

TriState Helicopter Club



TRI-STATE HELICOPTER CLUB

The Collective Pitch

From The President's Desk

Hard to believe it's May already! The club is hosting our first fun fly of the season. The date is May 21st (this is a Sunday), Saturday the field crew will whip the field into shape for your flying pleasure but don't hesitate to come out both days if you have the entire weekend free. This is going to be a busy weekend for model aviation. I have been asked to fly Saturday morning at Coney for the Family Jamboree. They have an area reserved for Control Line and Electric Heli's. This is great opportunity to see some outstanding control line scale and stunt flying. East Gate Mall is hosting a static display that we

have been asked to be part of. I've nominated our VP of never ending stories, Gayle Rotsching, to represent the club. Gayles' fleet of models is large enough to cover most of the mall (or at least a couple of his favorite canopies can). In all seriousness, we need to consider involving our club in this show so if there is a good Samaritan among us let me know and I will put together a hand-out to promote our helicopters. Please join us early Tuesday the 9th of May for a little pre meeting flying at Slim's Aerodrome! I hope to have an answer on the bulk fuel purchase for this meeting. Here's to a great summer of flying fun!!!

PHOTO's to Inspire...



This is John Anast and his trusty Raptor. So—what's so awe inspiring about a Raptor you ask??

This is "trick photography at its' best! Take a closer look at this photograph and see if you can tell what's wrong..... now turn it upside down so that it is right side up. AWESOME John!!

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

Safety First, Last & Always

Ed. Comment: This is the 2nd of a 2 part series from John Anast about the method to balance wood blades.

Thanks to John for putting this together for us. Should you have any questions or additional thoughts relating to this topic, please contact John at the number listed on the front of this News Letter.

Set the blades aside for now and get the blade covering out. Lay one sheet out on a flat table and wipe the covering with a Bounce sheet to keep it static/dust free. I find the Bounce acts as a nice lubricant when sliding the covering smooth also. Measure the width of the blade. I like to start the covering at about 20% cord on the bottom, in the hardwood area. If you start close to the trailing edge, the edge is very hard to do... trust me on this one. We want to wrap the covering from the bottom around the trailing edge, completely over the top, around the leading edge, finishing up overlapping the start point on the bottom. When done this way, when the blades are spinning, the air over the blade forces the covering down so it won't lift off over time. Now peel the paper off the covering and lay the film sticky side up. Take care to keep dust off the sticky side as once it settles it's a b_____ to get it out. Calculate the distance we need to get from the trailing edge to 20% cord, usually 40-50mm. Mark this distance in along the length of the sticky side of the covering with a fine point marker, usually 5 points will do. Next grab the root of the blade in your left hand and the tip end in your right hand with the leading edge pointing up (for left hand rotation switch hands!) At the same time, touch the trailing edge to the marked points and line up the end of the covering just to the side of the blade doubler. I do this by sighting down the outboard end of the root doubler while I touch the root end trailing edge to the covering, then rocking the tip down to touch the other marks. Once the trailing edge is completely down on the covering, roll the leading edge toward your body until the bottom of the blade is flat on the table and the first bottom section of the covering has attached itself to the blade. The root doublers will keep the blade from laying flat so I slide this part of the blade off the end of the table. Lift the blade up and slowly smooth the covering out with your thumb, being careful not to develop a wrinkle. The covering will stretch and contract a little if you work carefully but don't count on it. Once you get it down, press/slide hard with your thumb to secure it well. Measure the length of the excess on the end of the blade as this will help with the other blade. Cut off most of the excess leaving about 1/8" to 1/4" past the end of the blade.

