

July, 2005  
Volume xvii, Issue 6



# PEAK CHARGE

*Dedicated to the promotion of electric propulsion  
in all types of aeromodeling*

Monthly Meeting  
Aerospace Museum  
Balboa Park  
4th Tuesday  
7:00 PM, July 26  
*Glen Merritt*  
*Hitec and Multiplex Modelsports*

Electroglide  
Saturday  
following Meeting  
9:00 AM, July 31





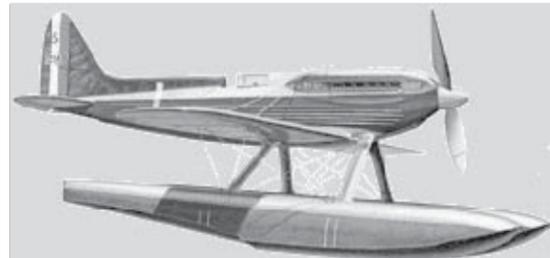
## SCHNEIDER CUP its origin

The cup is named after its creator, Jacques Schneider. He thought that the prosperity of Aviation depended of the seaplane, because, he used to say,  $\frac{3}{4}$  of the world is covered by water, and the "landplanes" have no future. Of course, he was mistaken but at that time, very few airstrips existed. That's why he decided in 1912 to create a new international competition engaging seaplanes. The prize is a bronze trophy on a marble pedestal and 50 000 francs for the winner of the race. Winner is the frenchman Maurice Provost with a "Depurdessin". At the start, the rules are quite surprising as they stress the floating qualities; one must make a figure of eight between two buoys, stand still in the water during 10 minutes, test watertightness, or landings during rough weather and 2m waves. But with increasing age, the event's reputation is such as to become the most famous speed competition. After their victory in Venice (1927) and Calshot (1929), the English can take permanent possession of the Schneider Cup in 1931. Thereforth, the competing is biennial to allow the development of innovative techniques. The French and italians are obliged to build supercompetitive seaplanes to challenge the English superiority. The Americans abandoned in 1929 because the crisis turned the public away from plane races. In England, private funds finance the participation. SCHNEIDER CUP OF 1931: England sole competitor

The French government has decided to participate and a Bernard HV 320 seaplane is born July 1931. It is fraught with technical problems and France throws in the towel. At the same time, the Italian engineer Mario Castolti draws the remarkable MC 72. This slim seaplane with a 1500 HP engine is also fraught with technical problems. August 2, 1931 the first prototype arrives at the Denzano base, Italy. It's captain Monti, old hand in seaplane racing, who will do the test flight. The engine is unreliable. Spectacu-

lar backfiring generates explosions that threaten to destruct the engine. Monti makes a pass over the test zone so the engineers can study the phenomenon. Suddenly, the plane raised up, then dove to the lake and hit the water. Captain Monty is the first victim of the MC 72. The investigation will show that the rupture of a propeller's ball bearing is the culprit. Italy also throws in the towel, and england becomes the sole competitor. THE SPEED RECORD OF FRANCESCO AGELLO

Then, English and Italians attack the only remainig challenge : the absolute speed record. Immediately after the competition, september 16, 1931, the British



Stainforth with a supermarine SB-6 blasts off for the race. His plane is equiped with a 2300 CV engine specially designed for speed records, using a particular fuel, mixture of gazoline, methanol and ethyl. Starting the engine is uneasy and there is considerable danger of engine explosion. Stainforth takes off from the water after a very long run up. The long distance was required because of the absence of flaps. At 400m height he establishes a new record at 655 km/h.

It takes the italians time to correct the initial errors of the MC 72. September 10, 1931, the lieutenant Bellini makes a flight with the MC-72. Immediately after

take-off, while the pilote accelarates, a first explosion, then a second. Bellini continues his flight when suddenly the plane explodes in the open sky. After Monti and Bellini, there is only Francesco Agello left for launching himself in the dangerous pursuit of the speed record. The engineer Bona is going to fix the problem; he finds that the backfiring is caused by air turbulence related to the speed of the plane. The air enters to fast the in-take and provokes serious carburation problems. By changing the in-take, the engineers render the capricious engine more trustworthy. At the same time, the power of the engine is gradually increased to 2850 HP. After all the accidents there is one experienced pilot left for beating Stainforth's record. : the adjudant Francesco Agello. In 1933, at Denzano the Italian dream takes shape. After four runs Agello arrives at an average speed of 682 km/h. But the 700 km/h barrier remains untouched. October 23, 1933 he makes the final try... The chronometry officials are present, there is a slight wind rippling the water surface. The sky is covered and the weather begins to change only after 1:00 P.M. At 1:50 P.M. everybody takes his place and the pilot gets into his plane. At 1:56 P.M. He takes off after an interminable run up. Visibility is far from excellent. For turnnig



Agello takes the Montichiari church dome as orientation point. With a baffing skes four passes and establishes a record that will never

be beaten by any seaplane with piston engine. One has to wait August 7, 1961 before the Russian Nicolai Andrievski does better with a jet seaplane...

