

August 2014 Edition

Wine Country Flyers



**Next meeting: Tuesday 16 September 2014, 7:00 P.M.
At Round Table Pizza**

Once again the meeting will be held at Round Table Pizza
2424 Magowan Dr. in Santa Rosa
Pizza served at 6:30 PM, meeting starts at 7:00 PM
www.wcflyers.com

Promoting Model Aviation in Sonoma County

2014 Club Officers:

President :	Tony McDonald	(707) 479-2152	mcdancing1@yahoo.com
Vice President:	Wylie Walters	(707) 235-6383	raidery73@yahoo.com
Secretary:	Paul Kohlmann	(707) 837-9437	Paul.Kohlmann@jdsu.com
Treasurer:	Phil Leech	(707) 538-8557	leechstudios@sonic.net
Safety Officer:	Wylie Walters	(707) 235-6383	raidery73@yahoo.com

2014 Board Members:

Merle McGregor	(707) 585-1061	merle_mcgregor@yahoo.com
Dave Mercer	(707) 975-4723	mcdave@sonic.net
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Newsletter Team: Dave Mercer, Phil Leech
Website: Patrick O'Halloran

Cover Image

Photo submitted by: Wylie Walters
Caption and comments by: Dave Mercer

The Reno Air Races are less than a month away !!!
September 10th through 14th. It's always a spectacular display
of aircraft racing; don't miss out on the chance to be a part of it.



Presidents Report

By: Tony McDonald
23 July 2014

Here we are approaching the last months of summer. I hope the majority of the membership has had a chance to go out to see some of our club events. The float flies at Lytton lake are always well attended and provide a opportunity to get out to the lake and fly with good company. Richard Skaff and George Leap threw a Opening day event that came together at the last minute but proved to be outstanding. The 2014 pylon racing season has been a blast. With a watchful eye Jacob continues to keep the competition even. The upcoming Larry Frank/Neil Taylor scale/award contest should be another great event coming up later this month. Thanks again to Richard and George for taking charge of this event!

I would like to remind everyone about two simple safety practices that could potentially save a life or injury. I think of my own observations lately as I have been guilty of not using these two practices. First, a lot of us have not been calling out when we are landing or taking off with an aircraft. This leads others to assume that it's safe to walk out or taxi an airplane out onto the runway without announcing their intentions. The second practice is to call out "Heads up"! There has been a lot of occasions that pilots will lose control or crash an aircraft without ever warning anyone around them. This becomes a safety concern when there is a high speed uncontrolled aircraft lost in the skies and no one but the pilot knows about it! A simple verbal warning should be the first thing that comes to your mind if you find yourself in this position. So enjoy our hobby, but try to think about the safety of others. And please let's all

start using these two simple but effective safety practices.

Vice Presidents Report Safety Officer Report

By: Wylie Walters
19 August 2014

With the flying season in full force it has been great to see the field packed every weekend. Just a reminder to all that the PCAM airshow is coming up in mid September. We are looking for guys to get flight groups together. So far we have a group of giant scale gassers together. If you have an idea for a flight group, talk to the guys that would fit in and let Paul Kohlmann and I know about it.

It is still a little early but I wanted to let people know that we are going to have some club officer positions to fill for next year. We will need a new Vice President/Safety Officer, as I need to step down to concentrate on my new business. We will also need a new Secretary as Paul has been an officer for quite a while and needs a break. So if you may be interested in being an officer or have any questions please let us know.

Wylie

Editors Update

By: Dave Mercer

As I sit here, slowly typing away, trying to complete the August newsletter before the end of the month, I'm reminded that a lot of important events are coming up soon in September. First off is our last Float Fly of the year on Labor Day, Monday September 1st. Don't miss out on participating, or even spectating, since you won't get another chance till next April. For me, our Float Fly events have provided some of the best times I've had all year. With no hint of bad weather in the forecast, the last event for this year should prove to be every bit as good as the

previous ones. Merle has earned all the appreciation and acknowledgements we can muster for making (once again, year after year) our Float Flys such a great experience. If you've never tried it, you don't know what you're missing. I don't have the literary expertise to properly put it into words. All I can say is that it's a unique and immensely enjoyable experience. I'll leave it at that.

Next up are the Reno Air Races, on September 10th through the 14th, as mentioned in the cover photo up above. While it's obviously not a club event, many of our club members look forward to this event year after year. I feel it deserves a mention as a reminder in our newsletter. Nowhere else can you witness competitive racing at close to 500 miles an hour. Nascar, Indy, Formula 1, NHRA, none of them boys can even come close. This annual event is like no other. Below is a link to a video that gives a glimpse of what to expect. Enjoy!!!