Next is THE most important step of the procedure. The trailing edge is hard to get to stick around the entire edge. A sloppy job will have air bubbles all along the trailing edge. If you go slow it will stick. To start, run your thumb many times across the bottom of the trailing edge, with your thumb half off the edge and half on. As the crease begins to form on the trailing edge, begin to rotate your thumb around to the top of

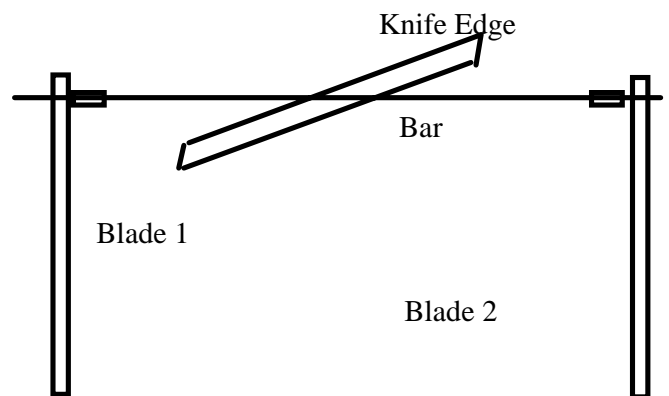
the edge while continuing to run up and down the length of the trailing edge. Don't be in a hurry, there's no backing up from this step! Once you get partially around to the front of the blade the covering is going to want to stick to the top of the blade before you want it to, so let gravity keep it away by holding the blade upside down. It looks funny to onlookers but it works. Once I'm mostly around to the top I like to form a V with my thumb and index finger and begin to pinch the covering onto the trailing edge top and bottom. Once you have the covering attached to the top of the blade, just continue to smooth the covering on the top working from the center of the blade side to side and moving slowly towards the front of the blade. Make sure to squeeze the air out totally as you go. If you get a bubble it's tough to get them out so again go slowly. If you do wind up with an air bubble, sometimes you can fix it by puncturing it with a pin and forcing the air out. It works but it's pretty obvious what happened. Continue to work the covering all the way around. The leading edge of the blade is a little easier going but treat it like the trailing edge. Go over the whole blade and be sure to firmly press all the area of the covering to secure it.

Trim the excess off the end of the blade and seal the end of the blade with some thick CA and accelerator. Layout the other blade covering as we did for the first blade. Mark the points for the trailing edge distance as before and then add a new mark that is the distance we measured off the first blade the tip end to the end of the excess covering. This will allow us to get the same amount of covering on each blade. Place the blade tip on the new mark and align the trailing edge on the other marks and cover this blade as you did the first. Trim the excess covering, seal the end and we are almost done.

Place the finished blades on the blade balancer and add tracking tape to the tip high blade until you get a perfect balance. That's it! Check the total weight of each blade, they should be less than 0.5 gram difference at this point. I hope you find this method helpful. If you have any tricks, feel free to share them.

Weighted Blades

If you have to glue weights in preslotted blades (Miniature Aircraft and some Yale blades come this way, or if you want to slot your own) these are even easier to balance. I cut the



Continued on page 3

weights about 10-15% shorter than the slot. I then trim the weight until the heavy blade matches the light blade in total weight. Place the blades on the balancer and slide the weights around until you get a good balance (equal tip weight). Fill the slots with epoxy or hot stuff and sand smooth. Cover as above and do a final trim balance. Simple, eh senior!

What if I don't have a gram balance?

You really don't need to know the weight of each blade as long as you know the weights are the same. You can make a cheap scale out of a piece of heavy gauge piano wire or an old (straight) fly bar. What you want to do is place some tape on the bar to make a blade stop on each end, then find (and mark!) the balance point with an old knife or a ruler with a sharp edge. Hang the blades on the bar and balance on the knife edge, then see which one is heavy!

John Anast, Safety Officer and WebMaster.

First Flight of the Ikarus Piccolo.



Some of you have wondered if the Ikarus Piccolo that I built was ever going to fly — well it has. Finally.

There was initially many problems with the receiver that was resolved when ACE R/C replaced the Ikarus Receiver with a 6 channel Bergen. It appears that all of the receivers that were shipped with the Piccolo from Germany (for Futaba) were all afflicted with the same problem and wouldn't function properly. That is the reason that the first flights of the Piccolo were closer to resembling the funky chicken dance instead of helicopter flight.

