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2014 Membership Cards

For 2014, please remember to get your AMA insurance renewed before you renew your MMM membership. In order to have a 2014 MMM card issued, you need to provide a copy of your 2014 AMA card and driver's license and an [updated application](#). The application is on line at <http://www.murocmodelmasters.org>. Click on "About Our Club". Club applications may be mailed to **Muroc Model Masters, Post Office Box 2194, Rosamond, CA 93560-2194**. Checks can be made payable to Muroc Model Masters. Membership dues are still just \$25 for the whole year. If applying in person, please see Ken Zakar, Treasurer, at the field or meetings.

FROM THE PRESIDENT

Hello Model Masters,

The lake bed is now open for us to use once again. The recent rains has really helped to smooth out the surface and it is now possible to fly some of the smaller electric aircraft without causing major damage to the landing gear. This is really good news to those of us who have been longing to fly some of our smaller beloved models. For those of you who fly larger planes, this just helps makes those landings even smoother. One of my new found interests is the multi-rotor aircraft which I've been trying to balance my flying time with my planes.

The interest in multi-rotors is increasing significantly. The AMA show this year had several vendors selling and promoting multi-rotors of different sizes and abilities. The RC expo in Long Beach last summer had a good number of vendors as well. I currently have two and have recently gotten a few co-workers interested in them as well. They're a great addition to my hangar and offer a different

flying experience that a plane just can't deliver. If anyone is interested in multi-rotors, Robert Marraccino and David Watson are other members who fly them, and can offer advice and recommendations.

Don't forget about the next meeting on 11 February. I look forward to seeing everyone at the field.

Be safe and have fun.

Antwain Mallory
 President, Muroc Model Masters
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Tips & Tricks

Winter Spruce Ups

With the flying season at and end for a lot of folks, it's time to think about other winter activities.

While you're planning your winter build, it's also a good time to go over your old machines and repair all those things that you swore that you'd get at right away back in July.

Some things to think about are:

- Repairing torn covering.
- Checking engine mounts for loose fasteners and firewalls.
- Have a plan to test and recycle your transmitter and receiver batteries once or twice.
- Stock up on propellers now while you have plenty of time to balance them.
- Clean gunk from that old engine.
- Redo the plumbing in your fuel tanks.
- Send in your transmitter or receiver for a checkup, either to the manufacturer or to a third-party vendor such as Radio South RC.

There are more things to think about, but this will give you a good start!

— From the Wing Busters Model Airplane Club,
 Massachusetts →

Eliminate Bounce in Your Landings

Twin City Radio Controllers, Inc., Minneapolis MN

In order for a taildragger not to tip over on its nose, its wheels must be ahead of the center of gravity (CG). As it is further forward, it can tolerate rougher ground, but the tendency to bounce is worse. But when a taildragger lands, the impact of the main wheels tends to push the nose up, increasing the angle of attack, lowering the tail, and increasing the lift—and the airplane is flying again.

Eventually, air speed is reduced and it falls to the ground again, maybe harder. The nose rotates, and the airplane becomes airborne once again. This process will continue until all flyable airspeed is exhausted. The aircraft may continue bouncing because of a phenomenon known as "loping."

Loping occurs in a taildragger when the bounce of the main wheels causes the tail wheel to slam into the ground while the main wheels are still in the air. Then, the tail wheel bounces, slamming the main wheels onto the ground. This argument between the front and rear continues until momentum is lost. But the severity of the loping can increase in the interim.

Loping can occur in trike-gear aircraft as well. If the nose wheel strikes the ground before the main wheels do, the nose is pushed up severely, slamming the main wheels onto the runway. Being behind the CG, the rebound of the main wheels rotates the airplane forward so the nose wheel slams down again, maybe harder than the first time.

The process repeats. Loping in a trike airplane can start with taxiing. If the main wheel hits a bump, weight is shifted forward onto the nose gear. It rebounds, returning weight backward. This ping-ponging can grow, especially if the airplane is accelerating. The only way to stop it is to stop the airplane. The longer the distance between the main wheels and the nose wheel, the greater the tendency to lope. Loping also increases if the main wheels are too far aft of the CG. Stiff struts and bouncy wheels aggravate matters.

