

The FLYER

Devoted to the Building and Flying of Radio Controlled Aircraft

VOL. 2017, Issue 5

The Monthly Newsletter of the Livermore Flying Electrons RC Club

May 2017

Everyone is Welcome to LFE Meetings!

Next Meeting: at Mountain Mike's Pizza in Livermore (1304 First Street, Livermore, Ca 94550), Wednesday, May 10th at 6:30pm

2017 LFE Board of Directors

Jim Thompson (978)590-0340
Julius Bertolucci (925)373-1687
Tom Bilotti (925)820-3347
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2017 LFE Club Officers & Flight Instructors

President	Jim Thompson
Vice President	Julius Bertolucci
Treasurer	Tom Bilotti
Secretary	Jerry Crans
Field Maintenance Chairman	Chris Keith
Membership Chairman	Johnnie Johnson
Safety Officers	Chris Keith Bill Long
Fuel Sales Chairman	Mark Isozaki
Flight Instruction Coordinator	Jeff Stern
Flight Instructors (Fixed Wing)	Chris Keith Mike O'Con Chris Orsini Gary Oehrle Mark Isozaki
Flight Instructor (Fixed Wing/multi-rotors)	Daniel Sellers
Flight Instructor (Fixed Wing/Helicopters/Multi-rotors)	Jim Thompson

Newsletter Editor and Web Master: Edward Becker

Email: Newsletter@lferc.com

Newsletter Deadline: Any information to be included in The Flyer should be submitted to the email listed above no later than the 25th of the month for inclusion in the next newsletter. All submissions should be in plain text or Microsoft Word format in 12 point Ariel. Permission is hereby granted to reproduce any part of "The Flyer" provided source credit is given.

Club Information:

Real-time weather and field cameras – www.lferc.com and select "Weather & Cameras"

Board of Directors: directors@lferc.com

Mailing Address:

Livermore Flying Electrons RC Club, Inc.
P.O. Box 2182
Livermore, Ca. 94551

From The Editor

By Ed Becker
LFE Newsletter Editor



Greetings and thanks to all the club members who helped out at the recent work party. We are fortunate to have so many club members who contribute to our club in different ways.

Bugs!

No, not software bugs, not hardware bugs, but something much more sinister! All those club members who have experienced our annual infestation know to what I am referring. Each May our club receives an annual infestation of insects that can leave nasty bites on the lower legs that will itch and in some cases bleed. The general consensus for avoiding bites is to stay out of the tall grass, cover your legs, and apply insect repellent on your shoes, socks and lower legs. The only good news is that the bugs are only at our field for a few weeks and are usually gone by Memorial Day Weekend.

See you at the next meeting and at the field.

-Ed Becker

Are You Infected?

From Aero R/C Club, Lennon, Michigan

If you can answer yes to more than five of these questions, then you may have a serious infection called RC Hobbypox.

- I need another radio (add a yes for every radio over five).
- I have more than one large box of scrap balsa.
- I save pieces of MonoKote that are as small as a square inch. • I keep broken propellers.
- \$200 for a four-cycle engine is worth it because it sounds twice as good as a two cycle.
- I have more than three airworthy airplanes.
- I have parts to airplanes that are not functional and never will be.
- I need a more powerful engine.
- I have considered buying a new vehicle so I could buy larger airplanes.
- I recognize my spouse and children less than two out of three times. Two yes responses if you just noticed that they left at the start of last flying season.
- I have snow skis for my airplanes.
- I wish twin-rotor helicopters were more of a challenge.
- I can guess the RPM of an engine within five revolutions.
- I have a still in my basement, but only to make fuel.
- I have never noticed the model holding the model airplane in advertisements.
- I have deliberately crashed an airplane so I would have an excuse to buy a better model.
- I bought a DVD player just to watch model airplane videos.

• I visit hobby shops when on vacation instead of going to the beach.