The bugs are gone. I am happy to report that the Piccolo flies!! Being a fixed pitch helicopter, it takes a lot of initial head speed to get it off of the ground—which makes it difficult to learn to fly on. Once airborne, it settles down but the nicad batteries that I am using only provide about 3-5 minutes of sustained flight. Better batteries should provide more flight time, but more on that later. Dale Mercer.

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	\$ 1010.22
Due's Received	\$ 45.00
<u>Expenditure's</u>	<u>\$ 16.52</u>
New Balance	\$ 1038.70

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) Don't forget the GRAND EVENT /Homecoming that is being held June 9 through 11 this year!!!.

This year's GRAND EVENT should be a fun-filled weekend barring any bad weather. This event brings together various segments of the hobby community together and was developed by a core group of the AMA managers back in 1996. The goal is to expose thousands of aspiring modelers to the excitement of all types of outdoor modeling hobbies. Equally important is the aim to make an unforgettable contribution to positive youth involvement in the hobby.

2) It's been eight years since the move from Reston Va to our new location in Muncie. AMA now has 49 full-time, 3 part-time and 1 contract employee all at a lower payroll cost than our previous location by over \$100,000. We also have openings for 7 additional full-time positions. Please read page 168 of your Model Aviation Magazine to catch up on the rest of this story.

So, until next issue,
Joyce Hagar, Executive Director, AMA

Next Club Meeting:

WHEN: May 9th, 2000

TIME: 7:30 PM

WHERE: Slim Helson's Aerodrome

See You There!

"Keep them rotors outta the dirt"



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: jmanast@worldnet.att.net or visit his website at Vector Helicopters <http://home.att.net/~jmanast/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
Tailtrr'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. JR Vigor - upgrade swashplate, built but new and never flown \$750
2. Vario Viper - low hours (maybe 4 tanks) OS61SXWC, Zimmerman steel tuned muffler, NHP 680 blades, Carbon fiber fins \$1275.
3. Schluter Scout II 60 - tons of Futura updates - carbon tube drive - OS61SX - \$550 obo
4. Robbe CSC-4 Helicopter Speed Control - \$75 obo
5. Ace Digipace II - autocyces 4 and 8 cell packs simultaneously then autotrickle charges. Great for checking out your pack capacity...\$80
6. Hitec CG-320 fast delta peak charger - 4-5 cells at 4.5A, 8 cells at 1.8A - \$40 obo

Dale Mercer 606-689-5953

1. Hattori #777 Tuned Pipe and #778 Header (60HTS-3) - (goes with the TSK for free!).
2. TSK MyStar 60. Built - but never flown - with the **new YS 61 ST2 motor**, Robbe battery monitor switch and LT680's and a set of NHP 680 blades all for the low price of \$900. (over \$1100.00 invested. New low price for the start of the flying season!!!)

Craig Golgowski 513-248-1864

1. Robbe/Schluter Moskito, Webra 50, Robbe tuned pipe, GRP blades, ACT H.Hold gyro, FMA servos, numerous upgrades. Flies great! Just add radio. \$575 w/electric's, \$425 w/out. Pictures to be posted soon.

Wireless Video Camera Review

By John C. Harrison. 4/23/2000

It's been something I've wanted to try for a while now (putting a video camera on a model helicopter) – having often wondered what things looked like from the perspective of the cockpit without lugging up my heavy Handi-Cam. The idea of purchasing a fifteen-hundred dollar system without *some* sort of guarantee that it would produce the results I was looking for was not appealing either. Not only that, but all of the systems I had looked at required a no code HAM radio license for the operator. I didn't have interest in doing that for my this purpose – but I *did* want to stay legal of course.



I first checked out the systems from PlaneTalk last August (and ordered one of their expensive catalogs with a 1-hour video of mostly lazy plank flight and a smidgeon of helicopter footage – TYPICAL!). PlaneTalk's basic system was around \$800.00, and I was contemplating purchasing one when I stumbled upon an individual named Monte Salot, which had put together for retail a system for use with RC aircraft (specifically helicopters). Priced at \$350.00, it is a perfect entry-level system for model helicopters. It is relatively lightweight, tolerates some vibration, has a good range and signal, and is compatible with carbon fiber rotor blades.

