

THE SLOW ROLL



President—Frank Moskowitz
Vice President—John Geyer
Treasurer—Dan Smith
Secretary—Bobbie Santora
Editor—Bob Purdy

NOVEMBER 2021

The Slow Roll is published by the Sun Valley Fliers by and for its membership to all others interested in the building and flying of radio control aircraft.



CHARTERED #921
Since DEC. 1974



Inside this issue: Cover Photo by Marty Jones showing his CUB @ Sunset

SVF CLUB ending 46 years as a charter club

President Report

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Minutes XX

Birthdays

Sunset Fliers photos

SWAP MEET & AUCTION Photos

ESC & LIPO Info

SVF @ BOTW Jet Rally

Vintage Hero & HS-B

Happenings **MEETING AT FIELD NOVEMBER 6, 10AM**

SVF Photos

HAVE A GREAT THANKSGIVING

November 2021 Slow Roll Presidents Letter

Welcome to Novembers Slow Roll. I hope everyone had a great October.

By the time you read this article, you should have all received your membership dues in the mail. I urge you all to not wait until the last minute to renew. Your membership dues allow us to continually upgrade the field and keep it clean and a safe place to fly. Remember you can pay online through our website using PayPal or your personal credit card. We now also accept checks mailed to our PO Box. **Address is: Sun Valley Fliers, PO Box 71488, Phoenix AZ, 85040.** If you pay using a check, you must fill out the membership form so we can add your most updated info to our database. You can use this link to download the membership application; <http://gofile.me/20Vjt/Ey7Thy4Va> Please include that application with your check that you send to our PO Box.



The Auction and Swap Meet that took place in October was a huge success. Weather was quite nice, and everyone had a great time. Read about it in this edition of the Slow Roll.

I would like to wish all our members and their families a joyous Thanksgiving Day.

Please join us for our next club meeting Saturday November 6th at our field. We will have many raffle prizes and the 50/50 could make you very happy \$\$\$\$. You never know what might happen, and you don't want to miss it. Meeting starts at 10:00 am. We will have coffee and donuts for your enjoyment.

Have fun out there!

Frank Moskowitz

President

WINTER WARBIRDS JANUARY 28,29,30, 2022

Sun Valley Fliers Club Meeting Agenda

Officers: President - **Frank Moskowitz**, Vice President-**John Geyer**, Treasurer-**Dan Smith**, Secretary-**Bobby Santoro**.

Board Members: Charlie Beverson, Tony Quist, Jamie Edwards (Absent), Bob Bayless, Brian Rhoads, Dan Bott (Absent) and Val Roqueni

A. Open - 10:07

- a. Introduction of board members

B. Any guests?

- a. Many guests due to the swap meet, thank you all for coming

C. Any new members?

- a. Welcome back Richard!

D. Any new solo pilots?

- a. Not currently, new pilots programs will be ramped up soon.

E. Secretary's report - (Bobby Santoro) Motion - Bob Bayless 2nd - Brian Rhoads

- a. Club meeting minutes have been posted in the slow roll and posted on the Facebook group.

F. Treasurer's report – (Dan Smith) Motion - John Geyer 2nd - Brian Rhoads

G. Membership Directors report – (Tony Quist) Motion - Charlie Beverson 2nd - Brian Rhoads

- a. Currently 216 members including lifetime
- b. Will be sending out an email soon for 2022 membership drive, payment can be made via cash, check, or paypal. If wanting to pay with cash or check please reach out to a board member

H. Safety Officers report by Ken Rhoads

- a. No report, everyone is being safe
- b. Watch out for snakes, bees, anything else!

I. Old business?

- a. Tony secured a new PO Box for us at the Rose Gard Post Office for convenience.

J. New business?

- a. Dues get emailed out in October. We are working on increasing membership this year!

K. Door Prizes

- a. Brenda, Wally Balfour, Dennis Lamb, Bobby Halahand, Don Kelly, Paul Brown, Arthur G, Richard Litt, Mike Taylor, Lou Sinti, Dennis Lamb, Val Roqueni

L. 50/50 Raffle

- a.

M. Show and Tell

- a. None

N. Adjourn - 10:20 Motion: Tony Quist 2nd - Brian Rhoads

BOARD MEETING Minutes – June 15th, 2021

Sun Valley Fliers Board Meeting Agenda

Officers: Frank Moskowitz – President, – John Geyer Vice President, Dan Smith –Treasurer, Bobby Santoro – Secretary.

Board Members: Tony Quist, Charlie Beverson (Absent), Jamie Edwards, Bob Bayless, Brian Rhodes, Dan Bott, Val Roqueni

1. Open – 18:03

2. Secretary's report - Bobby Santoro Motion: Tony Quist 2nd John Geyer

- a. Information on the website has been updated to include the latest rules as well as information to sign up for the club using cash/check.
- b. Facebook group has been created and shared to all known members. Will need help from the other board members in order to keep it active. Will hopefully start doing a monthly wall paper vote to choose best pictures from the field.

