

The Comets' Tale

*The Official
Newsletter of the*



December 2007

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The Comets' Tale is the official newsletter and record of the Ventura County Comets, AMA Chartered Club #173 and is published monthly at the Comets' Tale Plaza, somewhere in Ventura.

Editorial contributions are welcome.

Next Meeting:

Thursday, 20 December, 2007, **7:00 PM** at the
Oak View Community Center



**Coming
Up!**

**Thursday, 20 December
2007**

7:00 PM

Comets' annual Christmas
meeting, party and potluck.
Check with Marilyn Nash
about what to bring

1st Sunday of each Month

First Sunday At the Airport
Static displays, Young
Eagle Rides
Santa Paula Airport

December Rambling

I won't be able to make it to the Christmas party this year so I would like to wish everyone a Merry Christmas, and I hope you all have a great year in 2008.

I haven't seen many new models at the field for awhile so it was nice to see Don Ashworth with a new Ultimate biplane as shown in picture 1. It is built from a Goldberg kit. Jim Anderson started it and Don finished it. George Boston was out the same day with his beautiful P-51 in the Miss America paint scheme as shown in picture 2. Mike Ambarian put this ARF together, and after flying it awhile sold it to George. Another model which I haven't seen flying for awhile is Ron Golding's Edge 540 shown in picture 3. I believe Ron bought this ARF kit at the AMA show last year. The annual AMA show which is now held in Ontario is worth seeing. A group of us attend each year. The show is January 11, 12, and 13 this year. Our group goes on Friday and I know other Comet members attend on Saturday. Anyone that hasn't seen this show should try to go. It is well worth the trip to see what's new from the industry.





I was on the internet looking for full scale propeller information when I came across a collection of pictures of airplanes which utilized counter rotating propellers. There are many designs which have been tested over the years. I thought some of our members might be interested. Although I had heard about some of these, others were new to me. There are too many pictures for one newsletter so I will show some of them this month and the rest next month.

Picture 4 shows an Italian Macchi-Castoldi MC-72. This airplane was designed for the Schneider trophy races. Five of these machines were planned for the 1931 races, but the Italians ran into a lot of development problems. There were surface radiators covering the wings, upper fuselage, and the floats. All the fuel was carried in the floats under pressure and fed to small header tanks in the fuselage. They lost 2 of the three airplanes which had been completed in time for the 1931 races. The indications were of fire in the area of the header tanks started from various sources. No further development was made on the remaining aircraft for quite some time. The British Vickers-Supermarine-Rolls-Royce S.6B won by default that year. No other country was ready to compete. The Italians did get the MC-72 flying later and set a new world speed record for any aircraft. This plane utilized two engines in tandem. Take note of the huge pitch on the fixed pitch prop blades. This record speed was finally exceeded (by less than 30 mph!) in 1939 by the Germans using a modern land based plane. The MC-72 still holds the seaplane speed record as far as I know.



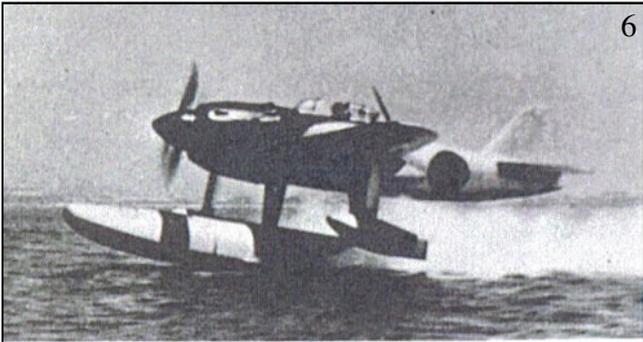
Macchi-Castoldi MC-72
 Fiat AS6 engine; dual V-12, 3100 total HP, each engine drives one very coarse, fixed-pitch prop 440.729 mph in 1934. Class record still stands.
 Why contra-prop? Supermarine S6B w/ 2650 HP on single prop overloaded one float by 32% on takeoff due to torque



