



Palomar R/C Flyers, Inc.

Transmitter

December 2015



AMA Charter 141

PRESIDENT'S COLUMN



Happy December Everyone!

I want to say thank you to everyone for allowing me to be president for the last year and a half and thank you to all the people who supported our efforts. I hope you will give Jim and all the officers and board members help when needed; this is your club.

I'd like to remind everyone that our annual key exchange will be held at the entrance gate to our field on January 2, 2016 from 8am til 12 noon. PLEASE be sure to get your AMA current for 2016!

Elections of officers and board members we're held at our general meeting in November with the following elected:

Jim Jenkins – president. Chris Avellino – vice president. Steve Kerrin – secretary. Sean O'Connor – treasurer. Safety Officer – Patrick Pranica.

Board Members: Bill Hill, Chuck Riley, David Drowns, Joe Villarreal, Jim Gallacher and Curtis Pineau.

EVENTS FOR December:

We have our last & final combat meet for the year coming December 5th.

Our annual Christmas dinner is going to be held in place of our December 17th meeting. I hope you'll try to attend to renew acquaintances with some of our members you may not have seen in a while. If you don't have your tickets yet, please contact Barbara Villarreal (760) 390-1470.

Thank you to all of our volunteers this past year, and thanks to my lovely wife, Rhonda for taking notes at our November meeting – THANK YOU.

May you have a very Merry Christmas and blessed New Year!

Fly safe and watch the noise limitations.
Varley Longson

President of the Palomar R/C Flyers, Inc.

Editor's Corner:

On behalf of our club, I want to express our thanks to our club officers and board members for 2015. It is an excellent year. Beginning with President Varley Longson, all of us owe him much thanks for a job well done. Being president, as I have experienced, takes a great deal of time. However, Varley is not only president, he is also our membership chairman. That job alone is one huge, thankless task. Not many people say thanks to Varley for continually giving his time and talent to us. It's easy to take for granted what the club officers contribute to the running of our club; their behind-the-scenes efforts are largely hidden. It is by actually being in these positions that one appreciates how much effort goes into making our club run smoothly.

Varley, you rock and we appreciate you. You have earned your lifetime membership many times over. You stand tall, our friend.

I will not mention the rest of the team members by name, but you too richly deserve our thanks. Not only do you attend the club meetings, but you devote another night during each month for board meetings. Then there are the follow-up activities you folks have accomplished. The time spent cooking for our club events eats time in your busy schedules. Thanks to you all and to the various chairmen who run the special events we enjoy every year. No wonder our club thrives.

In most organizations, about 9% of the membership are actively involved in running an organization. The same statistic is true for the Palomar R/C Flyers, Inc. For the most part, we see the generous faces of the same 9% involved in running our club.

The *Transmitter* records some of what you all have made possible for the rest of us. We appreciate your dedication. We don't say it enough, so speaking for the rest of our club members:

Thank you for all you have done for us, and all you continue to do. We appreciate you and your generosity.

A personal note from Joe Buko, editor: Thank you to so many for your kind remarks and prayers offered on behalf of my wife Ann and me. I compare her end of life days to sailing in a sailplane. She has flown the circuit and is coming in on final. Her liver cancer symptoms are well managed by the angels at Elizabeth Hospice, but her cancer continues to progress.

Many of you have been through similar experiences and have shared the details of helping your wives through their final days. Thank you for your kindness and compassion. I appreciate you so much. Our club is more than just flying our planes at the field. The relationships that we have with our club friends are rich sources of goodness and love. These are the 'good old days.' I am grateful for your support and caring.

This month's Transmitter is shorter than usual. My time to work on the newsletter these days is limited for obvious reasons. 11/30/2015

Note Well— Notice- Please Read This:

2016 Key Exchange

Keys to our flying field will change on January 2, 2016. If you want to fly at the field, come on Saturday, January 2, 2016 to pick up your new key. Obviously, your 2015 key will not work next year.

Please bring your 2015 key to exchange for a new one. Also, be sure your AMA is current for 2016.

