

# PCC NEWSLETTER

PENINSULA CHANNEL COMMANDERS INC.



May 2013

Next Meeting:

May 15th, 2013

AMA Chartered Club # 139

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## WHAT'S HAPPENING @PCC

### **TURBINE SEASON IS OVER.**

Following Jake's departure to the North of the Golden Gate Bridge, Phil Hill is also moving to the north side of the SF Peninsula; just on the other side of the bridge, the land of Ostrich feathers and hot tubs (Ok, old 70's joke!) He will be missed by the regular weekend crowd, no more Phil to pick on. Hopefully he will visit us once in a while after the other clubs in his area got tired of him!! Good luck on the new house, new town and new friend!

## APRIL MEETING MINUTES

*Dennis Lowry*

April 17, 2013

**Call to Order:** Mike Solaegui called meeting to order.

**Guests:** No Guests would admit that they were present.

**Raffle Prize:** It was the best prize offered this year. A Twin Electric Firebird Stratos

**Treasurers Report:** Traffic Sucked! But the PCC Treasury is in good shape.

**Membership Report:** 88 to date and growing.

**President's Report:** The PCC Charter has been renewed for 2013.

**New Business:** Nothing for the moment.

### Old Business:

**Contests & Events:** Dream Machines is April 27. Go in the gate north of the café. Mike needs your name to submit for entrance.

And attend Eddie's dinner, but call Mike Klass to reserve your ticket. Tickets are \$30.00 per dinner, with the proceeds going to the Coast Senior Center.

Mike Klass will set up the volunteer participation parking planes as he did last year last year.

Bring Sandbags to hold your planes down. Tables are always needed. And sunscreen is a must; it is always sunny and windy. Bring cash to buy a hot link, or chicken on a stick.

### Safety Report:

Like TSA says at the airport: if you see something say something. If you see a dangerous situation developing, speak up. Don't let anybody get hurt.

**DO NOT FLY ACROSS THE HIGHWAY.** Flying across the highway could endanger the future of the club and the safety of drivers on the highway.

There was no Tick Spraying this year, so if you get any tick bites let Mike Solaegui know. The tick population was reduced over the past several years, and should not grow back quickly. However if we get any bites, we want to take precautions quickly.

**Field Report:** It's looking Good. As always, don't leave trash at the field.

The Lawn Mower needs Belts. It's working, but a back up set of belts should be on hand. Belts do break, and it's not rocket science to change them. (This is the kind of fraternal activity that draws our club together: If it's not rocket science, count me in.)

The Battery is dead. Resuscitation has been considered, but you can jump it for starting from your car battery. If you end up cutting the grass with it and it should die out in the field, you'll have to push it back until we fork up for a new battery, or revive this one.

**Flight Proficiency:** Don't fly across highway one and we'll call you proficient enough. Do and you'll get a scarlet letter!

**Sad Stories:** Greg Romine's P-38 went in, and he's blaming the Spectrum equipment. (This is truly sad because that was a nice little plane.) On the elevator he was using the original servo that came with his DX-6 transmitter he bought just after they were invented. After the catastrophic failure, he checked everything and found the servo, the evil Spectrum servo, the only digital servo in the beautiful little airplane, and found that it chattered. All of the other servos were analogue and worked just fine. His motto has now become: "NOT IF, BUT WHEN". . . He's going to stay in the hobby though, and is now building walnut scale stuff. Good luck Greg, we hope you don't get hurt at that scale.

**Hits and Misses:** None this month.

#### **Show and Tell:**

Daniel showed a Traxis quad copter. (He destroyed a Mig. 29 coming around the corner in a strong cross wind and this is his consolation prize.) It uses a 1 cell 240 milli-amp lipo battery. It costs 100 bucks for 2 batteries and a charger. It has three axis gyros. You get a 5 to 10 minute flight time. VERY cool!

Oliver: showed an electric Maako with Red and White tape cover.

Matt: showed a tri-copter (configured as a Y-6) with a camera, sporting a belt drive on the camera gimbals. The camera works 70% up to speed. Now the gimbals belt ratio is 6 to 1 and he's going to make it 4 to 1 for more accuracy. He's going to upgrade the motors to the gimbals as well.

Parker: showed a \$30.00 Pizza Box Flyer Flat Foamy with guitar graphics that he built with his dad. The Motor was \$6.00; a cheap receiver; foam board; and ski planes on the side. He did the original design work on his first one.

**RAFFLE:** Karl won the best prize of the year, a Firebird Stratos RC/RTF. He said "I Never won anything in my whole \*\*&%@ Life!" He seemed happy about winning.