Supermarine Spitfire MK 46: Griffon, Rotol

There was a lot of development work during WW-II aimed at increasing available horsepower in some of the fighters of the day. Picture 5 shows one of the final Spitfire designs after the war. The Supermarine Spitfire probably had more improvements made over its life than any other airplane. Every time the Germans came out with a performance improvement the British updated the Spitfire. The Spitfire design was started in 1935 when most military officials still thought that an air to air fighter had to be a biplane. It went into service around 1939 utilizing a fixed pitch wooden prop. As the Merlin engine was improved for better performance the prop changed to a variable pitch prop utilizing 2 blades, then 3, then 4 blades. Finally with the new Rolls Griffon engine replacing the Merlin they had to go to a 5 blade variable pitch

prop to absorb the tremendous horsepower being developed. Interestingly the five Rotol prop blades were made of wood to save weight. The MK 46 in picture 5 was the final iteration of this development.



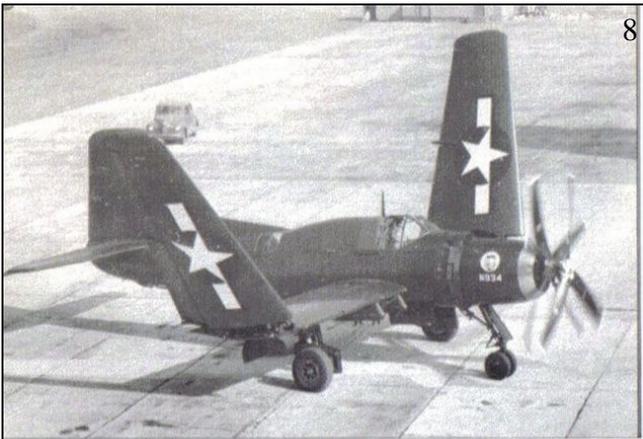
6

**Kawanishi N1K1 Kyofu
Ha.32/14, prop maker unknown**



7

Vought F4U-1 Corsair: R-2800, Hamilton Standard



8

**Douglas XTB2D-1 Sky Pirate
R-4360, Hamilton Standard**



9

Martin-Baker MB-5: Griffon, Rotol

Picture 6 shows a Japanese plane with counter rotating props. I don't know anything about this airplane or the American Corsair shown in picture 7. Picture 8 is a Douglas XTB2D-1 Sky Pirate. This plane was an attempt to utilize the huge Wright R-4360 engine. I think many of these efforts were superseded by the coming jet powered aircraft, but it must have been fun while it lasted. My understanding is that the Martin-Baker MB-5 shown in picture 9 wasn't successful because it didn't have any performance advantage over the late Spitfires. I will end this discussion with picture 10. The Douglas XB-42 was an attempt to improve performance by utilizing a pusher configuration. The fact that this program didn't go is a good indication that the hoped for performance wasn't there. I will show some of the later designs utilizing counter rotating propellers in next months discussion.

I want to include an article I just saw in the Winter 2007 issue of the International Miniature Aircraft Association High Flight magazine. This is a fascinating discussion of one second during an unlimited air race. Enjoy it and I'll be back in 2008.



10

Douglas XB-42: 2 x V-1710, Curtiss electric

Bob Root

ONE SECOND IN THE LIFE OF A RACER

BY TOM FEY

THE UNLIMITEDS GO FLASHING THROUGH THE RACECOURSE, ENGINES HOWLING, AIR SHEARING, HEAT WAVES STREAMING. FOUR HUNDRED EIGHTY MILES AN HOUR IS 8 MILES A MINUTE, AND THE ELITE RACERS TAKE ABOUT 70 SECONDS TO COVER THE 9.1 MILE RENO COURSE. IF YOU COULD TAKE A SOUPED P-51 RACER FLYING THE CIRCUIT AT RENO, SLOW TIME DOWN, AND EXAMINE JUST ONE SECOND, WHAT WOULD YOU FIND?

