winn ingest family in the history of Nat's combat!

Eight of the thirteen pilots at the Nat's this year flew my favorite class, 2948 Scale. Scale combat planes add that touch of realism that is worth the extra effort required in building them. It also produces a plane that flies more realistically which means more pursuit is the tactic generally employed.



Photo 2: Some of the 2948 Scale planes at this year's AMA Nat's

There are only a very limited number of 2948 kits available so many pilots scratch build their favorite model. Since the most common material used in constructing combat planes these days is blue foam, a very easily worked substance, it's not nearly as hard as you might think to fabricate your own designs.



Photo 3: Mark Schofield with his scratch built Corsair, Nice!

The weather threatened off and on throughout the contest, but actually rained mostly at night so in contrast to other years played only a small part. To read all about the event and browse the hundreds of photos taken by Don Grissom, the RCCA's Webmaster who also competed at the Nat's this year, go to: <http://rccombat.net/forum/viewtopic.php?f=21&t=13540>

The Mid America Challenge for SSC was well attended, although down a bit from previous years. As you know, SSC, which stands for Slow Survivable Combat, is very popular at this Jackson, Tenn. club as well as around the country. It allows for less damage and slower speeds to make things easier for the beginner and still lots of fun for the seasoned veteran. Go here for tons of photos and event report: <http://rccombat.net/forum/viewtopic.php?f=21&t=13524>

The Marks Spring Shootout held in Salisbury, Maryland drew thirteen pilots for SSC. This is another hot bed of SSC activity hosting multiple contests each year. Kirk Adams, the resident combat Guru, has led the group's enthusiasm and been the area's top dog for many years. Go here for complete report and some unbelievable aerial shots: <http://rccombat.net/forum/viewtopic.php?f=21&t=13502>



Photo 4: Marks Shootout Salisbury, Maryland Pilots Group for SSC

Now to the Lone star State for the Texoma Summer Scorcher for SSC. Ed Kettler, Evan Wengler, and Bob Star took top honors. It looks like they were all a little hot under the collar by the end of the day! Great job guy! Go here for complete report with photos: <http://rccombat.net/forum/viewtopic.php?f=21&t=13543>



Photo 5: Texoma Summer Scorcher Pilots Group

Lots more events worth reading about, but too lengthy for this article can be found in the events debrief section of the RCCA site at <http://www.rccombat.net/forum/viewforum.php?f=21&sid=a314565314be62f1afef337b01c8d0e2>.

And also be sure to check out the Palomar Flyers Combat Forum at <http://pfcombat.hyperboards.com/index.php> for some cool combat tips, event debriefs and discussion forums.

FROM THE BENCH

So just how much trouble is it to build a scale combat plane, you must be asking yourself right about now? Well, say no more! You came to the

right place! I just finished putting one together and would be happy to give you the highlights!

Thanks to the advent of blue foam in the combat builder's arsenal of tricks, things are not as bad as they seem. I'll bet you had no idea that when you saw that finished scale combat model all prettied up with covering and insignia that it came from such humble, cheap and easily worked materials. Yep, sho' nuf!

Phase 1: Glue wing halves together, glue in fiberglass spars, cover with tape and tape on ailerons.



Photo 6: Wing covered with BiDi Tape and Ailerons attached

Phase 2: Glue fuselage parts together, glue in fiberglass spars, and cover with Bi-Directional tape.

Phase 3: Glue in Tail feathers

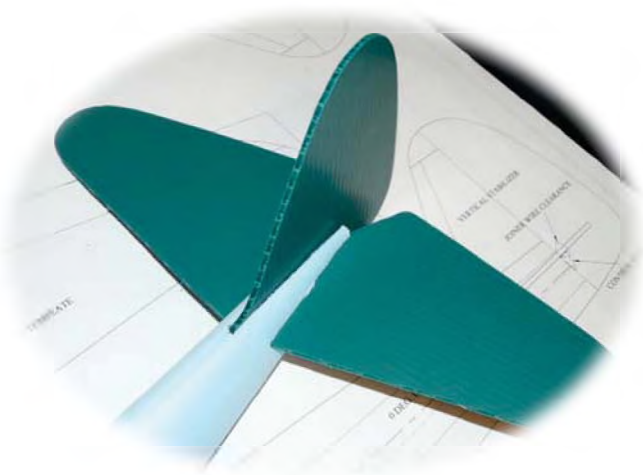


Photo 7: Tail Surfaces installed

Phase 4: Mount Engine, Fuel tank, Cowl and Servos.



Photo 8: Engine and Cowl



Photo 9: Servos



Photo 10: Wing Servos

Phase 5: Bring it all together. Fit wing to fuse, add receiver and battery, cover with low temp iron on covering, add details like canopy and national markings, paint cowl, check CG, and VIOLA!

You are ready for a test flight! Yes it's just that easy! Trust me, it's even easier than using a Sledgeomatic!



Photo 11: Finished Ki-43 Oscar kit for 2948 Scale Combat

Now, admittedly, I used lots of photos and very little text to oversimplify for you the reader and make my editor's life a living hell because she said specifically not to use too many photos with not enough text. Something about having to wrap the text around the pictures or some such. Such is the life of a high-powered editor I guess. Must be tough! *(Now, Chris! I am really an "Insert here" kinda girl! Wrapping text is for the really high-powered editors who have lowly assistants! I only have Isabelle and she's a diva at times. Julia)*

The actual kit instructions have many more detailed photos and instructions walking you through each step so you can easily understand and complete the build even if you have never done anything like it before. Such is the life of a low profile kit manufacturer. Ask me how I know that? Well since you asked, this little example is one of my very own "BulletProof Models" Ki-43 Oscar kits for 2948! I also have developed a P-47 kit, which is a sweet flier.

The moral of the story, children friends, is to fear not! Building a scale combat plane is much easier than you can imagine! Top that off with the fact that scale combat is slower, more realistic, and crowd pleasing to boot, and I just don't know how you will be able to contain your newfound enthusiasm for scale combat! OMG, lets BLOG about it! ☺r better yet, how about (after you finish reading the rest of RC

Reports Online) you push back from that computer before your arms and legs atrophy to the point of complete paralysis, and GET WITH IT! Who knows, you might even get a tan while you're out there showing off your new scale combat plane!

Well, that's it for this month gang; I hope you enjoyed it and am looking forward to hearing your comments at

chandegard@peersonaudio.com.

Don't forget to clear your guns before you engage and check your six o'clock frequently!



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TAILS FROM THE OTHER SIDE ISABELLE

So did ya miss me? I might have missed SOME of you! ☺ I certainly enjoyed my birthday and consequent time off last month! Birthdays are such fun; especially with apples! I may be a little grayer around the edges, but I still look really good for 8 and I can still play with the best of them! Poor Mom! She had to work extra hard since Moo was filling in for me and Cass had to travel to a volleyball camp up in Pennsylvania.



This is Cass and her friend Beth at the Nittany Lion Shrine.

Just a quick note here about fellow columnist, Ed Moorman: he has shared with Mom and Dad that he is currently experiencing some health issues. We had hoped that he would be back in the pages of RC report Online this



month, but it was not to be. Please keep him in your prayers and send any well wishes along to either him or to Mom. Any messages will be forwarded along. I am sure he would appreciate it! Get well soon, Ed!