3. Treasurer's report - Dan Smith Motion: Frank Moskowitz 2nd: Tony Quist

- a. Dan gave the 2nd PO Box key to Frank for periodic visits for mail retrieval.

4. Membership Directors Report - Tony Quist

- a. Currently 207 members plus the 4 lifetime members bring it to 211 in total.
- b. Discussion on membership dues adjustment given the COVID 19 situation

5. Safety Officers report – John Laird and Kenny Rhodes

- a. No issues have been observed at the field.

6. Old business

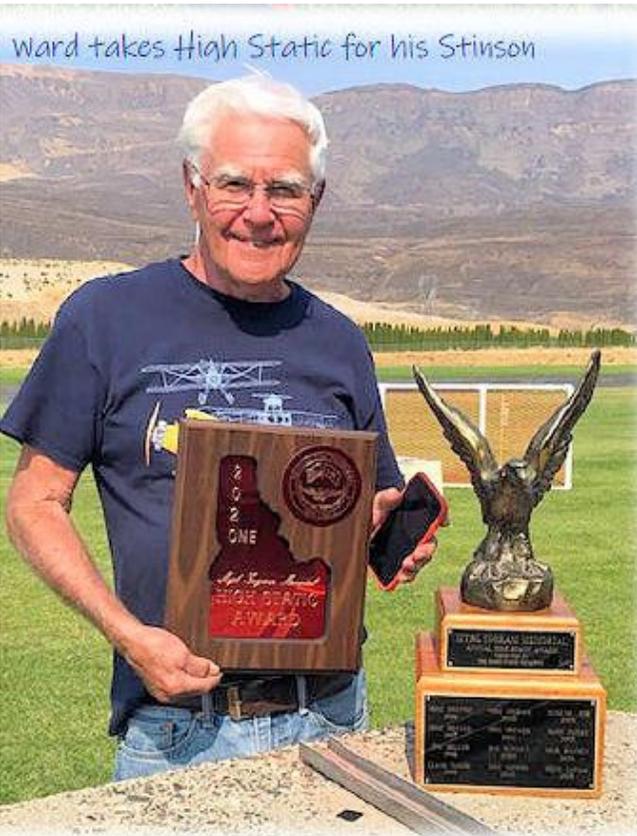
- a. Bobby has set up our Facebook group page. Let us let other members know so we can start taking advantage of it. We will also hope to start advertising the club more and sharing the exciting things we do to help grow membership. I will put out a mass email explaining this in detail.
- b. John Serio is now under contract with SVF to control weeds bi-annually.
- c. Club will begin accepting cash/check payments again.
- d. John and I have our Chase debit cards. Dan Smith will get his soon.
- e. The board meeting times will be 6PM to 7PM the first Monday after our Saturday club meeting via Zoom until a restaurant location is found.

7. New Business

- a. July and August Club meetings are canceled. They will resume Saturday September 4th at 10am. I will put out a mass email to members.
- b. Discussion of key lock vs Combo lock. Which is more functional?
 - i. **Motion - Brian Rhodes to keep a combo lock and find an easier to use lock. 2nd Bob Bayless - Voted on unanimous agreement**
- c. We are working with the City Parks and Flood to move the Heli Pad. A proposal from one of our club heli pilots was reviewed by the board. We will continue this effort and see what we are able to accomplish.

8. Adjourn -- 18:41

What's Happening



Ward Emigh one time a SVF and a excellent builder does it again up in Washington. Congratulation Ward.