<http://vimeo.com/m/103825862>

The weekend following, September 20th and 21st provides our club its latest opportunity to showcase our talents at the PCAM Wings Over Wine Country Air Show. Each and every year this is one of our premier events. A lot of time and effort goes into making this successful. Those of you who feel you have the skill and confidence to participate should get in touch with Wylie Walters at: raidery73@yahoo.com or (707) 235-6383. Or contact Paul Kohlmann at: Paul.Kohlmann@jdsu.com or (707) 837-9437. These are the two main people spearheading the efforts to pull this off with our customary professionalism. There is a mandatory practice scheduled for Sept. 7th. If you can't make that you're out of luck for the main show. But if you can meet all the necessary requirements, you'll get a chance to show off your flying skills before THOUSANDS of people. Bring it on !!!

A week later, to finish off the month, on Sept. 28th will be our September round of Pylon

Racing. The racing season is winding down, with only three rounds left, yet with all that action still to unfold none of the championships are locked up. A whole lot can change over the next three months. If you're not already participating, come on out and enjoy the show. You might find yourself inspired to partake in the pylon racing action next year. I hope to see you out there.

That's all I got for this month.

Dave Mercer
WCF Newsletter Scribbler

Guess This Mess!!

By: Dave Mercer

Last month's shop: none

Winning Guess: none

Whose shop is this? Anybody care to guess?



General Meeting Minutes ***August Meeting***

By: Phil Leech
3 August 2014

The meeting was held at the Field on Sunday morning at 11 AM. The meeting was brought to order by Wylie Walter with 12 members present.

BUSINESS:

Secretary's Report – Paul Kohlmann was out of town on business.

Treasurer's Report -The checking account stands at \$6392 with the C/D at \$7,482

Wylie told us the slate for 2015 should be considered soon as we are losing our President, Vice President and Secretary. He noted that Adam Clement is willing to take the President slot but we still need a VP and a Secretary.

A question was raised about the status of the batteries for the solar system. Mike Cracchiolo is working on this but hasn't been able to close the deal yet. We need 8 gold cart size batteries that will cost \$80 to \$96 each.

EVENTS:

The next event on the calendar is in three weeks on August 24 for the Larry Frank Scale Event with the Neil Taylor Award presentation. There will be a BBQ by Glenn and Dawnelle Binkley at this event that it is generally well attended. Plaques will be presented to the winners of the scale flying as well as a plaque for this year's Neil Taylor recipient.

- The Christmas Party planning is proceeding as a new date was announced for Saturday Dec 6. Richard Skaff is working with Phil on planning for the party.

Preliminary work on the PCAM program is proceeding with Wylie and Paul Kohlmann. There will be practice sessions announced soon. We will need volunteers to man the booth as usual.

THE RAFFLE

- Bilal Maqsood won the top prize, a Meridian ARF. Steve Satterwhite, attending his first meeting, won the 3 cell 70C battery while Paul Gibson got the glue. I won the T-28 wing that I later passed on to George Leap. Allen Spaeth collected the partially completed Cub kit and George Leap took the donated flight box.

Meeting was adjourned at 11:35

Report prepared and submitted by Phil Leech.

Board Meeting Minutes ***August Meeting***

By: Phil Leech
8 August 2014

Board Meeting Minutes – August 6, 2014

The meeting was brought to order by Tony McDonald at 6:30 pm. at the Field. Members attending were Tony Maconald, Jake MacDonald, John Reade, Wylie Walters and myself, Phil Leech. George Leap was a guest.

The meeting started with the Treasurer's Report that I presented. I told them that we had a checking account balance of \$6,392 and the CD is at \$7,482.

Tony told us that Victor Trentadue had a conversation with Bill Walters when he told Bill that the nitro trainer that the club gave him was gathering dust and he would probably fly more if he had a simpler electric plane to fly. Realizing this, the Board immediately voted to buy an Apprentice electric trainer to give to Victor.

There was a review on the upcoming Larry Frank Scale Event that has Glenn and Dawnelle Binkley scheduled for the BBQ and Wayne Frederick and Jake Chichilitti on board for judging. Richard Skaff will be the announcer.

Paul Kohlmann is to return soon from his business trip and will be busy planning for PCAM.

The Christmas Party is scheduled for Saturday, Dec 6 and a check will be sent for the security deposit and the reservation deposit.

Tony told us that next year's Pylon Races will drop the Dogfighter class and will have a new class based on the ROC/Hobby Reno Warbirds planes.

Tony has the new T-shirts which are blue colored.

Because of scheduling difficulties in September it was decided to cancel the September General Membership Meeting.