Fellow columnist, Ed Moorman

Here we go; looking ahead to September! Don't forget, for information on events in July; check out the flyers near the end of this issue!

Labor Day Weekend starts in Bloomfield, CT (C-Restricted to IMAA) with the Central Connecticut Giant Squadron Labor Day Fly In. Ron Liska can be reached at: jliska9000@sbcglobal.net. Visit www.flywfc.org. Join them at New England's Biggest Best IMAA Fly and District I Mini-fest, fun fellowship, and terrific flying. Please keep engine/prop noise to a low roar and honor the 20mph speed limit on Seabury's road.

You're a jet guy? Okay! Let's go to Texas instead for the Texas Best E-Jets and Rally held on September 4 in Mansfield, TX. Contact Ronald Colyer at rcolyer2011@yahoo.com. Visit www.hawkfield.org. Come and enjoy lots of fun fly time with Ejet combat, speed trials by radar, aircraft carrier landing with prizes awarded all day. Gate opens 8AM with the pilots meeting 8:45AM. Flying starts 9AM with a \$15.00 landing fee which includes lunch for pilots. \$5 buys lunch for non flyers.

Still in Texas on September 11, 2010? Take a look at this! The Cedar Creek Aero Modelers Big Bird and Swap Meet will be held in Malakoff, TX at Royal Ranch Airfield. Elwood Kotil is the man in charge and can be reached at ekotil@suddenlink.net. Great flying site, grass airstrip, landing fee \$20 includes lunch and one raffle ticket, unlimited raffle tickets available, all prizes RC related. All examples of Big Bird type aircraft welcome, 1/4 scale, or 80' mono, or 60" biplane minimum, .60 size or larger helis, gas, glow, or electric. No gas turbines, please.

Here's something for the heli lovers out there! Rotary Wings Over Maryland II will be held on September 11, 2010 in Laurel, MD at the Konterra Model Airpark. Rob Clark has more information at rotorheadbob@mac.com or visit

www.freestateaeromodelers.org. This is a helicopter fun fly any and all helicopter pilots are invited. Landing fee \$10.

Stay in the New England area till the following weekend and give this a try: The Fall Fling 2010 will be held on September 18-19, 2010 in the White Clay Creek State Park located in Newark, DE. Eric Teder is the CD and can be reached at eric.teder@verizon.net. 441(JSO). Visit www.skss.org. Two days of hand-launch glider flying in a fun and competitive atmosphere, man-on-man scoring with 1st, 2nd, 3rd place awards in Expert, Sportsman, and Novice.

Maybe you want to head down South for a little southern hospitality in Louisiana? Visit West Monroe, LA on September 18, 2010 for the Fall Fun Fly w/Big Birds. Email Stan Williams for more information: chswe800@yahoo.com. Visit www.weflyrc.net. Prizes and raffle, food and drink concession, flying 9AM to 5PM, first 15 minutes of each hour reserved for big birds, landing fee \$10.

Round out the month in Ponca City, Oklahoma at a Fun Fly. Don Lambring can be contacted via email at lamb@hit.net. Come one, come all, bring em big, bring em small and beat the heat near the beginning of fall at the GOOFS fun fly. And if you come from 100 miles or more away, your landing fee of \$15 will be waived. Sponsor: GOOD OLE OKIE FLYING SOCIETY

Hope you find this information helpful! Stay busy and stay out there in the hobby!

If you have an event that you would like for me to promote, please send me an email with the information and attach a flyer too!

Now on to the Pet of the Month...Again, this month, a winner was selected by random drawing. Congratulations to RC Report Online's August 2010 Pet of the Month, Molly from New Lothrop, Michigan!

Marshal writes: *"This is Molly. She is a five year old Cavalier King Charles Spaniel. When I am working on airplanes, she wants to be on the work table, as you can see in the picture."*



Such a tired puppy after helping Dad!

Molly and her dad, Marshal, will receive a free premium subscription for one year to RC Report Online, which can be used as a gift or as a renewal, AND a \$20 Petco gift card.

Many thanks, again, to all that entered this month! Entries received this month will automatically be included in next month's drawing,

but I am always looking for new faces and friends!

How do you enter?

Just submit a picture of your pet or pets, including their name, approximate age and a brief description, with or without one of your planes for a chance to win a toy from my "Toy Box"! All types of pets are eligible: with fins, fur, feathers, scales, farm animals, etc. Each month a pet will be selected from all entries received by the 15th of the current month and any previous months. If you have more than one pet, you can enter multiple pets each month. You can email your picture (preferred method) or you can mail it by regular mail. Only photos received with a self-addressed stamped envelope will be returned. Please send entries to Mom at juliac@rcreport.net. Please put "Pet of the Month" in the subject line and make sure that you receive a confirmation email verifying that I received your entry. I would certainly appreciate other correspondence as well, such as funny or heartwarming stories about your

pets or anything else you would like to share. Birthday shout-outs are welcome too!

Well, until next month,

Isabelle

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Sparky's Revolt

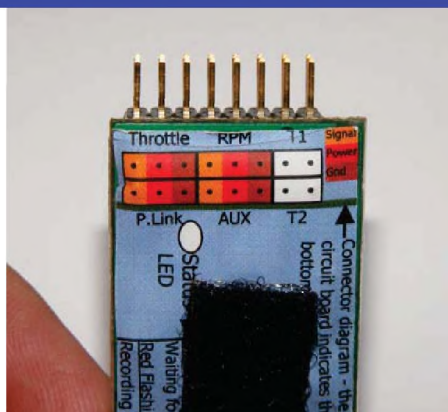
By Tony Coberly

Once again I will say that I am a data junkie; so my latest item continues to fuel my habit. The Oracle onboard data recorder from Medusa Research is my newest and perhaps neatest gadget yet. The Oracle data recorder is designed to be installed in an aircraft, primarily electric, and record several different data options.



Oracle 100Amp

The Oracle data recorder has two versions: MR-DR-60100 for up to 100 Amp current rating or the MR-DR-60200 that is capable of 200 Amps! I have the 100 amp version with Deans Ultra connectors preinstalled for me. The recorder can record current, watts, voltage, RPM and temperature with the provided hardware. The Oracle records voltage, watts and current through the Deans Ultra connectors, but the sensors plug into the pins on the end the



Sensor input end

recorder itself for the other data.

The RPM sensor is designed to plug into one pole of a brushless motor. To facilitate connection, here they have installed a 3mm male/female bullet connector to act as a pass through.

The temperature sensor is



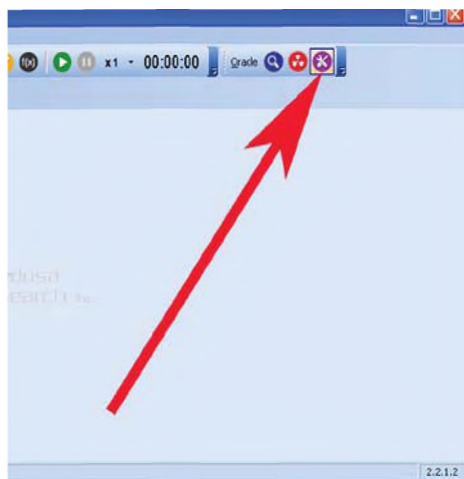
RPM Sensor

designed to be screwed or bolted onto the item you are measuring the temperature of, like a motor or battery mount. With all provided sensors



Temperature Sensor

connected to the data recorder, you are left with three sets of pins not in use. First, you have an option for a second temperature sensor. Second you have a set of three pins that you can plug the throttle into to record the position of the throttle stick while flying. The third set of pins is not used during flight, but rather to talk to the recorder with a laptop computer for download the recorder data. Okay, that's the general info about the Oracle. Now let's get into the data and programming side of things.



