

# Carrier Wave

## March 2005

Newsletter of the Phantom Flyers R/C Club  
<http://phantomflyersrc.com>

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**Don Vetrone will be giving a presentation on float plane set up and flying at the March meeting!**



**Ben Lanterman Photo**

## Meeting Minutes, 16 February 2005 ( Mitch Galatioto )

The meeting was brought to order at 7:00 by club President Herb Johnson. There were 28 members in attendance. Recent member applicant Larry White attended his first meeting.

**Secretaries Report:** The Secretaries report was approved as written for January 2005.

**Treasurer's Report:** Reports for December/January were combined and approved.

**Recreation Report:** Larry Leuschke reported that we updated the club summary on the Recreation website. It links to our website which requires update on meeting times/locations.

**GSLMA Report:** Buder has a website, [www.flybuder.com](http://www.flybuder.com) where you can download the form to get a Buder Park flying permit. Everyone in the club is encouraged to get a Buder Park permit to show our support of GSLMA and Buder Park for continued RC usage. No fee is requested, however, donations are used to support facility maintenance. Total budget is small and GSLMA stretches it as much as possible.

**Field Manager's Report:** Herb Johnson reported that the field looks great. Every now and again there's great weather, so keep those airplanes on charge and head out when you can. The new lock will be installed tomorrow and keys were distributed after the club meeting. If you didn't get one, get a hold of Mitch Galatioto. You can mail your key to him via internal mail or to his house. In order to obtain a new key, you will have to return you're old. A motion was made and approved to impose a \$2.00 fee for anyone who has lost their old key. So if you've lost yours, be prepared to pay a replacement fee.

**Safety Report:** Emery Kattelman reminded folks to stand on the side of the runway your takeoff roll begins from when you fly (Also, ensure all pilots stand on the same side). Emery also requested each club member challenge those that don't have a club membership card. Be friendly if challenged, it is everyone's responsibility to ensure only members and their guests utilize the field.

**Activities Report:** The Model Expo will be held on March 19<sup>th</sup> at Fort Zumwalt South High School which is the same location as last year. Charlie Bauer, AMA will be at the Expo as a vendor, but it will be decided if they will have a booth. Jim Wortkoetter is looking for two (2) volunteers; one to accept tables delivered to the school on Friday 18 March and one to wait for them to be picked up on Monday 21 March. There will be 45 tables. A signup sheet was distributed for Expo workers. Shifts will be two (2) hours this year. Contact Larry Leuschke to sign up. Other events upcoming include the Cub Pack 30 rocket launch on 16 April with RC demonstrations in between launches and the 1<sup>st</sup> fun fly of the year on 1 May, so get your bomb drop prepared!

**Old Business:** The status of items that are being procured to replace those stolen from our facility was provided. Ed White procured the generator. Emery Kattelman priced a Stihl trimmer and blower as well as the E-Z Up canopies at SAMs. The club recommended we buy replacement products that are of high quality and reliability. Larry Leuschke found out the club deductible. Emery will get with the president on all items and the President will make the final decision on what to buy.

Mitch Galatioto reported that the field lease renewal was in work through the company. All was going well so far, but there's still a lot of work to be done.

**New Business:** Jan Jansen will be unable to continue being one of the BAT program ground R/C personnel for a little while due to work conflicts. Jim Greenwood and Dan Sundman will be trained in both the ground and air R/C roles. Herb is now trained to be PIC. The field is tentatively scheduled to be closed to flying for the BAT program on March 1st. Herb Johnson will send out an e-mail when we know for sure. You can also check the website to verify for notification as well.

**Tech Session:** There was no technical session at this meeting.

The club meeting was adjourned at 7:38 p.m. and a raffle ensued. Next months meeting will be on 16 March. We'll see you there!

Mitch's Flight total for the year = 10

New Airplane Count = 0 :(



# Helpful Hints For Two-Stroke Glow Engines

(From the AMA National Newsletter)

Today's two-stroke glow engines are technological marvels; they're powerful, lightweight, easy to use, and with proper use and care, will last for many years.

