HSD Super Viper 12S 105mm EDF, and pilot Tootsie, at DVRC field

Air Currents

The Official Newsletter of Diablo Valley Radio Controllers

DIABLO VALLEY RADIO CONTROLLERS

President's Corner

The results of the DVRC elections are in, and they point towards no changes for the officer positions of President, VP, Treasurer, and Secretary for 2018. I thank Bob Wolfe, Mel Nash, and Doug Schramm for their efforts in 2017, and for their continued efforts in 2018.

In addition, Anthony Cox vacated his position after 4 years of dedicated service on the Board. He said he is looking forward to doing more flying in the timeslot that he would otherwise have been attending Board meetings. In Anthony's place, Gene Aughtry has stepped up to the plate as our newly elected Board member. I would also like to thank him in advance for his future service on the Board, beginning in January 2018.

Flight Safety should always be second nature, and with that in mind, I would like to briefly discuss the importance of correctly setting the center of gravity, C of G, of our aircraft. Nothing affects the flight of an airplane more than the location of its center of gravity. Too far forward and the airplane has sluggish flight characteristics, requiring lots of elevator movement to control the pitch of the plane. However, too far aft, and the C of G can make the plane too sensitive in the pitch axis, with small elevator inputs having dramatic effects on aircraft handling.

For most aircraft, the location of the C of G is usually between 25% and 33% of the wing's chord, as measured from the leading edge of the wing, at the fuselage side. Follow the manufacturer's recommendation for the location of the C of G. Put marks on the wings, each side of the fuse, with indelible pen, to easily identify the C of G so you can always check it after crash repairs or aircraft modifications. Preferably, check the C of G in still air, with your battery installed (but not connected).

For those of you who buy their planes at swap-meets, instructions are generally not provided, which leaves a question about of where to set the C of G. In these instances, you can research the C of G for that model online, or, use a C of G calculator, like this one I have used before on the internet, http://rcplanes.000webhostapp.com/cg_calc.htm. It is fairly easy to use; just plug-in several required measurements, taken from your aircraft, and the C of G is then calculated for you.

Here's something to think about for those who still fly gas, 2-, and 4-stroke engines; the instructions always tell you to set the C of G of your latest acquisition in the dry condition i.e. no fuel in the tank. However, when you test fly your prized possession, you could add 12 ounces (or more) of fuel to the tank, which is generally positioned just behind the firewall, and significantly forward of the C of G???? It seems crazy doesn't, yet I have followed similar instructions for decades???? You had better dial-in a lot of elevator throw for your hi-rate mode on the first flight.

In recent years, I have changed the way I set the C of G for my 2-stroke planes. I have assumed I would have at least ¼ of a tank (3oz.) of fuel remaining at the end of a flight so, using lead weights equivalent to 3oz, I set the C of G to the aft end of the recommended C of G range. That way the plane won't be so nose heavy at the beginning of a flight and will become more agile towards the end of the flight.

In contrast, electric planes have batteries that show no detectable change in weight from a fully charged battery, to a discharged battery. Therefore, once the C of G has been set, the plane will fly with the same characteristics from start to finish of the flight.

Until next time, remember good judgment comes from experience and experience comes from bad judgment.

Happy Flying,

Nigel Watson, President, DVRC

Notes from Membership Coordinator:

Reminder to all members that 2018 dues are due before 12/31/2017 to avoid a $20.00 penalty, any questions give the membership coordinator a call.

Also all members need to make sure that their AMA membership is current, as **YOU CAN NOT FLY AT DVRC** without current AMA certification.

Gene Aughtry, DVRC Membership Chairman
925-487-5575

How to make custom length spacers for electric motor mounts

By Nigel Watson

When you purchase an electric ARF airplane, the kit manufacturer will usually recommend an electric motor for the application. For example, I recently assembled a Phoenix Giles G202 and the manufacturer recommended the Rimfire 46 motor. The supplied motor mount spacers were consistent with the recommended motor so that the prop adapter hub ends-up slightly ahead of the nose ring of the cowl, for prop clearance. It's all good unless you want to install a different motor. There are many high quality, similarly sized motors in the marketplace that will power the Giles, and a number of them have prices as low as 30% of the Rimfire 46 cost. It pays to shop around.

