



# SANDERSON FIELD R.C. NEWS



CHARTER NO. 3079

## CLUB MEETING

*This months meeting will be held  
on Thursday April 14th at 7:00  
p.m.*

*at PUD #3*

*At 3rd & Cota*

I wasn't able to attend the last meeting so I can't give you any info on it. I probably won't be at the next 3 meetings either so bear with me, I'll try to get a newsletter to Sharon.

### Getting to Know Your Electric Starter

By James Goss

I can remember when I first saw an electric starter being used to crank a model engine. I think it was in 1968, or in that general time frame. It truly amazed me when the guy placed the starter against the spinner and the engine cranked with no effort at all. At that time I had been around model engines for some time and had several myself on small control line planes. Flipping it by hand was the only way that I knew to crank these little engines. Well, I did see two guys trying to crank

a small model engine using a bicycle turned upside down with one of the guys turning the pedals. With the wheel turning at high speed, the second guy placed the engine shaft against the wheel. He was holding the engine in his hand and the engine didn't have a prop on it, nor did he have a

old at that time and when I told them "you have got to have a battery to crank that engine" they said, "yea right, sure you do, we have been working on engines before you were born". When I walked away and looked back, the fools were still pedaling away. These two guys had to be the stupidest fellows I have ever met to this day.



battery  
to heat the  
glow plug.

They were also using regular gasoline for fuel. As I think back, it must have been a little .049 engine with a self-contained fuel tank. They cranked and cranked but the engine just would not hit a lick. Obviously they didn't know anything about model engines at all. I was around twelve years

A lot of modelers still like to hand prop an engine for starting. It does look nice to see an engine start with one or two flips of the prop, especially when it starts on the first flip. When I hand prop my engines I will use a chicken stick most of the time. I don't like to get hit on the finger, particularly in cold weather. Nowadays it is quite common to see modelers using an electric starter to get things going. They have become a tool of our trade, so to speak. Electric starters may not be as good for your engine, but they sure do get it running in a hurry. The reason I say it may not be good for your engine is that during starting you are applying a lot of force to the

# SANDERSON FIELD R.C. FLYERS 11th Annual Swap Meët

Static  
Display

Static  
Display

Located at Shelton High School, N. 3737 Shelton Springs Rd. Shelton WA, 98584. Just North of downtown Shelton. Take Hwy 101 North to Wallace Kneeland Blvd. Turn right on Wallace Kneeland Blvd. Turn left on Shelton Springs Rd. The Shelton High School will be on the left. The Swap Meët will be located in the Sub.

FREE  
ADMISSION

9:00 a.m. - 12:00 p.m.

Lots of great stuff!

Saturday, April 23, 2005

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For More information See our  
web site at <http://sfrcf.quintex.com>  
or Email: [bigbird@quintex.com](mailto:bigbird@quintex.com)

**From Olympia:** Take exit 104 from 21 onto Hwy 101. Go north on Hwy 101 N for approximately 21 miles (until you reach Wallace Kneeland Blvd). Take Hwy 101 N to Wallace Kneeland Blvd. Turn right on Wallace Kneeland Blvd. Turn left on Shelton Springs Rd. Shelton High School will be on the left. The Swap Meët will be located in the Sub.

**From Olympia (Alternative):** Take exit 104 from 21 onto Hwy 101. Go north on Hwy 101 N for approximately 21 miles (until you reach Shelton Springs Rd.). Turn right at the Texaco Station. Continue on down until you see the Shelton High School on the right hand side. The Swap Meët will be located in the Sub.

**From Bremerton:** At Bayshore turn right on Eden Prairie. Stay on John's Prairie Rd till you come to a stop sign on Brookside Rd. Go straight thru the stop sign. Turn right on Shelton Springs Rd. Shelton High School will be on the left hand side. The Swap Meët will be located in the Sub.

**From Hoodport:** Go left on Shelton Springs Rd. Turn right into the Shelton High School parking lot. The Swap Meët will be located in the Sub.



## Starter (Continued)

crankshaft of the engine. How much? Who knows, but all that force is transferred directly to the ball bearings. This will cause wear on the balls and race, but for no longer than we keep it attached to the shaft the engine will last for years. Not so for bushed engines though. Those bronze bushings will wear more than the steel ball bearings will. The smaller the bushed-engine is, the more effect there will be on its life span, but you still get many years of service from the little guy. It's always best if you apply your starter to the engine in a short burst, and not in a long run. A lot of times the engine will crank and the modeler will not realize it, he

will continue to hold the starter to the spinner creating undue stress on the engine.