## The President's Corner

By Steve Manganelli



*Well, here we go. Did you catch Alan Cocconni's presentation about the 48 hr flight of the Solong at our June meeting? If you didn't, you really missed what I consider a momentous occasion. If it seems I was personally blown away, you're right. I have met Alan a few times in the past and was vaguely familiar with some of the technology he employed to make perpetual flight using lithium batteries and solar cells possible, but hearing how all the elements came together was truly captivating. Let me share with you a Thank You letter I send Alan on behalf the Club :*

"On behalf of the membership of the Silent Electric Flyers of San Diego, I want to take a moment to express my profound appreciation for the presentation you made at our club meeting this past Tuesday, June 28<sup>th</sup>. I truly feel we experienced the UAV equivalent of the Wright Brothers explaining how they made their first flight! The confluence of technology mostly of your own invention required to make perpetual flight on solar cells and batteries a reality, is simply an awesome accomplishment! Being an Aerospace Engineer myself perhaps allows me to appreciate better the range and depth of all the technology required to make it happen. To think, we may have been one of the first groups to hear it; what a privilege!

Once again I offer my sincerest gratitude for making the June, 2005 meeting of the Silent Electric Flyers of San Diego our best ever. Congratulations on the *Aviation Week* cover as well. "

Next, we need to talk about the field. You'll notice some new chains securing the telephone poles in a manner that prevents their relocation to allow driving past the gate without opening it. This was done mainly to prevent the usual "pyrotechnics" we experience during 4th of July (i.e. burning the wire spools and 4-wheeling donuts on the runway) This

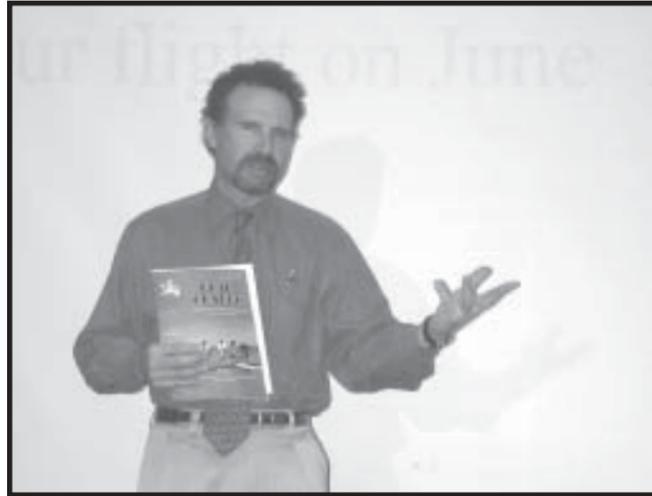
was largely successful in that the secured pole survived unmoved and luckily, no damage was done. By the time you read this, additional chains will be in place on the Western road perimeter to secure those poles, hopefully ensuring all non-curb hopping traffic will be through the gate. Through the gate is the only way the City wants us entering and exiting the field. Need a key? They are available from Chuck Grim. Catch up with him if you need one, but please don't use any means other than the gate to enter or exit the field.

Now to 9-11. No not a memorial to the World Trade Center but our own Intergalactic F-5B Contest and U.S. 2006 FAI-F5B Team selection contest this coming September 10th and 11th at our field. If you haven't seen an all-up F-5B models fly, it's a treat. Climbing straight up at say 100 MPH, then arching over to like over 150 MPH to start...gliding? Sort of gliding, We call it distance where the model achieves as many legs a possible between 2 parallel planes 150 meter apart. The Intergalactic part open to all contestants is where we fly 10 cell and 7 cell "hot liners" on the same course. The official Contest Sanction Application is in the mail and the out-of-towners are already lining up to compete for (3) spots on the U.S. Team for the 2006 World Championships. Our own Steve Neu, Dave Pitcairn and Jeff Keasaman will all try to reprise their 2004 roles on the U.S Team competing in York England. All the