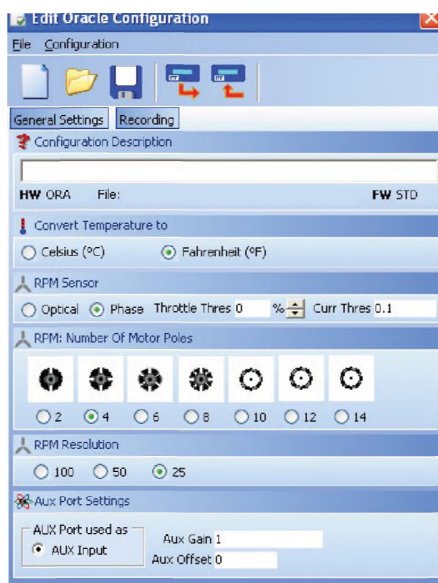
PowerPro View

The Oracle comes with software for your PC computer to setup the recorder and retrieve the data from it. With the software installed, and the recorder plugged in to the USB adapter; I can start the PowerProview software and have a look. First thing I see is basically a blank page with a bunch of buttons near the top, not really what I call a intuitive interface. I do notice in the bottom left corner we have a green icon indicating that I am connected, but now what?

Well, with a little musing around the screen, I find the button to bring up the configuration area of the Oracle. (Notice the bright red arrow!) Now I can see the settings for the recorder itself.

The general settings tab screen allows me to choose our preferred temperature format,

RPM sensor type, number of poles in a brushless motor, RPM resolution, and finally settings for the aux port. The



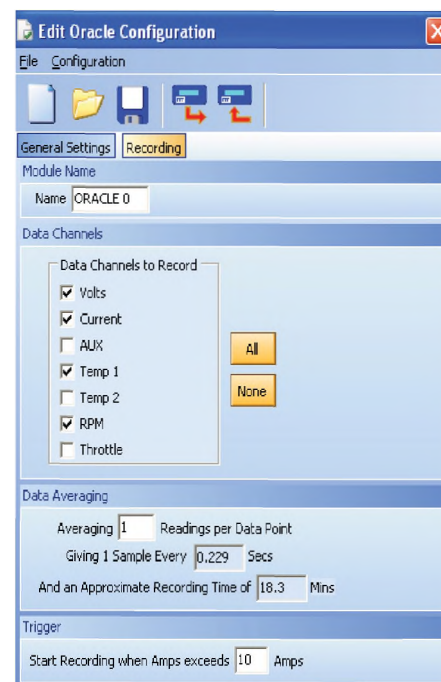
Oracle General Settings

aux port is open for additional sensors under development.

The recording tab is where I choose the data that I want to capture. The name can be set for saving configurations' of multiple oracle units. The data averaging is the rate at which the data is captured. The one setting is the maximum sample rate and will yield a sample every .229 seconds. This setting means that we can store up to 18.3 minutes of recordings. The last item is recording trigger. This can be helpful if you have a larger more complicated battery installation on your plane. There is no reason to record

data while you are waiting to take off, or perhaps while you are putting a canopy on! Raising this number, the recorder will not actually start recording when you plug it in; but rather when you run the motor up to full throttle prior or during takeoff. Okay, everything is set, so its time to go fly and get some data!

The Oracle recorder is small enough to fit in most any size plane. After all the total

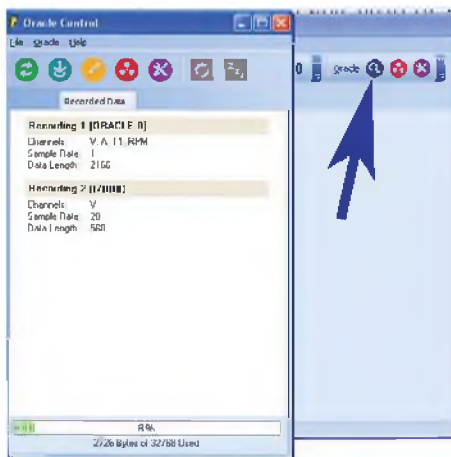


Oracle Recording Settings

weight of the sensors and the recorder is only .8 ounces! I usually just strap it on top of my battery packs with an additional piece of velcro type fastener. If you remember the setting indicated that I could have up to 18.3 minutes of

recording time, but that doesn't mean I can only fly once. Each time we plug in the Oracle, it will create a database set, so if I make three flights that are five minutes long, I will have three data sets to download later! Now let's have a look at that data, shall we?

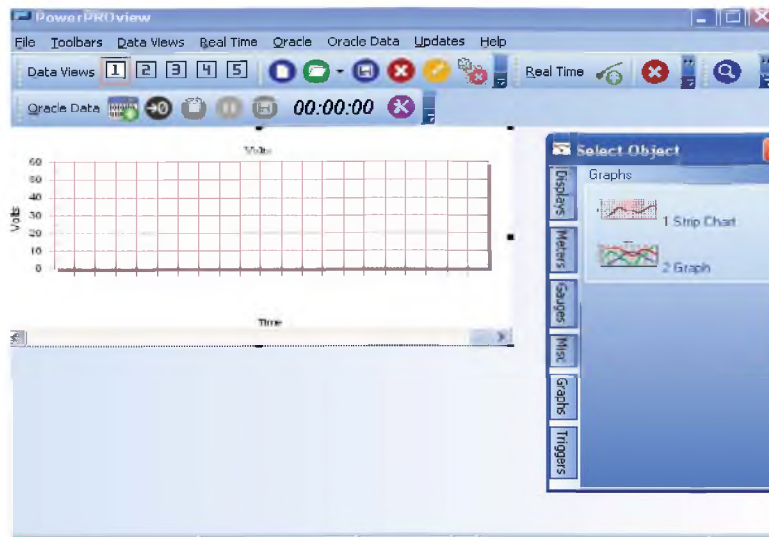
Once again I plug the recorder into our computer and start up the PowerPRO view software. This time we need to click on the blue magnifying glass to get out data.



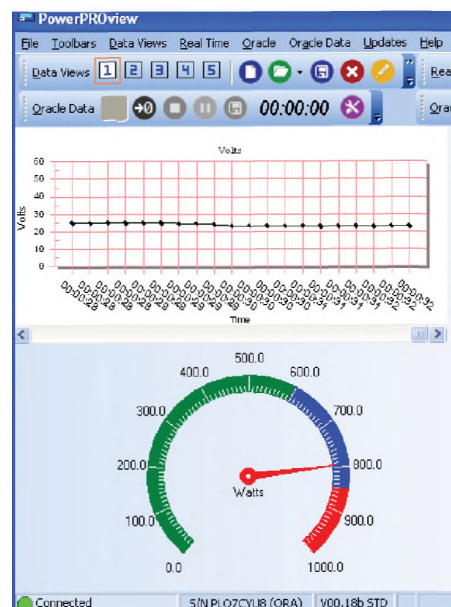
Two datasets on the recorder

A screen pops up and I can see that I have two data sets to choose from, and save to our computer. Okay I have my file saved on our computer, so I need to play it back, but there is nothing to see yet. We have a blank canvas on the lower part of the screen and I need to add gadgets to display our recorded

data, so I like to say when in doubt "Right Click". A right mouse click in the lower screen gives the option for design



view.