Varley and company will be there on the road outside the gate to exchange your key from 8 AM until noon. We owe a great debt of thanks to Varley and the folks who helped in this huge work.

Editor

FOR SALE FOR SALE FOR SALE

ALL NEW IN BOX

fox eagle 74 2c - \$50.00

hb eng. hb 40 2c - \$50.00

super tigre 60 2c - \$50.00

super tigre 3000 w/perry carb. - \$100.00

o.s. max 108 2c - \$150.00

o.s. surpass fs 120 4c w/pump - \$250.00

**Byron byrojet ducted fan sys. complete w/rossi .60 2c
rear exhaust w/tuned pipe \$100.00**

Thanks, Marvin Clemens

760-433- 6651

Our former club secretary, Don Wadlington, wrote that he is building a 85" Decathlon powered by 30cc gasoline four stroke engine . He sent the following three photos. It sure looks slick. Thanks, Don. We miss you.





Reynolds numbers, why they are important

Ron Peterka

Think of Reynolds numbers as a measure of the viscosity, or stickiness, of air or liquids. Since we are discussing aircraft physics we will stay with the Reynolds number for air. Reynolds numbers are named after British engineer and scientist Osborne Reynolds many years ago and who recognized the effects of air's viscosity and density on aircraft flight.

Like water, air molecules have a particular amount of stickiness or viscosity. When you move an aircraft through the air a certain amount of friction occurs on every surface of the aircraft when moving through the air. For the SR-71 this friction heats the skin surfaces to temperatures of up to 450 degrees F around Mach 2.5. I haven't found any stat on the heating occurring on an RC model, even a fast one.

Air also has density, not as high as water, and much more variable with variation in altitude and temperature. The air is somewhat reluctant to move aside, or over so your airplane can get through.

The major problem for modelers is that air density and viscosity cannot be scaled like we scale our other model dimensions, etc. down from full-scale aircraft. It should make some sense that more area results in higher lift at a given speed. Also, higher speed can increase Reynolds numbers so a small wing can lift a heavy airframe.

If the air is turbulent, the temperature and drag on the structure increase so laminar flow is important.

The simple formula is Reynolds Number =
$$\frac{\text{Speed x length (of hull)}}{\text{Kinematic viscosity}}$$

The numbers are not simple, or small, but we have no need to compute accurate numbers. The Reynolds numbers for model aircraft are usually around 10,000 to 400,000 in flight due to the smaller wing area and low speeds of the models. Full-scale aircraft have numbers ranging from 2,000,000 to 20,000,000. These numbers don't translate into usable information unless we see the effect of these numbers so we often use the wing loading of the aircraft in ounces of weight relative to the wing area in square feet (144 inches), or oz/sq. ft.. This measurement in models ranges from a few ounces per square foot to around 70 oz/sq ft for large size models and the difference in performance is largely due to the number of air molecules flowing over the wings surfaces..

Sheet foamie models may have a wing loading of fractions of an ounce per square foot of wing area, and an RC trainer around 15 oz to 25 oz sq/ft. Large scale models with their larger wing area can handle loads of 35 to 70 oz/sq ft easily. Our turbine-engine models can have very high wing loadings, but generate higher speeds to generate enough lift.

In contrast, a full-scale Piper Cub would rate a loading of around 107 oz per sq/ft (almost model range) due to its very slow speed. A P-51B at full gross weight would have a wing loading of 739 oz sq/ft, and a B-25 Martin "Marauder" light bomber, a 956 oz per sq/ft. wing loading.

Modern jumbo jets with advanced aerodynamics are in a whole different category regarding wing loading. A modern Boeing 747 at max gross takeoff weight of 910,000 pounds has a wing loading of a whopping 2,600 oz per sq/ft of wing area. Many modern airliners are restricted to a lower maximum 'landing weight' than gross takeoff weight, so in emergencies they must dump some fuel load to lighten the aircraft to a safe landing weight.

All these numbers are caused by the relatively unalterable air molecules we depend upon for flight weather in a model or in a full-scale aircraft of any size. Remember, increasing the size of a model wing by doubling it will increase the area by a factor of four, which in turn causes a higher Reynolds number, which increases lift per square foot of wing area. Or, this is why little airplanes "flit" and larger airplanes "fly".

