



August

Minneapolis, Minnesota U.S.A.

2007

Large Group Goes To Owatonna!

by Bill Jennings

The second field trip to the Southern Minnesota Model Aircraft Club field in Owatonna on July 7th attracted a large group of TCRC pilots. In spite of the forecast for heat and high winds, there were already about six pilots at the field when I arrived at about 10:45 a.m. During the late morning hours, pilots continued to arrive until there were a total of 13. Chris O'Connor set up his brand-new shelter to provide welcome shade for the assembled group. After setting up a second shelter, with lots of advice and support from the group, it was time to get in a few flights before lunch. The weather was very warm, but the forecasted high winds never arrived. Except for the heat, the day was just about perfect for flying with steady winds at around 15 mph from the south.



Relaxing in the new shelter at SMMAC. (Photo by Bill Jennings)

There is usually a surprise waiting for first-time visitors to this field. Those who had not been to the field before were not only impressed with the size of the field, but also the size of some of the planes on display. Who wouldn't do a double-take at seeing a 1/2 scale Gee Bee, or a 2/3 scale J-3 Cub? How about a 750 ft. runway or a large hangar equipped with electric hoists to lift the giant scale planes up to the rafters?

After everyone had time to enjoy a few late morning flights, all thoughts turned to the wonderful aromas drifting across the pit area from the hangar. It was lunch time! Tim & Karen Johnson, the field owners, always make visitors feel welcome, but are most well-known for their wonderful lunch and dinner menus. Many of those who attended the event last year can still remember the pork tenderloin sandwiches that were served. This year's menu was even more impressive, but you just had to be there... After lunch everyone returned to the pit area for a few more flights before packing up for the trip home again.

The return visitors on this trip this year were surprised at the sight of a double-scale Tiger II model. Its owner and builder, Jim Nelson from Hill City, took his kit plans into the local Kinko's and requested 200%

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The President's Hangar

by **Bill Jennings**

The wait is over... we'll be holding the principal celebration event for the club's 50th Anniversary this month. Only a few clubs in the history of the AMA have achieved this distinction. Although TCRC was founded in June of 1957, we decided to hold our field celebration during the month of August. The rationale is that the weather this month is generally more predictable and rain is less likely to occur. The event is scheduled for Saturday, August 25th, and will include many of the Model Aviation Day activities. There will also be some special activities and a few surprises, so we want as many members as possible to attend and participate. Invitations have also been sent to many of our neighbors in the surrounding communities, and we're hoping to have a large turnout. All TCRC members should plan to participate in this celebration. It doesn't matter whether you've been a member for three years or thirty years, we'd like to see you at the field!

There are plenty of other activities to keep members busy during the month. By the time you read this column, the 26th Annual Park Rapids trip will be in full swing. The event is scheduled for August 3-5, and a special request has been made for light winds this year.

August 10-12 is the 3rd Annual Northern Alliances Fly In at Owatonna. This event promises to be even larger than last year, and will draw war bird modelers and pilots from an eight state area and Canada.

The TCRC calendar was left clear on this weekend, just so our members could attend. We're really lucky to have an event of this magnitude within such an easy commuting distance. If you attended last year, I know you'll be back this year. If not, we hope to see you there *this* year!

On August 18th, Chris O'Connor will hold the second Pattern Practice Day. If you missed the first session, this event provides another opportunity to pick up some practice time before the watchful eyes of some expert coaches and judges. Practicing to become proficient in flying patterns will improve your everyday flying skills, and who doesn't want to become a better pilot? The pilots who participated in the last event will no doubt be practicing between the sessions in anticipation of picking up additional pointers at the next session.

On August 18th and 19th, TCRC will have another display at Air Expo 2007 held at Flying Cloud airport. This event provides an excellent chance to spend a little time sharing your hobby with the hundreds of visitors that attend Air Expo. Volunteers are provided with free admission and the chance to enjoy all of the planes on display, in exchange for spending a little time promoting the club at the booth. A few more volunteers are needed to round out the schedule, and more planes are still needed for the display. Check the website for additional information about participating. As a side benefit, the club usually picks up a few new members as the result of contacts made at the event.

