



July

Minneapolis, Minnesota U.S.A.

2010

June TCRC Activities Fall To Wind, Rain And Water

by Jim Cook

TCRC had lots of activities scheduled for the month of June, but one-by-one they had to be cancelled because of weather in some form or other.

The first event to succumb was TCRC Open House scheduled for June 12th at the Jordan Field. The weatherman seemed to be adamant that this Saturday would be rainy and he was good to his word.

Next came chair Paul Doyle's second attempt to kick-off the Micro Pylon racing season. A combination of winds and rain kept both the May 23rd and the June 20th scheduled dates from occurring. Paul is hopeful that July 25th date will finally allow the pilots to 'start their engines'.

Gerry Dunne's Electric Fly and Camp Out was on the books for June 26th and 27th, but the heavy rains of the month brought the Minnesota River back onto the field where it is as we go to press, and by latest predictions will remain until mid-month.

If the River does stay on the field until July 15th or so, it is pretty questionable as to whether the field can be dried off in time for the other flying events scheduled for Jordan near the end of the month. Those events in jeopardy are the July 24th Big Bird Fly-In chaired by Chris O'Connor and Steve Meyer, and the July 25th Micro Pylon Race to be held that Sunday.

The club webmaster will keep the website, TCRCOnline.com updated so that the members can know the status of the field and these and other events on a very current basis. J



The waters of the Minnesota River climb the road from the Jordan Field. (Photo by Steve Meyer)

TCRC meets every month on the 2nd Tuesday at 7:00 PM in Fellowship Hall of CrossPoint Church located on the southeastern corner of the intersection of 98th Street and France Avenue in Bloomington. Guests are welcome to attend these meetings.

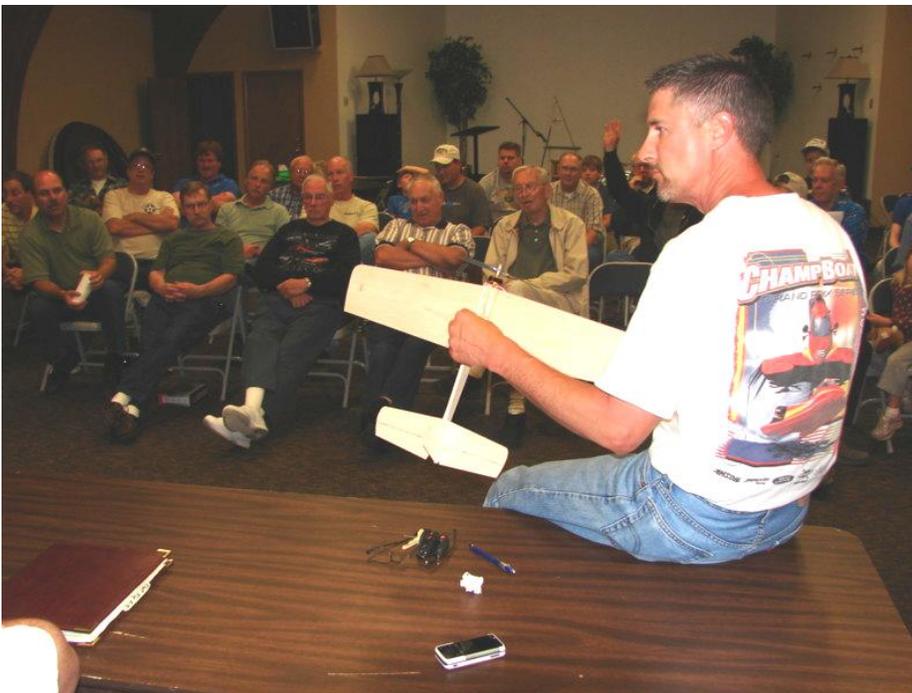
Ramblin's From The Left Seat

by President Steve Meyer



TCRC field closed again due to high water from the Minnesota River. As I am writing this article, the water level is around 22 feet and the access road and a large portion of the field is under water. Gerry Dunne's electric fly-in and over night camp out had to be cancelled. I hope the field dries out by mid-July or sooner if the rain holds off.

