



PVMAC Flightline

The Official Newsletter of the
Pomona Valley Model Airplane Club (PVMAC)



AMA Charter 0142

The 2nd largest RC Club in the U.S.

APRIL 2010 Edition

www.pvmac.com **Meeting Date: Tuesday - April 13, 2010- 7:00PM**
Chino Community Center - Chino, California



Bench Flying with Phil Goodwine PVMAC President

Hello once again to all PVMAC members, family and friends.

As you will see on the following pages of this newsletter, we had a Prado field clean up on Saturday 4/3/10. I would like to personally thank all of those 32 individuals that spent a great deal of their Saturday working so diligently on OUR field. If you haven't already been there to see the field, it looks fabulous. You will see that we did many things to spruce the joint up.

April at the Prado Airpark will be a relatively quiet month other than everyday normal flying, but once May gets here, look out. May 21/22 the PVMAC is hosting the inaugural "3D Full Deflection & Freestyle" event. This one should be a blast. We are hoping for 60+ pilots from all over California with rumors as far away as back east. Once we recuperate from the May event we look forward to the "Scale Squadron of Southern California" event in June.

The Board of Directors have already had their April meeting and have had discussions with

outside groups regarding other special events to be entertained for the Prado Airpark for later in the year. These events could host pilots within the hundreds. Once we have final word and discussions regarding these events, we will let you know.

Membership is growing and Beth is still turning those blue cards out at a feverish rate. The PVMAC has never been at this volume this early in the year before. Keep in mind YOU as a PVMAC member have (2) beautiful and well maintained fields to fly

If you read the magazine "Model Airplane News" and look hard enough at the pictures, you might notice in the background for most of the articles it's YOUR Prado Airpark and Norton Field. The pilots, photographer and writer are all members of the PVMAC, John Reid, Jason Benson and Mike Gantt. You will normally see them out at the field just about every week flying, taking still photos and even videotaping for their website. So check it out, say Hello when you see them out there and be proud that they use YOUR fields to do their articles.

Kyle, Beth and I have been traveling once again with Kyle's IMAC flying. The IMAC series had its "Cactus Classic" event in Arizona. Kyle was flying his 3W Yak in the "Advanced" class where he won. Great job of flying and I was very proud of what he accomplished once again. Kyle and I are working on 2 new planes for him to fly in IMAC, they are Dalton 300ML. The planes were framed by Tony Russo who owns Dalton Aviation and works at Desert Aircraft. They will be covered by Kenny Lauder and all engine, radio and hardware will be done by us. We are even building our own 4 into 2 exhaust system for the DA200L - 4 cylinder engine.

We are hoping to have them completed and with many flights on them prior to leaving to the U.S. Nationals for Scale Aerobatics in late June.

Until next month or until we see each other at the field,

Have Fun Flying, Enjoy Your Friends, Enjoy Life, God Bless.

Phil Goodwine, President



The new signs at Prado to remind you to wear your Blue PVMAC Membership badge. If you do not have your badge on, you will be asked about it by other members and Field Marshalls.

at, Norton and Prado. We are encouraging all PVMAC members to remember to wear your blue 2010 membership card while you are at the fields. This identifies you as a PVMAC member. For YOUR safety and OURS as a club, YOU as a PVMAC member are responsible to collect and fill out day fee passes for those individuals that are not current PVMAC members.



Editors Point of View

The month of may was a whirlwind with test flights on my KMP electric B-25, and several flights in Ken Wagner's P-51. We were invited by the 357 fighter squadron to attend the Davis Monthan aerospace Days in Tucson. This is the home base of the A10 training command. Being an RC Scale nut, I loaded up a 2 GB card of aircraft photos.

That was followed the next weekend by California Jets in Buttonwillow up near Bakersfield. While it is predominantly a turbine event, it was populated by 35% EDF (Electric Ducted Fans). This is a huge increase over EDF's from last year's event. Several of our PVMAC members participated like Ken McSpadden, Jeff Fassbinder, and Richard Pandis. Others came to just hang out and enjoy 128 pilots with every kind of jet from scale to sport in the air.

The field clean up was a big success and a lot of PVMAC Members and board members were on hand to lend a hand. After the professional weed killers were done, the field was covered with ugly black dead bushes and weeds. The use of a skip loader and Phil Goodwines truck and drag, we were able to turn the field into a park like appearance. Even our secretary Beth Goodwine was pruning trees, and you will notice that all the trees are trimmed and look really nice.