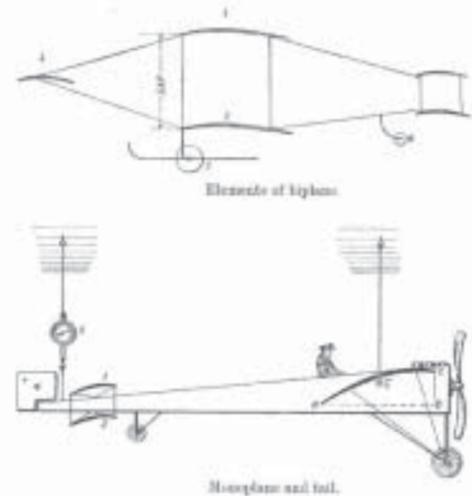


Club equipment will be out for this (2) day event and some help is required to make this another SEFSD success. The announcement and application should be up on the Web near the time you read this. We'll be looking for volunteers shortly and oh yeah , there will otherwise be no sport flying at the field during this weekend!

Finally, since there wasn't a Board Meeting last month, there was little progress made on MWE except the City Insurance Permit Application made by Ray Fulks. The die is cast folks, May 12-14, 2006. Also, our Pattern event originally scheduled for July 9th was postponed by Tim Attaway. It looks like we'll be getting another chance in September.



Here it is the first electric to enter the Nats. Aaron Shell from West Linn, OR gets the honor of being the first electric pilot. Photos by the author.

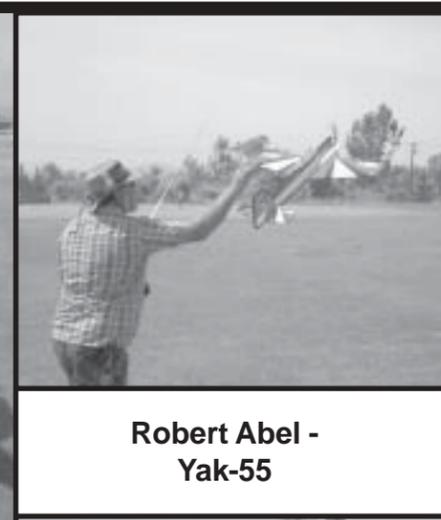


VOLUME TWO of AMA's video series (see the editorial in last month's issue of Model Aviation) has arrived. There has been very little interest in this series shown to date, but....

Bill Fee, editor

## a calendar of upcoming events in and near San Diego County

- July 29- 31 CVMRCC Helicopter Fun Fly
- July 30-31 Buzzing on the Border Heli Fun Fly CVMRCC
- August 6-7 Scale Electric 2005 Palomar RC Flyers
- August 13 Tentative Pylon
- August 20-21 San Diego IMAC (CVMRCC Field)
- September 10-11 USA F5B Team Trials and 3rd Intergalactic F5B**
- Sept 10-11 Prado IMAC
- Sept 24 INSITE on the Border Flying Event



Robert Abel -  
Yak-55



Dan Smith -  
Formosa and Blue Max



Eric Smith-  
Foamy Bipe & Mini Max



## THIS MONTH'S SPEAKER

### Bio of Glen Merritt - BY VP *Doug Rubin*

Glen is a native San Diegian raised on aeromodeling since the tender age of 5. He is a full scale sailplane pilot and owner of a cherry Cessna 150. Current R/C

interests include a broad cross section of aircraft, large aerobatic glow powered ships, glow and electric helicopters, slope, hand launch and unlimited class sailplanes and a mess of electric sport and 3D foamy stuff.

In the early 80's Glen worked at The Hobby Hanger hobby shop in Santee which led to a position in the late 80's working for Sandy Peck and the late Bob Peck at Peck Polymers building and flying the RTF electric indoor blimps. After a 6 year stint with a

local database marketing firm, Glen landed the Sales and Marketing position at Hitec, where he has been for the last 8 years. He was a charter member of the SDSEF, the San Diego Association of Model Clubs, the Poway Skimmers and current President of the First Weedwacker Aerosquadron of Lakeside California. Glen also served a three year term as an elected board member of the Radio Controlled Hobby Manufacturers Association. Now that Summer is here, you can find him after work at the beach surfing with his wonderfully understanding wife Rita and two children, Erin age 11 and Max age 8.

Glen Merritt, Marketing Manager  
Hitec and Multiplex Modelsports USA  
Phone # 858-748-6948

## The Raffle - by *Robert Abel*

We had a larger than normal turnout for the June meeting. It was great to see everyone there. The fantastic presentation by Alan Cocconi about the 48 hr. record setting flight by his plane the So Long took most of the evening. The museum staff hurried us out at the end so the raffle was a little harried. The prizes were divided up amongst the winners but we didn't get a chance to get their names. Congratulations to all. Diversity models donated another "Neu" motor in June. These are High Quality power-houses for your planes. Thanks Steve.