I want to thank Wayne Rademacher for bringing back memories of Christmas 1960 when as a boy I opened a large gift-wrapped box. The top of the box had a plastic window that gave me a glimpse of a bright yellow Cox control line model; I think it was a P-51 Mustang. Wayne's program last month was on developing a small electric control-line model that he had cut out with his CNC machine. The plane will be flown early this summer after he adds the control wires and electric components.



Wayne shows the membership his CNC-generated control line plane at the June meeting. (Photo by Jim Cook)

CHECK AND CHARGE YOUR BATTERIES. After the crash of my float plane due to the failure of the RX battery pack, I started looking at some of my other battery packs. Any battery packs I found that were

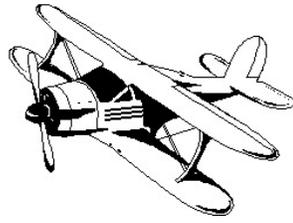
weak after three charge/discharge cycles were discarded and recycled. I am starting to use the new LiFe/A123 type for my receiver battery. This battery at 6.6 volts supplies more power to the servos at a more constant rate. These batteries are lighter than NiCad batteries and they can be recharged/fast-charged many more times. They hold their charge over long periods without dropping voltage. LiFe batteries still have to be monitored because even though their voltage remains constant it drops quickly when the charge is depleted. These batteries are easy to fast charge at the field and my receiver battery will always have a full charge.

July is the start of the summer flying events for many of the clubs in the area. TCRC is hosting two major events this July. The first event I need our club members to get involved with is on July 17th and 18th at The Wings of The North Expo at Flying Cloud Airport. TCRC will have a static display and we will need members on both days to show airplanes and talk RC with the spectators. The second event on July 24th is TCRC's Big Bird Fly-In. Chris O'Connor and I will be co-champions of this giant plane event (80 inch wing span for mono and 60 inch for biplanes). We will need volunteers to help on the flight line and concessions. This event is open to anyone in the area with an AMA card and giant scale aircraft.

A web site to checkout: <http://adamone.rchomepage.com> -- this deals with aerodynamics and flight for model aircraft.

Let's see all of you at the field and the meetings. This is going to be a great summer. ☺

Show & Tell



George Toon had a Sig Kobra built from the kit that he picked up at a swap meet for \$5. It was done in white fuse with black trim and the wings were white with blue and red sunrays. He will put a Super Tigre 45 2-stroke on it for the first flight.



Noah Toon had a Paul Doyle built GWS Zero that had been one of Paul's pylon racers the past year. The plane has survived two crashes and Noah plans on being a pylon competitor with it this season.



Koby Toon had a GWS high-wing that he also got at a swap meet. It had an electric engine and will be seen in the skies over Jordan this summer with Koby at the controls.

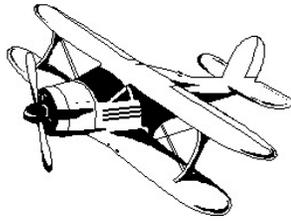


Joe Neidermayr had a Graupner foam Mini-Piper Cub that was powered with a brushless electric. The plane was pink foam and had 2 channels (rudder and elevator) and a speed controller. It had a 750 mah 2-cell lipo battery.

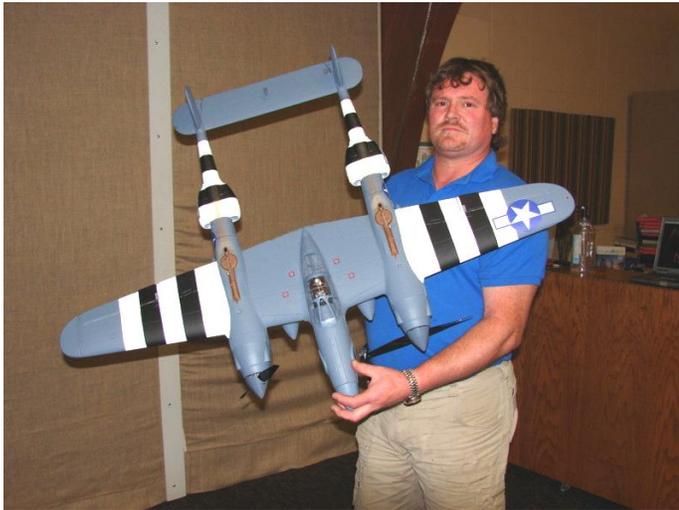
Gerry D had a very nice looking E-Flite P-38 Lightning electric (of course). The plane was gray with invasion stripes and powered by two 36/30 brushless motors. This ARF had a 2,200 mah 3-cell lipo battery and as of the meeting had not had its maiden flight as yet. (See picture on page 6)

