

TriState Helicopter Club



TRI-STATE HELICOPTER CLUB

The Collective Pitch

From The President's Desk

It's hard to believe I'm writing the August column, Summer has been entirely to short! That OK because Indian summer is just around the corner(more flying). I understand our second funfly went well, I'm sure Dale will have photos posted elsewhere in this issue. I didn't hear of one complaint from our neighbors so I want to thank everyone for doing their part. I have been talking with the regulars at the field about the need to keep an alternate site in the back of our

minds. I imagine there will come a time when flying at Slim's may no longer be permitted.

Most of you know that I've become quite a fan of electric flight. I am now building my fourth E-Heli the Logo 20. There are now four of us in the club flying electric helis, that I know of, if you're thinking about building a new model you might want to consider looking at the electric kits that are available!

See you at the Meeting

PHOTO's to Inspire...?



AMA Chartered Club #3373

See us on-line at WWW.TSHC.ORG

CLUB OFFICERS

President:	Bob Belluomini	(513) 245-0590
Vice President:	Gayl Rotsching	(513) 761-1266
Treasurer:	Al Drees	(513) 791-5412
Safety Officer:	John Anast	(513) 829-3950
Secretary:	Brady Pack	(513) 831-4900
Lowly Scribe:	Dale Mercer	(606) 689-5953

2000 AMA Nationals Scale Contest Winner!

Robert Belluomini

For those that were at the last meeting you know that I won the Scale helicopter event at this years nationals. I was asked by Dale Mercer, our editor to put together an article on this model.

The Agusta 109 Power is the latest variant from Agusta Helicopters in Italy. My model is kited by the Graupner Co. in Germany and is designed for the Uni-Mechanic

also from Graupner. I owned the Augusta 109 Mk II Wide body many years ago, unfortunately it lived a short life when it contacted the asphalt at Springdale Cinemas. I really liked the cleaner lines of the Power variant and decided to build one. I purchased my kit from England and when the box arrived I could hardly believe how

large it was. The fuselage is one piece and required the large carton, however this is a pretty good size model. The top cap and tail cone are also GRP.

The only option I used was a carbon tube drive as I was looking for maximum efficiency. I chose the paint scheme from the Agusta web site. The paint I used is Tamiya Lacquers in aerosol cans, this is nice paint but a little on the expensive side.

After many visits to a Japanese web site I decided to use the new Elektro version of the Uni-mechanics. It's really nice to know that all my hard work won't be eroded away by the damaging effects of Nitro and oil residue.

The kit is very nice in that the all openings and the window glazing is pre trimmed. The wood work is die cut

but needed some extra attention to get it out of the sheet. There is a minimum of woodwork to be installed. The tailplanes are vacuum formed with a rib structure which was easier to build than I originally pictured. The model builds very quickly.

The power for my model is a Kontronik 77-04 brushless motor and 3sl 40-14-32 controller on 30 x 2000Mah san-

yos (about four pounds worth) I am able to fly 6-7 seven minutes. One of the very nice features of this controller is a built in rotor governor, so instead of using a throttle curve, I simply have a constant throttle setting. I'll fly the model at the next meeting. See you there!



A109 POWER

Other pilots, Other stories.

Randy Dennison - burnerran@aol.com

I started flying heli's when the first Concepts came out. I had to teach myself as I lived in Japan at the time and the locals didn't fly mode II. So no one could check out my setup. Anyway, with the help of a freind (mode I flyer) I got the basics down. My story is set around 1988-89 time frame. I was at the field flying my Concept, landed and then was asked by a guy just beginning to give him a hand. He too was flying mode II so I guess I was the guy to ask. He had a worn out first generation shuttle (yuk!) with a 7 channel aircraft radio installed and no gyro. Here is the meat of this little story; When he asked me for help I had just landed and his heli was running with blades rotating as he was attempting to hover it. I agreed to try and hover it for him. He handed the radio to me, "what's this I asked?" an aircraft radio! I figured what the hell. Gave it the power she started to rev up but it wouldn't break ground. Due to the tail inputs required it was obvious that it didn't have a gyro and I figured his pitch set up was way out and that's why it wouldn't hover. I continued with the attempt at hovering, gave it the gas (about 80% stick), low and behold she broke ground into a hover. It was my first (and only) time flying without a gyro so I held the hover for a couple minutes to experience the tail inputs required. I was shocked by what took place next! I settled her back to the ground, let her idle and told the guy that he has a pitch set up problem (he actually had a heli set up problem). I shut the engine down, told the proud owner to stop the rotor and I about fell over when it stopped. Ok, here I am flying a worn out shuttle with an aircraft radio, no gyro and are you ready for this? One blade installed backwards! I can't believe it flew! I suppose this is in the F-4 Phantom catagory; anything will fly with enough power!