As you will see in the photos, new signs are posted to remind you to wear your PVMAC badge at all times. Signs are also posted so you won't leave your badge on the frequency board. New yellow signs are to remind you to lock the gate when you leave. Goodwine Glass provided two new glass door

cases for bulletins and also a new AMA Safety Rule sign mounted to the tan container.

As a reminder, pick up your trash or any trash on the ground. Also there are several large oil and gas spots on the pit asphalt. I don't know about you, but I am not too keen about tracking that black stuff into my vehicle. As a courtesy, you should have a container to reclaim any fuel runoff to prevent these type of spills. I am hoping you will agree with me.

Rich Smith seems to have a ton of luck. His girl friend bought him a really nice B-17 with 4 OS 40's on board. This bird is all weath-ered and really scaled out. I am sure we will see it at the meeting next Tuesday. I also hope he will tell us his secret so I can pass it on to my wife. (Just kidding).



I look forward to seeing this baby in the air soon as well.

There is a lot of good things going on in your club and I encourage you to attend a meeting, this Tuesday is a great reason as we head into summer. You will be eligible for door prize cash, a 50/50 raffle, as well as cookies and coffee. Not to mention some of the great show & tell aircraft that are showing up. This newsletter was emailed to everyone that requested an electronic version of the newsletter. Hopefully we are getting the word out to everyone and if not, let us know so we can correct the situation. Don't forget to visit the website. The PVMAC website is over the top and very professional with lots of good information and photos.
Sam Wright, PVMAC Editor

FOR SALE

ROBART P-47 Thunderbolt
1/5th Scale ARF. Bubble canopy version. All composite aircraft kit including wings from Nick Zirolu Designs. Gel coat white & wet sanded. This kit is 92" wingspan and flies well on a Zenoh G-62 with a 22:8 prop.

Includes all panel lines and rivets, gear doors, hatch, pylons, drop tanks, guns and antenna.
\$1895.00 Retail & Sold out.

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See Sam Wright - 949-632-8691 or sam-w@cox.net

See details on Robart website at: www.robart.com



This version is unpainted & ready for paint

MAY 2010 EVENTS

May 15-16, 2010

CHINO AIR SHOW
Friday & Saturday

May 21-22, 2010
Friday & Saturday

3D Full Deflection
Prado Airpark

May 30, 2010 - Saturday
PVMAC Swap Meet
Prado Airpark



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PVMAC Field & Weed Clean Up Saturday - April 3



Saturday April 3, 2010 was a day of dragging dead weeds, and grading the field. 32 of the PVMAC members got the word and were on site early to begin the dirty task at hand.

Rich Smith's lady friend scored a skip loader with a drag on the back and she drove it as well. Phil Goodwine hooked his Yukon to a new welded heavy drag and together the field began to look like a park.

The addition of the flags really dressed the field up as well as the repaired entrance gate.

PVMAC Members will be proud of this beautiful flying field and are encouraged to help keep it looking this way!



The addition of the new signs make it very clear that all members **MUST WEAR THEIR PVMAC MEMBERSHIP BADGE WHEN ON THE FIELD!** No Exceptions!
Also added were signs to remind you to not forget your PVMAC badge when you leave the field as well as signs to remind you to lock the gate if your the last person off the field.

The PVMAC Board and members that attended with tools, gloves, and hard work are gratefully acknowledged and a special thank you goes out to all of them.
I am sure you will notice the park like atmosphere when you visit the field. For those that already have experienced the field, you know what we are bragging about.



PVMAC Member Profile: Richard Pandis

Rich's 106" ME 262 with me and Jeff Fassbinder up at Rabbit lake bed. The plane uses a 12s cell lithium polymer battery system with Castle HV110 Amp ESC speed controls with aeronaut TF 4000 fans. We estimate about 17 pounds of thrust per fan. All up weight is 38 pounds. Plane is based on the German JG7 from May 1945. I have a build thread on RCU that covers the complete build. Aircraft was painted and weathered by Todd Burley who painted Dinos BF109 that won Top Gun Pro Am in 2008.

Top Left Photo: Rich's Miester BF 109 on a fly by at Prado.

Top Right Photo: Rich left with Jeff Fassbinder on right at the dry lake bed for flight test.