End

7/2015



Chris Avellino's 3-D plane cuts some great poses.





Chris Avellino is our current club secretary but in January he becomes our new vice president.



Greg Wilson is on the left. Above is my reflection in Chris' right eyeglass lens!



Nov. 5, Jim Gallacher brought Tom Johnston's PA-20 to the flight-line. It's colorful and flies well.





As I was coming to the field in the early morning, this full-scale balloon drifted over Gopher Canyon road near club member Bob Peterson's home.

Below is the small Oceanside, Ca. airport. The photo was taken from Prince of Peace Abbey which overlooks the airport.



Ambrosini SS.4 aircraft c. 1936-37

This plane is part of the following article by Ron Peterka

CURTIS ASCENDER VS; KYUSHU MAGNIFICENT LIGHTNING

A comparison of two very different aircraft

Ron Peterka

In any war each side makes every effort to gain an advantage over the other by designing and building ever more effective weapons. So it was in WWII when the U. S. and Japan each designed very different designs they hoped might be the ultimate pursuit aircraft. The Americans began a little earlier, in 1940, looking to improve performance over then current fighter aircraft.

Curtis Wright XP-55 “Ascender”

The Curtis Aircraft Company and two others were given contracts to design and build radical new aircraft, and Curtis was chosen to build the XP-55 and the project was named as the Ascender.



The companies were encouraged to explore unusual designs and the Ascender had a three bladed pusher prop, canard configuration with sharply swept wings, a rear mounted engine, and two vertical tails. It was also the first Curtiss design to use tricycle landing gear. When an experimental engine planned for the P-55 was dropped, the plane was redesigned, eventually using a V-1710 Allison engine with 1,275 HP. The propeller was to be jettisoned in an emergency so the pilot could bailout safely. Armament was to be four 50 cal. machine guns mounted in the nose.

Probably because it was an experimental design the first XP-55 made it's first flight in 1943 and it was decided to add wingtip extensions and enlarge the canard elevators. Performance was not impressive, and additionally, jet-powered aircraft were already in development so further work on the design was sopped.

The one remaining XP-55 is on display at the Air Zoo in Kalamazoo MI as a long term loan from the Smithsonian National Air & Space Museum in Washington D.C..

Kyushu J7W Shinden "Magnificent Lightning"

By 1943 the Japanese home islands were being bombed by Allied B-29s and the Japanese response was designed as a land based, short ranged, interceptor. The Shinden was a canard design by the Japanese Imperial Navy with a rear pusher engine, sharply swept wings with two wing mounted vertical fins and tricycle gear. Originally fitted with a reciprocating engine turning a six-bladed propeller, the Shinden was to be converted to jet turbine power later. Armament was to be four forward-firing 30 mm cannons.



Copying an enemies weapon designs is a long time patten, but the Shinden is very different from the Ascender and probably an original new design. Two prototypes were completed by April 1945 and proved so impressive that the design was approved for production before first flights of the prototypes, which took place on August 3rd, 1945.

Just three days later, an atomic bomb was dropped on Hiroshima on August 6th, 1945 ending the war and development of the Shinden. The U.S. Navy Intelligence unit claimed one airframe and the other was scrapped. The surviving Shinden is stored at it's Garber Facility in Suitland VA by the Smithsonian Air & Space Museum in Washington D.C.

Comparing these two designs shows the differences and similarities. The Ascender has a lower horsepower rating at 1,275 than the 2,130 HP of the Shinden. Interestingly, the Shinden has the lower wing area with 220 Sq Ft, to the P-55's 235 Sq. Ft.. The Curtis has a wing loading of 33 Lb/ Sq Ft to the Shinden's 49 Lb/Sq Ft loading. Since the P-55 weighed more (10,841 Lbs vs. 7,710 Lbs) the Shinden should have the higher power loading and higher performance. The Curtis aircraft claimed 390 MPH @ 19,300 ft, although it's actual performance apparently never reached that goal, while the Shinden was rated for 469 MPH, comparable to the best fighters of the day. The Shinden had only 45 minutes total flight time so it's airspeed is questionable also. The Ascender had the advantage on range with 105 miles greater range.