Paul Dwayne Calvey - piglet @ hgea.org

After visiting the local flying field I had an experienced pilot check out and fly my new helicopter. I later tried to hover but was too afraid and embarrassed in front of the experienced fliers. I later relocated to an area near my home and chose to practice solo without the audience. I had a hard time hovering, and while trying I switched on the engine hold. I felt that this made it easier since I could focus on other things besides the throttle. To make a long story short: I hovered too high, lost control, and subsequently switched off the engine hold and slamming my machine into the ground causing a tail boom strike and \$75.00 worth of damage. To compound this...My helicopter was partially built and I only had to go through half of the assembly. Now I have broken parts that will require me take apart and reassemble what I never had to do initially. Add to this that I live in Hawaii and the only one model shop here does not have parts for my helicopter, I'll have to await parts from the mainland. What A VALUABLE LESSON!

Jim Sorenson - feusaf@concentric.net

As I read most of the stories on this web page, I realize that most of them are from individuals who bought a Heli, and didn't think they need any help to get started. I try to make people in my area realize they need some assistance. I strongly encourage to everyone out there, that if they really want to get started with helicopters, find some folks in your area that fly them. If you can't find anyone close, ask around. A 100 Mile drive can make the difference. You might be wondering how I know this... I know this from experience. When I started flying heli's in '98, I didn't know anyone that did. I asked around, scoped out the internet, finally found someone that was within 50 miles from me. I got with them as soon as I could, and I was amazed with what he could do with his helicopter. From that point on I was hooked. This guy told me to bring my helicopter to him as soon as I had it assembled so that he could check it over. I was so very glad he did that. When I saw him pick that helicopter up into a hover for the first time, it put some confidence in me. Just seeing that the model I built was able to fly made me believe that I could do it all. For the first few months of my flying, I only flew with my friend. He helped me out from day one, and told me when I was ready to go out by myself. Granted, most of my first crashes were cause when I was by myself, but it didn't stop me. My friend taught me how to properly set up a helicopter, tune the engine, and trim it out. I am forever in his debt for that. Had I not found him, I would probably had ended up like some other folk out there, and sold my helicopter shortly after I built it. The moral of this story is simple, find someone to HELP. If you can't find anyone through the local hobby shops, try the internet. Check out the RC Heli Chat room on RConline. It can be found at www.rcchat.com It will be worth the time you spend looking for it. If that doesn't help, I have designed a web page just for people looking to fly with someone else. The web site is located at <http://rchelipad.com/dakota> Several people have found help through that web page, and that's what it is for. We all are more than happy to help out a newcomer to the hobby, and I now spend more time helping out others at the field, than I do flying my own machine. But I need to teach others everything that I have been taught. I hope this little bit helps you all out. Good Luck, and burn lots of fuel!!!! Jim "Dakota" Sorenson Albuquerque, NM

Treasurer's Report\$\$\$\$

We are finally up to 30 members! Please welcome our new full and associate members.

Our bank balance is still in the black and my report for this month is as follows:

Beginning Balance	\$ 948.29
Due's Received	\$ 90.00
<u>Expenditure's</u>	<u>\$ 186.50</u>
New Balance	\$ 851.79

Please check the attached Membership Roster to confirm if all of your information is correct. We are still missing some information from some of you (**especially AMA numbers**) and we cannot update our club roster to the AMA without your AMA number.

You can contact Dale Mercer or myself for any updates that you have to provide.

Al Drees, Club Treasurer.