KNOWING THE P-51 MUSTANG PART III

This time I would like to describe taxiing the P-51 Mustang out to the runway and how to take off in a powerful World War II fighter aircraft. The most important thing to remember is that this is an extremely powerful machine that must be handled with great respect at all times.

With the Merlin running, the pre-taxi checks done and having obtained taxi clearance from Chino Ground Control, the next thing to do is to taxi between several rows of hangars out to the run-up area which is adjacent to the runway. Steering the P-51 or any other tail dragger aircraft, particularly those with a long nose, is made difficult by the fact there is no vision directly ahead. In the Mustang it is important to do S-turns all down the taxiway with the canopy open. When the Mustang is turning to the left, one can see out the right side and when the Mustang is turning to the right, one can see out the left, leaning out of the cockpit for better visibility.

Of course, every time the airplane is directly going towards the direction of taxi, you cannot see where you are going. There have been many examples of Mustangs and other trail draggers running into things because of the lack of forward visibility.

To make taxiing easier, North American designed a system in the P-51 and the T-6 which allows for the tail wheel to be connected to the rudder pedals if the control stick is neutral or aft of neutral and to disengage and have a full castoring tail wheel when the stick is forward of neutral. You can actually feel the mechanism engaging and disengaging right around neutral position of the control stick. With the control stick neutral or aft, it is fairly easy to taxi with the rudder pedals. However, for sharp turns, the stick must be placed forward of neutral and then turning is done with the brakes only. If you forget and have the stick forward and try to turn the aircraft with the rudder pedals, nothing happens. This will get your attention in a hurry. The Rolls-Royce Merlin engine develops 100 hp at idle, so it is easy for the P-51 to get up too much speed during taxi even

with the engine at idle.

Once the Mustang has been taxied out to the run-up area, it is important to turn the aircraft toward the direction of wind to increase the amount of air going past the radiator. Run-up is fairly non-traumatic; the only difficulty being the incredible amount of power that is being generated during run-up which is done at 2300 RPM, take off being 3000 RPM. It is very important to hold the stick full back during run-up; otherwise, the tail can come



Ken "WAGS" Wagner and Lady Alice at Davis Monthan Air Force Base in Tucson. Note the Mustang rental car!

up and propeller could actually strike the ground. Even with all of the force that I can muster against the brakes, Lady Alice has a tendency to creep a little bit during run-up. The run-up is fairly routine checking the magnetos independently, the propeller, all of the temperatures and pressures and also to check function of the supercharger. Once the run-up is done, the next thing is to call Chino Tower for takeoff clearance.

Once take off clearance has been obtained, it is time to taxi out to the active runway and take off in the P-51. A lot of pilots have come to grief in the P-51 during takeoff because it can be difficult to keep the P-51 on the runway during takeoff. There are several factors that make the P-51 difficult to control on takeoff. Any tail dragger aircraft is inherently unstable while on the ground compared to a nose wheel type of aircraft. This is because the center of gravity of a tail wheel aircraft has to be behind the main wheels, and this will cause the aircraft to inherently want to swerve from side to side and switch ends. A nose wheel aircraft on the other hand has the main wheels behind the

center of gravity which would tend to maintain directional stability without any input by the pilot. This is why the FAA requires a separate tail wheel endorsement in the log book of a pilot intending to fly a tail wheel type of aircraft.

The next part is going to get fairly technical. You might want to think about skipping the next two paragraphs. Ever notice at our model field, a lot more aircraft particularly tail wheel aircraft go off the left side of the runway than the right side of the runway?

Steve Romano, this is for you. The reasons tail wheel aircraft tend to run off the left side of the runway and require judicious use of right rudder has to do with the P factor, gyroscopic precession, torque and airflow swirling around the fuselage. P factor has to do with the fact that when a propeller is pointing upwards and rotating to the right as in the P-51 Mustang, the propeller blades on the right side going downward have an increased angle of attack compared with the upward going blades on the left side of propeller disk. This imparts a force which will tend to pull the airplane to the left and it is much

more severe in a tail wheel airplane since the propeller is pointing upwards a lot more than a comparative nose wheel airplane.

Gyroscopic precession is a topic that I had great difficulty understanding but has a large contribution to leftward forces during takeoff. The propeller and spinner of a P-51 weighs 500 pounds and as the propeller disk changes from pointing upwards to point horizontally during the take-off run, there is a strong leftward force. This was brought home during my training at Stallion 51 with a bicycle wheel with lead-shot in the tire. While the bicycle wheel was rotating to the right and being held by a handle through the axle as the disk was rotated downward, there was a tremendous leftward force caused by the change in angulation of the propeller disk itself. This whole issue of gyroscopic precession will rear its ugly head again when we talk about landing the P-51 Mustang, although it will be going the opposite direction.