IN THAT ONE SECOND, THE V-12 ROLLS-ROYCE MERLIN ENGINE WOULD HAVE GONE THROUGH 60 REVOLUTIONS, WITH EACH OF THE 48 VALVES SLAMMING OPEN AND CLOSED 30 TIMES. THE TWENTY FOUR SPARK PLUGS HAVE FIRED 720 TIMES. EACH PISTON HAS TRAVELED A TOTAL OF 60 FEET IN LINEAR DISTANCE AT AN AVERAGE SPEED OF 41 MILES PER HOUR, WITH THE DIRECTION OF MOVEMENT REVERSING 180° AFTER EVERY 6 INCHES. THREE HUNDRED AND SIXTY POWER PULSES HAVE BEEN TRANSMITTED TO THE CRANKSHAFT, MAKING 360 SONIC BOOMS AS THE EXHAUST GAS IS EXPELLED FROM THE CYLINDER WITH A VELOCITY EXCEEDING THE SPEED OF SOUND. THE WATER PUMP IMPELLER HAS SPUN 90 REVOLUTIONS, SENDING 4 GALLONS OF COOLANT SURGING THROUGH THE ENGINE AND RADIATORS. THE OIL PUMPS HAVE FORCED 47 FLUID OUNCES, ROUGHLY ONE-THIRD GALLON, OF OIL THROUGH THE ENGINE, OIL COOLER, AND OIL TANK, SCAVENGING HEAT AND LUBRICATING THE FLAILING MACHINERY. THE SUPERCHARGER ROTOR HAS COMPLETED 348 REVOLUTIONS, IT'S RIM SPINNING AT MACH 1, FORCING 4.2 POUNDS OR 55 FT³ OF AMBIENT AIR INTO THE COMBUSTION CHAMBERS UNDER 3 ATMOSPHERES OF BOOST PRESSURE. AROUND 9 FLUID OUNCES OF HIGH OCTANE AVIATION FUEL, 7843 BTU'S WORTH OF ENERGY, HAS BEEN INJECTED INTO THE CARBURETOR ALONG WITH 5.3 FLUID OUNCES OF METHANOL/WATER ANTI-DETONANT INJECTION FLUID. PERHAPS 1/8 FLUID OUNCE OF ENGINE OIL HAS BEEN EITHER COMBUSTED OR BLOWN OVERBOARD VIA THE CRANKCASE BREATHER TUBE. OVER 1.65 MILLION FOOT POUNDS OF WORK HAVE BEEN DONE, THE EQUIVALENT OF LIFTING A STATION WAGON TO THE TOP OF THE STATUE OF LIBERTY.

IN THAT ONE SECOND, THE HARD-RUNNING MERLIN HAS TURNED THE PROPELLER THROUGH 25 COMPLETE REVOLUTIONS, WITH EACH OF THE BLADE TIPS HAVING ARCED THROUGH A DISTANCE OF 884 FEET AT A ROTATIONAL VELOCITY OF 0.8 MACH. FIFTEEN FLUID OUNCES OF SPRAY BAR WATER HAS BEEN ATOMIZED AND SPREAD ACROSS THE FACE OF THE RADIATOR TO ACCELERATE THE TRANSFER OF WASTE HEAT FROM THE COOLING SYSTEM TO THE ATMOSPHERE.

IN THAT ONE SECOND, THE AIRCRAFT ITSELF HAS TRAVELED 704 FEET, CLOSE TO 1/8 MILE, OR ROUGHLY 1.5% OF A SINGLE LAP. THE PILOT'S HEART HAS TAKEN 1.5 BEATS, PUMPING 5.4 FLUID OUNCES OF BLOOD THROUGH HIS BODY AT A PEAK PRESSURE OF 4.7 INCHES OF MERCURY OVER AMBIENT PRESSURE. OUR PILOT HAPPENED TO INSPIRE DURING OUR MEASURED SECOND, INHALING APPROXIMATELY 30 CUBIC INCHES (0.5 LITER) OF OXYGEN FROM THE ON-BOARD SYSTEM, AND 2.4 MILLION, YES MILLION, NEW RED BLOOD CELLS HAVE BEEN FORMED IN THE PILOT'S BONE MARROW.

IN JUST ONE SECOND, AN AMAZING SEQUENCE OF EVENTS HAVE TAKEN PLACE BENEATH THOSE POLISHED COWLINGS AND VISORED HELMETS. IT'S THE WORLD'S FASTEST MOTORSPORT. DON'T BLINK!

November 2007 minutes Comets Meeting

Thursday 15th of November, 2007.