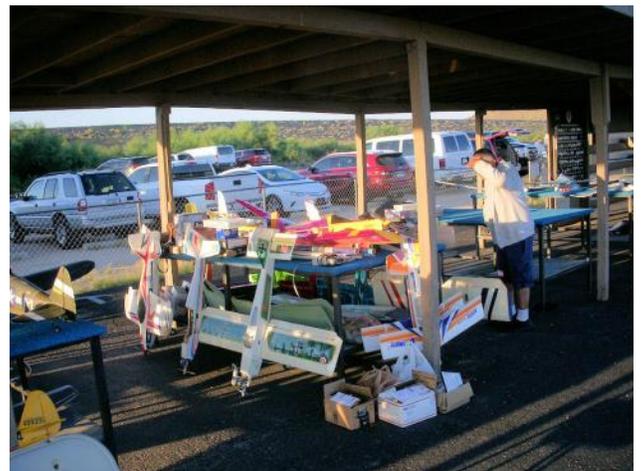
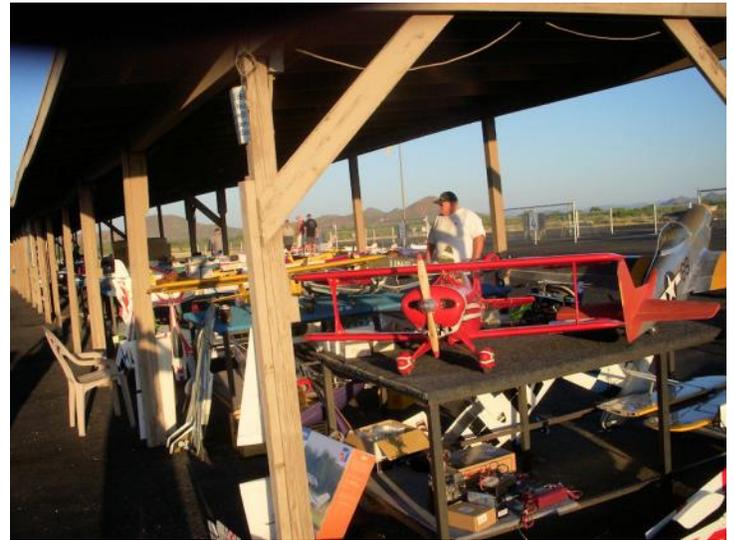
Editor at the SVF Swap Meet–Auction I met this wonderful dog, Benson Gambino. Thanks Art, Karen.



WIND DAMAGE??



SVF SWAP MEET SET UP



SVF AUCTION

OCTOBER 2, 2021



Getting ready for the auction



Charlie Beverson

Charlie helpers



Gary

Brian

John



More STUFF!



Well done Charlie



SVF at Best In The West Jet Rally



SVF
Sun Valley Fliers



VIDEO <https://www.youtube.com/watch?v=pPSRullerpM>

On A Beautiful Sunny October 31 Day



SUNSET FLYERS



**YOUR SUNSET FLIERS ARE
DEAN, JAMIE, YURI, LUCY,
DUSTIN, SPENCER, MARTY**



How Brushed and Brushless Electronic Speed Controllers Work



An electronic speed controller (ESC) is an electronic circuit whose main purpose is to vary the speed of an electric motor and its direction.

Whether the ESC is for a brushed motor or brushless the ESC interprets control information. This is not as in a mechanical motion as found in the case of servo units but rather in a way that varies the switching rate of a network of "Field-Effect Transistors", or more commonly known as FETs. The rapid switching of these transistors is what causes the motor itself to emit its characteristic high pitched whine, this is especially noticeable at lower speeds. These FETs also allow a much smoother and more precise speed control of the motor and in a far

more efficient way than the older mechanical type of speed controllers. It has a resistive coil and moving arms, that we would see in many models a few years ago, especially in the model car world. Most modern brushed and brushless ESC's incorporate a "Battery Eliminator Circuit" (BEC) to regulate a stable voltage to run the receiver and servo's, this removes the requirement to have to carry an extra battery in the model. The BEC's are usually either "Linear" or "Switched Mode".

- Linear BEC's

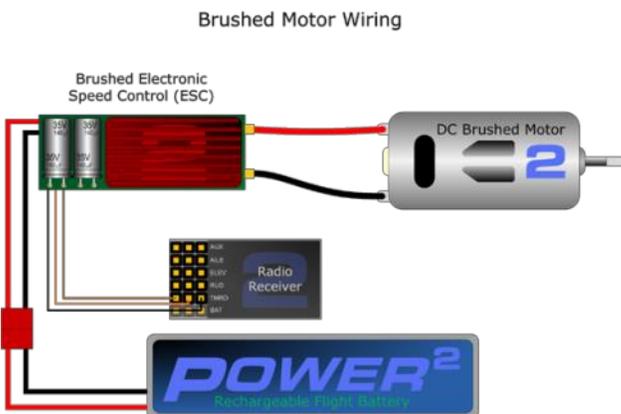
A linear BEC basically uses a resistor to step the voltage down from the 7.4v-11.1v we commonly use with our Lipo packs down to the 5 volts required for the receiver. The higher the lipo voltage and the more power the RX consumes, the more heat is generated as the current flows over this resistor. Too much current will overheat and damage your electronic speed controller or BEC. Not to mention it also wastes a lot of electricity, especially with larger electric airplanes.