With four 30mm cannons, the Shinden out gunned the P-55 with four 50 cal machine guns. The P-55 would have carried more rounds. Both aircraft had cooling system problems on the ground and both had long takeoff runs due to the small size of the forward canard surfaces. The P-55 crashed one prototype during a vertical dive (pilot bailed out), and another during a slow roll at low altitude during an air show (pilot killed).

Converting the Japanese aircraft to jet power would have been fairly easy, but already short range would probably suffer with higher fuel flow of a turbine engine. Under the heading of "There is nothing new under the sun" we look back to 1930 and an Italian aircraft designer built a series of canard design aircraft, three small proof of concept prototypes, and a fourth intended to be a fighter aircraft. The Libellula SS.4 was an all metal design that looks amazingly like either the Curtiss or the Japanese Canards. Probably due to balance problems, the SS.4 crashed on its maiden flight and development was discontinued.



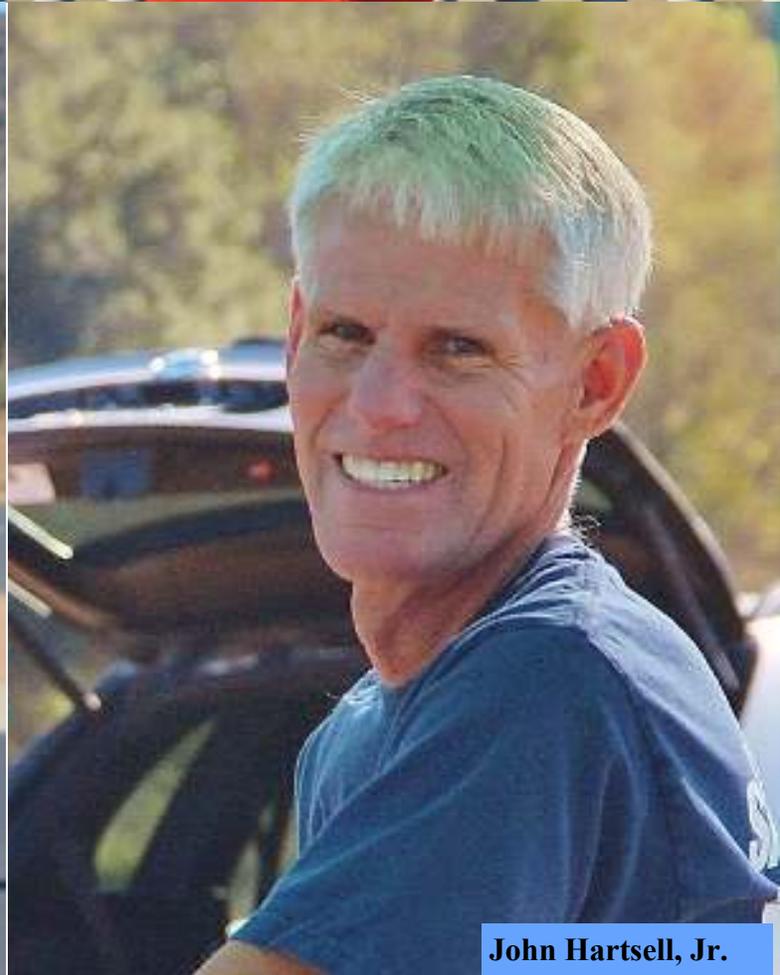
Mike Lonnecker was flying this Libelle. It is a German sailplane and the word means 'dragon fly.' Mike, you are still handsome after all these years!



Grandpa Roly Bryant and Eric Thomas and Liam Bryant-Thomas. Liam and his dad had a little contest as to who could land most closely on the centerline. Liam won! Good going!



John Hartsell Sr.



John Hartsell, Jr.



Ron Madison preparing his 3-D for flying.