One of the things I like about TCRC is watching families enjoying the RC airplane hobby together. Whether it's having a campout at the field while Dad flies his planes; or watching Dad help the kids take a few turns on the buddy box. This past Father's Day, I managed to capture the following photo of father and son members, Chris and Nate O'Connor, enjoying a flight together. It doesn't get any better than this! If you can't figure out which is which, Chris is on the left with the graying hair...



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Owatonna Field Trip

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scale! Dubbed the Tiger 2x2, it occupied much of the available floor space in Tim Johnson's hangar. With a 126-inch wingspan and powered by a 5.6 c.i. Stihl chainsaw engine, it is really awesome. How many of you remember the early Double Mint gum commercials? "Double your pleasure, double your fun..."? Those of us who stayed into the early evening hours also enjoyed seeing this mammoth bird complete a successful maiden flight.



Jim Nelson's monster Tiger II heads out to the runway for its maiden flight. (Photo by Bill Jennings)

All current AMA members are welcome to fly at the field on the first Saturday of every month. Many who make their first trip to the field continue to visit each month for the rest of the year. If you haven't yet seen this field, mark August 10-12 on your calendar, and plan to attend the 3rd Annual Northern Alliances Military Fly In. It's on our event schedule on the web site! ☺

The President's Hanger

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This will be a busy month, but one that I hope we'll all remember for a long time... After all, it took fifty years to get here! See you at the field! ☺

Propeller Hang

This is probably one of the more difficult maneuvers to master, but once you get it right, it is probably one of the most spectacular. The object is to fly along slowly then pull to a vertical position, allow the speed to bleed off giving it throttle to keep the model in a stationary vertical position.

Keeping the model in a vertical state while hovering still requires a lot of work with throttle, rudder, elevator, and a little aileron, the torque from the motor tends to make the model start torque rolling.

Practice this at a safe altitude and once you can hold your aircraft in a stable propeller hang as well as be able to fly out of the maneuver without losing any height, you can slowly start practicing at a lower and lower altitude. This maneuver requires enough power to be able to climb vertically out.

(Reprinted from the newsletter of the Suffolk Aero Modelers, Bay Shore, New York.) ☺



We are Very Proud To Be A 50-Year Club!

SAFETY AT THE FIELD

by Larry Couture

The safety item for this month is TCRC Field Rule #11: "Upon landing, a plane may be taxied to the east or west taxiway and down that taxiway until it reaches the yellow line. At that point it must be under physical restraint until in the pits with the engine shut down."

If you chose to pull off the runway onto the grass area you still must shut down at the yellow line area and stay outside the piloting area and not be headed at the pit area.

This will put your plane on the grass area along side the taxiway.

Dan and I go out to the field very often in the late afternoon and early evening and I am going to let you all in on a secret (THE WIND DIES DOWN ALMOST EVERY DAY BETWEEN 5 PM AND DARK) making this an excellent time to fly, and the field is not crowded and almost all channels are open for use -- Dan and I do use a few of them. It does mean you will miss supertime but flying is much more fun than eating and you can eat when it's dark but it is very hard to fly when it is dark, so this would seem like a very good time to fly. So, I hope to see more flyers out there in the late afternoon and early evening, burning up the skies.

There are 19 TCRC Field Rules and 12 AMA Safety Code Rules in

the front of the TCRC Roster that each member should be familiar with. Some of the rules in each list are the same, but the question is, "How many of us have read them recently?" It takes about 2 minutes to sloooooowly read them -- so let's all give a try today or tomorrow and refresh our memories with all of our safety rules.

As usual all landings from which you can fly again are great but not always graceful, so keep the rubber side down. ☺

25 days To MAD-2007 And Counting!

by Scott Anderson

Hello TCRC!