However, the downside is that you have to make or buy specific length spacers to accommodate the difference in length between your chosen motor and the recommended Rimfire 46. Spacers are generally not available in custom lengths, or if they are, they tend to be expensive.

The Giles kit came with four aluminum spacers designed to position a plywood motor mount, spaced the correct distance away from fuselage firewall such that when the Rimfire is fastened onto it, the prop hub is advanced by about 3mm (1/8") ahead of the cowl nose ring.

The motor I chose to power the Giles is a PropDrive V2 4238 750Kv, which has a housing that is about 10mm shorter than the Rimfire length.

I planned to use the supplied aluminum spacers to support the plywood motor mount as directed by the instructions, but decided to make 4 additional spacers to accommodate the shorter length of the 4238 motor. These spacers would be assembled onto the plywood mount and support the motor/aluminum cross mount.

To determine the length of new spacer, I assembled the 4238 motor/mount (including the prop adapter) to the plywood motor mount.

The cowl should then be taped to the fuselage in the appropriate position, with the nose ring centered over the motor. Take a 6-inch ruler and measure the distance from the prop hub to about 3mm (1/8") beyond the nose ring. This will be the length of your spacers.

I made my spacers out of ½" square hardwood dowel and made saw cuts using a fine tooth razor saw and an inexpensive miter tool, such as the MIDWEST Product Easy Miter Box, purchased for less than $5 online.

I rough-cut 4 lengths of the dowel to about ¼"to ½" longer than necessary and identified the cross section center-point of each length by drawing two bisecting diagonal lines in pencil across the cut ends. I then used a center punch to make a guide hole for the drill. Using a drill press and an appropriately sized drill-bit (dependent on the fasteners you are going to use), I drilled a through-hole into each of the spacers. You should use a vice tool in conjunction with the drill press, not only for your own safety, but also to ensure the spacers are gripped the in a rigid upright position.

Once all 4 spacers have been drilled, align them next to each other and tape them together using sticky tape. Now mark 2 lines to define the exact length of spacer on the shortest of the cut dowel pieces.

The Easy Miter Box has a 2" wide channel which conveniently accepts the 4 x ½" spacers and grips them tightly. Make your first cut with the razor saw at one of the marked lines, which will cut all 4 spacer simultaneously. Once cut, reposition the 4 x ½" spacers to the second marked line and again, cut with the saw. After removal of the tape, the end result will be 4 custom length spaces that should be identical in length with cut faces that are smooth and perpendicular to the axis of the hardwood spacer. These spacers are inexpensive, lightweight and very rigid, and will provide reliable service. That's all there is to it, a quick and simple solution to custom spacers.

Now all you need do is to go to your local hardware store and buy 4 sets of socket head machine screws, washers, and lock nuts to secure your motor/mount to the plywood motor mount via the 4 dowel spacers and fasteners.

2017 Holiday Party

Thanks Gene Aughtry for Putting Together This Wonderful Event!

Happy Holidays!!

An ounce of prevention is worth a pound of cure… A Few Li-Po Battery Fire Safety Prevention Thoughts…

By Grant Angove

DVRC members attending the past couple of monthly meetings have been engaged in some brainstorming ideas to develop a better working plan for putting out potential fires caused by Li-Po batteries. Gas engine powered aircrafts already require the owner to have a fire extinguisher on hand carried in their vehicle with them while flying at our DVRC AMA sanctioned airfield. These safety discussions are a result of the Li-Po battery powered model airplane crash that caused a small fire recently. The fire started on the lower part of the hill about 50 meters west and centered of our landing strip. As our club president, Mr. Nigel Watson, indicated in November's monthly meeting, a serious fire caused by a flyer would put an end to DVRC's ability to continue to use the facility as a club meeting grounds or flying field site. There has been a lot of discussions mainly on how to contain a fire if one started. Nigel also indicated that he is talking to his son who is a fireman and gathering information regarding Best Practices for Fire Prevention and Containment Safety Procedures. He will list new guidelines for fire safety to be posted as public notice in the field shed. DVRC will soon have a better plan and tools in place should there ever be another fire incident. Our DVRC Safety Coordinator, Mr. Ron Penn, indicated that we will have fire drills and know how to better respond in the event of another fire at our field.

