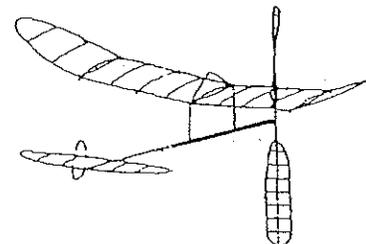


ISSUE # 128
EARLY SPRING
2011

INDOOR

NEWS and VIEWS



FROM THE EDITOR'S DESK

Here we go again with issue #128. We have for you plans, pictures, hints and kinks, a product review plus blurbs on just indoor stuff. On the plans we have Tom Icobellis' record setting limited Pennyplane. This is a model that any body can build and fly. The ability to set records is up to you and I. Did we build it to weight, is the prop pitch correct, CG ? How about good rubber? Weather conditions and old fashion good luck? Tom can help just so much and the rest is up to us. It's a darn good model and can really help us in our learning curve. We will have the wood sizes and weight in issue 129.

Speaking of wood sizes, we have the sizes and wood weights for his record setting F1M in our last issue. Again this is one part in building a good flying model. It also gives modelers like me a starting point. If I feel the size and weight are not in my skill level, I can use bigger wood and weight, until I reach that level Thanks again to Akihiro Danjo for his F1M and Tom for the Limited Pennyplane

Next we have a new torque meter by Bill Gowens. Do you have a torque meter, do you use it? Bill sells us a torque meter that you will use, it's high tech and very accurate. I compared my Bob Wilder torque meter, mounted on my Wilder winder and they measure the torque about the same. As for me I will use this meter as I do not have one for heavy motors and need it. You can contact Bill at his E-Mail address as to price and stuff. It is a bit pricey, but a needed item if you want to do well. Here's Bill's E-Mail address wdgowen@gmail.com Be nice to Bill, he will be helping out at the Indoor Nationals by running Hand and Catapult Gliders. Thanks Bill.

To assist you in your search to do well in the indoor arena we have Rodney O'Neill's wood stripper. This is another tool needed in your shop. This one you can fabricate your self or you can purchase from Ray Harlan. His ad is in this newsletter so check with him or make your own. Rodney has some pretty good instructions and now you have a new skill while gaining a much needed tool. Buy or build, your choice

Once again we will gain a new skill by following Larry Coslick's instructions on how to set a new pitch on a plastic prop. If you fly events that allow plastic props this is a big thing as far as pitch goes. Once again you fabricate the tool and cost is low or nil. No higher education is needed, follow the instructions. Maybe we need to include a prop pitch tool in our next issue, once again, you can buy or build, it's that easy. We will have an article on prop pitch indicator for you in the next issue. Thanks Larry, we miss you at the NATS.