We are just over 3 weeks away from our annual OPEN HOUSE and this year's 50th Anniversary Party!

In preparation for this event we are getting our volunteers lined up so we can all enjoy the day with a minimum of work for each member.

As an example:

Gerry Dunne has volunteered to reconstitute the 'Flare-Out Café' for food and drink during the event. Food will be available for a reasonable fee.

Mike Timmerman had volunteered to look into renting a large sun shelter where our guests may relax on a hot August day.

Chris O'Connor and David Andersen have volunteered to perform flight demonstrations.

If you have a terrific idea as for something interesting that we can display or do, please let us know! We are open to suggestions.

Please let us know what YOU can do, bring, or be willing to help us with. Here is a list of areas where we need your help:

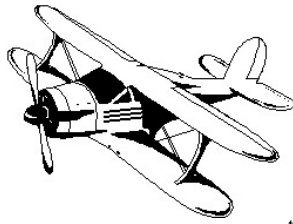
- Concessions Manager (Gerry Dunne)
- Master of Ceremonies
- Strong PA Voice
- Lots of Airplanes to display
- Pilots for Flight Demos
- 2 Computers for Flight Simulators
- Tents, a generator and extension cords
- Flight Simulator Manager
- Instructors for buddy-boxes

You can respond by logging on to the TCRCOnLine.com Forum and post (contact Pat Dziuk if you are having trouble), you can e-mail me directly, or you can simply give me a call at 952-934-1471 and leave a message if I'm not available!

Mark your calendars to be a part of MAD on Saturday, August 25th at the Jordan field. ☺

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.

Show & Tell



More nice planes showed up at the July 10th meeting. (Photos by Bill Jennings and Jon Perry)



Gerry Dunne had a Vrolet electric made by Fancy Foam Models. It was yellow with red trim and powered by an AXI 2408-51 motor. With a 10A ESC and a 300 mAh Lipo it weighed in at 7.5 ounces.



Gerry also had another electric – a GWS Corsair. It was powered by a KMS 3121 motor, and with an 18A ESC and a 1200 mAh Lipo weighed 16 ounces, even with retracts.

Stan Erickson had his newest electric at the meeting. This was a Banshee. The battery was a 900 mAh Lipo. Stan originally built this same model in 1945 or 1946, but it was then powered by glow fuel.



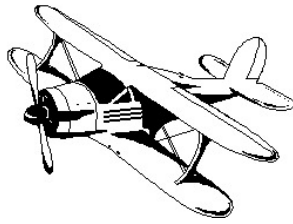
Mike Burk had a Dualsky Challenger profile electric. He purchased it at Toledo Expo in April. It had a 28-inch wingspan and with the AXI 2208-34 and a 900 mAH Lipo weighed in at 10.5 ounces.



Willie Kelly had a very nice Hanger 9 P-51D ARF. It had a 65-inch wingspan and was powered by a Saito FA-100 4-stroke giving a weight of 8.5 pounds.

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Show & Tell

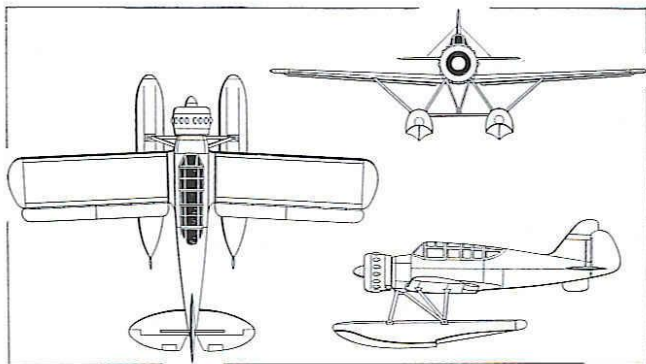


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Scott Johnson had his latest project – a work in progress of a Pica 1/5th-scale Waco YMF. The wing was covered and the fuse was in bones but the quality of the Pica kit could be seen in those bones. ☺