One thing is for sure; using an electric starter to crank your engine is the safest way to start it. You can still have an accident while starting your engine if the drive cup on the starter does not have a rubber cup that matches your prop drive nut or spinner. I have seen this quite a few times and have even been guilty of this myself. Starting an engine that only has a hex nut, not a spinner nut, will allow the cup to jump off the nut, the starter and your hand may go into the prop. Ouch! I guess everyone has got his finger hit by the prop at one time or

another if they have been in this hobby for a while. By and large, you will get hit a fewer number of times when using an electric starter. If you have been in this hobby for at least three years and have never got your finger hit by a prop, please let me know and I will publish this unusual fact in our newsletter. We all know one of our club members that even got his finger cut off with a sixty-size engine. Lets try and be more careful with these engines, they can really do some damage in a hurry.

Our electric starters are pretty reliable in their operation. We use them for years and years, while they are treated pretty rough along the

## PLANE OF THE MONTH

I'm going to start a new feature called plane of the month. What I'd like to do is have a club member, any club member take a picture of his/her project and give a little information about it. I'd like to start the feature with my latest project. A ModelTech P-47 ARF. This plane was the raffle prize at the second club swap meet I attended. I've finally gotten around to putting it together this winter. I'll probably do a review of this plane at a later date but this feature is more of an information kind of thing. So, here goes.

This model will be flown



MODELTECH P-47 C/EARLY D RAZORBACK

with an RCV 91-CD 4 stroke engine. This type of engine has no push rods as the valves are incorporated into the cylinder, which rotates around the piston.

It has JR DS811 digital servo's except the throttle servo which is a JR 537.

The receiver is a JR R 700, and the transmitter will be a JR 8103

I've also incorporated a Hobbico Voltwatch battery monitor. If the plane flies as well as I hope it will I will probably spring for better retracts and struts.

### Tips to test your radio equipment after repairs

After receiving your repaired radio equipment, you should carefully check out the system. Without going into the math of signal strengths and such values, you need to feel you have a safe, glitch-free model. Here is a good testing method. Assemble the model so it is ready to fly. Without the engine running, extend your antenna one section only out of the transmitter. Walk off a distance of 180 feet behind the model so you can look over the tail surfaces. Have a helper signal the

various commands by a previously agreed code. Operate the transmitter on the helper's commands, one at a time, noting the results. If the test fails, showing intermittent control on the demands of the helper, then you need to move closer to the model until the commands are solid. The closer you get to the model to gain control, the less reliable the ground-to-air link is. If the distance is less than 100 feet, do not fly! Many times the range check can be passed by rearranging the components in the fuselage, routing the antenna a different way, keeping it away from the servos and other wires. Try moving the NiCd pack closer to the receiver also. If this fails, you should have everything rechecked at

a service center. After passing the engine off range check, re-test everything with the engine running at full throttle. This will be the critical test, as everything in the model is being rattled around. Most intermittent will show up during this test. Naturally, the model is being restrained on the ground. Once again, if you are less than 100 feet away from the model, the test is not acceptable.

from The Transmitter of RCMB  
Radio Control Modelers of  
Baltimore  
Milt Peacock, editor  
Baltimore MD

way. They are one of the most reliable components we have in the hobby. If the manufacture would just put a better on off switch on them because this is where a lot of our trouble comes from. It's not unusual to see a modeler fling his starter several feet through the air after the engine has been started. I guess they get excited like a baseball player slinging his bat after a hit. Here is something we see a lot of at the field. A guy is in the process of starting his engine and realizes he forgot to get the starter. Instead of getting up off the ground, he grabs the line cord and pulls the starter across the ground at about 50 miles an hour. Also you may see that same guy carrying his starter by the line cord with the starter motor swinging like a pocket watch on a chain. I guess I have been guilty of this at one time or another, but I have been using the same starter for twenty-five years and it is still going strong. The electric starter is not very expensive, but I still like to take care of it. What can you do to take better care of your starter? If you have a good understanding of how the starter operates and what is inside the case, then you will know how to take care of it.

