

PROP TALK



THE NEWSLETTER OF THE
RIVERSIDE RADIO CONTROL CLUB

EDITOR: JIM "SKI" BRONOWSKI

E-mail - jbronowski@AOL.com

www.riversiderclub.org

JULY 2008

World record attempt

Field is location for solar power endurance try

By Jim Mayfield

Carl Engle, a recent Massachusetts Institute of Technology Graduate of Aerospace Engineering, presented the project that was assigned to him and another Graduate Student.

The endurance flight took place on the 28th of June at our field with Bob Barker and Tom Henning as witness to the attempt. At 15 minutes after Sun rise the flight started. Since the Sun was still just over the mountain tops, the beginning was slow as the solar panels were not up to top efficiency. With altitudes barley over 15 ft. high, and the propeller turning slowly, and trips from one end of the access road to the other close to the paved road, the Sun finally was up enough for the solar panels to give full power. By this time, wind was a small factor, creating dust and of course, the never ending dust devils so prevalent at the field. The plane got caught in one of the spinning vortex's and went to an altitude at 1800 ft. nearly being lost due to

altitude and dust. Only the application of reflective strips on the under side of the wings enabled the pilots of regain visual contact with the plane. It took time to get the plane down to a reasonable altitude once again, with the Telemetry system indicating the motor was overheating so the flight attempt was cancelled after 7 hours and several minutes.

Carl stated that another attempt would be made after several modifications were made and more test flights made.

Thanks to Bob Barker and Tom Henning for their interest and time at the field watching and helping the Pilots keep track of the plane. As stated by both observers, during the rapid ascent of the plane in the dust devil, there was cause for great concern, since the covering on the plane was almost transparent and at times was lost from sight, with dust covering the path the plane the plane was taking. All is well that ends well, and we are proud to have had the attempt make at our field.

RRCC CLUB OFFICERS

President: Jeff Szueber
(951) 485-8707

Vice-President: Jon DeFries
(951) 657-0710

2nd Vice-President: Don Rice
(951) 943-3294

Secretary: Jim Mayfield
(951) 301-0028

Treasurer: Larry Roberts
(951) 926-8567

Newsletter Editor: Jim Bronowski
(951) 780-0761

Safety Officer: Larry Roberts
(951) 926-8567

Field Director: Dale Yaney
(951) 927-1134

Webmaster: Oscar Weingart
(951) 684-8712
weingart1@earthlink.net

**NEXT MEETING
SATURDAY
JUL 19TH
10:00 A.M.
CROWLEY
FIELD**

Minutes of the June 2008 Meeting

Meeting of 21 June , 2008 was called to order at Crowley Field at 10:15 AM by President Jeff Szeuber with 24 members and guests present.

Moved and seconded that the **Minutes** of the May, 2008 meeting be approved as read – **passed**.

New Members and Guests: Carl Engle and Jeff Gillespie

President's Remarks: None

Old Business:

- A motion was made and seconded to settle the issue of the selling of raffle tickets to non-club members at scheduled club meetings. The motion reads as follows; No tickets will be sold to members only, with the only exception being club members who have family members present.
- Our summer IMAC contest will be on Saturday and Sunday, July 26th and 27th.

New Business: None

Program:

- Carl Engle, a recent Massachusetts Institute of Technology Graduate of Aerospace Engineering, presented the project that was assigned to him and another Graduate Student. The University provided a monetary grant to assist the students in developing a project that depended on solar for all power. Their project was to design and build a solar powered plane that would challenge the FAI flight endurance record of 11 hours and 34 minutes. Their design, built and powered with Solar panels providing a maximum of 750 Watts driving the entire electronics package in the Glider they designed. This Plane has a wing span over 10 feet, weighs less than 12 oz. and is equipped with a Telemetry package that measures motor temp, altitude, power consumption, and is down loaded into a computer program for documentation.

Several test flights were made at our flying field with time lapsed being over 4 hours for the last test flight.

Raffle:

1. **BH YAK 45 ARF**
2. **SIG Kadet Senior Kit**
3. **Model plane work and run-up stand.***
4. **X-ACTO Kit**
5. **1 gallon 15% Fuel**
6. **Gift Certificates from Dynamics Hobbies**
7. *** Donated by club member C. Kintigh**

Meeting adjourned at 11:15 AM

Secretary; Jim Mayfield



Oscar's Observations

The brutal hot spell and a major home remodeling project have reduced my hobby activities to almost zero this past month.

Clyde Reed

We are sorry to report that long-time RRCC member Clyde Reed died on June 21. Funeral services were held at the Riverside National Cemetery on Thursday, July 3. After the service, there was a Celebration of Clyde's Life in a reception at the March Field Air Museum. About a dozen RRCC members attended the funeral, and the club sent a wreath.

Clyde and his sons, Tony and Tim, were RC Modelers and RRCC members. Clyde was active in the club administration, and held several club offices. He was one of those who were instrumental in acquiring our current flying field. Clyde was a Manufacturing Research Engineer and Manager. He retired from Rohr Industries (Now Goodrich Aerospace) in Riverside.