Now I am getting somewhere, I have options for different objects, graphs and meters to display the recorded data. Just drag and drop the meter or graph to the screen and

your almost there. Once the graph is on the screen I get to choose what data type I want it to display. Now this graph will show the voltage of the battery during our flight on the left vertical axis and it will show the time during flight on the bottom. Now I'll add another meter that shows wattage. By pressing the

play button I point to the file I saved on my computer and the play back starts. I have a good smooth voltage and about 800 watts of power out of my Twister on six cells!

I like the functionality of the Oracle recorder, even if the computer interface could use a bit of tidying up. Sadly Medusa Research is NOT offering RC products anymore, so keep a look out at local hobby shop and swap meets.

Until next month!

Tony Coberly

tonyc@rcreport.net



Model: Sky Raider MKII

Airplane Type: Sport ARF

Manufacturer The World Models
Manufacturing Co LTD
Hong Kong

Typical Price: \$129.99

Sale Price: \$99.99

Wing Span: Advertised: 54 in.
Measured: 54 in.

Airfoil: Symmetrical

Wing Type: Built-up balsa

Wing Joiner Hardwood block

Fuselage Length: Advertised: 47.5in
Measured: 47.5in

Wing Area Advertised 556 Sq. In
Measured ...560 Sq. In

Pushrod type: Wire

Hinges included: Yes

Hinges Installed: Yes

Rec. Controls: Ail, El, Rud, Throt

Engine Mount Installed: Yes

Rec. Engine: 40-.46 cu. In. 2-stroke

Landing Gear Installed:.....No
Wheels Included:.....Yes
Advertised Weight:.....5lbs
Hardware:.....Metric
Hardware Included:...Spinner, pushrods, control
horns, wheel collars, axels, plastic clevis
Items needed to complete: engine, 4 standard
servos, flight battery, transmitter and receiver
Covering Material:.....Toughlon
Fuel Proofing required:.....No
Estimated Assembly Time:.....4-6 hours
Estimated Skills required:

Building: Beginner

Flying: Beginner

Drilling required:.....Yes-Servo arms, servo
s c r e w s , m o t o r m o u n t ,

A s s e m b l y T o o l s r e q u i r e d :
Hobby knife, small drill bits, pliers, side cutters,
a n d v a r i o u s s c r e w d r i v e r s

Adhesives required:.....Thin CA glue, 15 minute
Epoxy

Completed Model Specifications

Finished Weight:..... 4 lbs. 11.5 oz.
Wing Loading:.....15.19 oz/sq. ft.
Engine Used:.....TT Pro .40 BB 2-Stroke
Propeller Used:.....A P C 10x6
Fuel Tank Used:.....as provided

Main battery used: .A123 1100mAh LiFe
Radio used:Futaba R617FS
7 Channel 2.4 GHZ Futaba 12 FG transmitter
Servos used:.....3- Futaba 9150
d i g i t a l , 1 - F u t a b a 9 1 5 1 d i g i t a l

CHEERS:

Very lightweight, sporty and fast, very
aerobatic, great second plane

JEERS:

Instructions are a little vague for a true
beginner.

The World Models Sky Radier MKII is a
small low wing trainer type plane that can be had
for a very inexpensive price, but does that mean it
is “cheap”? I guess we will see. My Sky Raider
is done up on pure white covering. This covering
is called Toughlon and seems to be proprietary to
World models. This covering appears to be more
like TopFlite MonoKote in thickness and color
matching than that of UltraCoat. Now on to the
instructions.

The manual is a bit different than other
manuals provided with some other ARF's. This
manual has many descriptions, pictures and
diagrams, but not a lot of explanation of what to
do exactly. We are first to glue the wing panels
together with a hardwood dihedral brace. The fit
of the two wing panels is very good and some 30
minute epoxy and a clamp work well. Setting the
wing aside, we can move on to servo install in the
wing. I decided to move to step five. This means

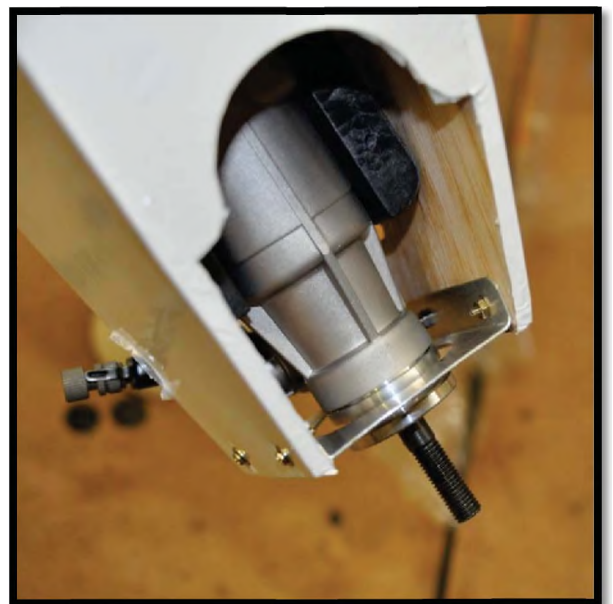
I skipped three and four to allow the epoxy to setup. I'll come back to the aileron servo later.



The tail assembly will be the next step. The stabilizer and elevator are pre-hinged and must be installed into the rear of the fuselage. There is a slot that the assembly slides into and long screws are inserted up from the bottom of the fuselage, through the stabilizer and into the vertical fin. Now the stabilizers are finished. The instructions tell us nothing of making sure that the vertical fin and stabilizer are aligned correctly with each other or with the wing. We are not told to do this until step 18 in the last pages of the manual! Well at least the stabilizers are not glued in place so we do have some adjustment if needed. Now we need to CA glue the hinges into the elevator and in the rudder.

The wire landing gear is installed next and is quite “beefy” for a plane this size. A notch in the fuselage holds the wire while two straps keep it secure. The tail wheel simply screws onto the bottom of the tail of the fuselage with a wire sliding up through a groove in the elevator and is strapped to the bottom of the rudder.

The motor mount and motor installation is next. The four blind nuts are preinstalled in the firewall so all we have to do is assemble the four pieces of the adjustable mount. I am using a Thunder Tiger Pro 40 ball bearing engine. This engine requires the motor mount to be spread out to its maximum width. I drill and tap holes in the engine mount to hold the motor on. The TT Pro .40 has an angled needle valve so I had to add a clearance notch for the needle valve. I needed an additional notch to allow the muffler screw to be removed without removing the motor. To finish the motor installation we have an aluminum piece that attaches to both sides of the fuselage. This keeps the “cheeks” of the fuselage from vibrating and braking off while in flight. Four small bolts and nuts hold this in place.



The fuel tank and radio gear install very simply and fit without problems. The pushrods for the elevator and rudder are larger in diameter than others I have seen on trainer like ARFs. This is a good thing because they are a very stiff music wire, not soft metal wire. Clevises on the control surface end and 90 degree bends at the servo is all that's needed. The throttle push rod fits very well next to the fuel tank and uses a Z-bend on one end and an EZ connector on the other. We are provided with a block of foam to hold our battery and receiver. I am using an 1100 mAh two cell A123 pack as a receiver battery and a 7 channel Futaba FASST receiver. I also added a MPI charge switch as well.