Having a fire containment plan with fresh extinguishers, a readied vented ammo box containing a fire bag or a small portable fire vault like Greg Lloyd had on display after November's meeting for quick secure battery retrieval and containment purposes are essential tools for immediate deployment use. These fire precaution practices should especially be exercised during dry times when fire risks are high. Vigilance regarding these matters and providing helpful advice to new comers has been the general spirit of our club that I have always appreciated as a returning member. Helping another flyer seen standing alone by being their spotter or assisting them if the unfortunate crash happens is always appreciated. Just don't be a chatting distraction or hinder the flyers view. If a crash happens at least there will be two people to gather and contain the Li-Po battery that can potentially be like a ticking time bomb as the recent battery unexpectedly caught fire a few minutes after the crash as reported.

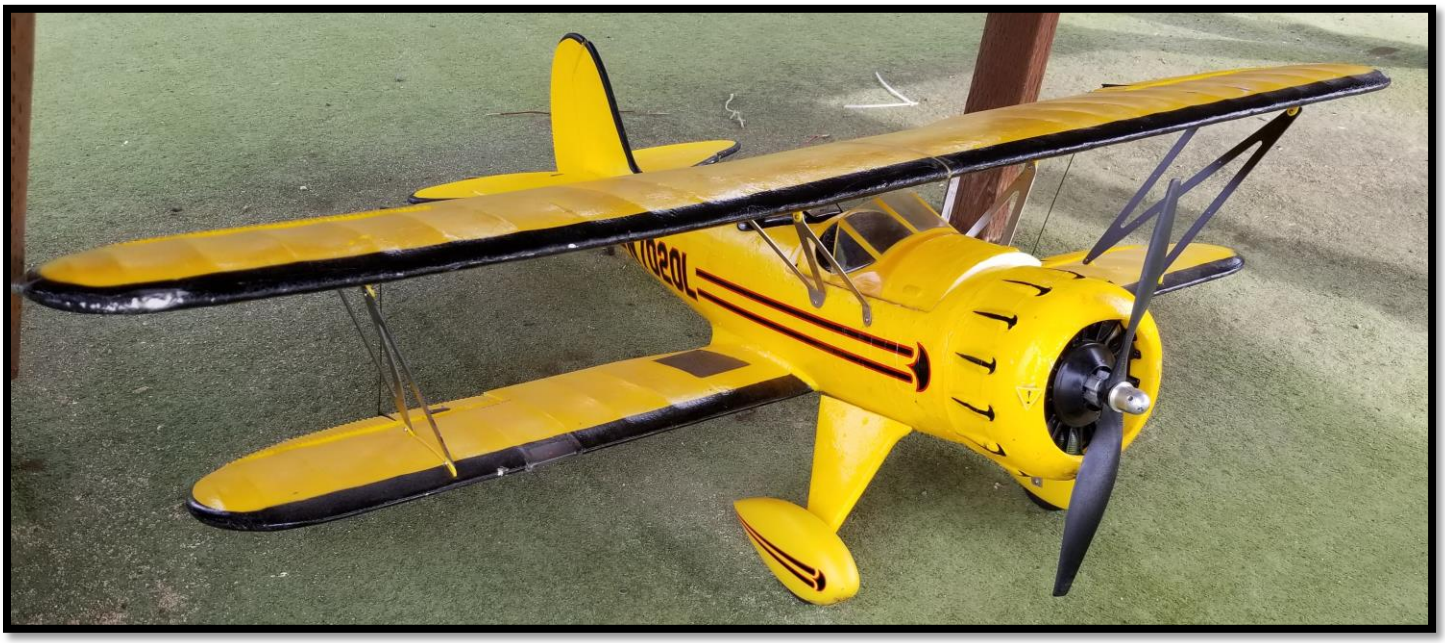
Keep in mind that airplanes are constructed differently and by design or builder error can be a greater fire hazard. Inspect the battery securement tray tie down straps and the anti slide velcro strips underneath the battery before flights. Experienced pilots understand the importance of having the battery and other components kept in place so not to affect the CG balance for stable predictable flight reasons. Make sure there is adequate protection foam material or balsa strips to prevent a battery hardware strike in a crash. This is where the experienced builder should oversee a new comers aircraft. Hopefully inexperienced flyers questioning their aircraft flight worthiness will seek out the advice from an experienced builder. You can't go wrong asking for a pre-maiden flight inspection no matter how experienced you might be. Even experienced builders can miss a detail that someone else may notice immediately. I missed a plastic clevis that was not fully set / fixed in the control horn of an aileron. Had Flight Trainer Mr. Ray Davis not been vigilant about doing a preflight inspection for me, the maiden flight of my Zero could have been very sad. Kudos to Ron Williams, Gene Aughtry, Daniel