The system operates on two 2.4 gigahertz FM frequencies (selectable). The CMOS camera has a detachable plastic pan and tilt base that flexes around a ball pivot. I opted to build my own motorized pan and tilt adapter using ball links, however (see picture). At first, though I simply attached the stock camera equipment to my Ergo 60 with velco (provided), tossed an old Apple color monitor and 110v power inverter in the back of my minivan and got to work. A friend of mine did most of the watching of the footage – as I found it difficult to take my eye off of the chopper for more than a few seconds at a time. People claim, however, that you can learn to fly your chopper from the monitor and I am working toward that

goal (imaging trying to shoot an auto from that perspective – I often screw them up the normal way!). In fact, PlaneTalk sells a system compatible with a specific model of Garmin GPS that will send GPS coordinates and other telemetry via a second video signal 5 miles long - good for dropping off baskets of fruit to in-laws from the safety of your own living room. 12 volts are required to power the cam and the receiver. This can either be accomplished with 10 1.2 volt Ni-Cads, or my favorite Ni-MH cells (get the pulse charger for these) from RadioShack. Otherwise, you'll need 8 1.5 volt alkalines, which will give you about 1.5 hours of runtime. Total weight of the system, excluding batteries is a little under 1lb.

Where's the beef? You'll get some pictures next issue for sure. But because this is my final hell week of college, you get...

Pros:

- Relatively low price
- High bang for the buck factor
- The camera provided is capable of producing 310 horizontal lines of video (the receiver has a capacity of 525 lines, so you can always upgrade the camera later if you get even more ambitious)
- A remotely-actuated pan and tilt adapter is almost a must. The one provided has to be adjusted prior to flight. I ended up making a 2-axis servo-actuated platform in two or three evenings
- Lightweight – liftable by a 30 size helicopter, but safer and more practical to have a 60 or gas copter. Either way, your pitch curves are going to need some adjustin'

Cons:

- If you or anyone nearby has a 2.4GHZ spread spectrum cordless phone, you're hosed. A rhythmic line pattern will appear on your screen rendering it barely usable
- Transmitter antenna is straight-line and not omnidirectional. Small obstructions can cause momentary loss of signal

Overall, this system is about great fun – but don't get any ideas about going into business with the stock camera - you won't get super high-res stills with it. It *will*, however, give you a respectable taste of what aerial video is about. On a 1 to 10 scale, I give it a 9.75. I had \$350.00 worth of enjoyment in just one evening.

Get more info or purchase your own at <http://www.wirelessvideocameras.com>.

Next issue:

- PICTURES
- VR Glasses review
- Outcome of placing piezo gyros on both cam pan/tilt axes revealed.

