



SANDERSON FIELD

R.C. NEWS

Fly-In May 15th
Pylon Race May 23rd



CHARTER NO. 3079

CLUB MEETING

This months meeting will be held on Thursday May 13th from 7:00 p.m. Doors open shortly after 6:00 pm.

at PUD #3

At 3rd & Cota

Minutes were read and accepted as read

No Treasurers report.

Eric Oberg, Bob Andrew, Gordie Osberg and Darryl Casad gave the Hunter field a tune up and it's in good shape. They also painted a center line down the field to assist in landing.

Eric has the letter declining his offer of \$800 per year to use his field for a flying field for Mr. Reynolds, Burt will deliver the letter.

Things to get done for the Swap Meet:

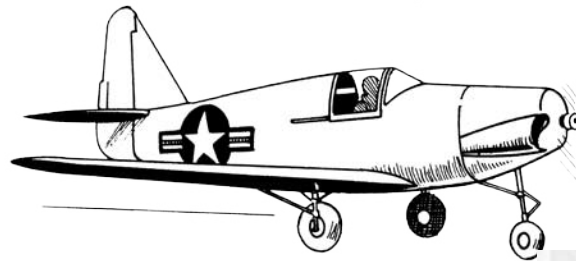
Pick up raffle wheel, coffee cups, napkins and donation can from shed - Dick and Dave
Doughnuts and Coffee - Burt will bring coffee Bob B will bring doughnuts.

Put out signs - Dick and Dave

Dick suggested we get someone to actively sell raffle tickets.

I will collect money for tables.

The Pylon race is Sunday the 25th. New this year is a test flight for a possible 25 sized electric class.



Send out a e-mail reminding everyone of the race.

Meeting adjourned at 7:30

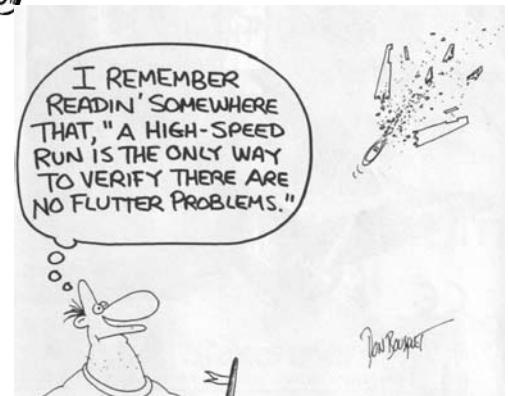
I'm sending out the newsletter early as I will be out of State starting the day after our swap meet for the rest of the month.

I also want to remind everyone to come out and help at the pylon race on Sunday the 25th of April

There is also a Pylon race the 23rd of MAY.

Our Swap Meet is on the 17th of **April**, set up at 8:00 am with doors opening at 9:00 am. The show is over at noon, get there early for the best selection. Tables are \$5 or 2 for \$8. There will be coffee and doughnuts and a 50/50 raffle.

This year it is back in the Sub at the High School. See you There!



About the Calendar on the last page.

TEXT in red = no fly days
Weekend days have the whole box in red but if there is no text there are no restrictions.

After the Crash

by Royce Tivel

After The Crash: Fixing A Tower Trainer 40 ARF

As a novice wannabe RC pilot, I have suffered two fatal plane crashes in my short flying career. The crashes were due to radio failure: the communication between the transmitter in my instructor's hands and the receiver in the aircraft failed and not even my experienced instructor was able to save the planes.

Experienced pilots told me that crashes happen to all pilots sooner or later. So, I was prepared, mentally, for a crash, especially after my instructor saved my aircraft numerous times--when I placed the aircraft in jeopardy during my training sessions. Some aircraft crashes result in a total loss of the plane; other crashes result in varying degrees of damage that can be

DUES ARE \$100.

IF YOU PAY BY MAIL SEND YOUR DUES, YOUR OLD KEY, PROOF OF 2009 AMA MEMBERSHIP AND A SELF ADDRESSED STAMPED ENVELOPE TO THE TREASURER:

**CHUCK KENTFIELD
3122 Madrona Beach Rd.
Olympia WA 98502**

Make checks payable to SFRCF

repaired.

My first crash, a Great Planes Easy Sport, resulted in a total loss on June 6, 2009; my second crash was in November, 2009, and resulted in fixable damage. I decided to fix the damaged trainer, a challenging project considering my building experience, small workspace, and tool inventory. My last model building was done nearly 50 years ago, and building materials and techniques have changed drastically since then. I considered fixing the trainer to be a great learning opportunity for building and repairing my RC aircraft.

Fortunately, I belong to an RC club, Sanderson Field RC Flyers, and club members helped me throughout the project. Collecting the necessary tools and materials and effecting the repair was done over a period of several months; an experienced modeler with the necessary tools and materials could probably have completed the repair in a few hours.

THE DAMAGE

The damaged trainer was a Tower Trainer 40 ARF (Almost Ready to Fly) which was given to me by another club member. The nose section needed a complete rebuild, as did the wing mounting and other areas of the fuselage, such as the main landing gear area. The covering also needed lots of repair work. Fortunately, except for some trailing edge damage, the wing was in good condition.