Treasurers Report

June 2014

By: Phil Leech

Membership:

Total: 83
Returning: 72
2014 New: 11
Youth: 8

Financials:

Checking balance: \$6392.00
CD: \$7482.25

(Editors note: This decision has been changed, as noted above. There WILL BE a September General Meeting at Round table Pizza, on Tuesday, September 16th.)

- The Board Meeting for September will be September 8 at JDSU offices.

- The General Meeting for October will be at the Round Table Pizza in Montgomery Village on Monday, October 20 with Pizza at 6:00 and the meeting at 6:30.

- The November General Meeting will be at Round Table Pizza on November 17.

And that wrapped it up!

Meeting was adjourned at 7:00 pm.

Report prepared and submitted by Phil Leech.

Member Contributions

By: Tony McDonald

Editors note: The following is an article submitted by Tony. It's a fascinating look at what it takes to compete at the Unlimited level at the Reno Air Races. It was written in 2001, so some of the info is outdated or may be different today. Yet it's still a great summary of what these racing teams need to do to win. It's a lengthy article, so I'm going to split it up into several installments. Enjoy the first installment, and hopefully you'll be chomping at the bit for the next newsletter to come out with the next installment.

Installment number 3:

Reno for Gearheads

By: Graham White

Race #11 Miss America - Modified P-51D

This aircraft has been on the racing circuit seemingly forever. Its new owner has completely revamped and spruced up this aircraft although he has retained the beautiful red, white and blue paint scheme. It's not known how modified the engine is but does not sound stock. Airframe modifications seemed to be limited to clipping the wings.

Miss America is owned and flown by Brent Hisey

Race #15 Furious - Modified Sea Fury.

This is another highly modified Sea Fury. Interestingly, this aircraft is powered by a Pratt & Whitney R-4360-63A. This highly complex 28 cylinder engine represented the largest piston engine to enter series production. Its 28 cylinders arranged in four rows of seven displaced a total of four thousand, three hundred and sixty three cubic inches. Due to the fact relatively little racing experience has been developed with this engine, modifications are quite few. The modifications seem to be restricted to changing the stock -63A nose case for a -59 nose case. The reason for this change is; -63A nose cases use an odd-ball SAE #70 spline propeller shaft. This means the only propeller available is the three blade Douglas Globemaster propeller, the aircraft originally powered by the -63A. So a -59 nose case, used on the Boeing KC-97, replaces the stock -63A. With an SAE #60 spline the -59 propeller shaft offers a far better choice of propellers even though the reduction ratio remains the same at .375:1. Like the R-3350 powered Sea Fury brigade, Furious uses a Douglas Skyraider prop. The R-4360 propeller shaft rides in three bearings; a massive rolling element bearing installed at the front of the nose case. This bearing handles thrust loads and radial loads. In the middle and at the rear are two copper/lead plain bearing that run inside the hollow crankshaft. At race speeds, up to 6Gs can be generated on the airframe. These tremendous loads are also imposed upon the propeller.

Exacerbating the situation is the fact the prop acts as a huge and powerful gyroscope. Of course all these loads are transmitted through the propeller shaft and consequently transmitted into the crankshaft via the two rear propeller shaft bearings. These additional loads require the front main crankshaft bearing to be beefed up, otherwise it would suffer undue stress. Fourteen ejector exhaust stacks are used. This set-up siameses appropriate pairs of cylinders for maximum exhaust scavenging. In a similar fashion to Critical Mass, Furious uses two stock oil coolers, one in each wing. Again, spray bars are used to augment the oil coolers. Spray bar fluid is sprayed at the rate of one gallon per minute at 25psi. Being air cooled, the R-4360 need all the help it can get. As with all the top radial engine powered racers, a beautifully designed convergent/divergent duct is designed from the spinner and inner cowl. To further augment cooling, a controversial method is used. But before going into that, the basic cooling system of the R-4360 needs to be understood. Unlike single row or double row radials which simply deflect cooling air from front to rear, the R-4360 is made up of 7 plenums. Each plenum is formed by the space between each row of cylinders. Cooling air enters the cowl and is forced into the seven plenums where it is then directed through the cylinders, almost cross flow fashion. On the leading edge of the inside diameter of the inner cowl, seven spray nozzles are incorporated. At race speeds and powers, these nozzles spray water into each plenum thus getting atomized water directly on the cylinders. A stock R-4360-63A is rated at 3,800 horsepower. It would be safe to say that Furious has in excess of 4,000 horsepower on tap.

Furious is flown by Bill Rogers and owned by Bill Rogers and Dale Stolzer.

Race #21 Modified Hawker Sea Fury.