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Show & Tell



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Gerry Dunne with his P-38. (Photo by Jim Cook)



Gerry also had a very good looking Phase 3 delta-wing Squall at the meeting. It was white with yellow and black trim and the bottom of the wing was done in blue and white vertical stripes. The plane was powered by a ducted fan and has flown twice. The first time was in the snow and a piece of ice went thru the fan badly damaging the fan and the rear of the plane. He had it up to 100+ mph at 2/3 throttle. He did change the transmitter over to exponential for the control surfaces.



Jon Perry had a Thunder Ace battery charger that can charge up to 6-cell lipos, and do all types of batteries used in our hobby. The charger was an AC/DC charger and was complete with power supply and cell balancer. He purchased it from Hobbyparts.com for \$55.



Tim Len had a very nice looking E-Flite LR-1A Pogo ARF. This plane had a 49-inch wingspan and had a white fuse with blue/yellow trim and yellow underwing. He said it went together very nicely and should fly out of the box at 110 mph. It was powered with an Eternity motor and had two onboard GPS units so that he could determine its speed accurately. It weighed in at 2 pounds 10 ounces and as of the meeting had yet to fly. J

Bring Your New Plane To The Next Meeting!

Wisconsin Fun Fly August 6th, 7th and 8th

The 2nd Annual Wisconsin Fun Fly is just around the corner – August 6th, 7th and 8th.

The Wisconsin Fun Fly kicks off at 11:00 AM on Friday, August 6th at the lake home of Jim and Mary Cook in Siren, Wisconsin. This is less than a very easy two hour drive north of the Twin Cities. We will start off with a potluck lunch with the grilling meat provided by Jim and Mary. Immediately after the lunch it's down to the dock for an afternoon of float flying on beautiful Viola Lake.

Around 3:30, the pilots will start packing up and then caravan the 40 miles over to Birchwood, Wisconsin where most everyone will check into the Birchwood Motel. (Phone number 715-354-7706). If you are just getting around to deciding to go on this grand event and find out that the Birchwood Motel is full and overflowing, you can still stay at Jim's place on the lake. He says he has plenty of space available if necessary.

Following the check-in at the motel, the group will meander over to Bill and Sue Sachs house for an evening of friendship, snacks and drinks.

Saturday morning starts off with a breakfast at a Birchwood restaurant and then on to the pristine flying site that has been

developed by Bill Sachs. The spouses will probably make a token visit to the airfield before heading for other areas of interest in the Birchwood environs. Flying will continue all morning and afternoon until the last pilot is finally satisfied that he has gotten sufficient airtime and can take a break for the rest of the day.

Saturday evening will be dining at a fine Birchwood restaurant.

Sunday morning brings another breakfast and then morning flying until everyone heads for home.

Last year's inaugural event at the end of August had some very unseasonably cool weather but Bill and Jim have consulted with higher authorities and are promising great flying weather for the entire weekend.

As of the last meeting those planning on attending the 2nd annual Wisconsin Fun Fly included: Conrad and Norma Naegele; Butch and Judy Neutgens; Larry and Joyce Couture; John and Kathy Dietz; Jim and Janice Ronhovde; Scott Anderson; Stan Erickson; Bill and Sue Sachs; and Jim and Mary Cook. If you are interested in being a part of the Wisconsin Fun Fly, give Jim a call at 952-200-2030 or Bill a call at 715-354-9561 or they can be contacted by e-mail at jimcook888@q.com or bsachs@skcable.com respectively.