REPAIRING THE NOSE SECTION

Early in the project, I decided to replace the standard clamp-type engine mount with a Great Planes .46-sized engine mount. This would require plugging old mounting holes and drilling new holes for the Great Planes mount.

My first step was to remove the old balsa from the bottom and top of the nose section. After drilling the necessary engine mounting holes and installing blind nuts for the engine-mount bolts, I re-epoxied the existing engine firewall into place. I also added a 1/16" thickness of plywood to the inside sides of the engine compartment to stiffen the front end of the fuselage.

A club member drilled the engine mounting holes in the engine mount using his drill press and I tapped the holes with a 6/32 tap: I used 6/32 socket head cap screws to secure both the engine mount and engine. After coating the interior of the engine compartment with a thin coat of epoxy (diluted with 99% isopropyl alcohol), I bolted the new engine mount to the firewall. My next step was to remount the fuel tank.

I glued some flexible tubing to the fuel tank cradle to help dampen engine vibrations. On a tip from a club member, I used flexible tubing from a sling-shot repair kit purchased at my local Walmart sports department. Before installing the fuel tank, I painted the compartment with a thin coat of epoxy for fuel proofing. I also used silicon adhesive around the front of the

After the crash continued

fuel tank to further isolate the tank from engine vibrations and seal the tank compartment from any engine compartment fuel leakage. I covered the top of the fuel tank compartment with a hatch made from 1/8" plywood and recovered the bottom of the compartment with new balsa.

NEW LANDING GEAR

Since the landing gears, both nose and main, were damaged, they had to be repaired or replaced. I decided to replace the main 5/32" wire landing gear with a more durable "Super Strength Landing Gear" by DU-BRO. The DU-BRO landing gear is made from a shock absorbing composite material and will not bend out of shape as the wire gear did. In addition, I planed to use larger wheels for both the main and the nose gear: I decided to use 3-1/4" Dave Brown "Lite Flite Wheels." I felt the landing gear upgrade would make the trainer more durable as I learned to fly--and would be a good setup for our grass field, too. Also, with the upgrade, I thought the plane would track better on the ground and, because of the added ground clearance, lessen the chance of damaging a propeller during a rough landing.

In order to accomplish the upgrade, I first replaced the original main landing-gear strong point with a wider 3/8" plywood base for attaching the DU-BRO gear. Underneath the plywood, I reinforced the strong point with 1/2" triangular balsa. I used four 6/32"

socket head cap screws to securely mount the DU-BRO landing gear to the fuselage. The landing gear can be painted and I plan to use a red spray paint for this sometime in the future.

For the nose gear, and to level the aircraft longitudinally, I bent a DU-BRO "5/32 Universal Nose Gear Wire." One problem with wire landing gear these days is that commercial landing gear comes with a plating that increases the wire diameter slightly. This creates a problem when using it with commercial parts, engineered for 5/32" wire, such as wheel collars. I found I had to use a #20 drill bit to enlarge both the wheel collars and also the engine-mount nose-gear holes so everything would fit.

REBUILDING THE SERVO TRAY

The servo tray also had to be replaced. Although some might consider this an overbuild, I used a piece of 1/4" plywood for the tray. First, using some card stock, I made a template of the tray and then cut out the plywood tray with a jigsaw. Finally, I drilled holes for the servo screws with a 5/64" drill bit.

FIXING THE WING

Only a little CA was needed to repair the wing. However, a new arrangement was required for the wing positioning dowels. I epoxied a block of balsa to the bottom leading edge of the wing and epoxied two positioning dowels into

the block. I built a new plywood former to accept the dowels and epoxied it into the fuselage. This arrangement made for a much more secure wing than the old, weak arrangement. I reused the original DU-BRO wing hold down blocks for the trailing edge wing bolts.

REMOVING THE OLD COVERING

At this point, I decided to remove the old fuselage covering. Since I had never done any covering and did not have any of the necessary tools, I visited club members to learn as much as I could before ordering tools and materials. Eventually, I removed the covering and then removed any leftover adhesive with Methyl Ethyl Ketone (M.E.K.). Once the old covering was stripped, I could clearly see other areas that needed to be re-glued or strengthened.

SHEETING THE STABILIZER AND VERTICAL FIN

One area that needed to be strengthened was the tail. The stabilizer and vertical fin were not mounted securely. I decided to sheet the surfaces with 1/64" plywood and reinforce the joints to the fuselage with 1/4" triangular balsa. Previously, I had to balance the trainer with a good deal of lead weight attached to the tail. I calculated that the weight added by the strengthening could usefully replace some or all of the lead weight (in fact, when the repairs were completed, the plane balanced almost perfectly). Before sheeting, I cut away the solid-balsa rudder and elevator: these would be replaced and re-hinged later.