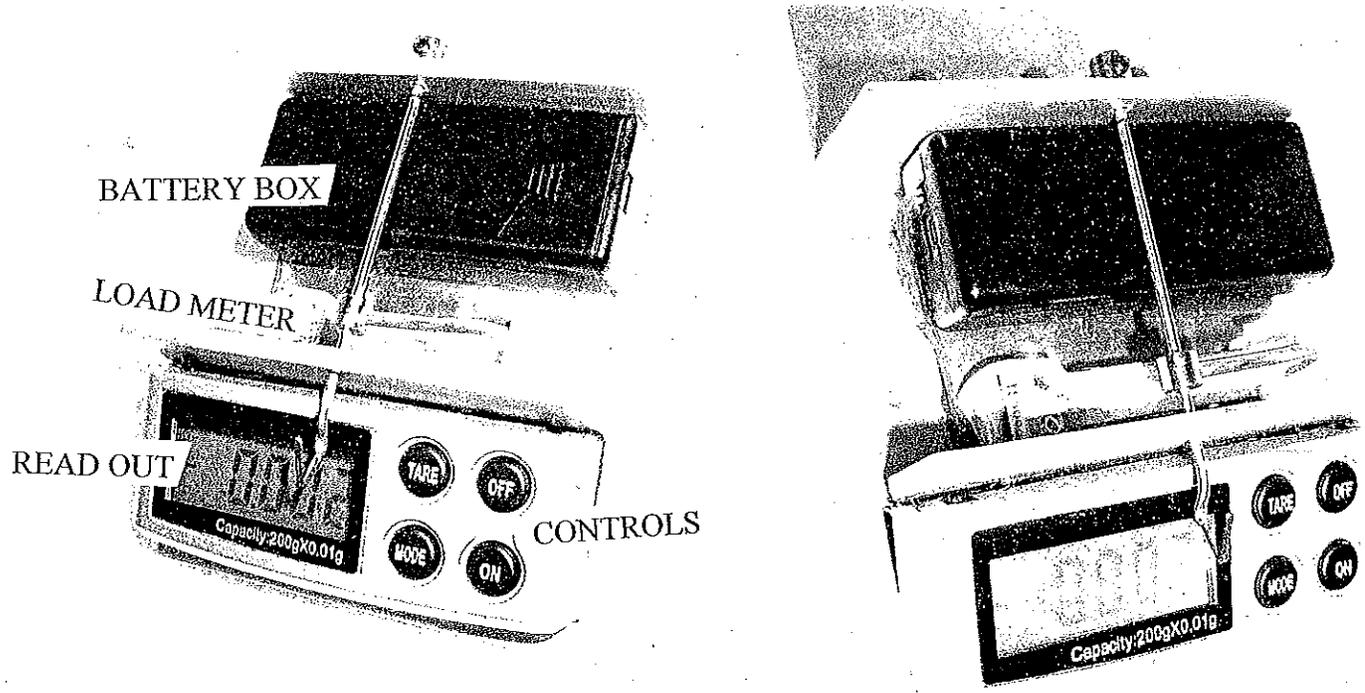
There will also be small blurbs about the USA Indoor Free Flight Nationals, the International Postal Contest for Ministick and A-6. How about the Wally Miller event and Science Olympiad, we have that and more

LOCATION OF BILL CARNEY, INDOOR FLYER.

Not only did we locate Bill Carney, but we gained three entries for our 2011 National Indoor Free Flight Contest. Bill has also volunteered to run the Science Olympiad Helicopter event. Now that's response. Many Thanks to Bill, but we say come and fly Bill. We have the event covered.

BILL GOWENS DIGITAL TORQUE METER.

Here we have pictures of Bill Gowen's fantastic digital torque meter. It has complete instructions on the operation of this little beauty. It takes two A size batteries these are installed in the little box at the top of the instrument. The load meter is located in the center and of course the digital read out and controls are at the bottom. Not shown are the instructions, these will be in the box the torque meter is shipped to you in at no extra charge. As you can see by the pictures the read out has a nice dark back ground that makes the white numbers stand out and is quite easy to read. We forgot to add that it has a very heavy duty aluminum base with a U shaped heavy duty aluminum bracket that cradles the torque meters components. This is not a wimpy instrument that will fall apart some where down the road. You can will it to your grand children. Contact Bill wdgowen@gmail.com for info and price.