AMA Information Corner

- 1) *The Grand Event was a success!!* It didn't rain, we had electricity, and the tents didn't get blown down. The weather cooperated and the attendance was up from last year.
- 2) The Grand Event began in 1996 as an idea developed by a core group of AMA managers. The desire was to bring various segments of the hobby together and has turned out to be new, innovative and fun!
- 3) I need input. AMA is constantly looking at ways to improve the service that we provide to our members. YOUR executive council reviews ideas that are brought before the at almost every meeting. Committees review the proposal for validity, costs associated with the project and what it would take to implement it.
- 4) Automatic Credit Card Renewals you ask? We are exploring this as an option that you would check on your renewal form that allows AMA to automatically renew your membership each year—until told to do otherwise. What do you think?

Joyce Hagar, Executive Director, AMA

Next Club Meeting:

"Keep them rotors outta the dirt"

WHEN: August 8th, 2000

TIME: 7:30 PM

WHERE: Slim Helson's Aerodrome

See You There!



Services and Such

Slim's Chopper Repair *"IF YOU CAN DRAW IT, HE CAN MAKE IT!"*

Machine shop services are available from Slim Helson, call him at 831-3173. He offers a full range of machining services and custom fabrication. Slim also has an extensive Robbe/Schluter parts supply. Slim's shop is conveniently located at 1033 St. Rt 131 in Milford.

Vector Helicopters (Authorized *Robbe Field Representative*)

Building, setup or repair services for all makes of helicopters is now available. You can also get your wood rotor blades professionally built, weighted and covered to your specifications. Prices range from \$15-\$35 depending on size and complexity. Call John Anast at 829-3950 for an estimate. Remember - **No job is too BIG!** You can also e-mail John at: janast@tshc.org or visit his website at Vector Helicopters www.tshc.org/VectorHeli/vh.html

Web Sites

Bryce's R/C Heli Page	http://www.byelectric.com/~fribab/
East Coast Model center	http://www.ecmc.com/#rc
Heli-fever Web Page	http://helifever.com
Leisure Tech	http://24.113.44.156!/heli/
Rick's RC Heli	http://www.rcheli.com
Tailrtr's R/C Heli Links	http://www.pcez.com/%7etailrtr/links.htm

Hobby Shops

<u>Name</u>	<u>Phone Number</u>	<u>City / Area</u>
Al's Hobby Shop	630.832.4908	Elmhurst, Il.
Flight Zone	746-0015	Boone Co.
House of Hobbies	248-9220	Milford
Northern KY Hobbies	283-1110	Florence (YA'LL)
Phil's Hobbies	385-8616	Cincinnati
Pit Row	891-7487	Kenwood
Slim's Chopper Repair	831-3173	Milford
Starfleet Hobbies	984-9889	Blue Ash

Classified Ads

Bob Belluomini 513-245-0590

1. Robbe CSC-4 Helicopter Speed Control - \$75 obo
2. Hitec 325 Fast Field Charger - \$35

John Anast 513-829-3950 .

1. Robbe CSC-4 Helicopter Speed Control - \$75 obo
2. Hitec CG-320 fast delta peak charger - 4-5 cells at 4.5A, 8 cells at 1.8A - \$40 obo

Craig Golgowski 513-248-1864

1. Robbe/Schluter Moskito, numerous upgrades. Flies great! \$199

Engine Operating & Field Tuning Guide

The Education corner continues this month with an article on the care and feeding of your heli engine. This could be captioned: "Zen—and the art of tuning your helicopter engine"
Many thanks to Coin at www.helifever.com

Congratulations on your choice of the finest R/C helicopter engine products in the world! This instruction & field guide will assist you in the operation & maintenance of your FSRC products.

Following these steps will ensure the maximum reliability, performance & longest life from your engine. A few prerequisites before we start. To meet the above performance & reliability goals, your engines needs the finest quality helicopter fuel available. Good heli fuel provides proper cooling through the use of special oils that can withstand our extreme demands. If you are still looking for a good fuel, FSRC has had good experiences with Red Max Heli blends, both 15% and 30%. Other national brands work too. Ask your local expert which brand has worked best for them. The most important thing is to have enough oil. General rule of thumb is at least 17% to 18% total oil, by VOLUME. Good heli fuels with 30% nitro use more oil than the 15% blends. All ABC / AAC liners / pistons can be run with either 100% pure synthetic, such as Klotz KL-200, or a castor / synthetic blend, such as KL-100, if you are mixing your own fuel.