This will be a great year for the Wisconsin Fun Fly. Let's see lots of pilots and spouses visiting our neighboring state on Friday, August 6th through Sunday, August 8th. ☺

Calendar

July 13	TCRC Membership Meeting, 7:00 PM Fellowship Hall CrossPoint Church Bloomington
July 17, 18	Wings Of The North Air Expo Flying Cloud Airport Scott Anderson
July 20	TCRC 3 rd Qtr Board Meeting, 7:00 Steve Meyer's House
July 24	Big Bird Fly-In Jordan Field, 10:00 Chris O'Connor and Steve Meyer
July 25	Micro Pylon Racing Jordan Field Noon Practice 1:00 PM Start Paul Doyle
July 30, to Aug. 1	Hanson Family Fly Kris Hanson's Farm 14800 50 th Street Mayer, Minnesota 612-702-3609
Aug. 6-8 Aug. 6	Wisconsin Fun Fly Float Flying 11:00 AM Jim Cook's Cabin Siren, Wisconsin Fun Fly Bill Sach's Field Birchwood, Wisconsin
Aug. 7,8	
Aug. 13-15	Northern Alliance Fly-In, Owatonna
Aug. 28	Model Aviation Day Jordan Field

Fly Wisconsin In August!

2010 TCRC Open House Rained Out

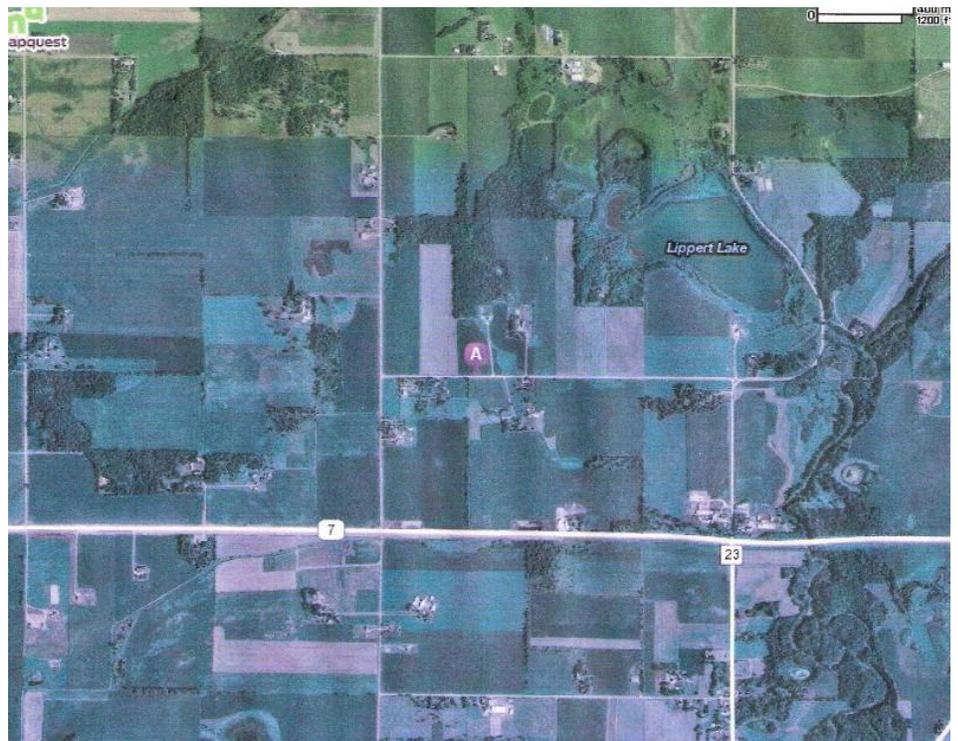
by Steve Meyer

As the champion for the TCRC Open House I wanted to show off our field to other RC flyers in the area and have a good day of flying, but that didn't happen. All week long the weather services were giving Saturday a fifty-fifty chance of rain (but I was crossing my fingers). Waking to a very gray day, and while loading the car with concessions to go to the field I checked the weather forecast for Jordan. The weather services were saying that rain might come in from the west but it might go south (I was still crossing my fingers).