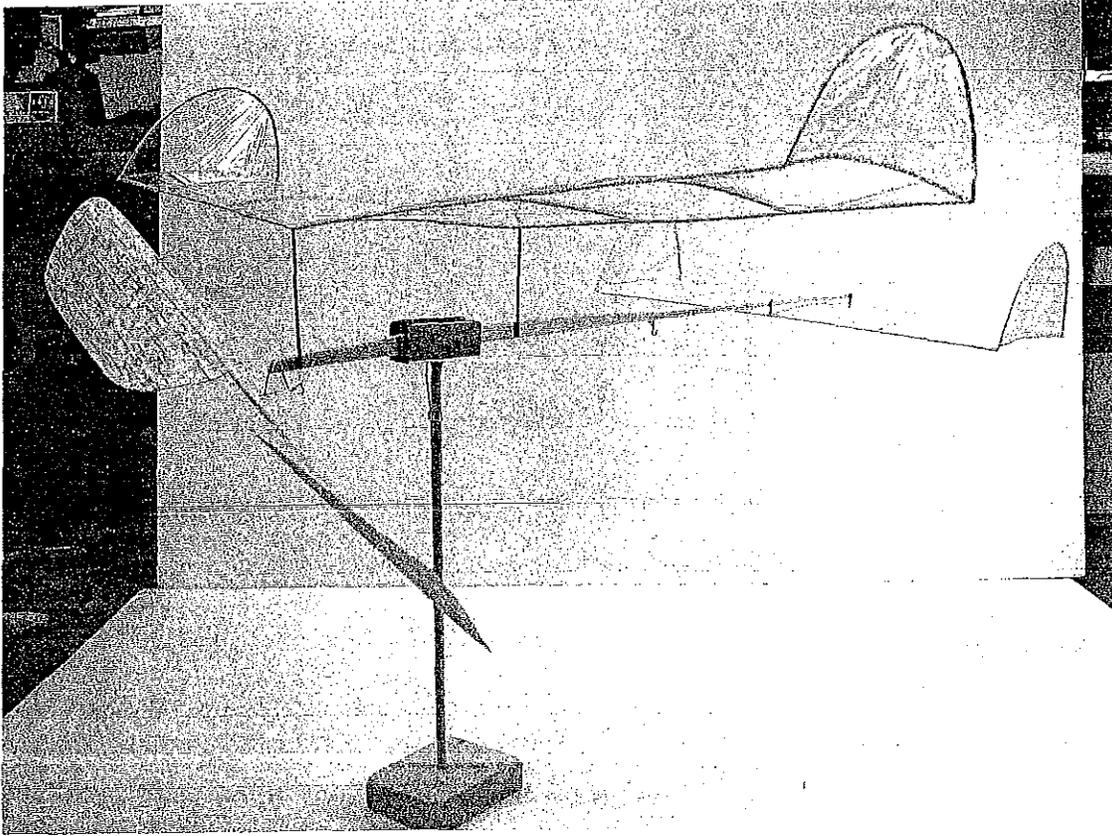


AMA & NFSS NATIONAL INDOOR FREE FLIGHT CONTEST, 25-29 MAY 2011

Indoor flying time again sports fans, Johnson City, TN is the location at the East Tennessee State University's Mini Dome. At a ceiling height of 114 feet, it's not mini to me. We will have two SO events for the school kids, Helicopter and Capacitor Electric, none for the old guys, unless you set it up yourself and fly at the same time as the kids. There are no prizes for the old guys. We also have the Wally Miller event with \$100 for first, \$50 second and 25bucks for third. The model must be built with the exact same size wood as Wally's and weigh 1.9 grams. Lotsa luck to all. Bring money as John Kagan will have a huge raffle with lotsa merchandise.

LOU YOUNG'S CROOKED LTD PENNYPLANE AND CEASAR BANK'S RUN DOWN STAND.

Paul Grabski received INAV # 125 and saw the above items and before you know it had built both and sent off the pictures to me for you. Paul says the weight came out right on the 3.1 gram mark and will tests it's flying ability come Indoor National's time in late May. Good luck Paul.



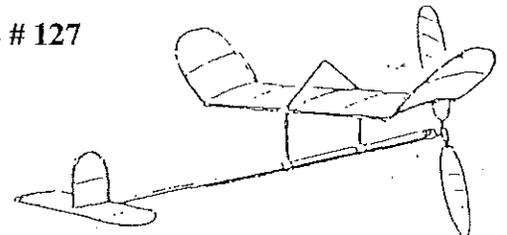
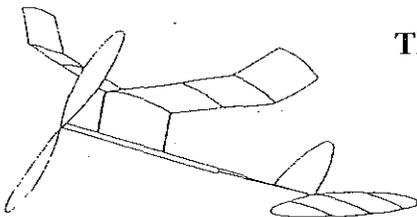
AKIHIRO DANJO'S F1M PROP WOOD SIZES AND WEIGHT