I assembled the Sky Raider MKII to check out the balance point based on the manual. Currently my plane balances at 3.375 in. back from the leading edge of the wing. This is .375 in aft of the recommend CG, but I think I'll give it a try.

One blistering hot day in northern Alabama, as I stood at the field soaking wet with sweat in the 99 degree heat with a 108 heat index, I ask myself..."What are you doing?" The answer of course is testing yet another plane for you, the readers. *(And missing Amy's wedding, too! Julia)*

(Just for the record, Amy is a friend of Cassies!—Tony)

The Sky Raider is ready to fly and the Thunder Tiger Pro .40 is turning a 10x6 APC at 13540 RPM, so we are ready to go!! A short 90 foot taxi and the Sky Raider is up and climbing out at about 35 degrees and into the sky we go. The aileron rate is a little slow for my taste, with about 300 degree roll rate per second. The elevator rate is quite nice and on

the borderline of being hot. Rudder control rate is plenty, but full left rudder in a right knife edge will not quite hold a full field knife edge. The performance of the Sky Raider is quite



choice for Club 40 Pylon Racing!! What, you haven't heard?? Well lets' talk a bit more about it!

Club 40 Pylon racing has been in the southeast for a year or two now, and it is exploding! We have about four races within an hour of where I live and there are more in Birmingham, Alabama, and Nashville, Tennessee. Club 40 Pylon racing is very inexpensive and available for most anyone that has, or is ready to graduate from a basic trainer plane to something else!

impressive. The speed is there and inverted flight is effortless with just slight pressure on the stick

to maintain altitude. Snap rolls are very nice, although a bit of wobble on exit. The Sky Raider will perform most any aerobatic maneuver that you ask it too. Now its hovering ability is a bit lacking, but perhaps an APC 12x3.75 prop would help that issue---hehe! The low speed performance is quite nice and docile when slowed down to bit. The Sky raider responds more like a high wing trainer when slowed down, but still needs a few additional miles per hour to fly stabile. So if a true trainer lands at 5 miles per hour, expect the Sky Raider MKII to need about 9 or 10 miles per hour for stabile flight during landing

The Sky Raider MKII is a great little plane with great performance and a very lightweight airframe perhaps that is why it is the airframe of

Club 40 requires the Sky Raider MKII airframe, but is divided into two classes of racing. The Novice class is limited a bushing based glow engine like the Thunder Tiger .42, or a something similar. These lower performance bushing based engines lower the speed slightly and allow a novice pilot to participate in his or her first pylon races. Club .40 racing does not allow for modifying the airframe to lighten it or make it faster, but you can add additional strength to the airframe and wing. If you have noticed the black band on the center of the wing of my Sky Raider, then you have seen a modification I have made. I decided to add a strip of 6 ounce fiberglass to the center of my wing section. The center section is black because I added a bit of powered graphite to the epoxy that I glued the glass to the wing with. I extended the fiberglass to where it covered the center plywood section of the wing and over the second rib of the wing. This adds an exponential amount of strength to the wing for high G maneuvers. Okay,

we have talked about the aircraft; now let's talk about the Pylon racing itself.

The Club 40 Pylon consists of a course with two pylons set up about 400 feet apart. The idea is to make 10 laps around these pylon markers with up to four planes at a time. All those involved in the heat race are on the line and ready to take off, but the motors are not started yet. Once the clock is started everyone has three minutes to start and get in the air and ready themselves for a start. Once the three minutes is up, or all pilots are ready, the 30 second countdown is started. No pilots can cross the start line until the buzzer goes off. Should anyone cross the line before the buzzer, that pilot must loop back and cross the line again, before his laps actually begin to count. After ten laps the results of that heat are calculated. While rounding the course, should any pilot turn before they reach the pylon, that pilot must add a lap to their race. There are turn marshals located at each end of the race course that are in line with the pylons. The turn marshals are in contact with the race coordinator and will sound a horn for every cut of a pylon. After several heats the points are calculated based on finishing order.

This form of pylon racing is great fun and is simply fun for all. The plane and engine required is very inexpensive, yet the fun meter is pegged completely! The folks at Middle Tennessee Radio Controllers have a great thing here, and if your club is hasn't tried this racing, you need too!! For more information, have a look at the MTRC website at <http://www.mtrcs.com/> for all your pylon information.

Tony Coberly

tonyc@rcreport.net



Ballistic Bearing Swap! O.S. .61 RF Hanno Special!



Well, now for something a little off my usual track of electrics and going back to glow engines. About three years ago, Gary Courtney and I had the first Ballistic Pattern Association (BPA) event in Huntsville. I am sure the first question is, “What is Ballistic Pattern?” Well, back before the time of large 4-stroke engines, and wide body two meter pattern planes; we had something different. The engine choices were limited to a .61 size two stroke engine and they made power at the high end of the rpm range. These were the days of flying in fast and furious at over 100 mph and pull up into three loops, or perhaps a figure-M or even a double Immelmann turn!! The planes were sleek and slippery and had screaming tuned pipes and the gear is sucked up for the ultimate in clean aerodynamic design. This is what we call Ballistic Pattern!! Recently we have been following another Ballistic Pattern event up in St. Charles Illinois. Rusty Dose of Team Futaba held his event May 29, 2010. I have been planning on attending this event, so it’s time to get ready!

Practice time at Rocket City RC Huntsville commences. My Dirty Birdie is not ready to fly, so Gary offered his Joe Bridie design XLT. This is a considerably later design from Joe Bridie, and is still available as a kit from Blue Jay airplanes at <http://www.bridiairplanes.com/>. Off to the field we go with Gary flying the great Don Lowe Design Phoenix 8. Both planes are powered by the legendary O.S.61 RF “Hanno Special”. The Hanno Special has been ported specifically for a tuned pipe and a 12x12 prop. This setup only revs to about 9700, but it is very quiet and pulls like a tractor!! Throughout the day both Gary and I have had repeated flame outs on the normally dependable Hanno’s. We attributed it to the engines being a bit gummed up from the castor based fuel we used last year in them. Nearing the

end of the day and about a half gallon through the engines, it came apparent that there is more amiss than a gummed up motor. Every flight had yielded more and more noise from the internals of the engine. The bearings and bearing retainers were obviously rusted and pitted and causing all kinds of maladies. It was time to replace the bearings in both of the Hanno’s if we were going to get in any practice.

The O.S.61 RF Hanno Special has not been available for many years, but they can be had on EBay and other auction sites. Replacement bearings and parts from the manufacture have been gone for quite some time, but a quick call to Jay at Boca Bearing and we were in business. Boca Bearing carries bearings for basically anything you have that has a bearing. In our case, we have eight different options for a set of front and rear bearings for the Hanno. Generally, the six basic options for most motors as listed in the chart below.