After the crash continued

I used thin CA to attach the first side of the sheeting: I could reach all contacting surfaces through the open side. In order to attach the second side, I first attached the trailing edge and allowed the CA to thoroughly set. Next, working towards the leading edge, I applied thick CA to about 1/3 of the remaining contacting surfaces, held the sheeting down until the CA set, and moved onto the next 1/3. The thick CA allowed me enough time to quickly position the sheeting before the CA set. I used an Xacto with a #11 blade to trim the excess sheeting. Where necessary, I used additional thin CA around the edges of the sheeting. After sanding the edges of the stabilizer and fin, the sheeting blended nicely into the edges. When the sheeting was completed, I added the 1/4" triangular balsa reinforcement.

COVERING THE FUSELAGE

After filling holes and gaps with either Hobbylite filler or DAP spackling and sanding everything smooth, I was ready to begin covering with red and white monokote. Starting with the fuselage bottom, I covered the fuselage. After covering the fuselage, I rated the job as a 10: looks good from 10 feet or more. My next job should be better.

NEW ELEVATOR AND RUDDER

I cut out a new rudder from 1/4" balsa; I used 3/8" trailing-edge stock for the new elevator. Hinging the elevator to the stabilizer was not too difficult. I had to reposition the hinge slots on the old stabi-

lizer because the old hinges were still in the wood: I used an Xacto knife with a #11 blade to cut the new slots. I slotted the elevator leading edge to match. Because of the more limited space to reposition new hinges on the rudder, and on the advice of a club member, I elected to use Hayes Live Hinges, which needed to be epoxied into small holes. In order to bevel the leading edges of the elevator and rudder, I built a small bevel-sanding jig. The bevel jig worked well for the soft balsa rudder but the hard trailing edge stock needed to be razor planed to the approximate bevel before final sanding on the jig. After the beveling, I covered the surfaces with red monokote and then attached the rudder and elevator to the stabilizer and fin.

VOLTWATCH2

It was necessary to replace the plywood windshield, and I decided to mount the VoltWatch2 here. I use a

VoltWatch2 to monitor the receiver battery--a low battery level can lead to crashes! I cut a small slot in the windshield and mounted the VoltWatch2 under the slot. I covered the slot with a small piece of clear monokote donated by a club member. Installed in this way, the LEDs of the VoltWatch2 are protected and the battery level can be easily monitored.

IN THE AIR

On March 30, 2010, my instructor thoroughly checked out the trainer before we drove to the flying field. Once ground checks were completed, we flew the finished aircraft for two successful test flights. I would like to thank the members of SFRCF, my RC club, who helped me with this project. Special thanks are due to members Bob Beatty, Richard Robb, and Bob Andrew for their help, advice, and tips.

For the online HTML article with images, use this link: <http://www.selectdigitals.com/articles/fix.html>

CLUB OFFICERS

President	Eric Oberg	(360)789-6011
Vice President	Burt Daggett	(360)427-6653
Treasurer	Charles Kentfield	(360)866-9473
Secretary	Bob Beatty	(360)426-5601
Safety Officer.....	John Tupper.....	(360)426-6383

BOARD MEMBERS

Board Member.....	Eric Oberg	(360)789-6011
Board Member.....	Jody Diaz.....	(360)427-6102
Board Member.....	Stacy Myers.....	(360)426-9367
Board Member.....	Bob Beatty	(360)426-5601
Board Member.....	Burt Daggett	(360)427-6653
Alt Board Member	Bob Mason	(360)426-9256
Alt Board Member	Chuck Kentfield	(360)866-9473

May 2010						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4 7:00p RC Board meeting	5	6	7	8 WWSCC - Sports cars
9 WWSCC - Sports cars	10	11	12	13 6:00p SFRFC Regular meeting	14	15 Fly-in
16 HWACC -Corvette	17	18	19	20	21	22 Viper Club
23 Pylon Race	24	25	26	27	28	29
30	31					

This month we have 4 closures, so far...Be sure to check the Events page on the Web Site.

<http://sfrfc.quintex.com/Events.html>



Event dates in black or red are scheduled. Events in gray are proposed.

Club Scheduled Events for 2009

- January 1st.....First fly of the year
- April 25thPylon Race - Come out and help officiate
- April 17thSanderson Field RC flyers annual swap meet 9:00 to 12:00 SHS Sub
- May 23rd.....Pylon Race - Come out and help officiate
- May 15th.....Fly-In - 9:00 a.m. to ?????
- June 5th.....Forest festival Parade float
- June 12th.....Public Fly-In 9:00 a.m. to ?????
- June 26th-27th.....Pylon Race - Locked
- July 17th.....Scale fly-in/ Public/ potluck BBQ - 9:00 a.m. to ?????
- August 14th.....Fly-In 9:00 am to ????
- August 21st-22ndPylon Race North vs South- Locked
- September 11thFly-In 9:00 a.m. to ????
- October 9th.....Fly-In 9:00 a.m. to ????
- December 9thChristmas Party 6:00 p.m. to 9:00 p.m. (potluck)

It's time for 2010 dues, dues are \$100.00

Check out our web site at <http://sfrfc.quintex.com>