Next to the radio system, the engine is one of the most expensive investments we make in Radio Control (RC) aircraft. Over the years, we've learned a lot about the care and feeding of engines, and we know there aren't any secrets to operating a model airplane engine correctly. From adjusting the fuel mixture and choosing the best glow plug to proper maintenance and using common sense to improve reliability, this article is full of helpful hints and information so you can have a happy relationship with your two-stroke glow engine.

## Easy starting

Nothing is more frustrating than owning an engine that is difficult to start. Our frustration often leads to a flight that ends with a dead-stick landing or a crash. When you start any engine, there are three things to remember. For combustion to occur, your engine needs air, fuel, and fire (heat). If your engine won't start, check the carburetor to make sure that air and fuel are available and check your glow plug to ensure that it provides enough heat to ignite the air/fuel mixture.

Remove the glow plug and attach the glow driver; its element should glow brightly. If it doesn't, replace it; if it does, reinstall it. Close the needle valve and then open it three full turns. Place your thumb over the carburetor, and flip the propeller several times until fuel is drawn through the fuel line and into the carburetor. If you remove any one of these three elements from the equation, your engine will not start.

## Two-stroke engine operation

The operation of a two-stroke engine is relatively simple. The crankshaft makes one complete revolution for every power cycle. During the piston's upstroke, the fuel/air mixture above the piston is compressed for combustion. At the same time, a fresh mixture is drawn into the crankcase below the piston. After combustion, the piston is forced downward, and the spent fuel charge is expelled through the exhaust port. Simultaneously, a fresh fuel/air mixture is drawn through the carburetor and into the crankcase. The intake valve is sealed, and the mixture is forced through the transfer ports and into the cylinder above the piston to start a new power cycle.

## Secure fuel lines

Proper fuel line installation is very important. If your fuel line is too big, it may leak air or even slip off in flight. Fuel lines come in several sizes, so use the size that best fits the carburetor's fuel fittings. Air bubbles in the fuel line may cause the engine to run lean, and if the line slips off, the engine will die. Be sure there is adequate slack in the line and secure it to the fuel fitting with a wire clip or a small length of fuel line slipped over the end of the main line.

## Tight seals

If your engine begins to run erratically, and the mixture leans out even after you've adjusted the needle valve, you may have an air leak in the carburetor. Make sure the carburetor is firmly and properly attached to the crankcase. If the intake is sealed with an O-ring, check it for cracks or breaks and make sure that it's seated properly, lies flat, and isn't distorted when the carburetor-attachment screw is tightened. Make sure that all the adjustment screws and the needle-valve assembly are properly sealed and work correctly.

Check that the fuel-intake fitting is tightly screwed into place and that it isn't damaged or cracked. The fuel tank and fuel lines must be properly and securely installed. If you have

previously nosed the model over or made a hard landing, the fuel pick-up clunk may have shifted forward in the tank; this can pinch off the fuel supply. The clunk and pick-up line should move freely, and you should be able to hear the clunk rattle in the tank.

#### Fuel flow

If your engine always runs rich or floods easily, check the position of the fuel tank. The tank should be installed in the fuselage so its centerline is at or slightly below the carburetor's spray bar. Use scraps of foam to position it securely so it can't move around in the tank compartment. If the tank is too high in the fuselage, fuel will tend to be siphoned out and run freely into the carburetor.

If the tank is too low or too far away from the carburetor, the engine may have difficulty drawing fuel into the carburetor, and it will run lean. To improve fuel draw, attach a line from the pressure fitting on your muffler to the tank's vent line. If you use a third filler line with your tank, close it off to allow the muffler pressure to enhance fuel draw.

from RC Prop Wash  
Ocala Flying Model Club  
Dick Smith, editor  
Ocala FL

The Rev. Billy Graham tells of a time early in his career when he arrived in a small town to preach a sermon. Wanting to mail a letter, he asked a young boy where the post office was. When the boy had told him, Dr. Graham thanked him and said, "If you'll come to the Baptist church this evening, you can hear me telling everyone how to get to heaven."

"I don't think I'll be there," the boy said. "You don't even know your way to the post office."

## LAUGHTER IS LIGHTER THAN AIR

A pilot was sitting in his seat and pulled out a .38 revolver.

He placed it on top of the instrument panel, and then asked the navigator, "Do you know what I use this for?"

The navigator replied timidly, "No. What's it for?"

The pilot responded, "I use this on navigators who get me lost!"