Heering, Mike Woodring, to name just a few trainers and other members alike whom are so helpful and knowledgable too. You guys keep us flying right!

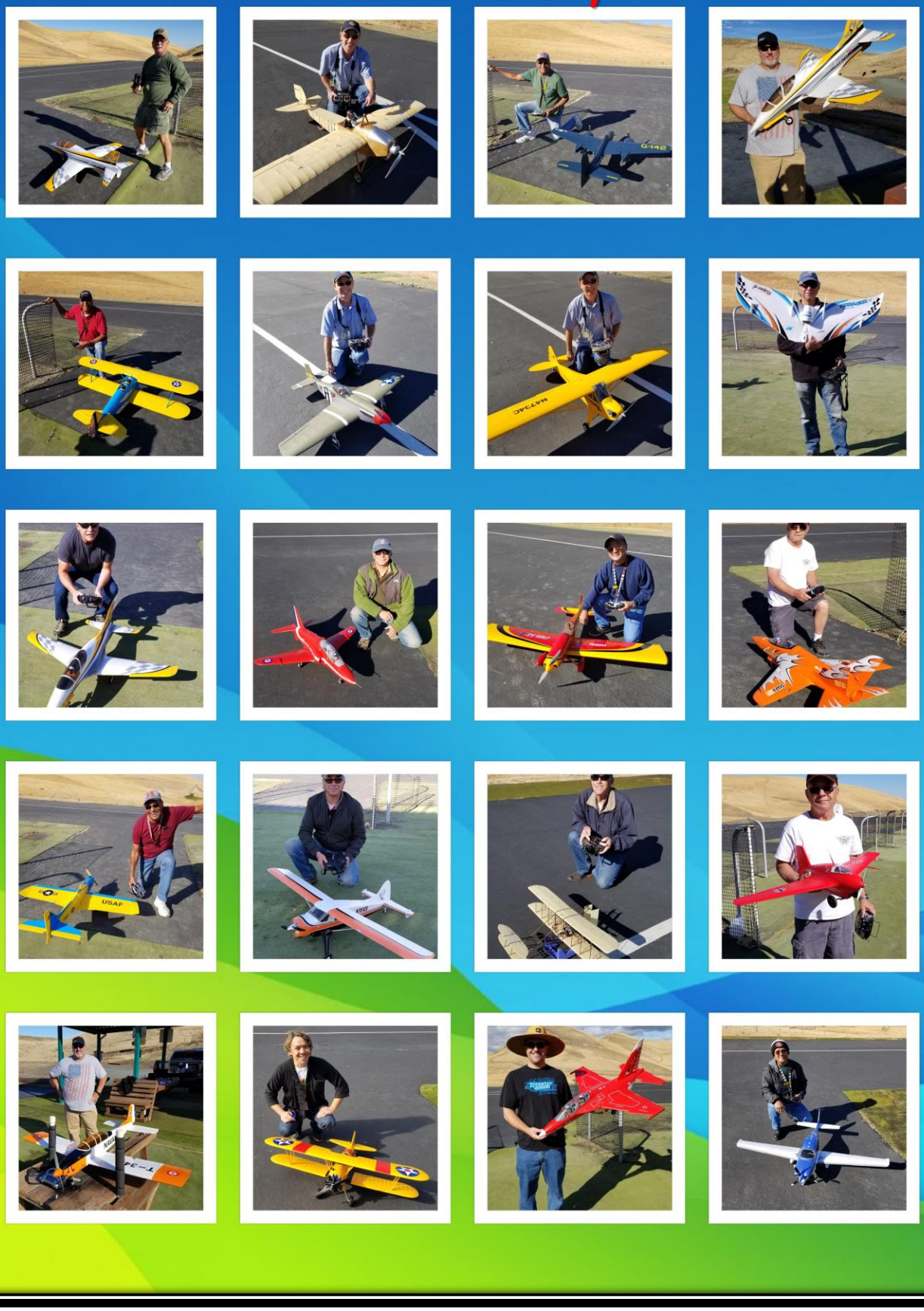
As indicated, Li-Po batteries are more prone to damage if they slide loose from the aircraft mounting tray and strike sharp hardware. Protruding firewall screws and the motor shaft are likely hardware elements of an airplane that can pierce the thin aluminum cell skins and fracture the battery in the event of a hard landing or crash. Once the sealed cell structure is compromised, the battery can become unstable. Like a firing pin the screw or motor shaft that fractures a battery cell may cause heat buildup for a fire to erupt.