The first place the quality of the fuel will show up is on the glow plug element. A new plug on a well set up & properly broken in engine will maintain 95% of its gloss after one flight. Ashen or grey color means the needle is too lean or that the cooling air flow is inadequate. Also, the plug may be the wrong heat range for your particular fuel nitro / exhaust system. Please see our engine set up matrix for you specific needs based upon your choice of fuel & exhaust system. Make sure to install the double glow plug washer set ups on the SX61 where noted in the set up matrix. FSRC recommends Enya #3, OS #8, or Hobby Shack #3, an Enya #3 clone. All of these plugs toughen the element by adding Iridium to the standard Platinum / Rhodium alloy. This is why you pay more for these top quality plugs. FSRC has had great field results with the Hobby Shack #3 clone, as it has a superior K&B style body & stem seal with the good #3 alloy wire. For heavy duty running in poor atmospheric conditions such as summer humidity, we recommend the K&B 7300 DF plug, the McCoy MC-9 or the Enya #4. One of these plugs will get your engine running well. Other items that could shorten plug life are having a squish band clearance that is too close or a wrong sized combustion chamber for the fuel you are using, if you have switched. The glow plug element could then show distortion or breakage from pinging if this occurs. Please see the FSRC set up matrix for proper squish clearances or call us immediately for your specific solution so as not to harm your engine. Also see the check out procedure at the end of this guide for the squish clearance, one of the engine's most important settings.

Break in your new engine, regardless of ABC or AAC liner / piston alloy, by using the richest possible two stroke needle setting. Always start first with the top end high speed needle valve set to give this type of two stroke run. Beginners do not need to worry about full power, 100% collective climb outs. More experienced pilots should set the top end this way once a hover check out is complete. Sneak up on the full power to be safe. Your FSRC engine has had the carburetor top end needle factory set. SFN: 2 turns out; SX 61 2 & 1/2 turns out for a safe beginning margin. This will probably need to be leaned out a bit right away, but why take chances? If the engine is finicky on the first run, leave the Ni-starter on for the first run up to hover. This will clean the engine out while warming it to operating temperature. NEVER judge any needle setting, top end or idle, on the first run up or when cold. Once the top end is set, get the idle needle to give the very best 1/4 stick decent setting. A buzzy decent or "hanging" is an indication the idle is too lean. Lots of smoke & tail twitching upon flaring to stop forward flight & power up to hover means the idle is too rich. This is where having a good plug can save the day. It cannot be stressed enough to do this "top down" needle check out at least twice on a new engine ASAP. Too rich could hurt the connecting rod & too lean could hurt everything! Setting the top needle in a hover right away is first priority, then climb outs if you can do them. Please take two gallons of mild flying on any new engine, i.e. one loop, one roll, autos, hovering, 180 stall turns before really going for the best top needle. Only use 100% collective momentarily to check needle setting.

**SX 61: Only when the top & idle needle are right on the money should the hover 3rd needle be opened from the fully closed position. 30% nitro SX61's

have had this set to 3/8 turn open from FSRC to start with. Again, recheck the "top - down", then the hover needle when any changes are made.

Here is the best "secret": Your engine will talk to you. Listen to it. Never ignore it. Fix needle settings right away. As your new piston / liner begins to break in, the engine will naturally start to go rich, brapping in & out of a two / four stroke break. Lean out the top needle a few clicks & recheck the top down procedure again. Always let the engine cool down completely before removing the glow plug, so as not to damage the cylinder head threads. Check the plug often in a new engine. Check it at the end of every flying day on well set engines.

One of two after run procedures must be used to ensure maximum bearing & liner life. Loose bearing micro corrosion particles shorten plug & liner life drastically. These particles go through the engine upon the 1st start up of the day, ruining the precision fit of the piston.

