



SANDERSON FIELD R.C. NEWS



CHARTER NO. 3079

Meeting February 13th

CLUB MEETING

*This months club meeting will be held
on Thursday February 13th. at*

PUD #3

**2621 E Johns Prairie Rd
Shelton, WA. 98584**

Treasurer Report was read and accepted as read. Dick Robb brought up the IRS issue.

Communications -

We got a letter from the AMA on the drone remote ID issue. they would like everyone to send comments to the FAA. There is a canned letter you can use on the AMA's web site at AMA/gov.

Dave would also like everyone in the club to compose a letter and send it to him or me so he can make copies for our Representatives and Congress. You could also go to the AMA's web site and copy their canned letter.

We also got a letter from a South Carolina club who lost their field asking for donations. They have found a new piece of ground but it needs much work

to make it into a flying field. Dick Robb motioned to send them \$100. motion seconded and passed.

Dick talked about grey scale cards in relation to color schemes.

The contract with the port has been signed.

The Monroe swap meet is this month - 25th and 26th

The McMinnville swap meet is March 14th at the Yamhill Heritage museum

Club trips - Paul Allen's museum in February?

Scale Spring opener in Othello WA - May 15th 16th & 17th

Programs - Guest speakers - Show and tell - How to's?

Meeting adjourned 7:38



We had a few brave souls show up for the first fly of the year on Jan 1st. Bill Judge III got the first flight.



There is still time to get your letter to the FAA and our representatives in to me - bigbird@quintex.com or Dave - dwindom@rocketmail.com

PRECISION MACHINING WITHOUT PRECISION MACHINES

Written by Jim Ryan

Basic shop tools to the rescue

As modelers, we occasionally find ourselves needing to do precision machine work, but we lack the tools normally required. However, a little ingenuity and forethought can enable us to achieve accurate results with only basic shop tools.

A friend of mine was building an Aviation Concepts 1/5-scale PT-19, and he was having difficulty fabricating the elevator joiner assembly. He'd made a couple of attempts but had been unable to make a part precise enough for his needs.

I offered to make the parts for him to show what's possible with basic shop tools. Although this project is particular to a specific model, the same processes can be used for any number of machining operations, such as fabricating custom rotor shafts for helicopters or machining scale landing gear struts.

The main stumbling of this project was drilling perfectly centered holes in the 3/8-inch aluminum tube that makes up the body of the elevator joiner. The generally accepted fixture for drilling centered transverse holes in round stock is a V-block, but I've always felt that V-blocks are a poor choice for a number of reasons. It's difficult to clamp a V-block to the drill press table perfectly centered relative to the chuck, and the work piece isn't

positively locked in place. Perhaps worst of all, a thin drill bit can walk a little before it starts to cut into the surface.

The technique I'm sharing enables anyone with a drill press to drill perfectly centered holes every time, whether it's in aluminum or even hardened steel.



01 These are the materials and tools for this particular project. I've made copies of the relevant section of the plans, and have heavy-wall 3/8-inch aluminum tube, 3/16-inch aluminum rod, and a 2-inch long 6-32 socket-head cap screw for the control arm. Blocks of medium-density fiberboard (MDF) will be used to hold and locate the aluminum tube during the drilling operations. I also recommend (although it isn't absolutely required) a set of inexpensive digital calipers and a small machinist's rule.



02 I first cut the 3/8-inch tube to

the precise length that I needed. Lacking a metal lathe, I cut the tube by spinning it in reverse with my cordless drill (so that the two tools are running in opposite directions) while I cut it with a reinforced cutoff wheel in my Dremel tool. This made it easy to get a square cut without the cutoff wheel catching in its kerf. I cut the

tube slightly long then carefully ground it down, checking often with the digital calipers, until I reached the precise 5.5-inch finished

length. This is how to cut precision lengths with only a couple of basic hand tools. Be sure to wear approved eye protection during this and all machine operations.