## **UPCOMING EVENTS**

### **May**

4-5 *Woodland/Davis 49er Scale Master Qualifier*

12 *Mother's Day*

15 **PCC Meeting, 7:30 p.m., Dave Chetcuti Rm, Millbrae**

17-19 *SCCMAS Heli Fun Fly, Morgan Hill, CA*

18 *Wings of History Museum open house. South County Airport, San Martin, CA*

18 *LFE Swap Meet, Livermore Flying Electrons.*

23-27 *West Coast Mini Fest @ Castle AFB. Atwater, CA*

27 *Memorial Day*

### **June**

7-9 *Thunder over the Valley jet Fly, @ Woodland/Davis*

8 *RotoFest 2013, Livermore Flying Electrons, Livermore*

16 *Father's Day*

19 **PCC Meeting, 7:30 p.m., Dave Chetcuti Rm, Millbrae**

22 *San Carlos Airport Open House.*

23 *War Birds Fly-in @ SCCMAS, Morgan Hill, CA*

### **July**

4 *Independence Day.*

6-7 *SCCMAS Annual Airshow, Morgan Hill, CA*

17 **PCC Meeting, 7:30 p.m., Dave Chetcuti Rm, Millbrae**

## **2013 DREAM MACHINES**

The weather did not cooperate this year, over cast, cold and windy! Temperature hovered about 65°. It was clear everywhere outside of Half Moon Bay (according to a pilot who flew in from Redding California.) All morning the ceiling is about 500ft at the airport. Visibility was less than one mile and the low ceiling prevented most small aircrafts from flying into **HAF** (ATA Code for Half Moon Bay airport) as most are operate under VFR (Visual Flight Rules). The overcast sky was actually great for taking pictures, as there was no hard shadow casted by the strong sunlight. The first plane (from Redding) did not land till 11:00 am. A friend reported he saw a Grumman Mallard flying over Belmont towards the Coast in the morning and only returning in 10 minutes. I saw the same plane (I think) landed at the airport about 1 p.m. So the low ceiling kept most of the planes away this year. Even the War birds did not fly till late afternoon and only 2 of the war birds flew as the visibility would make multiple planes in the sky unsafe. The PCC did have a good showing. Many stopped to ask questions and look at our "stuffs". The big attraction was Matt's multi-rotor airborne video platform. Many of the members stayed for the dinner at Eddie's hangar, some were scheduled to fly demo flights before dinner but the weather and the darkness (schedule issues) prevented our members to show off their special abilities!

Planes sighted, a Douglas DC-4, Dornier DO28 Skyservant, Grumman Mallard, Grumman Widgeon, 4 P-51 Mustangs, 2 Yaks, North American T-28 Trojan.....

p.s. the BBQ turkey legs are still good!!



PCC display at the Pacific Coast Dream Machines .



Matt's multi-rotor photo copter gets a lot of attention!



Afternoon crowd, Mike P's GeeBee attracted a lot of attention!



The largest plane, a Douglas DC-4. It is converted to spray oil dispersant fluid over the oil spills at sea.



Martin brought this Fokker D-8 and also he brought along his parents to the show.



Mike P helps push the incoming airplane to a tie down spot.

# JAKE'S NEW WORKSHOP

*Jake Chichilitti*

Hello All, Maryanne and I our now settled in to our new digs in Santa Rosa. Those of you who know me know I have been harping for a workshop for years, I sounded like a broken record.

Well we asked our real estate agent to find us a house with a bit of land and a separate building that could be used as a work shop.

We were shown everything for granny units to chicken coops, I kid you not.

But we finally were shown a nice place in north Santa Rosa that had a 12 X 24 foot out building that was in decent shape. No chickens and it didn't leak.

Ken Martinez came up before we closed the deal and took a look around for anything that we might have missed. It looked good to him so we closed the deal.

Ken and I went to work on some minor stuff in the house and then we tackled the workshop. He thought about how he would like it set up and we proceeded to go do it.

Long story short, it took about a month and several thousand bucks, but it was worth it. It has ample power to run any power tools I would want to. It also has a dust collector system and an exhaust fan for spray area, you know for the Brodak dope.

There is a loft for storing kits and plans and stuff. The building is fully insulated and so far it has remained very comfortable even though the temps have been over ninety degrees.

Here are some pictures, one exterior before and several when finished.



I'm one lucky guy!