The navigator proceeded to pull out a .45 and place it on his chart table.

"What's that for?" the pilot asked.

"To be honest, sir," the navigator replied. "I'll know we're lost before you will."

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You know you're a *real* modeler when you arrange your shirts in the closet in two groups—the ones with CyA glue spots and those without.

from *Space City Crash*  
Space City R/C  
Mike Crotts, editor  
Houston TX

# Advantages of Elastic Thread *(From the AMA National Newsletter)*

By Allan Schanzle

There are several materials that I have used for rigging on models. Three that come to mind are monofilament fishing line, regular sewing thread, and elastic thread. Each of these has its advantages. Monofilament fishing line can be purchased in almost any thickness, which facilitates selecting the proper size for the specific model being built. It can also be colored as desired by simply using a wide-tip permanent felt marker. Cyanoacrylate glues work well to hold these in place.

Normal sewing thread also works well and is available in a wide variety of colors and diameters.

These two materials are great for rigging between wings or on the tail surfaces. The only disadvantage is that they don't give when landing in a field that has prickly grass or weeds. That makes them less desirable for rigging that is likely to get caught on ground materials. This is exactly the situation with the Spartan C2-60, where there is an abundance of rigging below the wing and around the landing gear. This feature led me to choose elastic thread for the rigging.

I bought my elastic thread at Jo-Ann Fabrics (I think is a nationwide chain). I purchased both black and white spools.

They can be unbraided if necessary, but one strand will be rather kinky, while the second strand appears normal and is good for simulating smaller diameter rigging. I used the smaller size for the rigging on the tail surfaces.

Some elastic thread I've used in the past works well, but after six months or so, it may lose its elasticity and become saggy. It is this characteristic that led me to use Elmer's white glue to attach the end of the elastic rigging whenever possible. This particular glue has several advantages:

1. Even after drying, it can be dissolved with water, allowing you to repair saggy rigging. Simply soften the glue at one end of the thread with water, remove the thread, cut, and replace. You have to be patient and let the water soften the joint.
2. The hazy film of glue around the joint can be removed with a Q-tip soaked in water. This is a distinct advantage over acetone-based glues, such as Ambroid, where softening the glue usually ruins the finished surface around the joint.
3. It dries clear, avoiding the visual appearance of a blob of junk holding the rigging in place. (An unrelated benefit to Elmer's is to use it as a means of tack-gluing tail surfaces for initial flight testing. If you're like me, you won't remember where you put the small spots of glue, so simply use a small paint brush to apply water all around the joining surfaces—such as the stabilizer to the fuselage—and wait a few moments. As the glue softens, the joint turns opaque, allowing you to see exactly where the glue has been applied.)

Here is the approach I developed for rigging the Spartan.

1. When building the framework, glue small sheets of balsa to the substructure where thread is to be anchored.
2. After covering the model, make holes through the covering and into the balsa structure where the ends of the rigging will be attached. Use a small drill or a typical pin, which I found to be the perfect size for the thread I used.
3. Pick two points where rigging will be attached and cut a piece of elastic thread about three-fourths of the distance between the two points.
4. Apply a light coating of cyanoacrylate glue over approximately 1/2-inch at each end of the thread. This will stiffen this portion of the thread and make it relatively easy to insert into the drilled holes.
5. To produce the illusion of turnbuckles on a very small scale, dip about 3/8-inch of the

ends of the thread in the appropriate color paint. It may take several coats to build up a little thickness, but the earlier use of cyanoacrylate makes the thread less porous and helps to minimize the coats of paint.

6. Now try inserting the thread into one of the holes. If the hole is too big, simply apply another coat or two of paint until you get a tight fit. I found that with a bit of work, I could get the thread inserted into the holes at both ends in the stretched position and it would hold itself in place without glue. This makes it easy to apply a small drop of Elmer's at each end of the thread using the point of a pin.