03 I'm drilling 3/8-inch holes in the MDF blocks. Be sure to set the height of your table so that you can bore the 3/8-inch hole with the blocks lying flat and the smaller holes with the blocks up on edge. You don't want to move the table at any point in the drilling operations. A long piece of poplar is clamped to the table to set the Y-axis of my

PRECISION MACHINING CONTINUED

drilling operation, and the small block of scrap MDF sets the Z-axis. I always use MDF for temporary fixtures. It's cheap, dense, machines easily, and has no grain structure to interfere with accuracy. I like to cut 2-inch square blocks on my table saw, but they don't even need to be precisely the same size, as long as they each have one true 90° corner.



04 Here's where the magic happens. Because all of the holes are bored through the MDF blocks while they're pressed against the fence, their centerlines will always precisely intersect. Also, the MDF

prevents the drill bit from walking as it starts to drill into the tube. The result is that the holes in the tube will be perfectly centered. Note that before boring the holes, I marked each block with an arrow so that they'd all have the same edge on the table and the same edge against the fence.

The 3/8-inch tube should fit snugly in the guide blocks. Because this project required the middle hole for the 6-32 socket head to be 80° relative to the 3/16-inch aluminum dowels, I scribed a line on the tube and spray mounted an 80° angle template to the end block. (Regular glue would work as well.) I've clamped a stop block on the table to locate the tube's precise midpoint for drilling the first hole.

06 Here's the finished assembly. I polished the parts by mounting them on my trusty cordless drill and wet-sanding them with 400-grit sandpaper. The finished assembly has the 3/16-inch dowels perfectly parallel, and all length-wise hole locations are correct to plus-.005 tolerance. The same general techniques can be used on any number of precision-machining operations. Who needs a lathe or vertical mill when you have a drill press and some MDF?

(Step 5 omitted due to space limitations-Setp 5 is basically how he moves precise distances along the shaft. editor)



DUES ARE \$75 IF PAID BEFORE JAN 1ST, \$100 THEREAFTER.

IF YOU PAY BY MAIL SEND YOUR DUES, PROOF OF 2020 AMA MEMBERSHIP AND A SELF ADDRESSED STAMPED ENVELOPE TO THE TREASURER:

MARK PENTONY
180 E VUECREST DR.
Union WA 98592

Make checks payable to SFRFCF

CLUB OFFICERS

President.....	Dave Windom	(406)283-1916
Vice President	Jody Diaz.....	(360)427-6102
Treasurer	Mark Pentony	(360)490-4742
Secretary	Bob Beatty	(360)229-3408
Safety Officer.....	Todd Pepin.....	(352)232-4283

BOARD MEMBERS

Board Member	Dave Windom	(406)283-1916
Board Member	Jody Diaz.....	(360)427-6102
Board Member	Bob Beatty	(360)229-3408
Board Member	Mark Pentony	(360)490-4742
Board Member	Todd Pepin.....	(352)232-4283
Alt Board Member	Dick Robb.....	(360)427-4521
Alt Board Member	Jeff Sterba	(360)490-5800
Alt Board Member	Paul Fleming.....	(253)225-0780
Alt Board Member	Aaron Cleveland	(360)490-2189

February 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26 Monroe Swap Meet	27	28	29	30 Runway Closed	31	1
2	3 9:00 AM RC Breakfast	4 SFRFC Board meeting	5	6 1:00 PM Training	7	8
9	10	11	12	13 SFRFC Club meeting 1:00 PM Training	14	15
16	17	18	19	20 1:00 PM Training 7:00 PM Float club meeting	21	22
23	24	25	26	27 Closed Runway wsp 1:00 PM Training	28	29

Pacific Time Time Zone

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Training nights are ALWAYS weather permitting, check the weather at the field before leaving
 Sold days can change, check out the website before heading to the field.

<http://sfrcf.quintex.com/event/events.html>

Club Scheduled Events for 2019

Event dates in black are scheduled. Events in gray are complete.

January 1st First fly of the year - Sanderson Field - 10:00am
 May 30th..... Winter build challenge
 May 31st..... Warbirds - Sanderson Field
 July 4th..... Club Fly-in - Sanderson Field - 9:00 am
 July 18th..... To be determined - Sanderson Field
 July 19th..... To be determined - Sanderson Field

dues \$75 before January 1st and \$100 on or after

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