Tri-State Helicopter Club

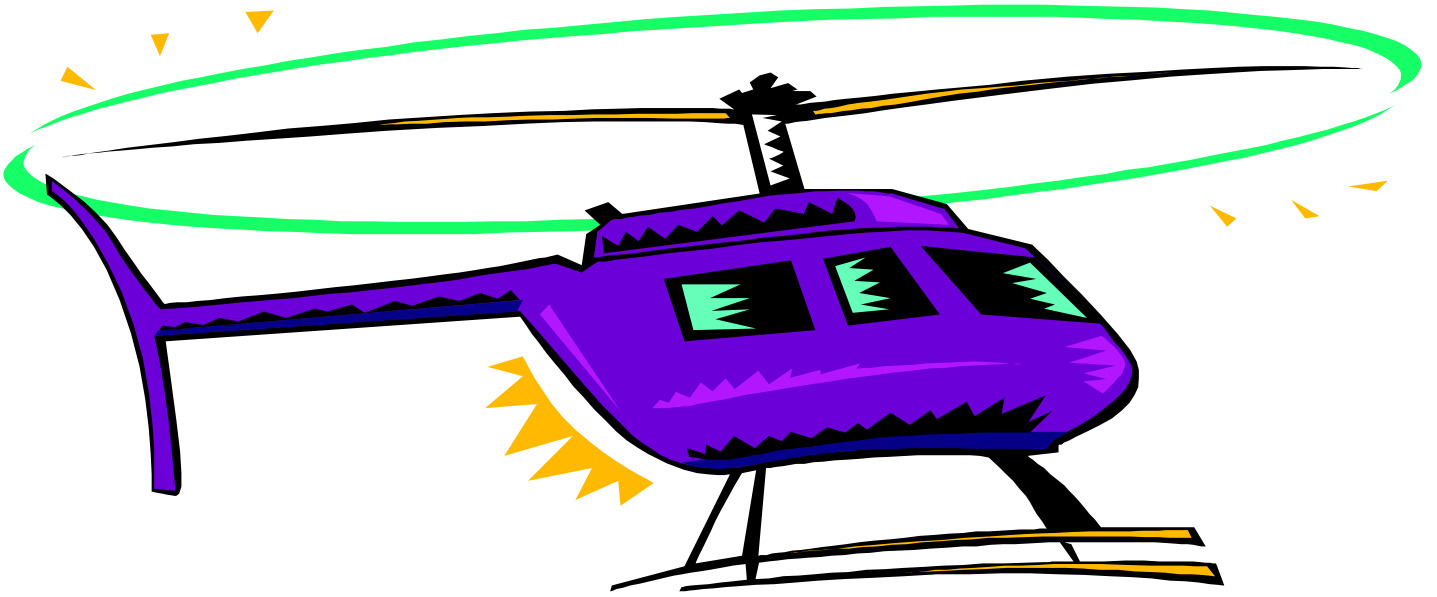
Membership Roster

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
Lynch	Tim	Full							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
Yingling	Chris	Full							

Don't forget to visit us on the web at: www.tshc.org

Tri-State Helicopter Club's Calendar of Events

		May		June		July
1	M		T		S	
2	T		F		S	
3	W		S	Edinburgh, IN. Fun Fly (3rd only) C. Wilson: (812) 526-2162	M	
4	T		S	Lexington, KY. IMAC/LMAC. 3rd/4th. L. McFarland 606.223.1237	T	
5	F		M		W	
6	S		T		T	
7	S		W		F	
8	M		T		S	
9	T		F	Reno Rotary Rendezvous R/C Heli F/F.	S	
10	W		S	2 flight lines. Raffle. Vendors. Camping.	M	
11	T		S	?? 775.348.0879	T	
12	F	Space City R/C Houston R/C Heli Fun Fly. Curtis Youngblood to attend.	M		W	
13	S	\$25 landing fee.	T		T	
14	S	R. Ackerman 281.514.5267/251.8369.	W		F	
15	M		T		S	
16	T		F	Greater Cincinnati Jet Fly.	S	TSHC Fun Fly #2
17	W		S	Miami U Airport.	M	
18	T		S	16.17.18. J. Amato 513.742.0767	T	
19	F		M		W	
20	S	Hebron Ohio. Whirlybirds Annual meet. 20-21. S. Spiewak 313.937-0014	T		T	
21	S	TSHC Fun Fly Number 1#	W		F	
22	M		T		S	
23	T		F		S	
24	W		S	4th Annual Night Fly. Alliance, OH. W. Peel 330.454.5283 (24th only)	M	
25	T		S	11th Annual Frelo Heli fun fly. Batta- via, IL J. Zagel 630.208.9131 (24th/25th)	T	
26	F	2nd annual Y2K model Helicopter Jam.	M		W	
27	S	Clark Co. Fair Grounds. Ridgefield, WA.	T		T	
28	S	F3C contest. Class I, II, II and FAI	W		F	
29	M	R. McKenna. 425.337.2403	T		S	
30	T		F		S	
31	W				M	
Key		TSHC Club related		R/C Helicopter 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
MAY 2000 Meeting
Tuesday the 9th
Slim's Aerodome