PROP OUTLINE 0.8 X 0.75 #7.0

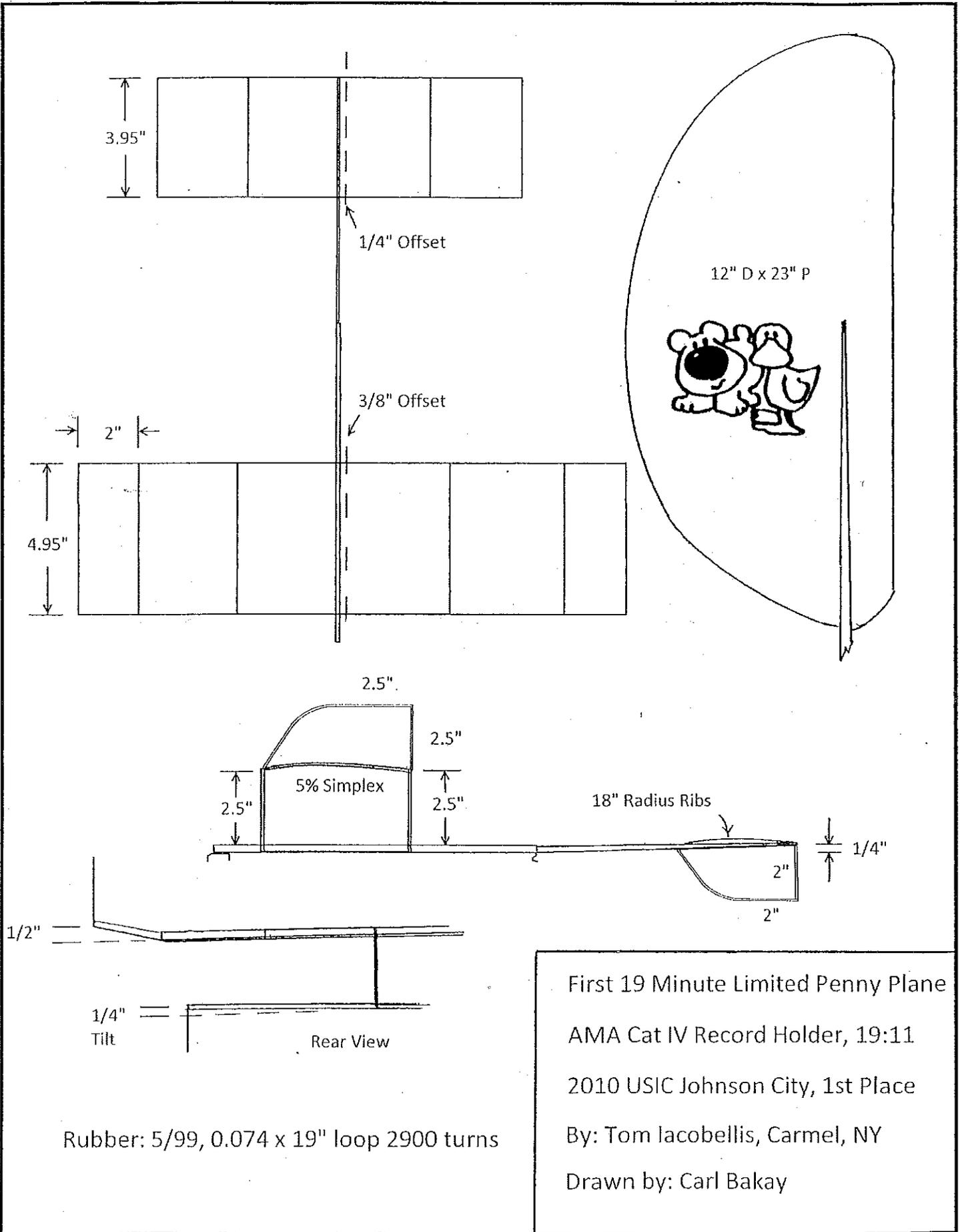
PROP RIBS 0.75 X 0.75 #6.0

PROP SPAR 2.0 X 2.0 - 1.0 X 1.0 #8.7

THIS WAS FOR AKIHIRO'S F1M IN ISSUE # 127



TOM'S LIMITED PENNYPLANE

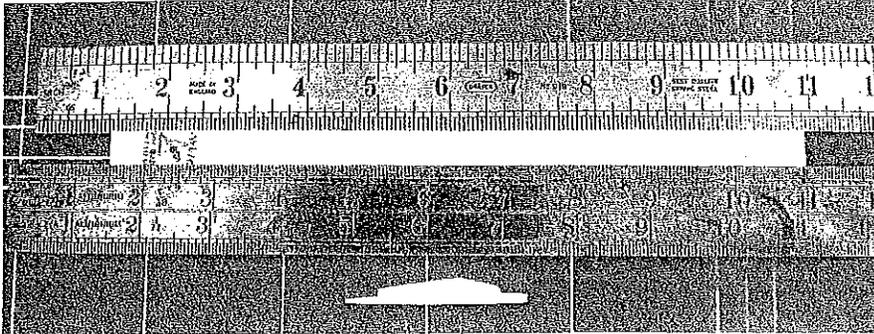


Rubber: 5/99, 0.074 x 19" loop 2900 turns

First 19 Minute Limited Penny Plane
 AMA Cat IV Record Holder, 19:11
 2010 USIC Johnson City, 1st Place
 By: Tom Iacobellis, Carmel, NY
 Drawn by: Carl Bakay

BALSA STRIPPER

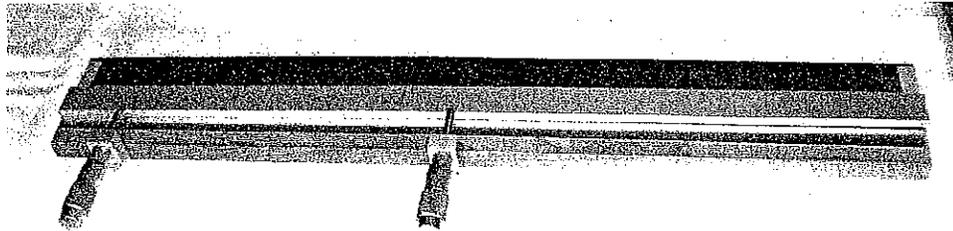
When I started indoor duration flying, about 20 years ago, I cut spars, using two steel rules and homemade slip gauges. I made a set of slip gauges to suit the size of taper required for the model I



was building. This practice continued for quite a few years until I was introduced to INAV and took out a subscription. In INAV, I came across Ray Harland's advert and took a look at his web site where I saw his balsa stripper and purchased one.