August Mystery Plane



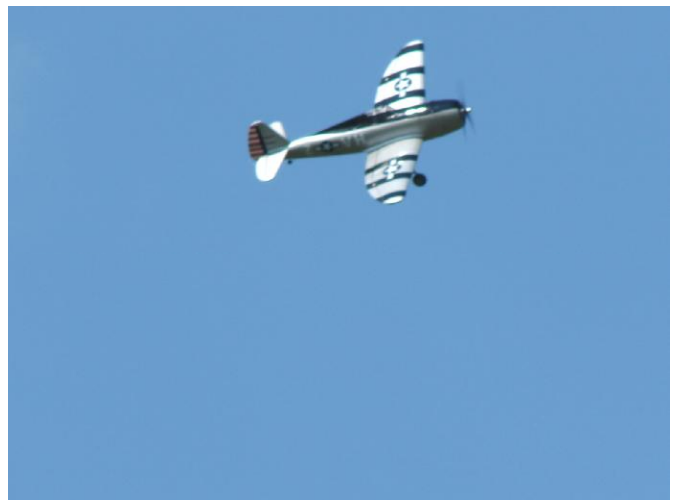
TCRCOnline.com
A Really Great Tool!

Everyone Should Own And Fly A Big Stik!



Scott Anderson's Giant Big Stik cruises over the runway on Saturday, July 28th. This is a gas-powered monster that flies just like the smaller Big Stiks we each own. (Photo by Jim Cook)

Everyone Should Have A WarBird!



Butch Neutgen's very nice looking P-47 was put through its paces in the skies over Jordan on Saturday, July 28th. (Photo by Jim Cook)

Bring you Big Stik and/or your warbird and get some airtime at Jordan in the month of August. ☺

Electric Fly Is Held June 30th

by Gerry Dunne

The weather for the TCRC Electric Fly-In couldn't have been better. The sun was shining and there was almost no wind.

Flyers were also invited to camp at the Jordan Field, but only Tom Thunstedt and Gerry Dunne did that on Friday night. I had my camper and Tom had a tent. We got a wake-up call early Saturday morning as a hot-air balloon drifted over the field around 7:00 AM.




Gerry's camper looked right at home at the Jordan Field on Friday afternoon. (Photo by Gerry Dunne)

We had lots of electric pilots start showing up Saturday morning, and they brought some very nice aircraft. We must have had more than 30 electrics of every type soaring through the calm air over the Jordan field. The list I compiled of pilots and planes is: Tynan and Tom Thunstedt with a Tiger Moth, Kadet, Ridge Rat and an Air Force 2; Rick Smith with a MIG 15, Nippy Tipster, E-Flite Funtana, Stryker and a Kyosho Viento; Craig Greenwald with an L-19, Bird Dog, a Goldberg electric and an E-ska; Thad Gorycki had an E-Flite Mini Ultra Stick; John Dietz with a Great Planes Super Sportster 40e; John Kossieck with two wings, two foamies, and a Mini Shocky; Mike Burk with a Hacker Super Zoom 4-D; Stan Erickson with an Arient; Kiera Dunne with a Rookie Mini Flyer; Gerry Dunne Jr. with a Tiger Shark and a Rookie; and Gerry Sr. with an E-ska, Vorlet, 3-DX, DC3 and a Mad Max. I apologize for those pilots and spectators that showed up to fly, and to watch, and I didn't mention.

The day was just perfect for electric flying, and the pilots did a good job of keeping the air full of planes. Here are some pictures I took of some of those planes:



Thanks for all who came and made the TCRC Electric Fly lots of fun. See you next year. ☺





MAD 2007
MODEL AVIATION DAY
Saturday Join Us in Celebrating **50 Years!**
1957 - 2007 **August 25th 2007**

11:00PM - 3:00PM
TCRC Flying Park
 18266 W. Sioux Vista
 Jordan, MN
 Food & Soft Drinks Available

COME JOIN US in the excitement and thrills of flying radio-controlled aircraft! Not only will you see these aircraft perform exciting maneuvers across the sky, but you will get a chance to try your skills in flying on a computer simulation, and then, actually FLY an aircraft YOURSELF! Demonstrations and Discussions will be held on checking out and preparing an aircraft for flight by Experts! Pilots will be flying all day!