- Switched BEC's

Switched BEC's actually switch the voltage on and off very rapidly to effectively drop the voltage without generating heat or wasting electricity. Some Switched BEC's also allow you to choose whether your receiver is supplied with 5v or 6v, depending on how and what type of aircraft you fly. This switching of the voltage on and off had been known to cause some interference in the past with some radio equipment but this type of interference has these days been just about eliminated with most modern 2.4GHz outfits. As a general rule of thumb, it's best to use a switched BEC if your liPo battery has four or more cells and where high power demands are required. ESC's in a broader sense is Pulse Width Modulation" (PWM) controllers for electric motors. Your receiver puts out a 50Hz PWM signal to the ESC with a variation from 1ms to 2ms, at 1ms the motor will be stationary, at 1.5ms the motor will be running at half speed, and at 2ms it will be running at full speed, you, of course, get a smooth speed control in between these numbers. ESC's for brushed motors are very different from ESC's for brushless motors and are not compatible with each other. You must use a brushless ESC with a brushless motor and a brushed ESC with a brushed motor. They are quite easy to identify, as a brushed ESC has 2 motor wires and a brushless ESC has 3 motor wires.

Controlling a Brushed Motor

As you may know, a brushed motor more or less runs itself mechanically as long as a voltage is applied. To control how fast the motor spins the brushed ESC simply turns the voltage on and off, this is done very



rapidly and many times a second. To increase the speed of the motor, the ESC simply increases the amount of time the voltage is turned on and decreases the amount of time that the voltage is turned off. To slow the motor down the process is reversed. The key point in understanding the difference between a brushed ESC and a brushless ESC is that the brushed ESC does not care about the position of the brushed motor armature etc, it just as mentioned before simply turns the voltage on and off.

Controlling a Brushless Motor

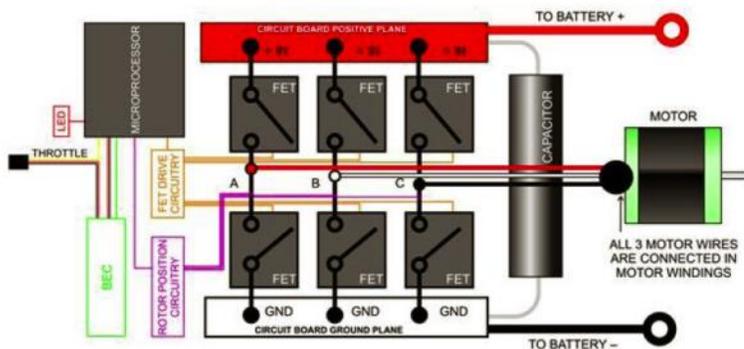
Because brushless motors work completely differently, controlling them is an entirely different process. Without brushes,

the ESC has no idea of the position of the coils/stator. It needs some kind of feedback from the motor to determine exactly when to energize each pole. Brushless ESC's basically create a "3 phase AC power output from a DC power source to run the motor by sending a sequence of AC signals generated from the ESC's circuitry. This is where the 3 wires now come in, only 2 of the wires are energized by the ESC at any one time. The pole that is not energized at any specific instant will generate a small amount of voltage that is proportional to how fast the motor is spinning; this is known as "Back Electromotive Force" (Back EMF). This small voltage is used by the ESC to determine how fast and in what direction the motor is rotating at any given time. With this information, the ESC knows how to send power to the electromagnets to keep the motor turning. This sensing of the position and what the motor is doing can also be achieved by using a magnetic "Hall Effect" sensor or "Optical" detector, these are more commonly found with model car ESCs and In-Runner brushless motors. Outrunner motors are usually controlled with the "Back EMF" style of controllers.

Computer-programmable speed controllers generally have user-specified options that allow setting low voltage cut-off limits, timing, acceleration, braking, and direction of rotation, and these days much more.

Reversing the motor's direction may also be accomplished by switching any two of the three leads from the ESC to the motor.

SIMPLIFIED ELECTRONIC SPEED CONTROL



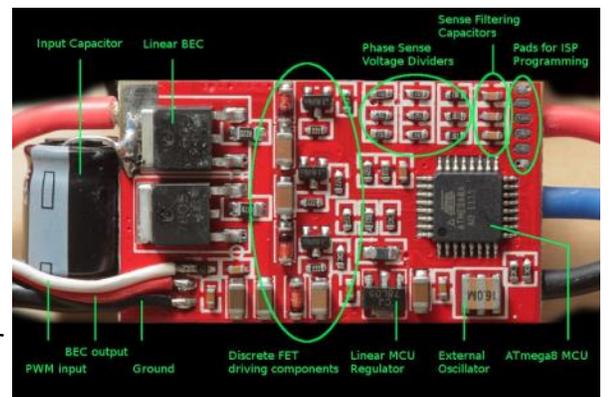
Choosing an Electronic Speed Controller

ESC's are rated for the maximum current they can handle. The more current an ESC is rated for the more expensive and heavier it will be. Choose an electronic speed controller that is rated for slightly more than what your motor/propeller combination will pull at full throttle. Too much current will damage an electronic speed controller very quickly! On the other hand, too big an ESC is dead weight that will adversely affect the performance of your airplane, is more expensive, and is just not necessary. LiPo batteries will be permanently damaged if the voltage of any cell drops below 3.0 volts. For this reason, LiPo batteries require an electronic speed controller with a low voltage cutoff (LVC). The LVC will cut the power to the motor when the voltage reaches 3.2V, or whatever you pre-program the cut-off to be. You will also need to choose an ESC that can handle the voltage of the battery pack you plan to use, the voltage rating for each ESC is clearly stated in the specifications.