Called to order at 07:34PM by **Pres. John Dugan**

July Minutes – Approved with correction: Nominating committee was **Lynn Breedlove, George Lanquist, and Mike Steinmetz**

Treasurer's report accepted

Membership 97

No visitors

Renewals are being accepted now. Please include the renewal form filled out and a copy of your AMA card for 2008 if sending in by mail.

Safety: **Dennis Fingold** -No Report.

Field Marshall Bud Scolari: Lake Casitas park people will be locking the gate by the shower building after Thanksgiving. Be sure to re-lock the gate after you come in.

Park liaison **Ken Marsh:** No Report

Old Business-

1. The float fly had 63 registered pilots. Weather was great and all were able to fly as much as they wanted. Good job by all the club volunteers, food was excellent as usual.
2. Nominating Committee report, **Lynn Breedlove:** President- **Ron Scott** was nominated but had to decline the nomination due to distance to field from home. Nominations opened to the floor, **Mike Ambarian** was nominated and accepted. No other nominations. Closed. Secretary- **Sandy Billings** was nominated, nomination opened to the floor. No further nominations. Elections were held with both positions being elected by acclamation.

New Business-

1. **Christmas dinner will be held next month. Contact Marilyn Nash if you haven't already signed up to come and also bring a dish. There will be a short meeting at 7PM and dinner at 7:30PM.**
2. Float fly for members will be limited for members only, no guest. **Ron Scott** will be CD with registration, etc.

Model of the Month - 3 models presented:

Bob Root – Ace 4120 Kit powered by a Supertigre 3000. Weighs about 15 ½ pounds.

T J Moran – Sun Racer F5D , small electric powered racer, Kevlar fuse, carbon fiber spars, weighs 21 ounces. Extremely fast

Emery Balasa – Hanger 9 Pulse XT 40. reported as a well built ARF with excellent directions.

Bob Root was the winner!

Drawing held

Meeting adjourned 8:21pm



Ron Golding

RENEWAL NOTICE 2008
Ventura County Comets
Dues Payable on or before January 1, 2008

Name _____

Street Address _____

City _____ State _____ Zip _____

AMA Number _____

Telephone Number _____

Email address _____

R/C Frequency Channel _____

Type of Membership: Senior _____ Spouse _____ Junior _____ Lifetime _____

Membership Renewal Fee: Senior \$50, Spouse \$25, Junior 17 yrs. and younger \$10
Please include a copy of your 2008 AMA membership card

Tips & Tricks

Got fuel-soaked balsa?

Fuel leak from the fuel tank all over the tank compartment? If so I have the solution! First, remove the fuel tank if able. Next, try to dry as much as possible. When finished, get some regular corn starch and dump it in the compartment and leave for 24-48 hours. After that, dump out the excess (if able) or use the vacuum cleaner. You will probably have corn starch stuck on the balsa where the fuel was. Just push the tank in and take it back out and use the vacuum to get the rest out. If it is still damp reapply the corn starch for another 24 hours. Repeat as you feel necessary. Yes, there are other methods to use but I have found this one to be best.

Tip for those who have Real Flight G2

If you use the interface controller for real flight, take a small zip tie and secure the cord to the carrying handle that way it will relieve the stress on the wire going into the controller.

Tip for cleaning bolts

I saw this little tidbit on RunRyder on cleaning bolts before applying Loctite to them. To do so, place the pile in a fine strainer (stainless) and sink it in a pot of boiling water and regular, not lemon, Cascade detergent for about 10 minutes. Dissolve the Cascade first. Rinse thoroughly and dry when complete. The parts are very clean when done. No further prep work is needed. This is easier on the fingers than the manual method, especially on a new model with a whole bag of screws to do.

Reinstalling the fuel tank with motor installed

Have you ever tried to run those pesky fuel lines through the tiny hole in the firewall while the motor is installed and you got a headache? Well here is your aspirin! If you have any old pushrods or old bent landing gear lying around, straighten them as best you can and route them through the front of the firewall to the radio compartment. Then hook your fuel lines onto the wire and pull the wire out of the firewall. Easy huh?

Reducing glitches

Use shrink or silicon tubing on metal parts such as throttle and linkages to reduce glitching.

—all tips and tricks courtesy of Jim's RC.com

TJ Moran sent these photos from the Comets-only Float Fly last November 15-19. Seems everybody had a great time and did plenty of flying. Great job, TJ!