When I arrived at the field at 9:30 am there were only six or seven pilots. Because of the weather forecast many of the pilots that might have come had stayed home. Gerry Dunne brought the grill for the hot dogs and Jon Perry brought coolers for the pop. Gerry had been flying some of his electric airplanes before I arrived. Kris Hanson pulled into the parking lot with his fish house/trailer full of aircraft and one or two other pilots followed him in. By 10:00 am most of the pilots were trying to get a flight in as the sky darkened. Then it thundered and everyone landed and shortly after it began to sprinkle. With everyone under the shelter I made an executive decision and said "Let's have a picnic".

Hanson Family Farm Fly July 30 to August 1

Kris Hanson has invited the flyers of TCRC and their families to a weekend of flying and camping at his farm in Mayer, Minnesota on Friday, July 30th to Sunday, August 1st. The address of the site in Mayer is 14800 50th Street and is shown on the map from MapQuest below as the red letter 'A'. Kris says to just follow Highway 7 west of Highway 25 and turn on Tacoma Avenue north to 50th Street and then east on 50th to the site.



Flying will be done from a nice grass airstrip at the farm and he also says that there is a small pond and some float flying can be done. And of course there are lots and lots of nice places to pitch quite a few campers and tents.

For more information give Kris a call at 612-702-3609.

J

The 2010 TCRC Open House event was a rainout but we all had hot dogs, chips, pop, and fresh brownies and some enjoyable camaraderie.

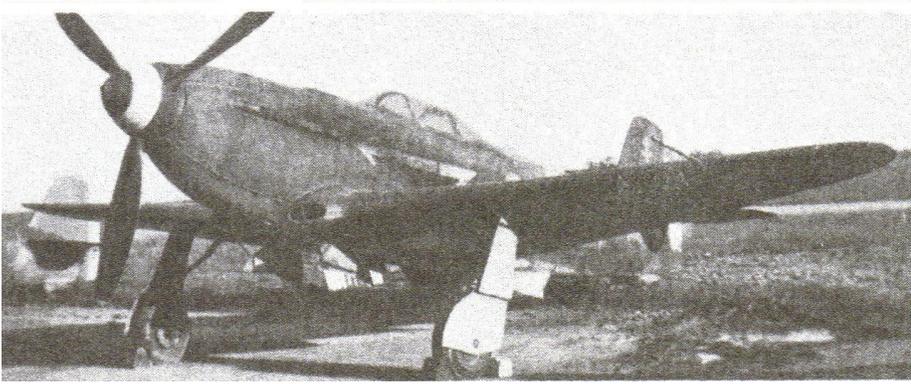
We will try this again next year and hopefully have much better weather.

☺

Yakolev Yak-3

by Conrad Naegele

The June Mystery Plane was the Russian Yakolev Yak-3.



This small mid-war fighter was unusual because it was developed right between the Yak 1 (Yak 7), and the Yak-9!! Development of the whole series was concurrent! It was probably the most successful, and as it turns out, was one of the truly outstanding fighters of WWII, for many reasons.

The 3 was designed specifically as a low level fighter. It was a simple design, one that could be built by relatively unskilled labor and under primitive conditions. It was light-weight, which enabled it to attain high speed with a small horsepower engine. The cockpit was roomy, with a simple instrument array with a full-view canopy. The wing was wood with 2 spars, plywood-skinned, covered with fabric. The fuse was steel tube and wood. It was fitted with a retractable tailwheel. Strangely, the entire plane was finished with a heavy coat of polish!

Armor and armament was light compared to Allied and German fighters, but it allowed the 3 to excel in both speed and time to climb. Of course, during the production run these two shortcomings were improved. It was rugged enough to let it use typical Russian airfields and snow-covered ground. The simple construction and sparse pilot amenities enabled the USSR to produce over 4,900 models under trying conditions and, give the pilots a really great fighter! In fact, the free French 'Normandie-Nieman' fighter group, operating in Russia, flew Allied fighters, but then given their choice, unanimously chose the Yak-3 as the plane they preferred.