*Jake*

*(Where is the picture of the house? Notice Jake did not mention a word about the house! bc)*

# VOLTAGE REGULATORS AND LIFE BATTERY PACKS

*Chris Bajorek*

The growing popularity of LiFePO4 (aka LiFe) battery packs has raised the issue of servo reliability when subjected to voltages that exceed servo manufacturers ratings. While some servos are now coming out in "HV" (high voltage) versions, many of the popular ones are still rated at 6.6v or less. For example [MKS servos](#) are rated at 6.0v maximum. Since LiFe pack voltage can exceed 6.6v during the early part of their discharge curve ([RCG ref](#)), this puts unhealthy electrical stress on the servo motors (per a discussion with the MKS USA rep on this topic) which can lead to in-flight failures.

While there are many RC pilots who use LiFe batteries and offer testimonials that "my servos work fine without a regulator," the fact is that the servo manufacturers say the servo motor lifetimes can/will be reduced if you run them at the higher LiFe voltages (it turns out that most servo electronics--ICs, discretes, capacitors--are up to the task but not the motor itself).

## **Know your Voltage and Current Requirements**

There are several easy and reliable solutions to this problem: add a voltage regulator or voltage reducer between your battery pack and your receiver. Before you can do that it helps to know the voltage and current requirements in a typical 6-servo plane. Most non-HV servos will work fine with between 5.0v and 6.0v but just to be safe you should check specs on your particular servos. In terms of current consumed, the typical 6-servo plane will draw 300-500mA during normal operation. However during the zoom phase of launches (or other such hi-G maneuvers) the very short term battery pack currents can get as high as 10A! Thankfully that only lasts for very short (few seconds) periods so you don't have to guarantee continuous currents from your regulator at that level. But certainly the higher usable\* peak current a regulator can handle the better. For a good real-world compromise I recommend a peak current rating of 3-5A for your regulator or voltage reducer.

\* Making the distinction between manufacturer's ratings and the actual performance of a regulator.

## **Voltage Regulators versus Voltage Reducers**

A voltage regulator comes in two flavors--linear and switching. Virtually all of them on the RC market use specialized integrated circuits that do all the heavy lifting to produce stable voltage with varying input (battery) voltage. While switching regulators have been very popular in certain segments of RC and have an intrinsically wide input voltage range, they produce noisier voltage under peak loads and at least theoretically have the potential to generate RF noise that can interfere with your receiver. Low drop-out linear regulators, on the other hand, produce clean power and in our

LiFe application where the difference between input and output voltages is very small, are every bit as efficient as switchers.

A voltage reducer is significantly less complex electrically than a regulator; it uses power diodes to drop a more or less constant voltage (as opposed to generating a fixed output voltage). Different diode types can be combined for different voltage drops. One very nice attribute: voltage reducers have no hard limits on peak current; rather, power diodes will simply drop slightly more voltage at higher peak currents as opposed to regulators that may significantly reduce the output voltage during peaks.

## **Which to Use?**

I have to admit that going into this project I was not comfortable about using regulators in my expensive planes. After doing the research and performing tests on several units I have completely changed my perspective: now there is no excuse to NOT be using them. Personally I like the linear regulators better than the switchers. I also completely trust a good voltage reducer in my plane.

A few references to help you with your selection:

*RC Info Share* is a website I created to share regulator and reducer product info as well as actual test report data.

This *RC Groups Voltage Regulator thread* is an excellent resource for more info, highly recommended.

Finally, after using a DIY voltage reducer all last season in my Xplorer 3.8, this winter I designed a voltage reducer circuit board that I have been selling "under the radar." Selling these boards is not all about the money, it's just a way to help our RC soaring community. And honestly the low drop-out linear regulators are an excellent option now and are quite safe for your plane. For more info on the *SoaringDude Voltage Reducer* you can download the user guide at <http://sites.google.com/site/rcinfofare/file-cabinet/VoltageReducerUserGuide--12-20-2011.pdf>

Any questions let me know, and Happy Regulating/Reducing. And to your servos: Live Long and Prosper.

*Chris*

(Chris's username at RC Groups is "*SoaringDude*", he can be contacted via *Private Message*. bc)

RC Info Share,  
<https://sites.google.com/site/rcinfofare/home>

Link to Voltage regulators information,  
<https://sites.google.com/site/rcinfofare/voltage-regs>

RC Groups Voltage Regulator Thread,  
<http://www.rcgroups.com/forums/showthread.php?t=1554075>

# HOW TO IRON MONOKOTE INTO TIGHT SPACES

*From the newsletter of First State R/C Club,  
New Castle DE*

I used to have a lot of trouble ironing MonoKote into cockpits and other small places where a standard iron will not fit.