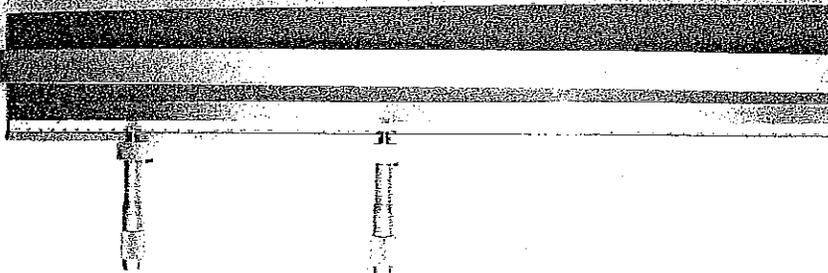
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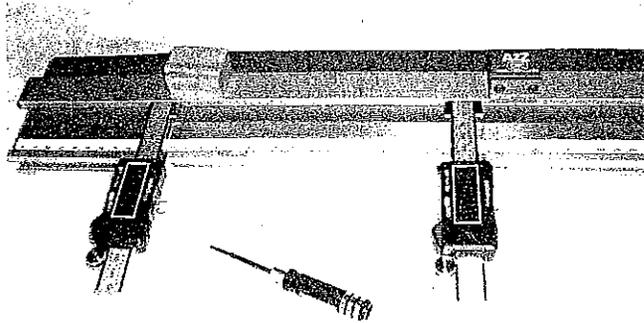
This piece of equipment made stripping spars a lot easier and much more consistent. I never took to calculating the taper required, as recommended with the stripper, when it was first purchased. I resorted to moving one of the micrometers to suit the length of spar to be cut. I decided that I needed to revise my method of cutting spars, as after a few years of use, the surface of the cutting area was getting marked by the cutting blade. The marking meant that occasionally the cutting blade would deviate from its proper path and I also was looking at ways to make adjusting the position of the micrometers on the board, easier.