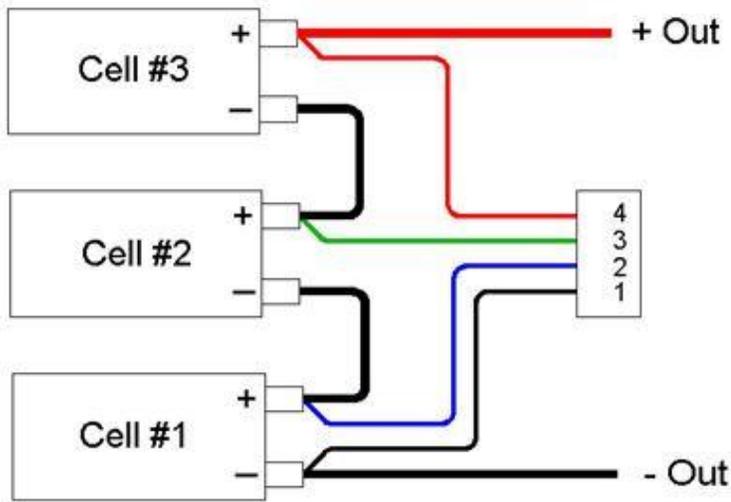
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Summary

This just a short, not too technical insight on how Electronic Speed Controllers work, I hope you have enjoyed reading it and now have a little more understanding of how they actually work. Written by Garythegliderpilot *HobbyKing*



How To Fix a Broken LIPO Balance Lead



Repairing a battery could be dangerous so from the outset you must assume this procedure has inherent risks that you must mitigate.

LIPO batteries are volatile and if damaged or punctured could catch fire. For that reason, you should not perform this task indoors. You should do this outdoors, away from all flammable and inflammable materials or liquids. You should have a bucket of water or sand at the ready to place your LIPO should something go wrong. You must have a way to fight a fire should it arise. A hose or extinguisher or both would be desirable. Your lipo battery voltage should be around 3.6v per cell and this is because a fully charged LIPO is extremely volatile, whilst a near flat LIPO is considered less volatile.

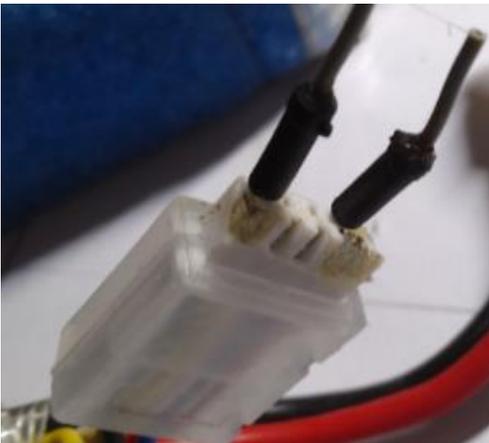
Whilst these warnings sound extreme we always plan for the worst and hope for the best so that

you're not surprised should something go wrong. If the battery is damaged from a crash you should consider discarding the battery. If the pack shows signs of damage, don't risk it. It may even charge and cycle fine but without any warning, the battery could catch fire. It would be fair to say the folks at Ezdrone knew what they were doing yet a LIPO battery managed to ignite with a warning.

This is why we take adequate precautions and we make sure that LIPO batteries are stored properly and worked on in a suitable location.

