

# Thrustline

The Newsletter by and for the Springfield Model Airplane Club

Website - <http://www.smacoh.org>

Volume 12

December 2005

## Officers 2005

President  
Jeff Traub

Vice-President  
Jeff Joos

Secretary  
Joe Ferrara

Treasurer  
Tom Minnich

## Board Members

Jim Miller  
Neil Perkins  
Bill Cline  
Buzz Massey

Past President/  
Safety Officer  
Bob McWilliams

Field Marshal  
Don Barns

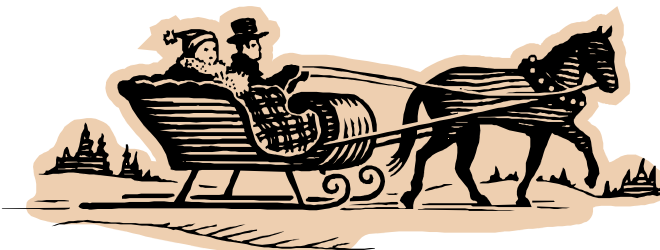
## Assistants 2005

Mower Maintenance  
Steve Kianka

Work Liaison  
Neil Perkins

Newsletter Editor  
Clem Schmid  
[cjschmid@sbcglobal.net](mailto:cjschmid@sbcglobal.net)

## Merry Christmas and Happy New Year to All



## Pray for Our Military Men and Women Through the World

**“SMAC Vice-President Candidate”** Hello, for those of you who do not know who I am my name is Rick Barch. I have been nominated for the seat of Vice-President and will serve in that capacity if elected. I have been a member of SMAC for two years now and involved in the model airplane hobby for 28 years. My piloting skill were acquired through the “School of Hard Knocks”, being self-taught. I started out with an old Mule radio and rubber-band escapement on the rudder and a small glow engine. I have switched over to large scale gas powered aircraft and small electrics for the last three years. I am also an active member with the D.O.G.S. and a staff member with the Extreme Flight Competition (XFC) organization.



**“SMAC Board Candidate”** Hello folks, I’m David Snyder and I’m seeking a seat on the Board. I’m a computer engineer by trade with the majority of my experience in software development. I started model aviation with rubber powered Guillow’s kits in my teens and graduated to COX powered U-control. In 1974 I saved enough money to buy my first RC outfit, a Contro-laire Mule, single channel push button, with a Yankee rudder only airplane, and a COX Golden Bee engine. Now I split my modeling time between electrics and giant scale warbirds. I first joined SMAC in the early 80’s. I have served as president of the club and founder of the swap meet running the event for all but one year.

**Minutes of SMAC Meeting,  
November 1st, 2005**

Tonight's meeting was held at the Asbury United Methodist Church in North Hampton. Club President Jeff Traub called the meeting to order at 7:32 PM. There were approximately 32 members in attendance. We were also pleased to welcome 2 visitors, Dan and Walter Dumbley as guests tonight.

**Secretary's Report:** The report was read by Club Secretary Joe Ferrara. The report was then accepted as read.

**Treasurer's Report:** The report was read by Club Treasurer Tom Minnich. The report was then accepted as read. Tom also stated the raffle fund currently has \$98.00 in it and the membership stands at 85 paid members.

**Old Business**

**Club Member Paul Rueger:** Clem Schmid was pleased to report that Paul is finally home from the hospital and although he is still recuperating, he can accept visitors, but before going over to see him, *please call first!* His phone number is 937-323-1221 and a few friendly faces would probably cheer him up.

**Field Shutdown:** The annual field shutdown was accomplished on Saturday, October 29th and all items have been secured for the winter season. Thanks to all who came out to help.

**Upcoming Elections:** The Club's annual election of officers will be held at the December meeting. The offices of President, Vice-President, 2 Board members and Club Secretary are open and all Club members are encouraged to run. Additionally, **THE ANNUAL 50/50 CASH GIVE-AWAY WILL BE HELD AT THE SAME TIME!** Last year's winner, "Lucky" Buzz Massey walked away with more than \$290 in cash and had a pretty good Christmas as a result. This year, it could be **YOU!**

**Fire Ring:** Bill Cline reported that the item is built and in place, but all Club members are asked to NOT throw trash into it.