For the July meeting I thought we would have a "TOOL" night with an assortment of hobby tools for you avid builders. A clamp on digital amp meter and an X-Peak 3

digital charger & discharger for all types of battery's from Dymond models top the raffle list. A Cold Heat soldering tool, Hobby Vise, Helping hands, Stanley micro screwdriver set, A rota-tool set, a fire safe for your lipo's and an assortment of other goodies.

Almost forgot, a couple more airplane kits. (and you wanted gas cars). Ask Santa, he has those. For the August meeting I will have a Triton lipo battery charger on the toy list. A mini tach for checking the rpm of your motors, and if the rain check gets filled a direct current meter. You say you want another transmitter. How about an Optic 6 with a spectra

module, show up at the August meeting and buy lots of tickets, I'll have one there for you to win along with the other goodies.



## Minutes from the June Meeting

by *David Fee*

### Introduction-

Steve Manganelli called the June meeting to order on 06/28/05 at 7:10PM. There were several newcomers in attendance this evening,

including gentlemen named Howard and Eric, Ron Clemm, Bob Schneider, Carl (and his daughter Jeanelle), Steve Johnson, Troy Peterson, Steve Connor and, of course, our guest speaker Alan Cocconi. I offer my apologies for any misspelled names.

### General Business-

Please keep the gate closed when flying at the field. It is posted on the gate that it is to be kept shut at all times. The City installed the gate because they want to control traffic in the park area. It is in the club's right of entry permit that the gate is to be kept closed.

### Club Competitions and Events-

The S400 Electroglide will be held on Saturday, July 2<sup>nd</sup>.

There will be a swap meet in Balboa Park, at the VA Hospital parking lot, on July 9<sup>th</sup>.

There will be an IMAC aerobatic practice at the field on July 10<sup>th</sup>. Tim Attaway will be available for instruction, in addition to his training sessions on Wednesday mornings.

The Chula Vista club is hosting an RC Helicopter meet on July 29-31.

"Scale Electric 2005" will be hosted by the Palomar RC Fliers on August 6<sup>th</sup> and 7<sup>th</sup>.

Steve Manganelli will be the contest director for the USA F5B Team Selection Trials on September 10<sup>th</sup> and 11<sup>th</sup>.

There will be a demonstration of electric R/C flight in September, given for the Boy Scouts of San Diego. If you are interested in participating, please contact Steve Manganelli.

MWE will be held in May of 2006. Volunteers are needed for all positions.

### Club Raffle-

There were kits, motors, batteries, servos and other accessories offered in the raffle.