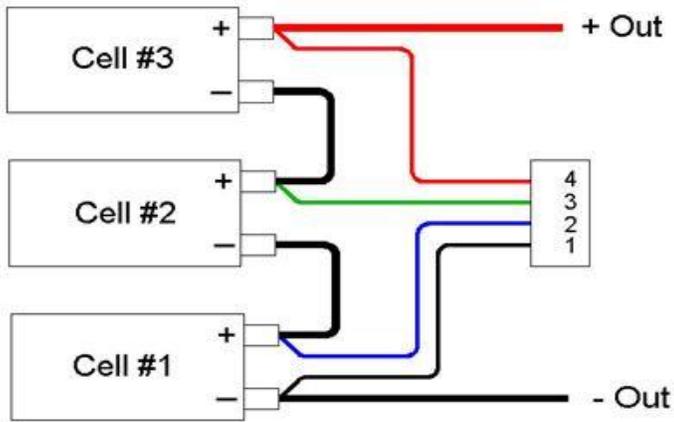
Damaged Discharge Plugs

If you have a damaged balance plug, first check the voltage of all cells and make sure they are all at a similar voltage. If you notice one cell is significantly lower than the others then it may indicate a puncture or damage to a cell. The exception here is if your crash was the result of a low voltage cut off it would be normal to see one or more cells significantly lower than the others. Carefully check the battery and if you notice damage discard the battery. Don't risk it. It's common to see a balance lead that has been chopped by a prop strike. There are two ways to fix it. Ideally, we would remove the balance lead connector and replace it but if you are in a bind you can fix it up with a little two-part epoxy.'



Start by prepping the area. You need to make some formers that will stop the epoxy dripping off the sides. Sticky tap is fine, so start by winding that a few times around the connector. Before applying the glue, I plug a jumper pin in where the glue is going to go. This stops the glue from going into the pinhole and affects conductivity later. Be aware to make sure there is no way the metal part of your jumper pins can touch each other, which could cause a short circuit and even fire! Apply a little vegetable oil to the pins to stop the epoxy from adhering to the pins. Mix the epoxy and pour it into the connector. Once it is almost cured you can cut away the excess.

LIPO Balance Wire Repair



This repair is generally easy provided you only need to repair one wire. Solder and shrink wrap is all that is required for this task. If you damage more than one wire and they are not color-coded you will need to double-check it with a multimeter. You need to be sure you are re-joining the correct wires.

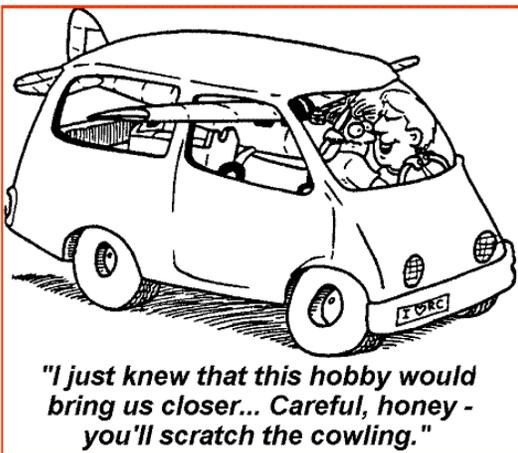
Replace Balance Plug

This is, of course, the easiest option as no soldering or gluing is required. You simply open the connector by pulling back the plastic tabs and gently pulling on the lead. You should only remove one lead at a time so that you know where it goes and they don't touch each other and cause further damage.

LIPO Cell Wire Broken

I have saved the worst until last. The most unpleasant task is pulling down the lipo as the utmost care must be exercised. If you are using a knife be careful not to slip as it may damage the LIPO cells and may cause a fire at worse and a useless pack at best. Once you have exposed the terminals you can solder the wire back to the tab. Be sure that the tip of the soldering iron does not cross or touch other cells at the same time.