In evaluating both Allied and German fighters, the Yak-3 was probably the better all-around fighter.

The Yak-3 was usually powered with a Klimov VK 12-cylinder, liquid-cooled, V-inline engine that developed 1,290 horsepower. It had a wingspan of 30 feet, a gross weight of 5,864 pounds, a speed of 415 mph and a range of 505 miles at 300 mph. For armament it had 1-20mm cannon and 2 12.7mm machine guns. ☺

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Soldering Clinic

by Vincent P. Lipton, Anoka County RC Club
Coon Rapids, MN

The following guidelines will help you achieve good, reliable solder joints, and will hopefully encourage you to be more adventurous with your model's on-board control systems.

Rule One: Use a small soldering iron for small jobs (small wires and connectors) and a large iron for large jobs (landing gear wire, tinfoil, music wire, etc.). In a pinch, you can wrap a piece of thick copper wire tightly around the tip of your "blunderbuss," extending the copper wire tip about ½ inch beyond the tip of the oversize soldering iron or gun, thereby creating a small iron. Be sure to run the solder around the contact region between the big tip and the coil of wire, to make a good thermal contact.

Rule Two: A good solder joint is usually made from the standard 60/40 blend of lead and tin. If this alloy is allowed to oxidize by being overheated, or heated for too long, the binding properties of the solder degrade seriously. Don't use solder that has been sitting molten on the iron tip for more than five seconds. Wipe it all off. Discarded solder blobs are useless; don't save them. Always use fresh solder.

Rule Three: Keep a piece of dampened (not soaked) sponge nearby to clean oxidized solder off the iron tip. This must be a natural sponge, not one made from foam or plastic (which melts). You'll find the green Scotch-Brite kitchen pads ideal. Clean off your soldering iron tip on this just before you make any solder joint. The tip of your iron should look bright and shiny just before you apply it. Oxidized solder looks dull and grainy. Get rid of it! I find that I discard 70% of my solder by cleaning it off and replenishing it with fresh, but it's well worth it.

Rule Four: Always use resin-cored solder. You should never need liquid or paste acid-flux if you prepare your work correctly. The resin core melts when you apply solder to the job and acts as a cleaning and flow agent so the solder will bind properly.

Rule Five: Use only enough solder to bind the two objects together. Extra solder does nothing to increase strength, but only adds weight.

Rule Six: Always tin both parts before joining together. Tinning means heating the areas to be joined, applying solder to the junction of the hot tip and the part, and ensuring that the part is evenly coated with a good, shiny film of solder.

Joining Electrical Wires

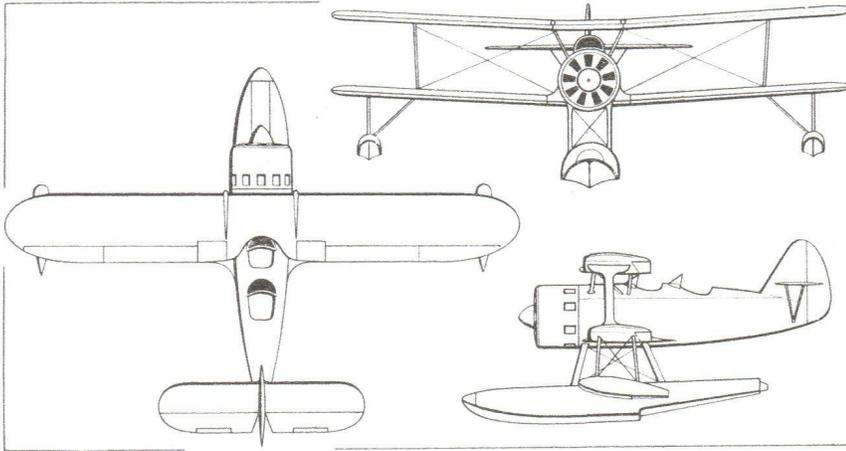
1. Strip off 3/32- to 1/8-inch of insulation.
2. Tin the wire so it looks uniform and shiny.
3. If the solder "drags" and looks dull and grainy, apply the iron again, apply more solder, and clean off the excess.
4. Slide a piece of heat shrink tubing approximately double the wire diameter and about 3/8-inch long over one of the wires.
5. Lay the two tinned ends side by side.
6. Heat briefly with the iron so they flow together.
7. Slide the heat shrink tubing over the joint and heat with your heat gun or the barrel of your soldering iron. Once it cools, pull on the wires to make sure the joint holds.