Series	Speed	Price
Econo	Fast	Budget
Stainless Steel	Fast	Moderate
High Speed/High Heat	Faster	High
High Performance	Faster	High
Ceramic Premium	Fastest	Premium
Ceramic Premium - High Performance	Fastest	Premium

- Econo series I never really consider using, because a stock bearing or something comparable was not an option to me.
- The stainless steel series is better than stock and the 440 stainless tends to prevent rust. This is a good thing because we are talking about an engine that is not run much due to the vintage of the plane it is in! Even the

best storage practices can still allow rust to buildup, so that stainless steel will help prevent rust.

- The high speed/high heat series is harder steel than the stainless series and can take more heat than stock or stainless. The retainer is a composite material and allows for a lighter bearing overall.
- The high performance series have chrome ball bearings. Chrome is harder than the stainless and more durable. Additionally the front bearing is a sealed unit to prevent fuel and air leakage.
- The Ceramic Premium series has actual ceramic ball bearings. Absolutely no corrosion and they are very lightweight. Ceramic is ultra hard, but can be susceptible to crash damage. They are nearly frictionless!
- The Ceramic Premium High Performance has all the properties of the regular ceramic premium, but add the fully sealed front bearing.

I chose to use the high performance series bearings in the Hanno's. These bearings are considerably harder than the stock bearings and with the addition of the sealed front bearing will increase performance and needle settings. A set of bearings cost \$38.95 plus shipping. A similar set of factory bearings if available would cost \$35.98, so these much higher quality bearings are well worth the 1% upcharge. Now we can actually get them replaced so we can get to flying again!

First thing I do when I am

doing a bearing swap is to get the motor as clean as possible. The cleanliness of the motor is important for a couple reasons. I want the engine clean as possible to keep contaminants out of the motor when we reassemble it. I don't want dirt and grime in an engine with a nice new set of bearings! I like to use a commercial brake or carburetor cleaner to clean off the case and clean out the exhaust ports. The generic brands from AutoZone work well and are only a couple dollars per can. Make sure you use these chemicals in a well ventilated area and protect yourself from vapors and overspray. Once the outside of the engine is clean then remove the carburetor, head and back plate of the engine and clean out the inside of the engine with the spray.

Once everything appears clean you can then push the cylinder sleeve up and out of the case to make room to remove the piston and connection rod from the case. Now you can remove the crank shaft from the engine by simply pulling it out of the bearings. Depending on the age and time on you motor you may need to give the prop shaft a light tap to get the shaft out. Just set the rear case of the engine down on a piece of wood and give the prop



shaft a good rap with another piece of wood to drive the shaft. This will loosen the shaft and allow it to come out the rear of the engine case.



Need to cleanup this buildup before we heat the engine case!

Now that the bearings are exposed we can figure a way to get them out of the case, starting with the rear bearing. This is the second reason I mentioned that we need a very clean engine. With everything clean and DRY of all chemical cleaners I am going to heat the motor slightly to allow the case to expand. This will allow the rear bearing to fall out the rear of the case after a slight rap on that piece of wood from earlier. Now some folks will use a propane torch for this, but I think that's a bit too hot and doesn't heat the case evenly. Instead I like to use a toaster oven for this. Preheating the oven to about 300 degrees for a few minutes and then put the engine case in for about five minutes. I am not looking for the case to get to the same 300 degrees as the oven is, but rather getting the case to about 150 degrees is what I am shooting for.



This inexpensive toaster oven heats the engine case more evenly than a propane torch.

Remove the engine from the oven, with a glove or potholder, and then give a rear of the motor a rap until the rear bearing is freed from the case. Now for the front bearing.



You can see here that we didn't need a great deal of heat to free the rear bearing.

The front bearing must be driven out with a hardwood dowel, drift or in my case I am using a large Allen wrench. Since the bearing is bad, I'm not concerned with damaging it. This dowel must be large enough so it will not fit through the front bearing. Once again put the engine into the toaster oven for about five minutes or so. Remove the engine, with a glove or potholder, and slide the motor over the dowel. Now rap the other end of the dowel on the bench or with a small hammer until the front bearing pops out! Now the front bearing is not usually very stubborn and comes out easily most of the time, so you may not even need the heat.



Now that we have a naked engine case a good cleaning is needed in the areas behind the bearings. There is always some buildup here. Probably a pink or blue dye color from the glow fuel you are using, and if you use a castor based fuel there is more than likely some molasses like buildup. Use care to not scratch up the surfaces where the bearing races rest. Deep scratches here will make installing the new bearings considerably more difficult.



This goo must be cleaned up before we install the new Boca High Performance Bearings.

LIGHTER, **STRONGER**, FASTER

UPGRADE YOUR HELICOPTER NOW WITH **CERAMIC BEARINGS.**

Boca Bearings cutting edge ceramic bearings that go to the **EXTREME.**

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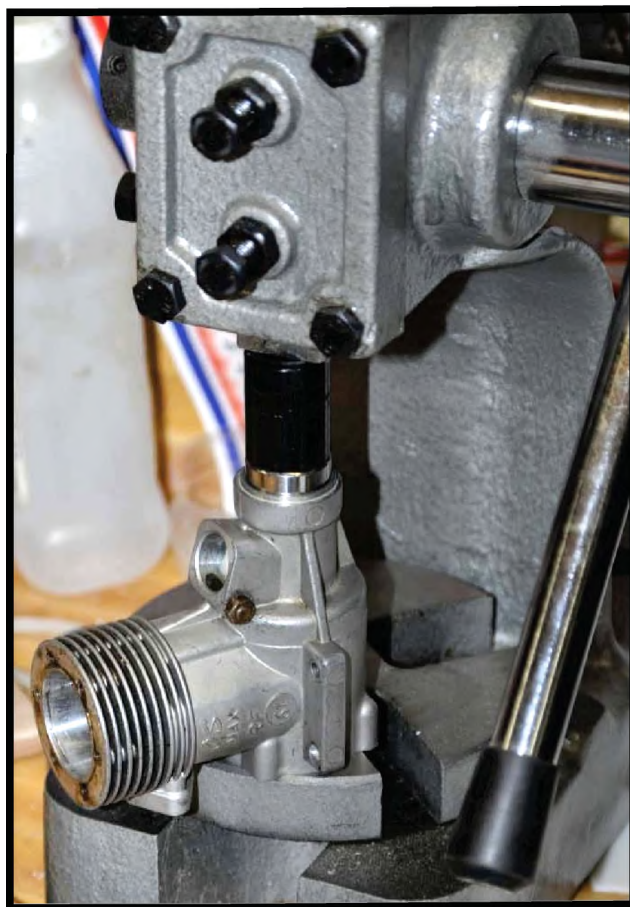


Our new set from Boca, ready to install out of the package!

Now we simply reverse the process and install the new sealed front high performance bearing from Boca. Simply line up the front bearing in the front of the motor and press down evenly until it slides in. A few drops of fuel can be added to the bearing to act as additional lube. If the bearing does not slide in easily, you can heat up the case again in the toaster oven and try again. This is usually all that is needed. If the bearing is still stubborn then you will need to use the piece of wood to gently tap the bearing into place. Finally if the front bearing is stubborn, you can use a small arbor press to seat the bearing into the front of the engine. A socket that is the same size as the outside race of the bearing can be used as a spacer between the press and the bearing. Harbor Freight has these 1 ton arbor press units for \$45.00. This is not a bad investment if you have several motors to rebuild, or perhaps you are the clubs local motor guy!!