Ian Middleton looks on as Transmitter editor Joe Buko prepares his 40 year old J-3 for flight; it was built from a Sig kit and still flies with only one servo for both ailerons.



A front view of Ian Middleton, the Scotsman from Canada.

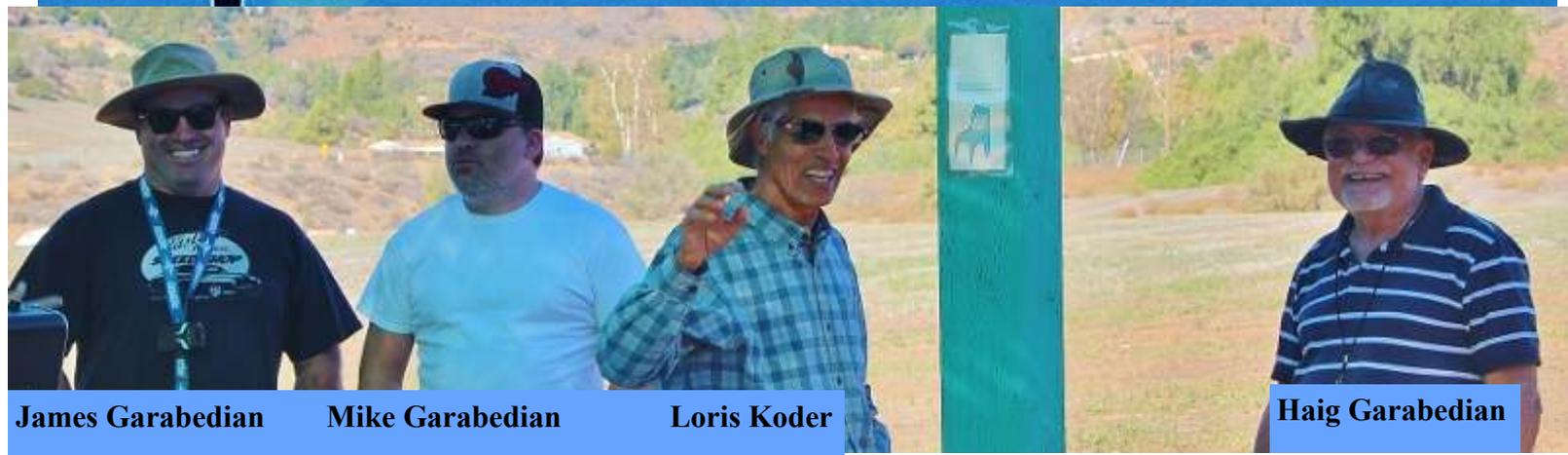
HELICOPTERS AT OUR FIELD

Don White





Don White's heli



James Garabedian

Mike Garabedian

Loris Koder

Haig Garabedian



Russell Parks



Loris Koder

Haig Garabedian

Mike Garabedian



Mike Garabedian

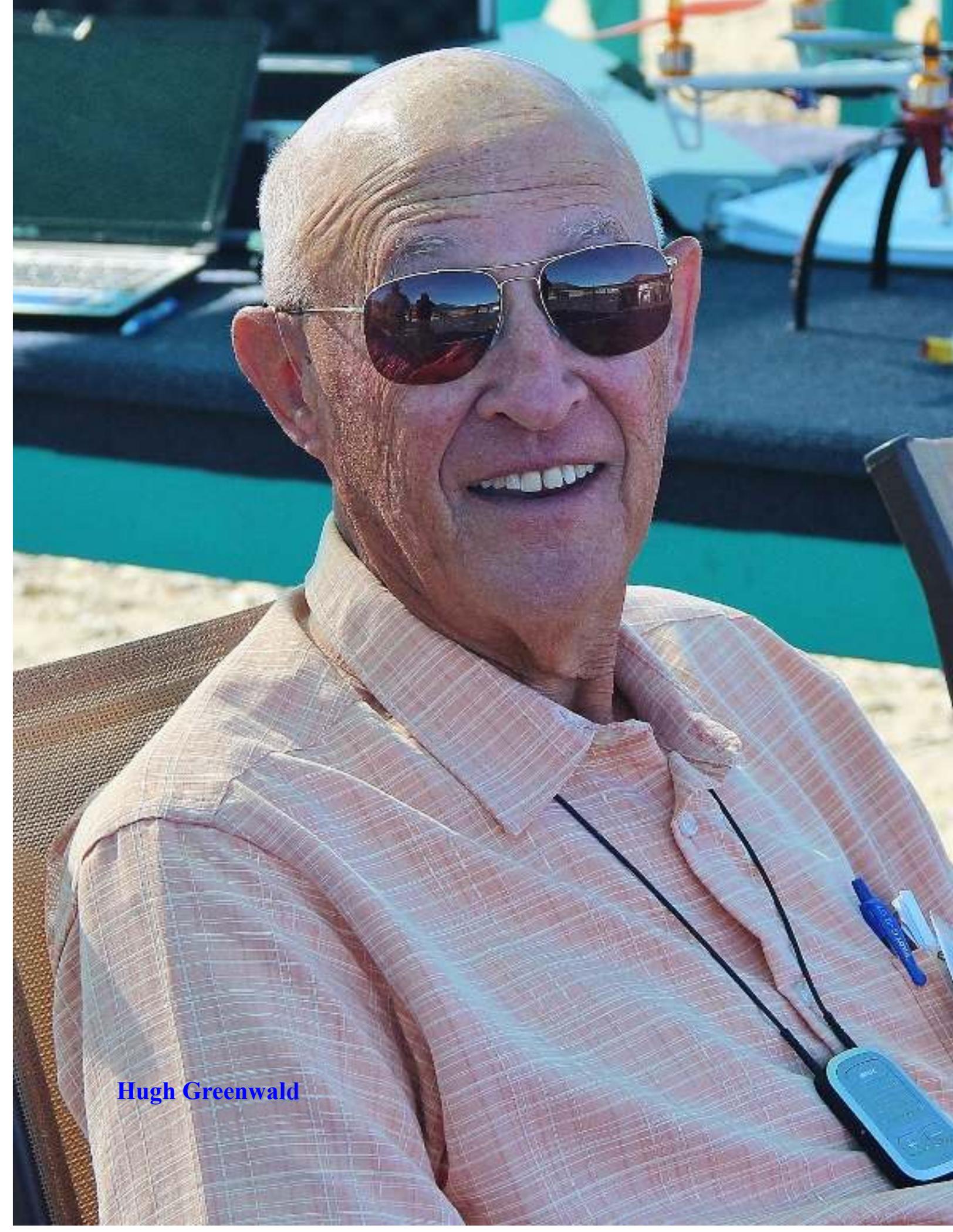
Brian Otto



Steve Kerrin

Mike Lonnecker

James Gallacher



Hugh Greenwald



Congratulations to Jim Jenkins, our president for 2016! Jim was elected on Nov. 19th, the day this photo was taken at our field when the temp was 80.



Dale Burlington



Greg Wilson

November Club Meeting and Annual Auction and Elections





Rhonda Longson

Ethel Burke



The young Albert boys were flush with cash and bought many planes at the auction.

Our auctioneer, Bill Hill, former president, was elected to serve as a board member. Bill, you are one of our finest!



Varley Longson won Model-of-the Month with this large scale, beautiful Supermarine Spitfire. He said that he finally aced Frank Burke, another master builder, who often wins this award.

Varley had to present himself with the Model-of-the-Month plaque since the VP was not in attendance.



**November
2015
Model of
the
Month**



Another photo of President Varley Longson's Supermarine Spitfire. This is one slick plane.



Frank Burke brought his P-40 Warhawk which was impeccably done.



Treasurer Sean O'Connor was re-elected to serve another term. Many thanks for your fine service.

AS SEEN AT THE FIELD

BY ETHEL BURKE

NEXT FOUR PHOTOS BY eTHEL



"Welcome" to new member, Miles Padberg. Miles has moved here from Washington state and has been flying for 5 yrs. He is interested in combat. Today he is flying two of his 1/8 scale combat war birds. The Corsair has a 40 in. wingspan with a 25 glow engine. He modified it and added fixed gear and a steering tail wheel.