Joining Steel Wire

1. Prepare the joining surfaces by thoroughly sanding them with sandpaper. This provides a good surface for the solder to stick. Treating each piece separately, heat the contact area with the iron and apply solder. Rub the tip all over the contact area, while applying fresh solder and flicking off oxidized solder, until the contact area is shiny and well tinned. While the steel wire is still hot and the surface solder is still molten, quickly wipe off the solder with a dry cloth. You'll notice a different color between the rest of the steel wire and the tinned surface indicating that solder has penetrated the wire surface and has prepared the contact area for binding.
2. Place the two tinned areas together and wrap with fine copper wire. Strands taken from multi-strand heavy electrical cable is ideal, but have the strands ready for use before you start. After wrapping tightly, twist the ends of the binding wire together (so they don't unwrap). Heat the whole joint with the iron

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July Mystery Plane



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Soldering Clinic

Continued From Page 8

and apply fresh solder. Because you pre-tinned the steel wires, you'll find that solder will readily flow into the joint and adhere properly to the surfaces. Any time you see convex blobs of solder you can bet the joint has not soldered properly. Apply more heat, flick off the old solder, and apply fresh.

(Reprinted from *The Wright Flyer*, newsletter of the Wright Flyers R/C Club, Monticello, MN, Jean Davids, Editor.) J

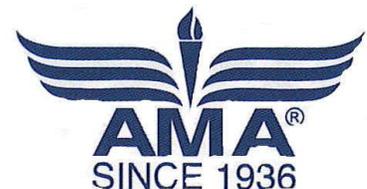
Soldering Wires

Unless you have nerves of steel, it's difficult to hold two wires still while you solder them together, even if one is clamped to your workbench. An easy solution to this problem is to glue two wooden clothespins to a wooden base, about an inch apart. Now, slip the wires to be soldered into the clamping part of the clothespins, and they will be held together without jiggling. You can put the clothespins side-by-side rather than nose-to-nose. This keeps them from interfering with longer wires. You will probably have to sand the gripping part to create a larger grip area.

(Reprinted from the newsletter of the Beachmasters RC Club, Ocean Park, California.) J



The pits will need a couple of weeks or so to dry out before they look like this again.



RC Helicopter Safety Tips

1. Whenever you start your helicopter, whether it's a nitro, gasser, or electric, always hold the blade grips tightly. If your throttle is not all the way down, or there's a glitch, your helicopter can spin out of control and cause damage.
2. Always stand a minimum of five to ten feet away from your helicopter and never fly toward yourself. Similarly, don't fly around other people or pets.
3. Blade tips can be spinning in excess of 250 mph and a carbon fiber rotor at those speeds can do some serious damage and even cause death.
4. Always disconnect your battery/motor before trying to adjust anything on your helicopter.
5. If a blade separates during flight, it can fly in excess of 100 feet, so make sure your nuts /bolts are tight.
6. Perform a quick preflight check to make sure everything is as it's supposed to be. Make sure nuts, bolts, and screws are tight, linkages aren't loose, and your batteries are charged.
7. Don't fly alone if it can be avoided and always have a cell phone or other means of communication available.
8. Don't fly near trees, power lines, or other obstacles.
9. Avoid flying your RC helicopter in close proximity to another helicopter to avoid contact and a potentially fatal crash.
10. Don't fly a non-electric RC helicopter indoors. The fumes are toxic and not good for your health.
11. Practice new moves on a simulator first for safety and your wallet's sake.
12. When flying on windy days, always fly upwind from your RC helicopter so a gust doesn't blow it toward you. Better yet, don't fly when it's windy out.
13. Don't adjust the radio when your helicopter is powered. If you accidentally reverse throttle, bad things can happen.
14. Avoid flying your RC helicopter at head height. If something comes loose or there's a glitch (electric or human) you're less likely to lose an eye.
15. If you want to manually slow down the blades, do so by adding friction to the button and keep loose clothing and other bodily parts away from them.
16. When walking toward your helicopter, make sure that your transmitter's throttle hold switch is turned on.
17. Only use hardened bolts for any bolt that has a load being placed on it. If possible, stick to stock parts.
18. Program fail-safe settings into your receiver if possible.
19. If you're new to RC helicopters, make sure that an experienced helicopter pilot checks out your aircraft and radio setup prior to your first flight.
20. Don't fly powerful RC helicopters indoors that were meant for the wide open spaces of outdoors.