1. Pull off fuel line while at idle on the last flight of the day. It helps to pinch off the fuel line with hemostats before it goes into the carb filter to prevent pressurized fuel from squirting everywhere. This will empty the line & carburetor, preventing fresh fuel from pulling in moisture. Hold The Rotor Head until the engine stops. Leave radio on & restart engine at start setting, fuel line still removed. Keep "blipping" starter trigger with glow plug lit until no more popping is heard. Finally, rotate crank shaft backwards to seal off exhaust port & carburetor intake from the outside air.
2. Pull off fuel line as above. Wait until engine cools & remove glow plug, placing a paper towel over the cylinder head. Open carburetor barrel 100% & spray any marine grade aerosol corrosion inhibitor down the throat for five full seconds while spinning engine over with the starter. Replace plug, shut barrel & rotate shaft backwards as above. We have found that CRC 5-56 works quite well. WD-40 reacts with ****some**** fuel oils & leads to weird gumming + some corrosion. Your mileage may vary here. Marine grade sprays, airtool oils & Performance Specialties after run oil all provide superior bearing protection. Any engine with silicon fuel system pieces, pumps etc.... can only use the Performance Specialties oil.

All new and re-built engines by FSRC have had all fasteners properly torqued. All of them are assembled with a very small amount of Loctite 290, the green stuff. Should you need to disassemble any engine, be careful with any Loctite flaking residue. All OS 3.5mm SFN / SX cylinder head bolts should be tightened to 13 in-lbs to 14 in-lbs. This is just slightly over one foot pound, not very much. If you tighten an SX head & the piston sticks hard at TDC with oil in the cylinder, you have over tightened the head bolts & should start over. Always use a good cross pattern several times around to fully tighten. You will FEEL the fastener though end of the allen wrench take a hard set at full torque. In other words, after getting all the fasteners just touching down evenly & taking one good cross pattern around, you will feel it on the next path as the fasteners reach full torque. Don't go any further - just make sure they are all equally firm.

All new FSRC ABC / AAC liner & piston assemblies should have a tight fit at the last quarter of the stroke coming up to / going down from TDC. This is why it is important to gently tighten the bolts in a good cross pattern to achieve proper liner taper. Also, all new ABC/ AAC engines assembled by FSRC have been broken in by hand using ATF oil with the engine fully assembled & everything tightened, ready to run. The engine is turned over about 200 times with the glow plug removed & oil liberally applied. Once complete, the oil is cleaned from the internal parts & they are reassembled using automobile crankcase oil, such as Mobil 1.

During the ATF break in procedure, the squish clearance is checked by inserting a thin piece of hollow, rosin core electronics solder, no more than 0.032" - 0.035" thick. Insert it when all of the ports are just closed when turning the cranks shaft up to TDC. Make sure the solder reaches the OD of the chamber and is in line front to back with the piston wrist pin / crank shaft for an accurate reading. Rock the crank back & forth a few times, & then measure the resultant flattened solder with a micrometer or vernier calipers. FSRC has provided an additional 0.003" shim with all SFN billet heads (two 0.005 installed) and an additional 0.002" shim with the SX. Install this shim only if the glow plug indicates greying or ashing of the element (overheating / too lean) or bending deformation (pinging). Retorque the head bolts as above. : Bruce Bennett owner of FreeStyle R/C Engineering
"Contest Winning Horse Power For Your Helicopter"