The P-47 Thunderbolt is electric with a 30 in. wingspan and also has a steering tail wheel added. The motor is 1200 kv and 14 volt.

Here is Dale Burlington flying his T-28 Trojan from Park Zone. The wingspan is 48 in. It has an electric motor with ASX-3 (artificial stabilization). It has an E-flite ESC and receiver with an AGA Power 3-cell battery 2200 mAh. It is flown with a Spektrum DX-9 transmitter.





"Welcome" to new member, Allen McTurner from Ohio. Allen is flying this Yak 55 from Fly-Models. The wingspan is 89 in. and it has a Demon Cortex gyro installed. It is powered by a DLE-55cc gas engine with a 22 x 8 Xoar prop. It is flown with a Hitec Aurora 9 transmitter.



Peter Nanigian is flying this Stinger 90 foam jet made by Freewing and purchased through Motion RC. It has a 90 mm electric ducted fan motor, 6S battery 5000 mAh, and a 120 amp ESC from Hobbywing. The added, heavy duty nose cone & canopy were bought separately.

The wing is 45 in. and has flaps & ailerons. It has tri-gear electric retracts and weighs 6¼ lbs.

PLANE CONFORMS
M SPECS.
5 ft.





Steve Nelson's Carden Pro Extra

These five photos of Steve's plane courtesy of Varley Longson.

Palomar Dollars as of Nov. 27, 2015 by Varley Longson

AVELLINO	CHRIS	125.00
BATES	DENVER	125.00
BUKOVCHIK	JOSEPH	125.00
COSIO	ROGER	125.00
DEDIC	SCOTT	125.00
DROWNS	DAVID	125.00
EIVAZ	FRED	125.00
GALLACHER	JAMES	125.00
HILL	BILL	125.00
HUFFORD	LARRY	125.00
JENKINS	JIM	125.00
KERRIN	STEVE	125.00
LONGSON	VARLEY	125.00
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LOUKAKIS	JASON	125.00
MICHELI	CHARLES	125.00
NEMOVI	RAY	125.00
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O'CONNOR	SEAN	125.00
PAGE	SCOTT	125.00
POHLY	GLENN	125.00
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RILEY	CHUCK	125.00
VILLARREAL	G JOSEPH	125.00
WHITE	DONALD	125.00
ABONGAN	BUTCH	100.00
HARTSELL	JOHN D.	100.00
HITCHCOCK	TIM	100.00
MELTON	TODD	100.00
RILEY	CHARLIE	100.00
D'ELISEO	JAMES	90.00
BROUGHTON	ROBERT	80.00
McLEAN	JOHN	60.00
FRAZIER	ROBERT	50.00
HARTSELL	JOHN	50.00
PINEAU	CURTIS	50.00
LANZ	VICTOR	40.00
WALTON IV	CHARLES M	40.00
SCHUYLER	RONALD	30.00
ELROD	MIKE	20.00

**Palomar RC Flyers Monthly Meeting
November 19, 2015**

Call to order was given by President Varley Longson at 7:20 p.m. He welcomed the members and the guest from Canada. More than 60 people attended the meeting due to the popular annual November Auction.

The motion to waive the reading of last month's minutes and to accept minutes as published was approved.

The financial report was given by Sean O'Connor. The club account balance is \$55,839 which includes membership dues that are now being collected.

This month's club business was the elections. The membership voted, and the new slates of officers are as follows:

President: Jim Jenkins

Vice President: Chris Avellino

Treasurer: Sean O'Connor

Secretary: Steve Kerrin

Safety Officer: Patrick Pranica

Board of Directors: Bill Hill; David Drowns; Jim Gallacher; Joe Villarreal; Chuck Riley and Curtis Pineau.

Christmas dinner tickets were made available tonight from Barb Villarreal. Anyone who needs tickets can contact her at 1 (760-390-1470). The cost is \$20 per person for a wonderful catered meal on December 17th at 7 p.m. at the San Marcos Senior Center. 111 Richmar Ave, San Marcos, 92069.