Newly manufactured electric powered almost ready to fly (EP/ARF) airplane kits will provide additional balsa sticks to glue in place behind the firewalls as added protection against potential battery damage. Be aware that there are many earlier glow fuel models being converted to electric power due to EP ease of use preferences and growing popularity.

Converted models should be inspected as current Li-Po safety matters were not factored in when originally manufactured and might have become an oversight during their conversion process by the builder. Pilots should know their model history. If purchased second hand, assure adequate ventilation and good air flow for cooling the Li-Po battery, ESC and the other electronics. Assure all working surfaces are fastened securely, moving freely and in the proper direction. The point is, we want to minimize known causes of Li-Po powered airplane failures, the number of crashes will be reduced as well as a potential fire.



Maiden Day



From a safety perspective

This has been a good flying year. We have been accident free and have only had to remind a few of our members about the major safety concerns. For our newer members, and to remind the rest of us I would like to review a couple of the rules that keep us safe,

Flying in the pits: The pit area is well defined, the area east of the runway behind the pilot stations to the wind sock on the south and north ends of the field. We should not be flying over this area. The grassy areas on either side of the pits are OK for small multi rotors and the small planes.

Flying over the runway: The maneuvers that are authorized on and over the runway are the following: take-offs, landing and touch and goes. All other flying is to be done west of the fence, west of the runway. All high speed passes are to be done west of the fence.

Setup tables: For electrics, the power battery is not allowed to be in the plane while on the setup tables. If you require power to adjust control surfaces and linkages use a small receiver battery that will not provide power to the motor. The power batteries should not be installed into the aircraft until it is placed on the startup tables. Placing the power battery in the aircraft is a violation, not that it is connected, simply being in the plane makes it a violation.

Calling out your intentions: Take offs, landings and touch and goes are to be declared, that means that we are to loudly state our intention prior to executing the maneuver Hearing the maneuver we should echo (repeat it), so that other pilots further away from the caller will be informed of the intentions of the pilot.

OK, enough on the safety theme. It has been a good year and if we all think before we act next year should just as good. If you have any ideas or comment about our safety program feel free to let me know.

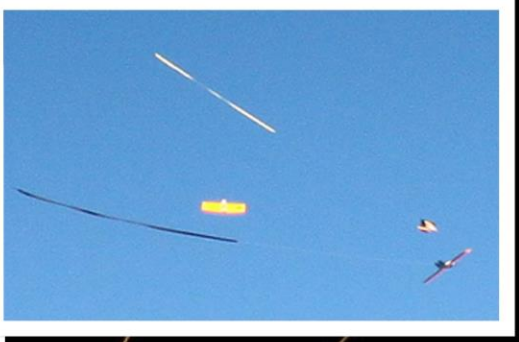
Hope to see at the field.

Ron Penn

Safety Officer.

GremlIn Combat











Maiden Day
NAVY
NAVY

T-28 Race

Thanks to everyone that contributed to this newsletter with articles and also thanks to Jim Siebert, Grant Angove and Garry Kerr for emailing pictures that are included in this issue. – Ron Hariri


ESCAPADE
The plane with something for every pilot!


FrSKY
TARANIS

.....Hot Links.....