Tri-State Helicopter Club

Membership Roster

Last Name	First Name	Member Type	Street Address	City	State	Zip	Telephone	AMA	Paid /owe
Anast	John	Full	5752 Lake Michigan Drive	Fairfield	OH	45014	(513) 829-3950	167274	YES
Barrow	Dave	Full	5236 Madison Pike	Independence	KY	45051	(606) 357-1258	002534	YES
Belluomini	Bob	Full	8872 Colrain Ave.	Cincinnati	OH	45251	(513) 245-9580	077207	YES
Bridges	Milt	Full	5319 Bonnell Road	Guilford	IN	47022	(812) 487-2100	208151	YES
Cooper	Scott	Associate	113 Cornell Drive	Bainbridge	NY	13733	(607) 967-3937	648750	YES
Davis	Bob	Full	3935 Montgomery Road	Norwood	OH	45212	(513) 531-4765	??????	YES
Drees	Al	Full	7810 Hartford Hill Lane	Cincinnati	OH	45242	(513) 791-5412	523403	YES
Dustrude	Ray	Full	8555 Lynnehaven Drive	Cincinnati	OH	45236	(513) 793-3982	042260	YES
Fuschen-Zanker	Cindy	Associate	Al's Hobby Shop	Elmhurst	IL		(630) 832-4908		YES
Gaertner	Bob	Full	8311 Weller Road	Cincinnati	OH	45242	(513) 530-9676	000321	YES
Galvin	William	Full	2252 Whitmer Road	Batavia	OH	45103	(513) 732-8659	598588	YES
Golgowski	Craig	Full	5845 Price Road	Milford	OH	45150	(513) 248-1864	439037	YES
Harrison	John W	Full	1757 Marquette Avenue	Cincinnati	OH	45230	(513) 232-8833	609808	YES
Harrison	John C	Full	1757 Marquette Avenue	Cincinnati	OH	45230	(513) 232-8833	607543	YES
Helson	Slim	Full	1033 St. Route 131	Milford	OH	45150	(513) 831-3173	183940	YES
Knott	Tim	Full	7757 Thomas Road	Middletown	OH	45042	(513) 423-5747	159321	YES
Noel	Daryl	Full	3811 Locke Street	Covington	KY	41015	(606) 491-2613	616833	YES
Kosar	Richard	Full	1336 St. Route 131	Milford	OH	45150	(513) 831-1641	420322	YES
Jacobs	Terry	Full	6653 Paxton-Guinea Road	Loveland	OH	45140			
Lynch	Tim	Full	6977 Panther Drive	Middletown	OH	45044	(513) 777-1054		YES
Mercer	Dale	Full	6132 Woodcrest Drive	Burlington	KY	41005	(606) 689-5953	629712	YES
Milligan	Rod	Full	4169 Heritage Glen	Cincinnati	OH	45245	(513) 752-9032	457808	YES
Pack	Brady	Full	5917 Price Road	Milford	OH	45150	(513) 831-4900	577629	YES
Pennell	John	Full	6512 Turtle Point Place	Mason	OH	45040	(513) 754-1577	427502	YES
Rotsching	Gayl	Full	263 Lux Avenue	Cincinnati	OH	45216	(513) 761-1266	097474	YES
Roysdon	Daniel	Full	2649 Thomasville #1603	Cincinnati	OH	45238	(513) 481-5757	665017	YES
Shaw	Jesse	Full	6685 Oakland Road	Loveland	OH	45140	(513) 722-8335	660435	YES
Shurley	Carey	Associate	PO Box 953303	Lake Mary	FL	32795	(407) 771-7759	165910	YES
Stephens	Dwayne	Full	9193 Sunderkand Way	West Chester	OH	45069	(513) 755-9193	006571	YES
Wiebold	Bill	Full	5950 Park Road	Cincinnati	OH	45043	(513) 831-3731	??????	YES
Walton	Major	Full	1945 Lawn	Cincinnati	OH	45237	(513) 731-4284	339888	YES
Yingling	Chris	Full	20811 Bellemeade Drive	Lawrenceburg	IN	47025	(812) 637-6309	359654	YES

Tri-State Helicopter Club's Calendar of Events

		<i>August</i>	<i>September</i>	<i>October</i>
1	T			
2	W	7th Annual Heli International IRCHA World		
3	T	Jamboree.		
4	F	Jeff Robb, CD. 740-928-5300		
5	S	(Over 40 vendors, on-site camping, vendors,		
6	S	Food, hobby shop, seminars, demos....)		
7	M			
8	T			
9	W			
10	T			
11	F			
12	S			
13	S			
14	M			
15	T			
16	W			
17	T			
18	F			
19	S			
20	S			
21	M			
22	T			
23	W			
24	T			
25	F			
26	S			
27	S			
28	M			
29	T			
30	W			
31	T			
Key		TSHC Club Events	R/C Heli Related Events	R/C Airplane Related Events



TriState Helicopter Club
c/o Dale Mercer
6132 Woodcrest Drive
Burlington, Ky 41005

Mark your calendar now for the
August 2000 Meeting
Tuesday the 8th
Slim's Aerodome