How is a Good Preflight Check Performed?

from the East Valley Aviators, Apache Junction, Arizona

by Bill Cummings

You might think this is a simple thing to do, but each time I'm at the field, I see mishaps that could have been avoided if the pilot would have only taken the time to make some routine checks. A good preflight check should start before your airplane is assembled. You should go through a meticulous check of all parts of the airplane before assembly, because some very important things cannot be accessed afterwards. Start at the front of the airplane and proceed to the rear.

1. Propeller/Spinner - Check the spinner for cracks, especially around the screw holes. A cracked spinner could come apart when the engine is started and injure you or someone standing close by. Also check the propeller for cracks and nicks. Propellers take a beating. A damaged propeller can be very dangerous if the blades come off at speed.

2. Throttle linkage – Check to make sure that the screws are secure and the pushrod (or cable) is firmly attached and not damaged.

3. Engine mount bolts – Make sure all bolts are present (obvious) and they are tight. Do not forget to check the bolts that hold the motor mount to the firewall!

4. Muffler – Check to make sure the muffler bolts are tight. Also check that the tailpiece is tight and will not rotate.

5. Firewall – Grasp the airplane by the propeller and fuselage, and rock back and forth to make sure the firewall is not loose.

6. Landing gear – Check the wheel collars and axles to make sure they are tight. Spin the wheels to make sure they rotate freely. If you

have wheel pants, check that they are secure and tight. Check the landing gear attachment bolts to make sure they are tight.

7. Servos/Linkages – With the wing off (or through an access cover) check each servo to make sure the attachment screws are in place and tight. Check each control-rod linkage to make sure it is firmly attached and bolts, screws, and connectors are tight. While in this area, check any wire connections you have access to such as battery, switch, etc.

You should also check wing-attachment points to make sure they are solid and tight.

8. Check the batteries with a load test-type checker. The batteries must remain in the safe zone even under load. If they do not, recharge before you fly. Make sure the load test meter is the proper type for the kind and number of cells you are testing. If you have mixed batteries in your airplane (for example a Lithium Ion on the receiver and NiMH on the ignition) it is a good idea to put a note on the charge jack as to type and size as a reminder for both charging and testing.

9. Horizontal stabilizer – Grasp and pull on the stabilizer to make sure it is attached solidly. Pull on the elevator (both halves) to make sure the hinges are tight. Check the control horn and the control rod to make sure they are attached solidly. Also check that you have a “safety device” (i.e. piece of fuel line) to make sure the linkage cannot come loose from the control horn. If you use flying wires, check to make sure they are tight.

10. Vertical stabilizer – Grasp and pull on the fin to make sure it is attached securely. Pull on the rudder to make sure the hinges are tight. Check the control horn and the control rod to make sure they are attached solidly. Also check that you have a “safety device” (i.e. piece of fuel line) to make sure the linkage cannot come loose from the control horn.

11. Antenna – If your antenna is accessible, check it for nicks or breaks.

12. Wing – Check the wing for obvious damage such as tears in the covering, broken ribs, etc. Grasp and pull on each aileron and flap to make sure the hinges are tight. Check each control horn to make sure they are tight and the control rods are attached solidly. Make sure you have a “safety device” (fuel line) on each clevis to ensure they cannot come loose during flight. Check wing bolts or any other means used to attach the wing.

Now attach the wing, and check to make sure the bolts have the correct torque to hold the wing solidly.

13. Check controls - Once the wing is in place, turn on the radio and, with the antenna collapsed, check all controls for ease of movement and correct direction of travel.

14. If this will be the first flight on the airplane, verify that the Center of Gravity (CG) is within the safe range. If you are unaware of what that range is, it is usually safe to test fly at 25% of the chord of the wing from the leading edge. That should leave the airplane a little nose heavy, which is a safe way to test fly. Remember: A nose-heavy airplane flies poorly – A tail-heavy airplane fly's ONCE!