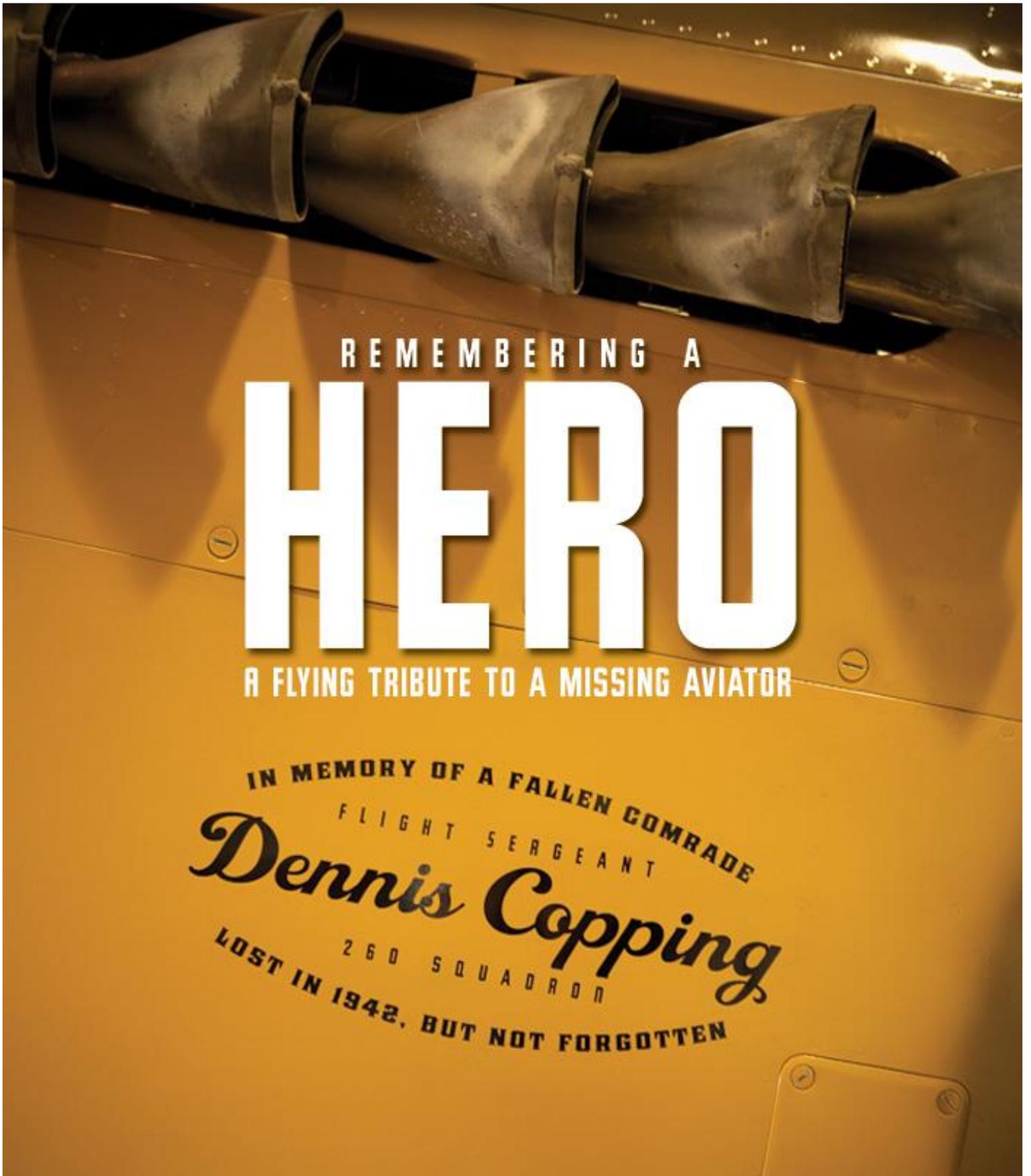
Best of luck
HobbyKing



"I just knew that this hobby would bring us closer... Careful, honey - you'll scratch the cowling."



"Quit complaining and put it down!... 'ya keep this up and I won't bring you out here anymore!"



REMEMBERING A
HERO
A FLYING TRIBUTE TO A MISSING AVIATOR

IN MEMORY OF A FALLEN COMRADE
FLIGHT SERGEANT
Dennis Copping
260 SQUADRON
LOST IN 1942, BUT NOT FORGOTTEN

<http://www.vintagewings.ca/VintageNews/Stories/tabid/116/articleType/ArticleView/articleId/365/Hero.aspx>

260 SQUADRON KITTYHAWK

HS-B

FOUND AFTER SEVENTY YEARS

PHOTOS BY JAKUB PERKA



FOUND IN NORTH AFRICAN DESERT BY OIL EXPLORATION TEAM,
A P-40, IN SAME MARKINGS AS THE VINTAGE WINGS OF CANADA
STOCKY EDWARDS KITTYHAWK IS IN REMARKABLE CONDITION

<http://www.vintagewings.ca/VintageNews/Stories/tabid/116/articleType/ArticleView/articleId/357/Original-Kittyhawk-HS-B-Discovered.aspx>

Wings

"Together we can save the life of a child."



2021

Benefit Fun-Fly

AMA Sanction # 10514

Come Fly With Us, For the Kids of St. Jude

Follow us on Facebook

RC FLIGHT DECK
PILOT
.COM

November 5,6,7

AMPS - At the Adobe Dam flying field

- Pilot Landing Fee (all 3 days): \$40 (donation to St. Jude)
- Proof of AMA / FAA required.
- Pilot event shirts included in landing fee
- Dry camping available—limited (contact CD)
- Daily pilot awards and raffle (see event website for details)
- Food and concessions on site—(see event website for details)



100 % of ALL monies collected for the event go directly to St. Jude Children's Cancer Research.

Event CD: Mike Niehaus (269) 993-8384

Event website: www.wingsaz.com

AMPS is a Concessionaire of Maricopa County at Adobe Dam Regional Park.

Arizona Model Aviators

33rd Annual Jet Rally



November 19, 20, 21, 2021

Location Superstition Airpark

Landing Fee \$40. Spectator Parking \$6

Turbines, EDF & Ducted Fan only.

EDF must have a 100mm fan or greater or a combined width & length of 120"

Overnight camping available Thursday, Friday, Saturday only.

Call John Mangino for reservations.

Registration Friday 7:30 AM. Daily flying 8:00 AM-4:00PM.