There aren't any upcoming events at the field.

Model of the Month and award: Varley Longson won model of the month for his outstanding job building the PICA Spitfire with a wingspan of 88" and 26lbs. weight.

Many thanks to the Melody and Chuck for the wonderful snacks each month.

Bill Hill did an outstanding job as the auctioneer. Many thanks to the club members who donated many items that brought in money for the club.

**Meeting adjourned at the end of the auction at 9:20 p.m.
Minutes by Rhonda Longson**



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VICE PRESIDENT Patrick Pranica	442-333-9024
SECRETARY Chris Avellino	858-245-3342
TREASURER Sean O'Connor	858-485-0750
SAFETY OFFICER Jim Jenkins	760-910-4141
BD MEMBER Denver Bates	760-728-2880
BD MEMBER Scott Dedic	858-674-4624
BD MEMBER Chuck Riley	951-693-5679
BD MEMBER Roger D. Cosio	760-724-4926
BD MEMBER Joseph Villarreal	760-390-1470
BD MEMBER David Drowns	760-740-1715

CLUB OPERATIONS

Advertising Bill Hill	760-738-0644
Newsletter Editor Joe Buko	760-726-8831
WebMaster Martynas Kausas	

SPECIAL INTEREST GROUPS

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Helicopter Chairman Scott Dedic	858-674-4624

HEAD INSTRUCTOR

Dennis Newbeck	760-297-1134
-----------------------	---------------------

INSTRUCTOR LIST

Butch Abongan Basic Flight	760-855-2162
David Drowns Basic Flight	760-740-1715
Todd Melton Basic Flight	760-305-8983
Glenn Pohly Basic Flight	858-414-9749
Tim Hitchcock Basic Flight	760-458-8961

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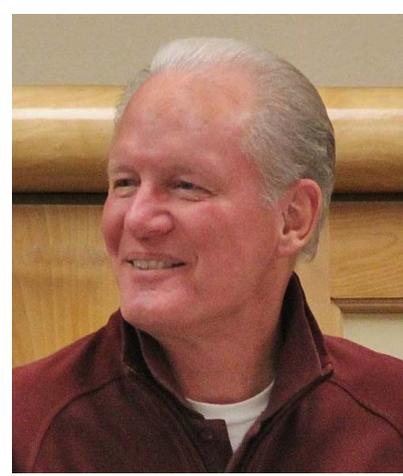
2015 Club Officers



Treasurer Sean O'Connor



President Varley Longson



Vice President Patrick Pranic

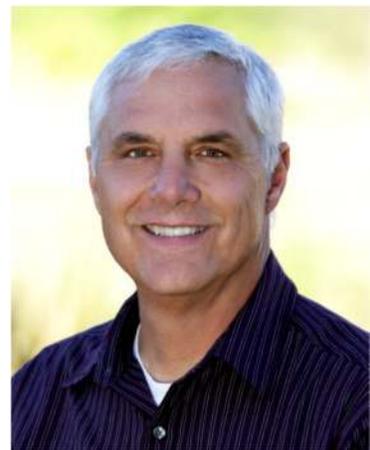


Safety Officer Jim Jenkins

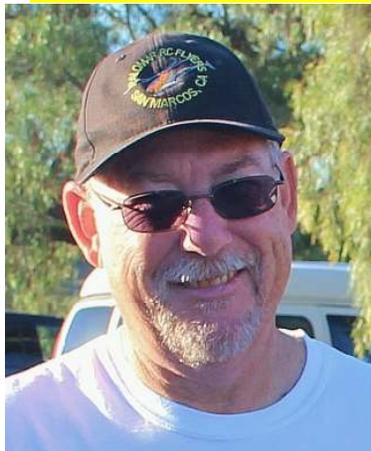


Secretary Chris Avellino

Board Members



Sott Dedic



Joseph Villarreal



David Drown



Chuck Riley



Denver Bates



Roger Cosio

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CLUB MEMBER NEWS

December 2015

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