This stock looking Sea Fury is one of the few race aircraft to sport military markings. It is

painted up to represent an RCAF aircraft. It is powered by a Wright R-3350-26WD, a Douglas Skyraider, non PRT engine. As with some other Sea Furys', it uses a carbon fiber copy of a Blackburn Beverly spinner. Even though this leaves the remarkably narrow annular gap of 1.5 inches for air entry into the cowl, cooling is not a problem. This is accounted for by the excellent design of the R-3350-26WD cylinder. It incorporates a forged cylinder head with all cooling fins machined in. The forging process offers a more structurally sound design without any of the limitations of a casting. The fins are closely spaced and deep, thus offering a large cooling fin area. The cylinder barrel has Wright's patented 'W' finning which, again, offers considerable cooling area and efficiency.

Race #21 is owned and flown by Joseph Thibodeau. Probably a good contender for the Silver or Bronze race.

Race #22 Merlin's Magic - Modified P-51D

This aircraft can truly be called a wolf in sheep's clothing. Belying its stock appearance, except for clipped wings, it sports a Dwight Thorn, balls to the wall race engine except it does not have G6 Allison rods. Even though the racers were just warming up on the last day of flying, Monday, September 10, it achieved its personal fastest qualifying speed at 432mph. However, it may have been pushed just a little too hard. After landing, a maintenance check revealed metal in the oil screen - a bad sign. Rather than risk a \$150,000.00 race engine, it was wisely decided to remove the race engine and replace it with a stock Merlin.

Owned by Stu and Marilyn Eberhardt, it was flown by Stu and his son Bill Eberhardt.

Race #27 Miss Trinidad Modified Yak 11

Yaks are now becoming increasingly popular among warbird owners. This is due to their availability and relatively low cost compared

to, say, a P-51D. The original Russian power plant is all but impossible to find so most are powered by US built engines. In the case of Race #27, a Pratt & Whitney R-2000. Normally, one does not think of an R-2000 as a race engine. However, when paired with the Yak 11, it makes for a good combination. R-2000s only powered a handful of aircraft, the most numerous being the Douglas DC-4 followed by the Canadair Caribou. Pete Law designed an ADI system for this racer which allows a manifold pressure of 52 in. Hg. Further helping power output are ejector exhaust stacks.

Owned by Sam Davis it is flown by Tom Camp.

Race #31 - Stock P-51D (Speedball Alice)

Little can said about this aircraft. Being a stock P-51D, the owner pilots simply wanted to go racing and have fun.

Owned and flown by Dan Vance and Art Vance.

Race #38 Precious Metal - Highly Modified P-51D

We normally think of P-51Ds being powered by Packard built Rolls-Royce Merlins. However, the last piston engine mass produced by Rolls-Royce was an even larger engine than the Merlin. Displacing 2,239 cubic inches, the V-12 Rolls-Royce Griffon entered service in the early 1940s. As good as the Merlin was, it still had some fundamental problems that would have been difficult to fix once the engine was in production. The Griffon recognized these problems and benefited from previous Rolls-Royce experience. Except for the pair of oil lines that feed the contra-rotating propellers, no external oil lines are to be seen on the Griffon. The profusion of external oil lines on Merlins have proved to be a maintenance headache over the years. Another key change made to the Griffon was to drive the camshafts from the front of the engine. Likewise, the single

magneto is also driven from the front of the engine. This reduced the torsional vibration the cam drive and magneto drive gear trains are exposed to, particularly when driven for the rear of the crankshaft like the Merlin (see illustration). The Whittington brothers in Ft. Lauderdale, Florida, originally modified this aircraft for Griffon power. Engine modifications follow the same concept as the race Merlins. Precious Metal uses a conglomerate of parts from different mark numbers of the Griffon. The power section and contra-rotating nose case is from a Griffon 58. The two-stage supercharger is from a Griffon 74 which normally would normally power a British Fleet Air Arm Fairy Firefly F.R. Mk. IV and N.F. Mk. IV. An adapter plate is required to mate the 74 blower to the 58 power section. Like the full race Merlins, the after cooler is removed and replaced with a tube. All charge temperature issues are dealt with by massive doses of ADI. Griffon 58s were normally used to power the Avro Shackelton, a British maritime patrol bomber. The engine drove a pair of contra-rotating propellers. Precious Metal retains this propeller and nose case, albeit in modified form. First off, the propeller diameter is dramatically reduced and at the same time more pitch is used. The engine runs at 3,200 rpm, stock redline is 2,750 rpm. A modified speeder spring in the propeller governor allows the higher engine speed. All stock Griffons used up-draft carburation. Precious Metal uses a down draft Bendix PR 100 carburetor originally used on Pratt & Whitney R-4360s. For the Griffon application, a PR 100 is overkill to the point of being over carburated. However, this may be due to its prior life as a power plant for the Miss Budweiser Unlimited hydroplane boat racer. Jeff Neff, the Budweiser crew chief during the Griffon era, built three engines for the Whittingtons. One of these engine was a stocker for ferrying the aircraft. The boat racers used to turn their engines up to much higher engine speeds than aircraft racers. In the future, I would not be surprised to see a PR 58 carburetor replace the present set-up. A ram air scoop on top of the cowl feeds air to the PR 100. Converting to the PR 100