As you already know, our starters are direct current motors (dc), not unlike the ones in our cars, just smaller. The starter motors for autos have two windings in them, whereas our starters only have one. The

big starters in our cars have an armature winding and a field winding. The armature is the part that rotates and the fields are stationary. Remember that it takes two magnetic fields to create torque. Torque is the twisting power that the shaft develops when two magnetic fields are present. The armature and field windings are wound, in most cases, with copper wire known as magnetic wire. Magnetic wire has a thin enamel coating for its insulation and can be wound very close to its neighboring windings. The field winding is an electromagnet that depends on current flow through it for its strength, the same as the armature winding does. The more current, the more strength the fields will have, thus producing more torque.

The difference between our little starters and an automobile starter is that our starter does not have field windings. You may find some very old starters, or a starter that someone made from an old wiper motor that still has field windings. Starters with field windings will draw more current than ones without field windings. You may wonder how a dc motor can run without field windings because I just stated that it takes two magnetic fields to have torque. Instead of using windings, our starters have permanent magnets for the fields. This works very well and

efficient for maximum speed. In addition, the up-going aileron causes the same drag as the down-going aileron, so that roll causes no yaw. Yawing with the rudder does not change the lift at the tips, so yaw does not induce roll. This is just what the fighter pilot needs for gun aiming, and what the modeler needs for precise scale flight.

Washout is a must in airplanes with long, thin, or pointy wings. Some can't fly without it. Next time you are at the airport, notice the washout of the airliners there. It's huge for safety and fuel efficiency. Most biplanes don't need washout because one wing is typically set at a higher incidence angle, and one wing will stall before the other. Ailerons must therefore be on the wing with the lower incidence angle. Washout has a dark side; it can interfere with aerobatic performance. In inverted flight, washout becomes washin and all the bad things that washout prevents in upright flight become worse in inverted flight. Snap rolls and spins, which require the wing to stall on command, can be difficult to start and control. Adverse yaw varies with airspeed. Scale models of fighters are only mildly aerobatic. Fully aerobatic airplanes generally do not include washout.

Summary: Washout improves aileron response at all airspeeds, reduces adverse yaw and softens the stall, but only in upright flight.

from Flare-out  
Twin City Radio Controllars  
Jim Cook, editor  
Minneapolis NM

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**CHUCK KENTFIELD  
6843 Gallagher Cove Rd NW  
Olympia WA 98502**

**Starter (Continued)**

the motors are more compact in size. Now on some really big hand starters you may still fine windings for the fields. It is easy to test your starter to see if you have field windings or field magnets. If you change the polarity of the dc input to a

permanent magnet motor, it will reverse its direction of rotation. If you change the polarity of the input on a motor with field windings, it will still run in the same direction. On any dc motor, except the permanent

magnet field motor, you must change the polarity of the field windings in respect to the armature windings, or change the armature polarity in respect to the field windings, to reverse its rotation.

*Continued next month..*

BELOW ARE THE SCHEDULED EVENTS FOR 2005

## Club Scheduled Events for 2005

- January.....Annual 1st fly of the year
- February .....
- March .....
- April 23rd .....Sanderson Field RC flyers annual swap meet 9:00 to 12:00 SHS Sub
- May .....
- June 11th .....Display at Walmart
- June 12th.....Public Fly-In
- July 9th.....fly-in 9:00 a.m. to ????
- August 20th.....Scale fly-in 9:00 a.m. to ????
- September 10th.....Fly-In 9:00 a.m. to ????
- October .....
- November.....
- December .....

**It's time for 2005 dues, pay before December 31st for \$10 savings**

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

## CLUB OFFICERS

President .....	Jody Diaz.....	(360)427-6102
Vice President .....	Dick Robb.....	(360)427-4521
Treasurer .....	Charles Kentfield .....	(360)866-9473
Secretary .....	Bob Beatty .....	(360)426-5601
Field Marshall .....	Charles Kentfield .....	(360)866-9473
Safety Officer.....	John Tupper.....	(360)426-6383

## BOARD MEMBERS

Board Member.....	Jody Diaz.....	(360)427-6102
Board Member.....	Dick Robb.....	(360)427-4521
Board Member.....	Stacy Myers.....	(360)426-9367
Board Member.....	Bob Beatty .....	(360)426-5601
Board Member.....	Herb Coslett.....	(360)275-4158
Alt Board Member .....	Gordon Osberg.....	(360)426-5172
Alt Board Member .....	Chuck Kentfield .....	(360)866-9473