**New Business**

**Winter Indoor Flying:** Jeff Traub stated that the Clark State University gym will be open to Club members wanting to fly indoors this winter. The available hours are 9:00 AM to 12 noon on Fridays. A weight of 5 oz. is the maximum allowable plane size, and even though this is a small size, everyone is urged to use caution while flying indoors as even a plane this size can still cause injury if it gets out of control.

**New Club Treasurer:** As was previously reported, after 8 years of service to SMAC, Tom Minnich is stepping down as Club Treasurer in December and this item was addressed at the October meeting of the Board. Club Secretary Joe Ferrara stated he would take over Tom's duties if at least 1 qualified candidate would run for the Secretary's office. Bob Levy said that he would be willing to run for Secretary and the Board unanimously voted to recommend this to the General Membership. Club President Jeff Traub then asked if there was any objection to the Board's recommendation and there was none, so Joe Ferrara will be moving on to fill Tom's position as the new SMAC Treasurer beginning in December. Incidentally, the Secretary's job is open to any Club member in good standing who might want to run for it.

**Nominations For Club Office:** With the election of Club Officers the main item on next month's agenda, President Jeff Traub opened up the floor for nominations. Rick Barch was then nominated for Vice-President and accepted. Bernie Zoppa had also previously announced his candidacy for **V-P**. Dave Snyder was then nominated for the Board and also accepted. Neil Perkins and Jim Miller had likewise previously announced their candidacy for re-election to the Board. Nominations can be made up until the voting begins at the December meeting, so here's your chance if you're interested.

Additionally, Clem Schmid doesn't want to continue as newsletter editor, so we're going to need someone to pick up the ball here. A suggestion was made to see if Paul Rueger is up to the job and if so, offer it to him. Jim Miller has been managing the Club's internet web site in Paul's absence.

**Year End Swap Meet:** Preparations continue for the end of year swap meet to be held **“November 25th (the day after Thanksgiving)” at the VFW Hall in Springfield, 1237 E. Main Street (Across from the Blue Water Tower)**. As many of you already know, this is the big annual moneymaker for the Club, so if anyone is interested in helping out, please contact Mike Harter or Dave Snyder before then. They’re also the point of contact for seller’s space. Mike and Dave report that 25 of the seller’s tables are spoken for. The local hobby shops have also been approached about prize donations and we will give reciprocal advertising for them in return. Roger Peck said he can work the front door and collect admission money. Also, the AMA insurance certificate has returned completed, so we are ready to go. Admission is \$3.00 and seller’s table space is \$10.00 per table. Setup of tables and chairs begins on Friday morning at 6:30 AM. See ya’ there!

**Annual Freeze Fly:** The Club’s annual “Freeze Fly” will be held come rain, snow or ice (but not deep mud!) on January 1st, 2006 at 12 noon.

**Next Club Meeting:** The next general meeting is scheduled for Tuesday, December 6th at the Asbury United Methodist Church in North Hampton at 7:30 PM.

At the conclusion of the regular meeting, the 50/50 raffle was held and Bob Levy was the winner of the \$12.50 prize. There being no further business, a motion to close the meeting was made. The meeting was closed by President Jeff Traub at 8:06 PM.

Respectfully submitted,  
By Club Secretary  
**Joe Ferrara**

**Before I cut my ties with Thrustline I will give you each a Christmas Gift, small but interesting! Go to:**

**Http://trunks.secondfoundation.org/files/psychic.swf**



### **Selecting Electrical Power Systems**

This section is for those club members who do not have access to the internet. Much has been written over the last four decades on using electric motors to replace glow and gas engines to power aircraft; models to full scale. This article is based on material assembled by Bob Aberle.

When RC started to come of age in the 1950’s, we learned by experience that 1/2A RC models could weigh as much as 18-20 ounces, Class A RC models could weigh as much as 30 ounces, and so on. Although these engines are rated in horsepower (and thrust), to this day most modelers simply relate engine displacement to model weight and size.