15. Range check, engine off - With the antenna still collapsed, walk about 60 to 80 feet away while moving the controls. There should be no interruption or chattering from the servos. It is helpful to have someone stand near the airplane to listen for chattering.

16. Range check, Engine running –MAKE SURE YOUR AIRPLANE IS RESTRAINED BEFORE STARTING THE ENGINE! Start the engine, and with it running and the antenna collapsed, walk around the airplane checking controls. This should be done at idle and at full throttle. I know some of you will look at this list and say, “If I do all that before each day of flying, I will not have time to fly!” In fact, if you make this checklist a part of your “routine” every time you put an airplane together, after a while you will find it will only take a few minutes to complete.

Tips & Tricks

Keep Your Pilot in Your Plane

Have you ever seen someone's pilot-figure rolling around in the canopy? Not very cool especially if the pilot is an F-15 figure. Try this idea to make sure your pilot doesn't eject too soon.

Since most pilot figures are hollow, enlarge the rubber hole in the bottom of your figure. Make it about 1/4-inch to 3/8-inch wide. Go down to your favorite hardware store and purchase some drywall hole-hanger screws.

Get the 1/2-inch or 3/4-inch thick size. The size to use will depend on your cockpit size and the thickness of your pilot's rubber base.

Now drill a hole into the cockpit floor (where your pilot will sit). The cockpit hole needs to line up with the hole in the bottom of your figure.

Now glue your pilot down and take the drywall screw and push it up through the bottom of the cockpit floor.

Put the base of your figure on top of the drywall screw and tighten the screw. As the screw is tightened, the casing's external fingers will collapse or spread out inside your figure securely attaching your pilot to the cockpit floor.

Now if your airplane crashes, at least you know your pilot will still be securely attached!

—Hangar Talk, Edinburg, Indiana

Helpful Ideas

With the weather becoming gloomier, and colder, some of our attention has turned to building and repairs—and hopefully more of the building and less repairs. Here are a few tips:

The foam “Pool Noodles” sold in the sporting goods section of mega marts make great foam stock for mounting your batteries and receiver in your airplane. It cuts very easily with a kitchen knife, and a pocket can be easily formed that will protect the electronics from vibration and

shock. It is also rigid enough to hold the devices in place in many applications.

Aluminum foil makes a great shield or mask when spray painting. Paint of course does not penetrate the foil; it can be easily formed, and will stay where you put it, often without the need of tape.

Store your unmounted engine in an aluminum foil pouch. Thoroughly clean the engine and spray penetrating oil as a preservative and wrap the engine with the foil. Crease the edges to form an airtight seal to keep the preservative oil in, and the dirt and moisture out.

—From Ed Olszewski, Eagles' Nest, St. Clair County, Michigan

Cleaning Pushrod Tubes

The oily residue of model fuel sometimes makes its way into the pushrod tubes, which also captures small particles of grit. The oily residue also makes some of the flexible plastic pushrods and tubes swell and soften slightly, which makes operation in curves almost impossible.

A simple cure is to apply a solution of powdered graphite, mixed with mentholated spirits or rubbing alcohol. Holding the model in an appropriate position (thus having one end of the errant tube in an upright position), apply the solution with a syringe onto the rod (or it can be applied to the mouth of the tube while moving the rod in a back and forth motion) to encourage the solution to circulate.

The mentholated spirits, or alcohol, washes away the oily residue and grit, leaving the graphite behind providing a good lubrication to the pushrod.

—From San Gabriel Valley Radio Control League, South El Monte, California

Top Ten Reasons Why It's Not So Bad to Crash Your Airplane

From Roxbury Area Model Airplane Club, Lake Hopatcong, New Jersey

10. If there are people in the club who are wondering why you haven't done it recently, they will finally be "off your case."
9. You get everyone's attention for a few seconds.
8. You get some people's sympathy for second or two.
7. Certain club members run to get their camera to take pictures of the wreckage.
6. You don't have to fold the back seat down in your car to get your airplane in on the way home.
5. Your spare parts collection just got bigger.
4. You now have more room at home for your next airplane.
3. You now have room on your transmitter for your next airplane (if you were maxed out).
2. You will never have to bring that airplane to the club auction.
1. You don't have to fly that airplane anymore.