Jet Rally event in Lodi, CA

https://youtu.be/khHn2ArXEm0

HSD 105mm 12S Super Viper at DVRC

https://youtu.be/Z7ngaNduEPE

Spitfire 1600MM GS Maiden at DVRC

https://youtu.be/BVtvGau7NyY

Weather station at the field

http://www.weatherlink.com/user/dvrc2/index.php?view=main&headers=1

Check out Kevin Trexler's new video..... Make sure you watch it in 4K (2160 rez) very nice!

https://youtu.be/xiY0Wm3wzlY

large scale Vulcan Bomber

https://youtu.be/TMXGIlgwmpM

F-104 RED BULL AEROBATIC TEAM

https://youtu.be/Ye270nDBgks

GENERAL MEMBER MEETING MINUTES

DATE: 11/11/17

MEETING CALLED TO ORDER @ 9:46 am

OFFICERS AND BOARD MEMBERS PRESENT: P - NIGEL WATSON / T - MEL NASH / BOB WOLFE/ STEVE ANDERSON / ANTHONY COX / RON WILLIAMS / CARLOS GRACIA

GUESTS PRESENT: 0 NEW MEMBERS: 0 TOTAL MEMBERS PRESENT: 29

Treasurers report 11/11/17

The Treasurers Report was approved by the Board members

REPORTS

GENE AUGHTRY - MEMBERSHIP COORDINATOR/ FLIGHT OPERATIONS OFFICER
It is time to renew memberships for 2018. Members do not need to sign a new waiver each year. 10 people have renewed for 2018. Currently 19 green badges.

RON PENN - SAFETY OFFICER No incidents to report.

RON WILLIAMS - FIELD MANAGER Field is in good shape. Reminder if we pack it in, we must pack it out.

OLD BUSINESS

1. No update on shooting day schedule. Carlos has emailed the city for info.

2. Toys for Tots reminder. Please bring to the next club meeting if you can. Anthony will deliver to the fire department.

3. Events Calendar. T-28 races on the 18th. If too windy we can hold gremlin competition.

4. DVRC Holiday party is coming up quick. Get with Gene for tickets and info.

5. Remote camera/ weather station- Greg L provided an update. Equipment is up and running. Waiting for the website to be up.

NEW BUSINESS

1.Vince to take over the Frankin Mort. Planes to be judged on design and flight ability

2. Ron Penn- Discussed a new fire policy for the club. Club has purchased 4 fire extinguishers for use at the field. Please give any empties to Gene. Nigel to create a fire policy for review/ votes. Bob to get a secure box so that all members can access a fire extinguisher at any time.

SHOW AND TELL

Jim S. - Showed a new Wright flyer

Bill – Selling a Hot/Hot by RCM planes.

RAFFLE – by Steve Anderson

MEETING ADJOURNED @ 10:40 am

Diablo Valley Radio Controllers

PO Box 9411
Pittsburgh, CA. 94565
www.dvrc.org

2017 Club Officers:

Nigel Watson, President. 925-229-2336
Bob Wolfe, Vice President. 925-787-0264
Mel Nash, Treasurer. 925-597-8142
Doug Schramm, Secretary. 925-222-8060

Board of Directors:

Ron Williams. 925-825-5845
Jack Schonberger. 925-672-4562
Steve Anderson. 925-672-7352
Anthony Cox. 925 783 3980
Carlos Gracia. 925-640-8257

Flight Operations:

Gene Aughtry 925-687-1762

Membership Coordinator:

Gene Aughtry 925-687-1762

Safety Officer:

Ron Penn 925-383-3232

Newsletter Editor:

Ron Hariri 925-297-5519

Field Manager:

Ron Williams 925-825-5845

Flight Instructors:

Ron Williams 925-825-5845
Henry Lu 925-757-1657
Anthony Cox 925-783-3980
Jim Seibert 925-822-7822
Mel Nash 925-597-8142
Ted Edginton 925-356-6834
Dale Parsons 925-684-2248
Ray Davis 925-352-7229
Greg Gallegos 925-783-1072
Gene Aughtry 925-687-1762
Daniel Heering 925-267-2461
Doug Schramm 650-222-8060
Mike Woodring 925-798-6086

For DVRC driving directions and some club information, check out this link:

http://youtu.be/Owc7yDVYhc4