Sponsored by: the Twin City Radio Controllers (TC/RC)
www.TCRConLine.com

Contact:
 Scott Anderson 952-934-1471
 MAD@tcrconline.com

Measuring Washout

Washout, the downward twist in wingtips that improves low-speed flight, is sometimes used in airplanes with flat-bottom wings. A good way to make sure each wingtip has the same amount of washout (or any at all) is to get two straight dowels or carbon rods. Tape each to the bottom of the wing near the tips.

Set the wing on something so you can see both rods, and sight down the wing so you can see each rod in relation to the other. The rods magnify any angle that might be present in the wing.

Correct the wing twist until you have the angle you want. This doesn't work too well with wings that are rounded on the bottom, but is an excellent way of making sure the flat-bottom wings are true.

(Reprinted from the newsletter of the Suffolk Aero Modelers, Bay Shore, New York.) ☺



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From The Co-Pilot's Seat

by Chris O'Connor

Here we are in August, and all of us have had plenty of flying time right? NOT! The thing I wonder about is if not many are flying at the field then where or when are they flying. Hopefully you are getting in as much air time as possible.

Last month's program was on finishing and painting using the Stits paint system by F&M Enterprise. Great paint, very easy to use, comes already to spray. The paint is a polyester vinyl, very flexible.

Our meeting in August will feature another finishing and painting system. This will be on epoxy paints, specifically Klass Kote paints. This is a local company with an outstanding reputation for quality. Nate Dickerson from Klass Kote will be giving the program. Don't miss this one -- everything you wanted to know about epoxy paints.



John Berk takes his turn doing some aerobatic maneuvers as other members watched. (Photo by Pat Dziuk)

On to our aerobatics practice day, which was held on Saturday, July 28th. First off, thanks to all that tried flying. Remember each time you do it, it becomes easier. I don't want to name everyone because I might forget somebody, so I'll say that we had at least 10 guys, an increase from last year. The weather could not have been better -- warm and light winds. I put together a list of maneuvers from the old pattern instead of the new turn-around pattern. This one was just as challenging, with the focus on positioning, and heading and altitude control. I think all of us found out that just doing a loop is not the same as doing a loop in the center of the flying area and also starting and ending it on the same heading an altitude. It takes a little more effort to do a loop correctly. My hope out of all this is for all of you to improve on your flying skills

and challenge yourself at least one or two times each flight. Also, remember that the center line on the runway is not to divide it in half for oncoming traffic, but as a guide to takeoff and land on. I can make one guarantee -- that if you do something like what I have talked about, you will get better, and your confidence will improve. It was fun to see everyone try, and the comments I heard like, "Wow that was harder than I thought!", or "I just took off straight down the runway!" were just a few of the comments. The other thing I noticed was how hard people were trying and how well everyone did. Maybe now it's time for you to move to that next level. Try it! It is fun and rewarding. Also thanks to Dave Andersen for judging and commenting at the end on what he saw. Good job Dave and good job to all that tried! Last but not least, thank you to Bobbi Jo Dziuk for bringing lunch for everyone!