Li-Poly Battery Basics

From the Monmouth Model Airplane Club, Inc.
Keansburg, New Jersey
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 dos and don't's 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.

Li-Poly Quick Reference

C = Current

S = Serial

P = Parallel

Li-Poly Cell Voltage

Cells x 3.7 = voltage

1 cell = 3.7 volts

2 cells in series = 7.4 volts

3 cells in series = 11.1 volts

mAh = milliamp hour rating of a battery's capacity under load. 1000mAh = 1 Amph



The Secretary's Report

By Jerry Crans
LFE Secretary

Minutes of April 12th 2017 LFE Meeting

Board members present: Jerry Crans, Jim Thompson, Jeff Stern, Ed Becker Johnnie Johnson, Julius Bertolucci, Tom Bilotti and Chris Orsini

Meeting called to order at: 7:00 PM by Jim Thompson

Guests: 1 New member

Minutes: March 8th 2017 Minutes approved

Membership Report: Johnnie Johnson reports 185 members

Treasurer report: Tom Bilotti gave report

Events Chair Report:

- Fun Fly May 20
- Float Fly April 28th
- Oldtimers May 6
- Rotorfest June 24th

Quartermaster Report: none

Instructor Report:

- Slow due to weather
- Trainer planes in stock

Safety Office Report: Wear club badges at all times

Field Maintenance Report: Field clean up Sat, April 15th

Technology Group Report: New speaker pack

Unfinished Business:

- Gate relocation May 3
- New fencing, out of bounds pole to be raised April 15th
- Sound Measurement of aircraft: area at field to be marked for testing

New Business:

- Bomb drop making
- Do not fly from shade structure
- Move chairs after flying from them

Show and Tell: none

Meeting Adjourned: 7:45 by Thompson

Board actions by E-mail vote for April 2017:
Voted to buy 9hp Honda Blower for field maintenance April 5th

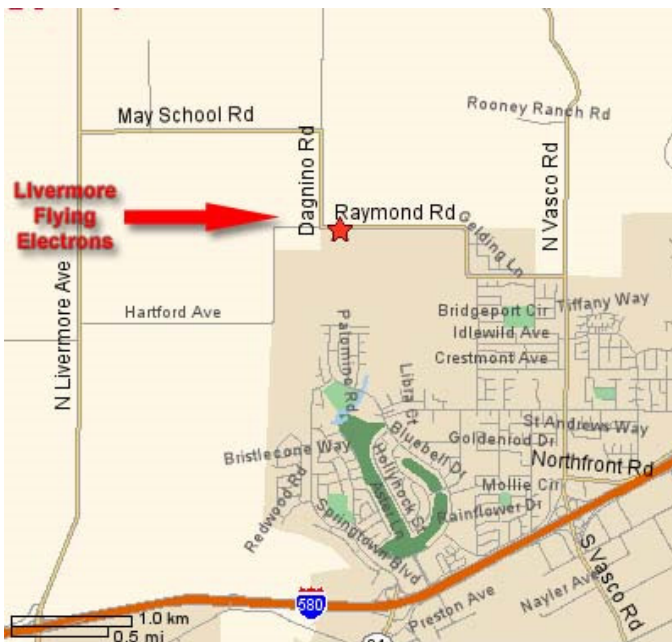
Voted not to support buying deli sandwiches for Old Timer event but to have standard BBQ for all.

LFE Secretary's Report by Jerry Crans

Directions and Map



Located conveniently between the N. Livermore Ave and S. Vasco Rd. Exits off of Highway 580



LFE Flying Site

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