To install the rear bearing I recommend you find a large dowel or deep socket that is just

slightly smaller than the bearing, but that still





contacts the outer brace of the bearing. You must push on the brace and NOT the bearing retainer. If you push on the bearing retainer you will destroy the bearings. Heat the case again and drop the bearing in and use the socket to square up the bearing and press it in, using a piece of wood to tap it in if needed.



Now you can install the crankshaft, piston and connection rod, cylinder sleeve, cylinder head and carburetor. Make sure to use an assembly lube of some kind for each and every part you install. One thing that works well is a few ounces of synthetic glow fuel in an open top container. Just let it sit in the sun to evaporate all the nitro and alcohol leaving the lubricant behind! Now the motor may feel a bit tight, so put on a propeller and tighten it up. This will allow the crank to set into the bearings. Now we can install the engine back plate and reinstall it into the airplane!

The new Boca bearings will allow a very smooth running motor with very hard chrome ball bearings will allow for long life. The composite bearing retainer in the rear bearing allows for less friction and the sealed front bearing will prevent fuel and air leaks. Now the revitalized ☺.S.61 RF Hanno Special is like new!

Thanks to Gary Courtney's borrowed plane and a new set of Boca bearings, I was able to score high enough to get the second place trophy in the St. Charles IL Classic Pattern contest!

Tony Coberly

tonyc@rcreport.net



being able to hold everything from a 15 size glow aircraft up to a 50cc Yak 54 without any difficulty. The stand is very lightweight and can be transported to the field and use at the field as well as back home to

The Extreme Flight RC model stand is designed to work with many different types of aircraft fuselages. Each side of the model stand has four different shapes for large round fuselages to smaller more standard half round even squared off fuselage shapes. Each side of the model stand consists of a lamination of foam and a composite wood material. This sandwich of two composite pieces and approximate 1 inch of high density EPS foam. The edges of the model stand are covered in a closed cell high density foam to protect our fuselage. This black quarter-inch foam is very becoming and should allow the fuselage to stay very well to the stand as soon slide around is not slide around very much this each side of the stand is connected with a PVC conduit type height that has to round washer like pieces on each and. These pieces bolt onto the sides of each of the foam laminations she's told the standard setting. Now the stand is touted as

the work bench. I have been using a stand for about six months and have found this pretty much indispensable. I have built several stands out PVC conduit and putting full installation on them but this extreme flight model stand is far superior. These 25 miles Van retails for \$29.95 and can be ordered directly from <http://www.extremeflightrc.com>. If you don't have one of these stands, I do recommend you get one. This extreme flight RC model stand has become an indispensable tool in my model shop. I use it nearly every time I work on aircraft in my shop.

Tony Coberly

tonyc@rcreport.net

Smile! You could be the next Winner!



O.S. .46 AX



O.S. .55AX

O.S.[®] ENGINE



O.S. .75AX

Smiley Face Contest #8 2010!

We are bringing back the smiley face contest. Throughout this issue we have placed five or more Smiley Face Figures like the one shown here (☺), but as before this page doesn't count. Write us and tell us where at least five are, and you'll be eligible for a random drawing in which the winner gets to choose from the three engine shown above. Winners will be selected by a random drawing from all the correct entries received no later than September 1, 2010. No entries will be accepted after this date. Entries must be sent via US mail or E-mail only, and reference the correct contest number in subject line or address. Hobbico employees, RC Report Online employees, columnist and advertisers are ineligible for prizes. No Purchase Required. Valid in USA and Canada only. smileys@rcreport.net Subject line: Smiley Face Contest #8 2010

US Mail: Smiley Face Contest #8, 2010 PO Box 12051 Huntsville, AL 35815

All terms subject to change without notice. This contest is void in any area, state, or locality where taxed or prohibited.

Dear Julia,

Here's my latest attempt to win the engine, through my persistent search for smiley faces. So far the entries I have written since Gordon started this contest have gained me several letters published in the magazine but no tangible rewards. Virtue is its own reward, right?

First the results: this month I found only five little grins and that's while reading the articles magnified to 125%.

Second: for the benefit of all the other readers who have trouble with this contest, here are the rules I have learned through years of Smiley Face contests. They actually are based on the famous Murphy's Law.

- 1. If you start looking at the front they will all be at the back.*
- 2. If you start at the back; they'll be at the front.*
- 3. Skip the even numbered pages and that's where they will be.*
- 4. Skip the odd-numbered pages- you know this drill by now.*
- 5. Read only your favorite columns; they won't be there.*
- 6. Read your least favorites-ditto.*
- 7. If you find one on a page, look for another- not a chance.*
- 8. Find one on a page and do not look further- you miss one!*
- 9. Look away from the page, answer the phone; you'll lose your place and miss several.*

10. Scan every line of every page very carefully, with your full concentration; you'll still overlook at least one!

Thanks for the contest,

Frank Maguire

WOW! I think Frank said it all for this month! Thanks for the advice...AND the funny!

Julia

Still loving the smileys! The winner will be contacted and announced in the August issue. The winner will receive his choice of one of these three engines: OS .46AX, OS .55AX, or OS .75AX. Keep searching those articles and columns.

Total Smileys for the July 2010, issue was 9.

June's Winner is Jim Fowler from Huntsville, Alabama!

Thanks for your submission, Jim!

Tony Coberly

tonyc@rcreport.net



Mail Call

Well folks keep your questions and comments coming. We will do our best to answer each and every question asked of us. We will continue to post a few each month for the rest of the readers to see your questions and comments.

RC Report Online Staff!

Received this little funny from Larry Slowaik recently! Enjoy!

A woman and a man are involved in a car accident on a snowy cold Monday morning; it's a bad one. Both of their cars are totally demolished, but amazingly neither of them is hurt. God works in mysterious ways. After they crawl out of their cars, the man is yelling about women drivers. The woman says, 'So, you're a man. That's interesting. I'm a woman. Wow, just look at our cars! There's nothing left, but we're unhurt. This must be a sign from God that we should be friends and live in peace for the rest of our days. Flattered, the man replies, 'Oh yes, I agree completely, this must be a sign from God! But you're still at fault; women shouldn't be allowed to drive.'

The woman continues, 'And look at this, here's another miracle. My car is completely demolished but this bottle of wine didn't break. Surely God wants us to drink this wine and celebrate our good fortune. She hands the bottle to the man.

The man nods his head in agreement, opens it and drinks half the bottle and then hands it back to the woman..

The woman takes the bottle, puts the cap back on and hands it back to the man.

The man asks, 'Aren't you having any?'

The woman replies, 'No. I think I'll just wait for the police...'

Here's another one from Dick Sprau and Baby!

Woman's Poem

He didn't like the casserole
And he didn't like my cake,
He said my biscuits were too hard
Not like his mother used to make.
I didn't perk the coffee right
He didn't like the stew,
I didn't mend his socks
The way his mother used to do.
I pondered for an answer
I was looking for a clue.
Then I turned around and
Smacked the shit out of him....

Like his mother used to do.

I love a good poem, don't you?!?!'

Laugh, Fellas!