carburetor requires the use of an adapter plate that rotates the intake elbow 180 degrees in order to accommodate the down draft set-up. An additional adapter plate is required to mate the PR 100 carburetor to the Rolls-Royce intake elbow. A modified radiator is augmented by spray bars. As with full race Merlins, lubrication is enhanced via an additional pump driven off one of the accessory pads. The Griffon, like late model Merlins, used what is known as an end-to-end crankshaft lubrication system. This means the oil is fed in at both ends of the hollow crankshaft rather than the more conventional method of feeding oil to the crank via each main bearing. The advantage with end-to-end lubrication is that it eliminates the necessity for oil distribution grooves in the main bearings in order to feed the connecting rod journals. Precious Metal's Griffon utilizes the additional oil pump to feed extra oil into each main bearing. Not only does this provide enhanced lubrication, it also carries away heat thus preserving the life of the grossly over loaded bearings.

Of course, modifications are not restricted to the engine and propeller, Precious Metal also has a radically modified airframe. A small bubble canopy replaces the stock one, wings are clipped and overall aerodynamic clean up has been done.

Precious Metal is flown by Ron Buccarelli and is owned by Lake Air Inc.

Race #44 Sparky - Stock P-51D

Little to be said about this bone stock P-51D. No modifications. Like others in this class, the owner/pilot simply wants have fun racing around the pylons - and who can blame him? Sparky is owned Steve Seghetti and flown by Brant Seghetti.

Race #45 Risky Business - Modified P-51D

This aircraft is another wolf in sheep's clothing. Apart from clipped wings one would not guess that under the cowl sits a very

potent Merlin. This aircraft is powered by a Rick Shawnholtzer built race engine. It races at 110 in.Hg. Abs manifold pressure at 3,400 rpm. The cooling system is augmented by three spray bars spraying on the radiator core; two for main engine coolant and one for the oil cooler.

Risky Business is owned and flown by Bill Rheinschild

Race #47 - Southern Cross Modified Hawker Sea Fury.

Powered by a Wright R-3350-26WD; with the exception of the engine, this is another stock looking Sea Fury. Painted up in Royal Australian Navy colors, this attractive airplane was another good contender for the Silver or Bronze. Relying on ADI, manifold pressure at race speeds is 57 in. Hg. and 2,900 rpm. Two oil coolers with spray bars keep oil temperature under control.

This aircraft is owned and flown by John Bagley

Upcoming Events

By: Dave Mercer

Float Fly #4

Monday, September 1st (Labor Day) will be our last Float Fly of the year. Don't miss it !!!! As I mentioned above, it's been the most fun I've had flying all year. There is something about taking off and landing on water that is quite captivating. I can't explain it, but once you've tried it and mastered it you're hooked. Don't squander this last opportunity to try it. Sure it's on a Monday....but hey, it's a holiday. Show up and fly in the morning, leave with a big grin on your face, and then you'll be much better equipped to tackle the more dreary tasks that life keeps throwing at us. I hope to see you there.

Installment number four next month....

Pylon Racing Update

August Round

By: Jacob McDonald

Editors note: No report received in time for this month. Next month I hope to have an August and September report. Stay tuned.

PCAM Airshow

September 20th and 21st

As mentioned above, this is our chance to shine, and showcase the talents of our club members. There are many ways for our club members to participate; volunteer to help out at our booth, offer to help out at the flight line, or fly in the performance itself. All of these tasks are vitally important. If you can possibly spare the time, you will find it to be a weekend with enormous personal rewards and satisfaction. You won't regret it.

WCF 2014 EVENTS SCHEDULE

Event	Date	Contact
FLOAT FLY #4	MON SEP 1	MERLE
RENO RACES	SEP 10-14	RENO
PCAM	SEP 20-21	PAUL
PYLON RACE #7	SUN SEP 28	JACOB
PYLON RACE #8	SUN OCT 19	JACOB
PYLON RACE #9	SUN NOV 16	JACOB
CHRISTMAS PARTY	SAT DEC 6	PHIL