What to do? Approximately 35 years have gone by since the real start in electric-powered flight. Although many still have questions, much more is now known and some excellent techniques for sizing or matching the correct motor to any size and weight of aircraft have been developed.

You must know the aircraft’s weight to select motors. Purchase (or have access to) a good digital scale to cover the weight range of the aircraft; pounds, ounces or grams. Balance A/C in the gram range during material selection by using a digital scale.

Model Aviation Hall of Famer Tom Hunt made a thought provoking observation, which follows: “The main problem in the selection process is that the electric motor has a much broader operating range than an internal combustion engine. One can have an AXI 2212/34 brushless motor fly a 10-ounce (total weight) aircraft at 60 watts input, a 14-ounce aircraft at 95 watts input (that’s a 50% power increase), and a 22-ounce model at 120 watts input (that’s a 100% increase)”. Because of this, there are many more choices in the selection process when going to electric power and is what mystifies most modelers.

Motors are defined by the term “power,” which is measured in watts. All references to power in watts is input to the motor (or output of the battery). A motor’s output power is a function of its efficiency. The primary rule is that power (in watts) equals motor current (in amperes, or amps) multiplied by the voltage. Voltage is determined by the battery and will vary according to battery type and the number of cells employed in the battery pack. The current is determined by several things, including the resistance of the motor windings, the size of the propeller, and the type of drive (direct, with gear reduction, or belt-reduction).

**THUNDER DRONES**

The Air Force's new flight demonstration team.  
Why put Thunderbird pilots' lives at risk?

The U.S. Military is working on the development of an  
"Autonomous Unmanned Force Structure."

(Cont. from Pg. 3) So you have the variables current (amps) and voltage that yield power (watts). This is where the fun begins since you can vary everything, including the propeller size, the motor drive and the battery. Each variable will produce different results.

The most important tool for the electric-power flight enthusiast is the ammeter and wattmeter. Have access to one that will measure below 10 mA and below 4.0 volts. Make sure you have access to the latest versions. The meters are generally self-powered by the system you are measuring. It provides four important motor parameters: voltage (volts), current (amps), power (watts), and the capacity going into or out of the battery, measured in ampere-hours (Ah).

Aircraft Weight and Power Loading: Now that you have the motor "identified" by power, how do you relate it to a specific-size model? There are two aircraft parameters you need to be interested in, one of which is the model's total weight. This is generally measured in grams or ounces for the smaller airplanes and in pounds for the larger models.

Knowing the motor's power and the model's weight, you can come up with one of the most important "combination parameters," known as watts/gram, watts/ounce or watts/pound. These "power loading" values are used for judging aircraft performance.

Wing Loading and Skill Level: After determining motor power (watts) and aircraft weight, you must focus on airplane size, which involves wing area and then wing loading (which takes into account wing area and aircraft weight).

Calendar of Events

**6 December 2005 SMAC Club Mtg. 7:30 PM**

**Election of Officers & Board Members**

**Location: Asbury United Methodist Church  
104 E. Clark St (Rte #41)  
North Hampton, Ohio**

**Freeze Fly 1 January 2006 at Noon**

**Location: SMAC Field, Spence Road  
North Hampton, Ohio**

**3 January 2006 SMAC Club Mtg. 7:30 PM**

**Location: Asbury United Methodist Church  
104 E. Clark St (Rte #41)  
North Hampton, Ohio**

**See Web site for Friday Electric Flying.**



**Hand Quilted Airplane Wall Hanging  
"Donated" to SMAC**

**Nine different airplane designs make up this  
48"x 48" hand quilted wall hanging.  
Color coordinated Log Cabin blocks complete  
the design in primary colors.**

**It has a rod pocket for hanging.**

**Custom designed and made by local Artisan**

**Only 150 Tickets to be Sold; 72 Tickets left,  
\$1.00 each or 6 for \$5.00**

**Drawing: 6 December 2005**

**Another Successful SMAC SWAP Meet 11-25-2005**

**Several members of SMAC or members of their family continue to need your prayers. Pray for those who have Cancer, By-pass surgery, Joint replacement, Major Accident, Loss of a loved one or Reduced level of health. Your kindness with prayers will be rewarded.**