Trike gear has less potential for bounce because the main wheels can be placed closer to the CG. When the main wheels touch down, the impact lowers the nose and the angle of attack, reducing lift. Some trike-gear designs actually have negative angles of attack when sitting on all wheels. This holds the airplane on the runway. Trikes have more positive ground steering because the nose wheel makes firmer contact with the runway than a tail wheel, especially at higher speeds.

Another little-known cause of bounce is main wheels that are

too far apart. This may be shocking because this practice is generally considered good for ground handling. It usually is because it improves directional stability when rolling along the ground. What happens when the airplane lands and one wheel hit the ground before the other? A lateral form of bounce occurs from one wing to the other.

One might think that soft tires and springy struts would increase bounce. Not so. More often, bounce is aggravated by the landing gear that is too stiff. Rigidity does not absorb energy; it reflects it. The hardness of the runway contributes to bounce for the same reason. Some early racing airplanes, such as the Howard Ike, had landing gear so rigid they could not land on concrete runways because of the uncontrollable bouncing that occurred.

Moving the main gear close to the CG reduces bounce and improves tracking. The Spitfire, for example, is quite bounce resistant, but it tips over easily on rough ground.

Moving the nose and main gears closer together reduces bounce and loping, but it degrades tracking and increases the tendency to tip over on rough ground and in crosswinds.

Oleo struts help absorb impacts, but the spring tension must be just right—stiff enough to keep from bottoming out, soft enough to absorb shock. The same may be said of tires.

If your airplane rebounds into the air after a severe impact, head off further bounce by inching up the throttle slightly. Apply down-elevator if necessary to level the nose. This increases air speed, prevents a stall, and lowers the rate of descent. 😊 →



When Molding Fiberglass Parts

Here's a tip when molding fiberglass parts such as gear doors for scale aircraft. Iron down scrap pieces of Monokote to the surface of the wing before cutting out the wheel wells. Then apply a coat of paste wax and then apply your glass and resin over the area. When cured, layout the shape of your door on the glass. Then gently pry up on the edge and the piece will pop right off. Cut out the shape of the doors and they will be a perfect match to the shape of the wing. This also works when making fillets between fuselages and wings.

Clifford Nash

MMM Meeting Minutes

14 January 2014

Club President Antwain Mallory opened the general membership meeting at 6:46 P.M. The club welcomed new member Luis Figueroa, son of Lou Figueroa.

Minutes:

There were no December minutes to read. The meeting was held at the Rosamond Elementary School with 9 members in attendance.

Treasurer's report:

Treasurer Ken Zakar did not attend, no report given this month.

Old Business:

Edwards AFB is actively looking into a new Land Lease Agreement and Vice President Tony Accurso was in communication with the Civil Engineering Squadron Director during December.

New Business:

Secretary David Watson has a sample MMM polo shirt featured in the December Propwash. If you are interested in acquiring a shirt, contact David:

Phone No.: 661.475.4065

Email: accord91700@yahoo.com

Club members have expressed an interest in participating in community events to help promote model aviation and MMM. Tony Accurso will be contacting Cathy Hanson to see about having MMM display model aircraft at the Mojave Airport "Plane Crazy Saturday" Event. Tony also plans to contact the Los Angeles County Airshow committee to see if they would be interested in having MMM display at their event.

The club needs photos to add to the website and newsletter each month, so please send photos of your latest project or any photos taken at the field to our Newsletter Editor John Sturgeon. If you have a project you're working on, please considering writing about it for the newsletter.

Tony Accurso motioned to close the meeting at 7:30 P.M. and it was second by Evelyn Accurso

Show and Tell:

No show and tell at this meeting.

There were 9 members in attendance: Tony Accurso; Evelyn Accurso; Patrick Farr; Lou Figueroa; Luis Figueroa; Antwain Mallory; Carlyn Mallory; Scott Mead; John Norris.

Volunteer Secretary Tony Accurso compiled these minutes on 14 Jan 2014.

Below are pictures of a club shirt that David Watson had made. If you are interested in acquiring a shirt contact David.

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