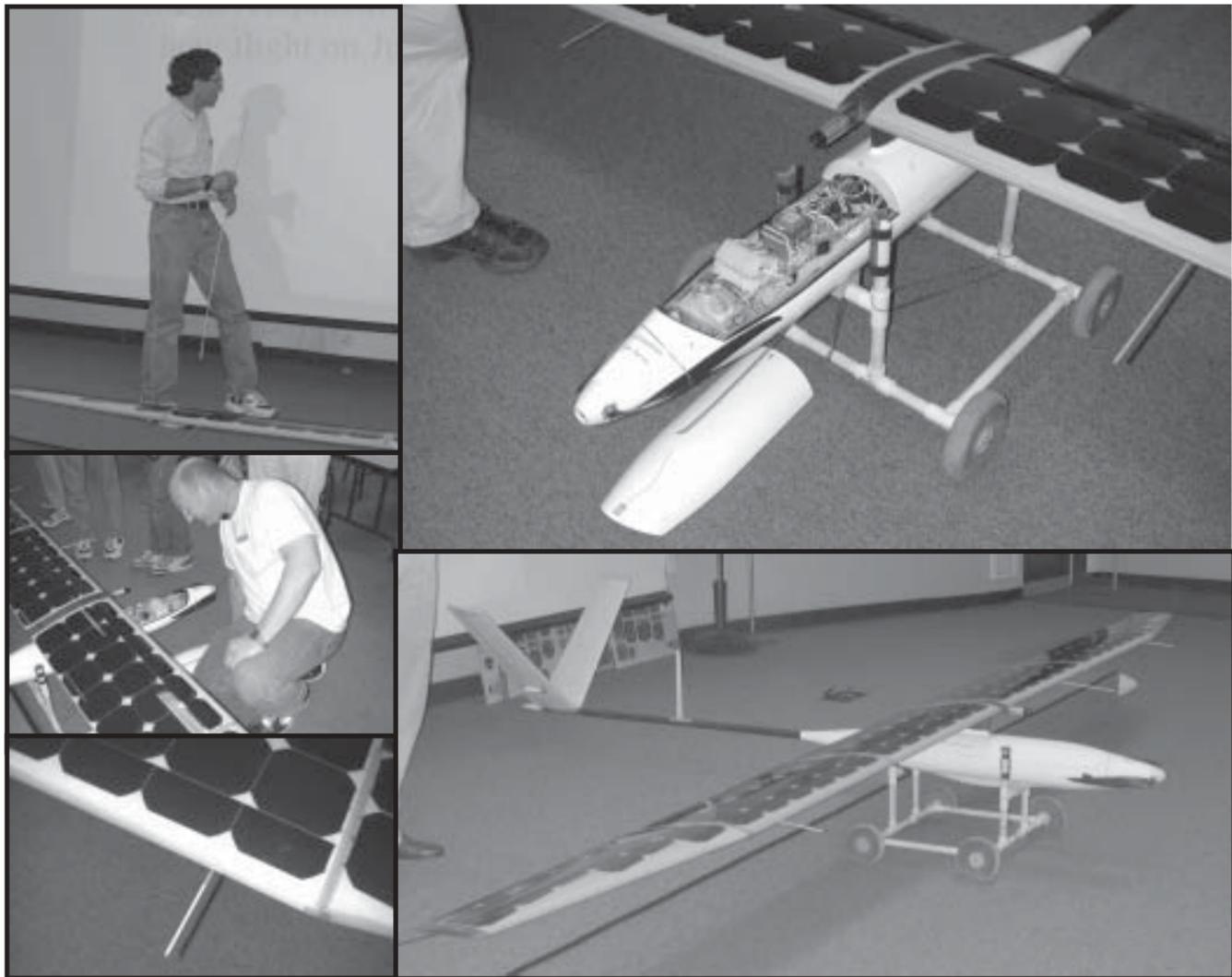
### Entertainment-

This month we had the tremendous honor of having Alan Cocconi of AC Propulsion as our guest speaker. His presentation featured a history of his projects in the fields of UAVs and electric vehicles, including the fantastically successful GM Sunraycer electric car of 1987. The highlight of Alan's presentation was his SoLong solar/electric UAV which recently completed a 48-hour nonstop flight over the California desert. This flight demonstrated that sustained solar/electric flight is possible, although practical applications may still be months or years away. Alan gave detailed descriptions of the custom hardware and software he designed that made this success possible. If you missed the meeting, you can read more on Alan's website and also in last month's (June, 2005) *Peak Charge*.

Alan's company website is <http://www.acpropulsion.com>.

If you want more information on Alan's various projects over the years, particularly with electric cars, be sure to read an in-depth interview at [http://www.acpropulsion.com/Media stories/Electric\\_Car\\_Interview.htm](http://www.acpropulsion.com/Media stories/Electric_Car_Interview.htm).

The meeting was adjourned at approximately 9:00PM.



## Aviation & Space

### Is this the future of air combat?

**A revolution is under way in aerial combat. Tomorrow's fighter pilots may be ceding the skies to robots**

Ultimately, the answer to the UCAV-versus-fighter debate is that we don't know the answer yet—partly because the promise of the UCAV technology has yet to be realized, and partly because it's impossible to know how internal Air Force politics will play out. The same Rumsfeld memo that cut back the Raptor program also threw a major glitch into the UCAV: It will be taken from DARPA and given to the Air Force, where many suspect that the ruling elite of fighter pilots will throttle it, or at least suppress it until the Air Force has secured its fleet of F-35s and Raptors. "The fighter

mafia that runs the Air Force has made several runs at the program to kill it," says our unidentified source, who is close to the UCAV project. Air Force leaders state in public that they support the UCAV, but in a form that doesn't directly threaten the fighter. Says Jumper: "People ask me all the time, 'Do you guys feel your job is threatened?' No. Because the things this is going to do are going to be things you can't do in a conventional airplane." Jumper and former Air Force Secretary James Roche raised the idea of a "flying Coke machine" UCAV that would orbit high

above the battlefield with a variety of bombs and release them on command from ground observers. Backers of autonomous combat aircraft are, for the time being, willing to position the unmanned aircraft as a long-range, heavy-payload complement to a fighter, rather than an alternative—but privately they don't expect to hold that position forever. "We don't want to get in a fight with anybody," our source says. "But when we get flying, someone will say: 'For crying out loud, this does 90 percent of the mission at half the cost.'"



Silent Electric Flyers of San Diego

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