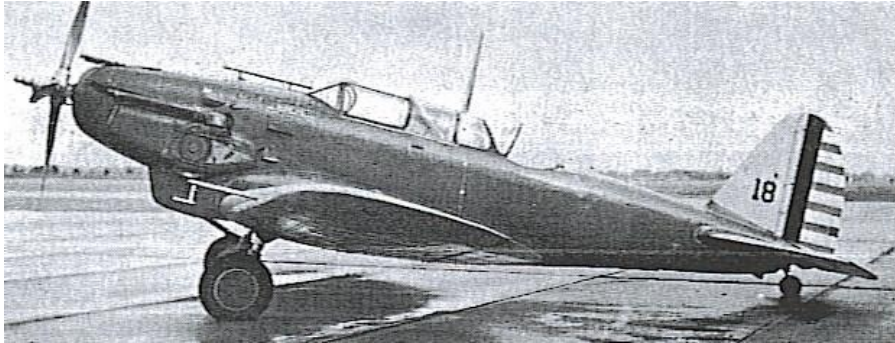
As you read this the Oshkosh Airventure has come and gone. Hopefully you made it over to Wisconsin for the event. If not, then plan on next year. It's about a 4.5 to 5-hour easy drive to see what can only be described as the center of the universe for aviation. Lynn and I, along with Steph and Nate, were there for opening day. This year was one of the best we have seen with the daily air show of 2.5 hours long being one of the most entertaining also. To top off the show, we were treated to a 2 hour concert by the Beach Boys. Only one wordAWESOME. We got special passes to be in the VIP section, and were 15 feet from the Beach Boys for the whole show. Don't miss next year. At the next meeting maybe we can have a quick report on Oshkosh.

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Consolidated YIP 25

by Conrad Naegele

The July Mystery Plane was the American Consolidated YIP 25.



Designed by Robert Wood as a development of the Lockheed XP 900 'Altair', the YIP-25 was an all-metal tandem 2-seat fighter, powered by a turbocharged V-1570 engine. It had inward retracting gear, and a plywood-covered wing. The prototype crashed in 1933 but 4 more models were ordered. It was now designated the P-30.

The new models were re-engined with V-1710's, the gear was redesigned, and a 3-bladed Hamilton controllable pitch prop was added. However, performance was poor as the turbocharger was not effective except at higher altitudes, generally above the normal operational fighter altitudes. Also, and more important, the rear gunner was really thrashed about, often blacking out, since he was facing backwards. Many airplanes had rear-facing crew members, but they were dive bombers, and did not include violent maneuvers. A single-seat model was also produced, the PB2A, but the military showed little interest in it.

This was the only two-seat fighter ever accepted by the Army Air Corp. The remaining planes were to become test beds for the new Allison V-1710 engines (think of the P-39, P-51, P-40, etc.) As mentioned this was a good design, with a few rough edges true, but its downfall was the fact that the military never had an official policy concerning its use.

The Consolidated YIP had a wingspan of 44 feet, a gross weight of 5,643 pounds and a speed of 234 mph. For armament, it had two forward and 1 rear flex 30-cal machine guns. ☺

Wings Of The North Air Expo 2007
August 18-19
Flying Cloud Airport

Calendar

- Aug 3-5** **Park Rapids Fly-In**
Park Rapids, MN
- Aug. 10** **Northern Alliances**
Fly-In
Owatonna, MN
Bill Jennings
- Aug. 14** **TCRC Membership**
Meeting, 7:00 PM
Fellowship Hall
CrossPoint Church
Bloomington
- Aug. 18** **Pattern Flying**
Practice, Jordan
Chris O'Connor
- Aug. 18-19** **Wings of the North**
Air Expo 2007
Flying Cloud Airport
Scott Anderson
952-934-1471
- Aug. 25** **MAD 2007**
TCRC Jordan Field
11:00 – 3:00 PM
Scott Anderson
952-934-1471



From The Co-Pilot's Seat

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A reminder about the big warbird fly-in at Owatonna on August 10, 11 & 12. The event is held at the SMMAC flying field. This is one of the biggest warbird events in the country. Tim and Karen Johnson do an outstanding job of hosting the event. The SMMAC field is one of the best sites in the country. Don't miss out.