I have to have some fun, too! ☺ Julia

PEGASUS GIANT SCALE FLY-IN

HAGERSTOWN, MD

AUGUST 14, 2010

MINIMUM WINGSPAN: BIPES - 60”

MONOPLANES – 80”

\$5.00 LANDING FEE

600 FOOT GRASS RUNWAY

REGISTRATION AT 0800

CATERED FOOD AVAILABLE

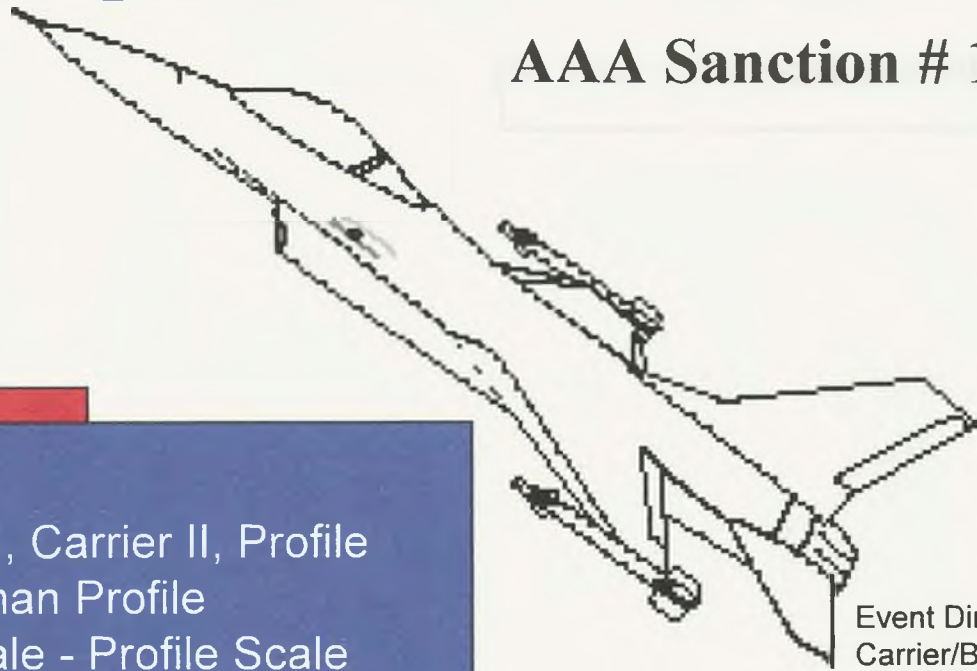
**SEE www.pegasusrc.com FOR DIRECTIONS
AND INFORMATION**

10th Annual
Aug. 28th & 29th, 2010

THE FCM AT AMA

Fellowship of Christian Modelers

AAA Sanction # 10-109



Events:

Carrier I, Carrier II, Profile
Sportsman Profile
Fun Scale - Profile Scale
Sport Scale
Classic & Old Time Stunt
Profile Stunt
PAMPA Stunt
Speed: 1/2 A, 1/2 Proto,
A,B,D,21Proto, SS21, F40,
Jet, F2A, NASS Sport Jet

Event Directors:
Carrier/Bill Caukins
Scale/Will Hinton
Stunt/Allen Goff
Speed/William Hughes

**FREE T-SHIRTS
PRIZE DRAWING**

SATURDAY NIGHT SUPPER
Sunday Morning Chapel

Muncie, Indiana
AMA National Flying Site

C.D. Allen Goff (765 759 7473)
fcm95@comcast.net

ELECTRIC GOOSE



Electric Powered Model Airplane Event

August 21, 2010

The Evergreen Aero Modelers invite you to attend the annual Electric Powered Model Airplane Event on Saturday, August 21.

Located at Bibbee DeAlton Air Field directly behind the Evergreen Aviation Museum, the event will feature lots of open flying with buddy boxes available for novices.

Registration starts at 8 a.m., with the planes lining up on the runway at noon. Landing fee is \$25, with a \$5 discount for early registration, and prizes are available for all entrants. RV parking is available but please call for details. Coyote Hobbies will be onsite selling electric aviation bits and pieces.

Make sure to stick around after the event to visit the Evergreen Aviation & Space Museum, go wine tasting at local wineries, or even stop for a bite to eat in downtown McMinnville. It will be a great day for the whole family!

SCHEDULE OF EVENTS

Flying Time:

8:30 a.m. until 3:00 p.m.

Runway line-up photo:

12:00 until 12:30

Flying demonstrations:

3-D fixed Wing flying: Richard Jarel
12:30 until 1:00 p.m.

3-D helicopter flying: Aaron Schell
1:00 P.M. until 1:30

All entrants will receive prizes:
prizes handed out at 3:00 p.m.

Prizes include items for aircraft/
also some special aviation art
pieces to be given to lucky winners

Landing Fee:

\$25

\$5 discount for early registration



HANGAR 9 HOBBIES

SPONSORS:

**EVERGREEN
AVIATION & SPACE
MUSEUM**
THE CAPTAIN MICHAEL KING SMITH EDUCATIONAL INSTITUTE

FOR MORE INFORMATION CALL:

Roger Weeks, Event Director,
H:503.554.8187 • C:503.332.8376
rogerrc@verizon.net

Middle Point R/C Flyers

www.mprcf.com

www.facebook.com/group.php?gid=123327474373735



Murfreesboro, TN Saturday, August 7



Giant Scale Fly-In

Open to any IMAA legal airplane (80" mono; 60" biplane; or true 1/4 scale)



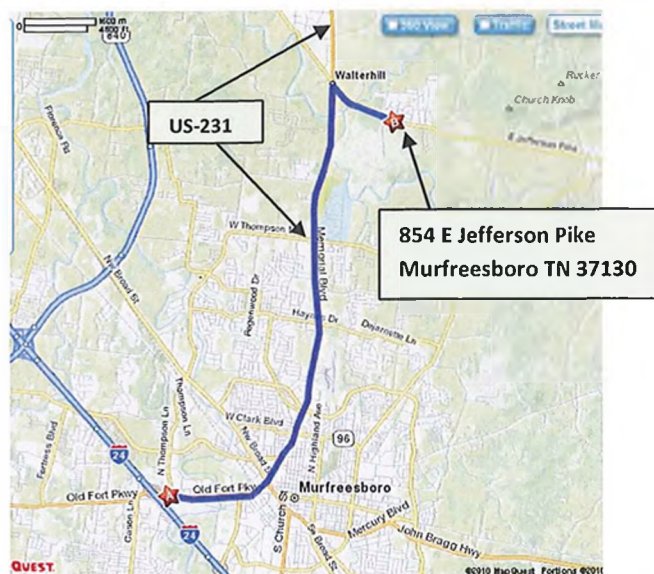
IMAA membership is not required



- 350' x 50' paved runway
- Landing fee - \$10
- Pilots' meeting 9:00 am
- Concessions available
- Overnight camping available (advance notice required) - no hookups
- Registered pilots are welcome to stay and fly on Sunday
- Door prizes
- AMA Membership required for all pilots
- Spectators are welcome



www.modelaircraft.org



Directions:

From I-24: I-24 exit 78-B. East on Old Fort Parkway (TN-96) for 2 miles. Stay straight to go onto Memorial Blvd (US-231) for 7 miles. Turn East (right) onto TN-266(Jefferson Pike) for 1.3 miles. The MPRCF field is on the right. Look for signs.

From I-40: I-40 exit 238. South on US-231 for 17 miles. Turn East (left) onto TN-266(Jefferson Pike) for 1.3 miles. The MPRCF field is on the right. Look for signs.

For more Information: Jim Powers (615) 479-6385 kijorski@comcast.net