When I went to work at Rohr in the early 1980's, I was delighted to find three active RC modelers in the same department. These were Ron Dixon, Dick Brown and Clyde Reed. Clyde, Tony, Tim, Dick and I often went flying RC Gliders, both with my "Weingart Weak Winch" and on

"Pope's Hill". I worked with Clyde for about 10 years, until he retired, and our relationship continued in RRCC.

Lou Pope observed hawks slope soaring at a hill behind his Hawarden Drive home, and realized that it might be a good site for RC gliders. He found a way to drive up near the crest, and "Pope's Hill" was born.

The upslope lift was fine, but every landing was a precision spot landing, since there was only a small flat landing area, surrounded by big boulders. There was an "escape route", a small canyon cut into the slope, where one could go around in case of a botched landing approach.

The "Weingart Weak Winch" used a 12 volt automobile starter motor, running on a 6 volt battery to reduce its torque. Our gliders were sport-type built-up balsa models, designed for slope, hand tow or "Hi-Start", but the wings were not strong enough for a 12 volt winch.

Even the weak winch could break your wings if you applied full continuous winch power while the model was climbing steeply, so one moderated the pull of the winch by blipping the spring loaded on-off foot switch, while simultaneously flying the model with the transmitter. It was sort of like patting your head and rubbing your tummy at the same time!

Well, Dick Brown never got the hang of this. He only had two speeds, off and full, so he would break his wings. He once got angry with me when I suggested that he replace his balsa wing spars with spruce ones, like my Ron Dixon-built glider had.

One funny incident occurred when the club was holding a fly-in, up at Soggy Dry Lake. I

had been taking Commercial Pilot Training on the G.I. Bill, at Riverside Air Service. This included lots of cross-country practice, so I offered to fly Tony and Tim up to the dry lake in a Cherokee 180. Clyde was very careful to watch my pre-flight, I guess to judge if I was a safe enough pilot. (Little did he suspect – read on!)

When we arrived up at Soggy, I buzzed the RC flying site, and then lined up to land near it. Those of you who have been full-scale pilots know that it is very hard to judge your altitude over large, smooth, flat surfaces, such as a wet lake or a dry lake, since there are no visual clues. So I landed the Cherokee, in a textbook full-stall, nose high landing, but about 10 feet up in the air! It was the worst landing of my whole life! We hit so hard, that I thought that the main gear oleo struts would punch through the tops of the wings! Worse, this all occurred right in front of most of the club! It served me right for trying to show off.

Clyde's daughter, in the eulogy, told things about Clyde that I never knew. He joined the Navy as soon as he reached 17-1/2 years of age, in 1942. He had tried to join right after Pearl Harbor, but was too young. Clyde ended up at the helm of an LCT (landing craft, tank) at Omaha Beach during the June 6, 1944 D-Day landings. If you study WWII history, you know that Omaha Beach was hell on earth.

After he got out of the service, Clyde married his high school sweetheart and got a Mechanical Engineering degree on the G.I. Bill. They raised a family of two boys and two girls, and Clyde had a long, successful career in his chosen profession. Sadly, Clyde's first great-grandchild, a girl, was born only three days after he passed away.

Scale Masters Championships

Continuing my mad plan to fly my Ercoupe in the Scale Masters Championships at Sarasota, Florida in October, I actually booked frequent flyer tickets for Doris and me. This was after I contacted the fellow scale modeler who would transport my plane in his motor home, and offered to contribute 100 gallons of gas to the 500 or so gallons that he would burn on the trip. This seemed to help him make up his mind that he was going for sure.

The current poor business environment for the Airlines has already reared its ugly head. The Airline called to tell me that our flight out was cancelled, so we had to change to one that leaves at 6 in the morning. It's a long time to October, and many other things can change.

PT-6A

Carl Engle During the event for Clyde at the March field Air



Museum, I pointed out the full-scale PT-6A trainer biplane to several club members. I am building a quarter scale model of this plane, and Don Lien is building a model of the 1930 Fleet Model 2 civilian version. Ski put a picture of the yellow and blue one at the San Diego Air and Space Museum into the newsletter last month.

One challenge in reproducing this aircraft is the rather strange main landing gear. One of the diagonal cross struts goes through a hole in

the middle of the other one. Don figured out a way to make these struts, so he is helping me with



mine.
Tune in next month,
Oscar



Our officers get ready for the monthly meeting as they admire the plethora of beautiful raffle prizes.



How many times have you come up with a situation where the construction, tapping or assembly calls for a numbered drill or your SAE drills are just not close enough? Lots of times, I'll bet, unless you have someone building for you. I just couldn't take it anymore, so I went to Harbor Freight and got this 115-piece drill set for about \$35. The drill sizes range from 0.0400 inches to 1/2 inch with about two thousandths difference between each size.