You can buy a tiny iron called a trim sealing tool. I had one of these for a short time, but the temperature control was inaccurate, and the shape was not very helpful, so I got rid of it.

A better solution to this problem is a butter knife. Heat it on your iron for about 30 seconds and use it like an iron. It could also be heated with a heat gun, but take a bit longer. Heat is transferred a lot better by contact with the metal iron. The knife will fit into tiny spaces where an iron won't, and it will reach a lot farther than the trim irons that you find in the hobby store. I used a butter knife to iron the entire cockpit of this Small Wonder, built from RCM plans.

You can try the same trick with a spoon for ironing fillets and other concave surfaces. Spoons have to be heated with a heat gun rather than an iron.



*(I strongly recommend to use some sort heat insulation on the handle of the knife!! bc)*

Information on the photo on the left →→→→→→→→

From Left to Right,

Carlos Reyes, Joe DeRenzi, Darrow Watt, Ken Adlawan, Mark Bettis and Jim Reimholz.



The Color Guard at Eddie's Hangar, posing with Eddie's Yak.



The Hungry bunch, waiting to be fed at Eddie's hangar, Martin, his parents, Lew, Maurice and Mrs. Zaldana.



Photo taken at SCCMAS IMAC contest, circa 1990.



Jake and Kenny spotted at the Los Banos Scale Fun Fly.



Eric's almost finish Airborne Photo Platform (APP).



Our Raffle Master, Eric, with his scale glider at Los Banos Scale Fun Fly.



A Dornier DO-28 seen at the Pacific Coast Dream Machines.



Eric launches the DG-600(?) into the wind on the beautiful slope of Los Banos Creek Reservoir.



Anyone ready for this? A 1:6.25 A-10 Warthog, that is 110" wingspan. Ok, if you have to ask, you can't afford it!! <http://www.skymasterjet.com/a10.htm>

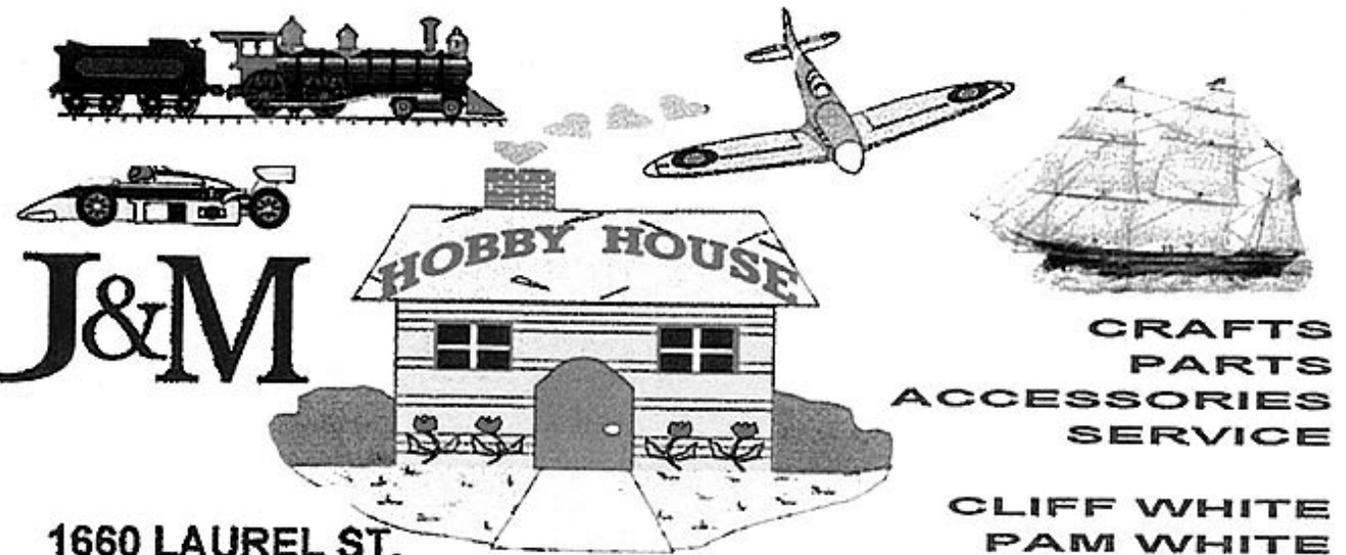


*Peninsula Channel Commanders*

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**Next Meeting: Wednesday, May 15th, 2013, 7:30 p.m.**

**TURBINE FLYING SEASON IS OVER.**



**J&M**

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