from Max Fax  
D.C. Maxcuters  
Allan Schanzel, editor  
Washington DC



### Is that iron hot enough?

A good way to see if your iron is hot enough, or worse yet, too hot, is to place the iron on a stand (I use a 6-inch scrap 2 x 4) so the foot is facing up. The top of the iron should rest on the 2 x 4. Get a scrap of the material you are using to cover the airplane. Using a Coverite thermometer, heat the iron to the recommended temperature. Then, rest the scrap on the shoe. If it shrivels into a ball right way, the iron is too hot. Readjust the temperature and try again. If nothing happen, then the iron is too cold. Keep adjusting until the scrap barely shrivels. I wait until it shrivels rather slowly and use that temperature as my hot setting. For my low setting, I watch for the piece to shrivel in a few seconds. Since I use MonoKote almost exclusively, I just mark on the iron where the two settings that work best for me are located. You might have to experiment to see what works best for you.

from *Circus Flyer*  
Camarillo Flying Circus  
Ron Boyer, editor  
Camarillo CA

# Activities *(Dan Abel)*

## Preliminary Event Calendar for 2005

EVENT	2005 DATE	DAY	2005 CD
SNOW FLY	1-Jan	SAT	
CLUB MTG @ SR CENTER	19-Jan	WED	CLUB PREZ
CLUB MTG @ SR CENTER	16-Feb	WED	CLUB PREZ
SWAP MEET	19-Mar	SAT	ED WHITE
CLUB MTG @ SR CENTER	16-Mar	WED	CLUB PREZ
PACK 30 ROCKET LAUNCH	16-Apr	SAT	GARY LUEBBERT
CLUB MTG @ SR CENTER	20-Apr	WED	CLUB PREZ
CARRIER FUN FLY	1-May	SUN	AL BONE
FLOAT FLY PRACTICE : 12-4 PM	14-May	SAT	DON VETRONE
CLUB MTG-FIELD	18-May	WED	CLUB PREZ
FLOAT FLY : 9:30 AM -12	28-May	SAT	DON VETRONE
PATTERN SEMINAR 12 NOON	4-Jun	SAT	ED WHITE
FAMILY BBQ and BUILD-A-PLANE	12-Jun	SUN	DAN ABEL
CLUB MTG - FIELD	15-Jun	WED	CLUB PREZ
FIELD PREP FOR ELECTRIC FLY	16-Jul	SAT	
ELECTRIC FLY	23-Jul	SAT	BRAD YOUNG
ELECTRIC FLY	24-Jul	SUN	DAN ABEL
CLUB MTG - FIELD	20-Jul	WED	CLUB PREZ
FIELD PREP FOR CONTEST	20-Aug	SAT	ED WHITE
CLUB MEETING - FIELD	17-Aug	WED	CLUB PREZ
PATTERN CONTEST	27-Aug	SAT	BILL AHRENS
PATTERN CONTEST	28-Aug	SUN	BILL AHRENS
FIELD PREP FOR HELICOPTER FLY	10-Sep	SAT	
HELICOPTER FLY IN	17-Sep	SAT	JEFF BRUNDT
HELICOPTER FLY IN	18-Sep	SUN	DAN ABEL
CLUB MTG @ SR CENTER	21-Sep	WED	CLUB PREZ
CLUB MTG @ SR CENTER	19-Oct	WED	CLUB PREZ
CLUB MTG @ SR CENTER	16-Nov	WED	CLUB PREZ
CHRISTMAS DINNER	3-Dec	SAT	CLUB PREZ



Same  
Location as  
Last year

Over 20,000 sq ft! Of RC Items

# R/C EXPOSITION



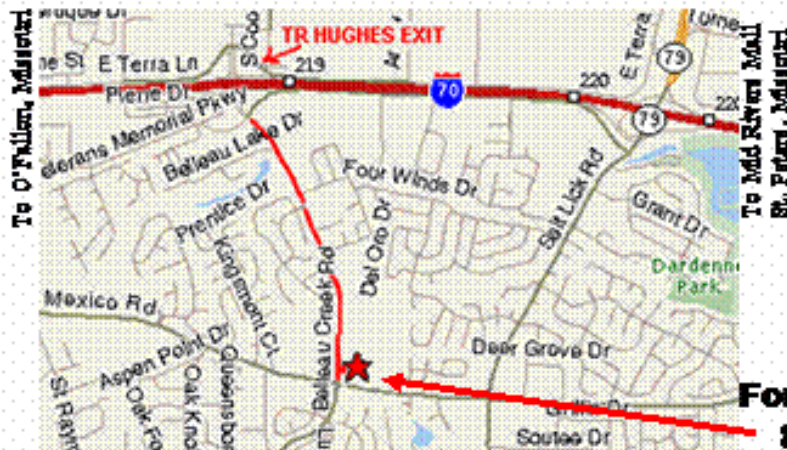
## & Swap Meet



At Fort Zumwalt South High School

**SATURDAY - MARCH 19, 2005**

Expanded Format: Airplanes, Boats, Helicopter, and Cars!  
Fly an R/C Flight Simulator! Watch Action Videos! Enjoy Static Displays!  
Learn about the hobby! Talk to St. Louis Area Clubs!