Carl Engle holds the solar-powered model he is using to break the FAI endurance record of 11 hours. Read all about the model and the attempt at our field in the lead article and meeting minutes by Jim Mayfield.

CHARGE & DISCHARGE

Written by: Dr. Bob Motazed

If your batteries need to be cycled and you don't have an automatic cyler, you will need a simple voltmeter and some time. An expanded scale voltmeter (ESV) can be purchased from most hobby shops and can be easily converted to accept plugs for your particular system.

Now, get a full overnight charge on your batteries. Check the voltage of the receiver and transmitter batteries. They should both register into the green areas. If not, there is damage to at least one cell. Don't even try to cycle any of these damaged cells because they are irreparable. Simply buy a new battery pack to replace the damaged pack.

If both packs register into the green areas, turn on the entire system and allow it to discharge itself. You must keep track of the time during this phase. Put a good movie into the VCR; this will take some time.

Intermittently move the controls to simulate in flight use. This causes the receiver battery to discharge at a believable rate. Every 15 minutes or so, check the voltage of both packs.

Remember you don't want the packs to completely discharge because you can damage your cells. You want the packs to discharge to a level of 1.1 volts per cell. A standard transmitter pack contains 8 cells so you will turn it off when the voltage drops to 8.8 volts. Receiver packs usually have 4 cells so stop the receiver discharging at 4.4 volts.

Record the time it takes for these voltages to be reached. On average, properly conditioned packs should give you between 60-90 minutes of time. Of course, this value can change with different systems, servo types and other variables. If your time is shorter than this, you will need to complete the cycle and check the times again. Simply put the batteries back onto the charger for about 16 hours to bring them up to a full charge. After this, discharge the packs as before and keep track of the time. You should see an improvement in the times. If not and the time is still less than 60 minutes, it is time to replace your packs.

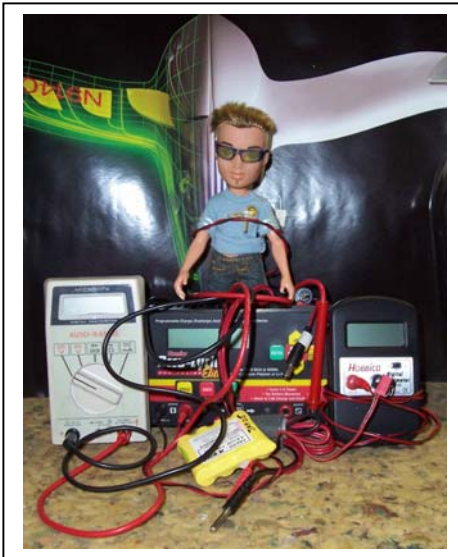
Occasionally you will have to cycle you packs up to three times to restore their maximum capacity. Do what is necessary to protect you expensive investment; batteries cost a lot less than airplanes. All of your

packs should be cycled at least once every three months or so in order to insure their reliability. For those of you that don't have the time to cycle your batteries by hand, I would recommend that you buy an automatic

battery cyler. The units that I personally use are the *Accu-cycle* and *Accu-cycle Plus* by Hobbico.

These units can automatically discharge your receiver and transmitter batteries to the proper levels while keeping track of the time and the actual milliamp hours. The *Accu-cycle Plus* can also cycle your batteries one full cycle or up to three full cycles (deep conditioning) automatically. This is perfect for reconditioning your packs if they have been sitting around for awhile and have developed some memory. The original *Accu-cycle* charges your packs on a time determined basis only and works best if you use the discharge cycle every time. This is recommended to prevent over charging your packs. Both units also automatically switch to a trickle rate charge after the charging cycles. This trickle rate keeps your batteries fully charged without danger of over-charging and damaging your cells and keeps them at their peak for flying. A final note regarding batteries has to do with the ESV (expanded scale voltmeter). This should be a required component found in your flight box at all times. Use it regularly to check your batteries before you fly every time. You should get into the habit of checking all of your batteries prior to each flight. Battery cells can "go south" and die at any time. With proper care and with prudent pre flight checks, you can easily prevent a very expensive crash. These types of uncontrolled crashes can easily result in damage to people and property on the ground. I have seen this very type of problem happen needlessly many times over the last several years, fortunately, not with any of my ships. Get one of these units and play it safe.

"You should get into the habit of checking all of your batteries prior to each flight. Battery cells can "go south" and die at any time."



(Reprinted From RC Universe Web Site)

Hemet's Hobby Headquarters



DYNAMIC HOBBIES

811 E. Florida Ave., Hemet, CA 92543

Owner - Bob Parcell (951) 925-9331

Items in the July raffle will include the following:

1. Hanger 9 Twist 40 ARF
2. Magnum XLS 52 motor
3. One Gal. 15% fuel
4. Folding chair
5. Gift certificate from Dynamic Hobbies

Don Rice



RIVERSIDE RADIO
CONTROL CLUB
P.O. Box 295
Homeland, CA 92548