The next force that contributes to the P-51 trying to turn left during takeoff is torque. Obviously, there is a great deal of torque



A 3G Overhead turn over the DM Boneyard. Shot from the rear seat...gasp!

coming through the propeller with the 1500 hp Rolls Royce Merlin. In addition to trying to make the aircraft go off the left side of the runway, it also tends to make the left main tire wear much more quickly than the right main tire. Part of the care and feeding of a Mustang is to swap main wheel tires occasionally because otherwise, the left main tire will wear out much quicker than the right. On take off, one can also feel that there is a significant amount of force trying to the roll the aircraft to the left



This will be your view from the back seat

during the takeoff roll because of the torque.

The final factor which is attempting to cause the Mustang to go off the left side of the runway is swirling of the airflow. Wind tunnel studies have shown that in the P-51 the airflow swirls around the fuselage, underneath the wing and fuselage around the area of the scoop and then comes back up to strike the left side of the fin and rudder. Since the airflow is striking the left side of the fin and rudder more than the right side, this tends to push the rudder over to the

right causing the airplane to want to turn left.

All of these factors contribute to making the takeoff experience a little more than thrilling sometimes and significant right rudder must be used. Unfortunately, you never know how much right rudder it is going to take and since the aircraft is basically unstable on the ground, if you give too much right rudder and the airplane starts to swerve to the right, you might have to give a little left rudder at times, so one can really be dancing on the rudder pedals all the way down the runway.

Once all of the pre takeoff checks have been done and takeoff clearance has been obtained from Chino tower, it is time to get very, very serious about getting the P-51 into the air safely. This is one of those situations in aviation where the slightest mistake or misjudgment can have fatal consequences.

Once the plane is rolled out onto the runway, the canopy must be closed; therefore there is no opportunity to look out the sides of the cockpit. There is no visibility directly forward.

One can see the side of the runway out the corner windows and as long as there is equal amount of runway on both sides, there

up and there is all of a sudden visibility forward and then keeping the airplane on the runway becomes much easier. At about 80 knots the airplane will become much more stable on the ground and at about 100 knots the Mustang will typically lift off all by itself. The next thing to do is to bring up the landing gear handle which is down by your left knee followed by a comforting resounding thump as the main wheels go into the wheel wells. Next, it is important to check the coolant temperature and make sure that the Merlin is still happy.

Once the wheels are up and we have established a cruise climb, the view out of the P-51 is unbelievable. Before the first power reduction, the noise is just astonishing and it is very difficult, if not impossible, to hear anything if the tower tries to give a call. Interestingly, that nice, very pleasant noise that is classic for a P-51 is not present in the cockpit. All you can hear inside the airplane is white noise which is painfully loud even with a helmet and ear plugs. The next thing is to pinch self and realize that I am flying a P-51 Mustang and not dreaming.

Next time, we will talk about a typical ride in the P-51; the unbelievable responsiveness of this aircraft, the fact that you feel like you are wearing this airplane, not sitting in it, and that things happen very quickly in the P-51. The most important thing is to never, ever, get behind this airplane.

Ken "WAGS" Wagner Pilot & PVMAC Member



Your editor digging the P-51 on the way to Tucson. Wags is offering a ride again for our Wings over Chino event in November!

Mustang is in the middle of the runway. Throttle is next advanced to 50 inches of Mercury and the noise and vibration are just indescribable. Sometimes it feels as though I am just hanging on trying to keep the thing going somewhat straight down the runway until at about 40 knots the tail comes

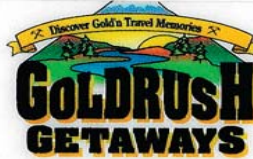
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Any part of this newsletter may be copied to promote radio control model aviation.

Every effort is made to provide valid content for this newsletter, however; PVMAC members, editors and assigned agents are held harmless in the event of a typo, error in copy, and all that other stuff!



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Field Clean up including trimming trees & trash...see story & photos inside this issue!

Club Meeting Date: Tuesday APRIL 13, 2010

Chino Community Building 5443 "B" Street - Chino, Ca 91710 (Directions to meeting on website)

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