Directions:  
I-70 to  
T.R. Hughes Rd Exit.  
Follow Belleau Creek  
Rd. South  
1.1 miles.  
On left just prior  
to Mexico Rd

Fort Zumwalt South HS  
8050 Mexico Road  
St. Peters, MO 63376

**!!!!SUPER RAFFLE PRIZE!!!!**

**(No Sales In Parking Lot Allowed)**

**General Admission: \$5.00 – Children under 10 Free**

**GENERAL ADMISSION OPENS AT 10:30 AM**

**General Admission – Free Tables as available**

**(Admission closes at 2:00 PM)**

**Business Tables see <http://phantomflyersrc.com/swap.gif>**

**Public Table Sales 10AM**

**\$10 for a 5' round table includes 1 admission**

**(first come first served)**

Presented by:

Phantom Flyers R/C Club & Spirits of St. Louis R/C Flying Club

CONTACTS: Larry Leuschke 636-537-1472

Email @ [swap05@phantomflyersrc.com](mailto:swap05@phantomflyersrc.com)

See <http://phantomflyersrc.com/swap.htm> for latest details

Reference <http://spiritsofstl.com>

On Site Concessions Stand

Same  
Location as  
Last year

# Hints, Tips. & How-To's

## Light tissue over dark colors

The fuselage of the featured model is black with a trim stripe that is orange and outlined in white. If you use orange tissue for the trim strip, the black will show through and distort the orange color. To make the orange tissue opaque, simply paint the back side of a piece of orange tissue (slightly larger than necessary) with white paint. To add the white edge to the orange stripe, use a white ball point pen to create the edge or use an old fashioned drawing pen along with white paint to create the edge.

Cut the tissue to shape, wet the stripe, place it on the fuselage, pat dry with a paper towel, and hold in place with thinned white glue applied just to the edges of the orange tissue.

## Mounting windshields

A trick I used to help glue the windshield to the fuselage of the Spartan is cut a piece of scrap 1/8-inch thick balsa into a triangular shape. Make one of the angles correspond to the tilt-back of the interior of the windshield. Tack glue this piece of balsa with Elmer's along the centerline of the fuselage. Locate the proper fore-and-aft location so that the forward point corresponds to the windshield location on the centerline.

Hold the windshield in place and put a small drop of Elmer's at the base of the windshield along the centerline—dry completely. The balsa scrap will now hold the windshield at the proper angle while you bend the windshield and place additional drops of glue to hold it in place.

From Max Fax · D.C. Maxcutters · Allan Schanzel, editor · Washington DC

### Pulling oil out of wood

Sometimes the firewalls and engine areas of older airplanes get soaked with oil from the fuel. This weakens glue joints to the point where an aircraft could fall apart in midair.

Try using CyA kicker (catalyst). You just have to spray it on and wipe it off. It pulls the oil right out of the wood. Several treatments may be necessary. This also works if a fuel tank develops a leak, and the fuselage gets soaked with fuel.

from *Evergreen Flyer*  
Evergreen Radio Modelers Association  
Tim Shea, editor  
Marysville WA

### Loose exhaust deflectors

If you have ever lost a silicon rubber exhaust deflector from your muffler in flight, try putting a small bead of J-B Weld or epoxy around the end of the outlet pipe to form a lip. Now you can push the deflector on and tie wrap it ahead of the lip. This will hold it securely in place. It also should work with tuned pipes.

from *The Aero-Shaft*  
The Aero R/C Club of Flint  
John Hice, editor  
Flint MI

Boeing Employees RC Model Airplane Club  
c/o Brian Kretchmar  
12 Pin Oak Court  
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