And remember, bigger flies better. ☺

Li-Poly Battery Basics

by Paul Gentile

The popularity of electric-powered aircraft has soared (pun intended) over the past few years. Part of the reason behind the recent popularity has been the advent of Lithium Polymer or Li-Poly batteries.

Li-Poly batteries pack a high energy-to-weight ratio when compared to their Ni-Cad and NiMH battery cousins. This stored energy has good and bad potential, and we will touch on both here.

Li-Poly battery cells are 3.7 volts, as compared to Ni-Cad and NiMH batteries which are 1.5 volts per cell.

When Li-Poly batteries are wired in parallel, they do not discharge like other batteries. In addition, when you wire cells in parallel, each cell only sees half the total current, or amp draw.

Total current is very important for Li-Poly batteries and is identified with a C rating. You may see Li-Poly batteries advertised as 3C, 6C, 8C, 10C. This means that a 3C 1500 mAh (1.5 amp) Li-Poly battery pack should never be discharged at a rate higher than 3 x 1500 mAh or 4500 mAh (4.5 amps).

Discharging a Li-Poly beyond this rating could cause damage to the cells or even fire. A very serious concern.

Changing a propeller on your airplane can change the current

draw and cause higher than expected discharge rates. So it is beneficial to have a current meter on hand. The manufacturer's specifications for the motor, speed control, and propeller combination you are running also come in very handy.

The other letters on Li-Poly packs refer to S for serial wiring of cells and P for parallel wiring of cells. A 3S pack would be 3.7 volts x 3 cells = 11.1 volts. A 3P pack would mean three parallel cells, or 3.7 volts and a higher C rating. A 3S 3P pack would have 3 cells in serial (11.1 volts) and 3 cells in parallel.

Li-Poly batteries also do not require cycling, or discharging like other batteries. In fact, you never want to cycle down Li-Poly batteries. You should always leave a partial charge, to avoid damage.

Chargers and speed controls should always be rated for Li-Poly use. Do not attempt to use your Ni-Cad or NiMH equipment. An improper charge rate could cause a Li-Poly pack to explode and burn at over 2000 degrees. A non-Li-Poly rated speed control could cause over discharge and cell damage.

Here is a list of do's and don'ts for your Li-Poly packs:

- Never put your Li-Poly packs in water and never put water on the packs.
- Don't leave your Li-Poly batteries unattended while charging. See www.modelaircraft.org for this year's list of people whose cars and houses have burned down while leaving packs unattended during charging.

- Don't puncture or short out Li-Poly batteries.
- Don't fully discharge your Li-Poly packs, this will damage the cells.
- Don't put the Li-Poly battery in your car, or leave it in your airplane after a crash. If the battery is damaged internally, you may not notice. According to the AMA, several members' cars have already burned up this year due to this scenario.
- Do use common sense and respect the energy that is stored in that little package.
- Do follow all manufacturer ratings and specifications for use and storage.
- Do store your Li-Poly packs in a fire-proof container.

Li-Poly batteries are used everyday safely in cell phones, laptops, consumer electronics, and iPods. In our hobby, we are pushing these batteries to their limits, charging and discharging them at high rates and sometimes smashing them into the ground at high speeds. We need to respect their potential and keep it safe.

Enjoy the power and convenience of electric flight with Li-Poly batteries; I do. Just respect the energy stored in that little Li-Poly package and it will reward you with some of the fastest, 3-Dest (if that is a word), most fun flying you will have.

(Reprinted from the newsletter of the Monmouth Model Airplane Club, Inc., Keansburg, New Jersey.) ☺

Editor, Jim Cook
@ Flare Out Publisher
1177 Polk Street
Shakopee, Minnesota 55379

Getting The Newsletter Out



The official publishers of the *Flare Out* are Pat Dziuk and Mike Timmerman, but the hardest worker on the crew is Emmy Dziuk. She helps on the folding, labeling and stamping of the newsletter to make sure it gets sent off to TCRC's members as quickly as possible. ☺

THE TCRC FLARE-OUT Monthly Newsletter



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

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