Current AMA or MAAC & Turbine Waiver Required.

200 MPH Speed Limit Will Be Enforced! Spotters Required.

Bleacher Seating available.

There will be food vendors on site.

Tables are on a first come, first serve basis.

Contest Director is John Mangino 480-980-1386 manginoaz@cox.net

Asst. Director is Terry Buckley 602-818-8598

Club Website www.azmodelaviators.com

**Tucson Radio
Control Club**



**WINTER
SCALE
CLASSIC 2021**

AMA Sanctioned Event 11986

SCALE FLY-IN

&

MODEL SWAP MEET

NOVEMBER 27TH & 28TH

Funds raised to benefit
stjude.org

PILOTS- \$40 LANDING FEE
for as many planes as you can bring.
Any size is fine, but no profiles please.
LANDING FEE includes pizza & wings for
dinner on Saturday.



REGISTRATION:
8:00 AM both days

FLYING:
9AM to 4PM Saturday & Sunday



10801 E. Valencia Rd., Tucson, Arizona 85747

Sanitary facilities ★ Camping on-site (no hook-ups) ★ Food available

For more information visit: <https://www.trccclub.org>
CONTEST DIRECTOR: Steve Clark, 520-603-1875, havingfunin_rc@yahoo.com

GunSmoke 2022

A Scale Masters Qualifier

Hosted by the One Eighth Air Force March 18, 19, 20, 2022



F4B

Competition in 5 classes
Expert, Team Scale,
Advanced, Pro Am Pro,
Pro Am Sportsman

+++++

Friday: Static Judging
10AM to 3PM

Late Arrival Static Judging
Saturday 8:00 AM.

Sat & Sun: Flight rounds
8:30AM to 3PM

+++++

Awards Ceremony Following the Flight Rounds
Sunday

Entry Fee: \$40

Spectator Parking \$6.00 per Vehicle

Overnight Parking available by

Reservation, Thursday, Friday & Saturday night
ONLY

Food at Concession Stands
available Sat & Sun

Pizza & Wings Friday Night

+++++

Contest Director: Paul Goldsmith 602-323-7753 PT19Nut@aol.com

Asst. C. D. Noel Hunt 586-799-3041 rcstrutter@gmail.com

1/8 TH Air Force Commander: [Jim Spice](mailto:JimSpice) 224-374-2696 coptercptn@gmail.com

John Geyer 1/8 TH Air Force Liaison: 602-810-1767 jegever@centurvlink.net

www.usscalemasters.org + www.oefaf.org +

www.azmodelaviators.com

NOVEMBER 2021 SVF Birth Day Boys

Jd	Waldron
James	Goessling
Peter	Jones
Craig	Demarcus
Stephen	Umans
Michael	Spandau
Lucas	Martin
Wayne	Baker
John	Gerhardt
Robert	Poe
James	Talmadge
William	Mead
Derek	Van dyke
Jack	Steward
David	O'rourke
Robert	Hass
Howard	Kennedy
Gary	Thompson
Val	Roqueni
Tony	Quist



Mon-Fri 9:00 AM — 8:00 PM

SAT 10:00 AM — 8:00 PM

SUN 11:00 AM — 6:00 PM

**HOBBY
BENCH**
COMPLETE HOBBY & CRAFT CENTER

8058 N. 19th Ave. 602-995-1755 Phoenix

M-F 9:30-8PM, SAT 9:30-6PM 11-5PM

4240 West Bell Rd. 602-547-1828 Glendale

M-F 9:30-9PM, SAT 9:30-6PM, SUN 11-5PM



SPECIAL NOTICE TO PILOTS!

"Sun Valley Flyers Utilizes a 400ft ceiling for flying model aircraft allowing for only momentary breaks caused by non-sustaining maneuvers.

All pilots must utilize a spotter at all times and abide by AMA Rule 540d" (see and avoid procedures)

Any pilot willfully violating this rule is subject to loss of flight privileges.





THE SLOW ROLL



Club Officers 2021-2022

FRANK MOSKOWITZ, President
John Geyer, Vice President
Dan Smith, Treasurer
Bobbie Santoro, Secretary
Safety Officer Kenny Rhoads
Bobby Santoro

Website Supervisor

Please check your Membership list for Phone numbers.



Board of Directors

Jamie Edwards '21-23
Bob Bayless '21-23
Tony Quist '21-23
Brian Rhoads '21-23
Charlie Beverson '20-22
Dan Bott '20-22
Val Roqueni '20-22



First Class Mail

SUN VALLEY FLIERS
P.O. BOX 71488
PHOENIX, AZ. 85050

To:

WWW.SUNVALLEYFLIERS.COM

47



YEARS



SINCE DECEMBER 1974