(Reprinted from the Rogue Eagles R/C Club newsletter, Medford, Oregon via **The Wright Flyer**, newsletter of the Wright Flyers R/C Club, Monticello, Minnesota, Jean Davids, Editor.) J

TCRCOnline.com

It's Where It's Happening!

Tips & Tricks

Construction Tip

When taking an airplane apart for repair, put all of the parts into a clear freezer bag with the name of the plane printed on the outside. This will save time in looking for the parts needed, as the airplane repairs are being completed. Some freezer bags have a spot for the name to be printed on and, if you put in a piece of the airplane's Monokote, this will speed up the ID.

Servo Connectors

To hold your radio/servo connectors together, use a piece of thin string or dental floss and wrap it around the connectors, looping it through the wires so it pulls the two connectors together. Use a non-slip knot to tie the string so it does not come untied. Don't let an unplugged connector cost you a crash.

Antenna

When collapsing your transmitter antenna make sure to grab the bottom of each section and pull down. Pushing from the top can easily bend the antenna.

(Reprinted from *The Wright Flyer*, newsletter of the Wright Flyers R/C Club, Monticello, Minnesota, Jean Davids, Editor.) J

**Pylon Racing
Sunday, July 25th**

WOTN AirExpo July 17 and 18

The annual Wings of the North AirExpo will again be held at Flying Cloud Airport on Saturday and Sunday, July 17th and 18th, and again TCRC will have a static booth at this great full-size flying event.

TCRC needs your help in two ways: 1) If you have a nice scale airplane you would like to have displayed at AirExpo; and 2) if you would like to help man the TCRC booth over those two days.

Wings of the North is a great place to see some fantastic vintage aircraft, both on the ground and in the air, and if you volunteer to work the TCRC booth, you can get in free to this wonderful aviation event.

Give Scott Anderson or Steve Meyer a call if you can help out with an airplane, or with some time. Families are very much welcome! J

TCRC Social Affiliate

TCRC finalized its Social Affiliate category in the month of June. The bylaws have been amended to accommodate this new designation within the club.

A Social Affiliate is a person who belongs to the club in a non-flying category. This person does not need to be a member of AMA. The category was created to allow those people who no longer fly, or possibly do not live close enough to Jordan to utilize the TCRC flying site, but still want to be a part of the club socially.

A Social Affiliate does not have voting rights within the club and the current dues to be a Social Affiliate are \$30/year.

A big thank you to Scott Johnson who utilized his legal skills to come up with the proper wording for the changes to the bylaws. J



The TCRC booth at AirExpo 2009.

Editor, Jim Cook
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Shakopee, Minnesota 55379

Getting To The Big Bird Fly In



This is how one of the pilots got all of his giant-scale aircraft to TCRC's Big Bird Fly In last year. This year's event is scheduled for the Jordan flying site for July 24th. Stop down and see some beautiful aircraft.

THE TCRC FLARE-OUT Monthly Newsletter



** TWIN CITY RADIO CONTROLLERS INC. **

Purpose: To preserve, encourage, and further develop the hobby of building and flying radio controlled model airplanes.

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