After much head scratching and a long search for the bits to make it, I arrived at my version of a balsa stripper. The base of this stripper is a piece of beech wood which was machined to get a uniformly flat surface on both sides. The thickness of the base was set at 0.875 ins to ensure that the base would not bow when I stuck a piece of an art type cutting mat, to it. On the cutting mat, I then stuck a thin narrow strip of stainless steel, as per Ray's cutting board. On one edge of the base I fixed an alloy channel section to allow me to slide the micrometers around as required and I also added a paper rule (cms) from IKEA. I used this version for about 18 months until I decided I need to replace

the micrometers with modified digital callipers.



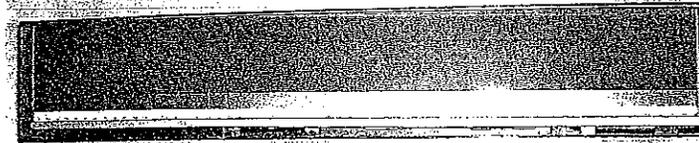
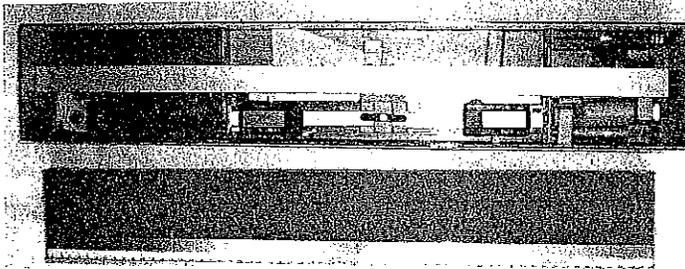


Why was the move to digital callipers necessary? Well I have had too many birthdays and I found that sometimes when adjusting the micrometers my concentration lapsed. I would start to make an adjustment and find that I could not remember the starting point for that adjustment; I had to resort to writing down each micrometer setting, for each cut I made. That was a bit of a bind, so I decided to invest in a couple of cheap digital callipers from China and modify

them, too suit my application. Now I move the callipers by the amount required and then tighten the locking screws and then make my cut. I then zero the callipers before releasing the locking screws and proceed to cut another spar.

Over the years the original stripper sat around my workshop in various dilapidated cardboard boxes. I realised that with the ability to easily dismount the micrometers / callipers, that I could make a sturdy box which would hold all the bits of my stripper. I had also purchased Tim Goldstein's spar deflection

tester and his CNC machined blade holder for use with the stripper. The box which I finally constructed holds all these bits.

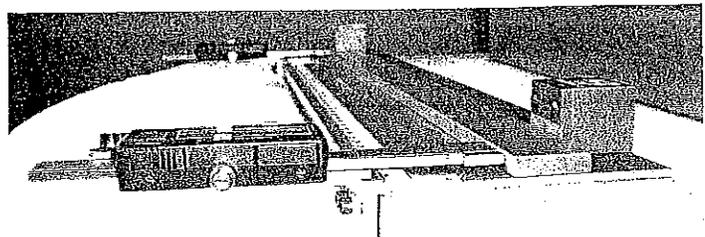


Note that the final shape of the alloy track and two of the four T section sliding blocks were made by hand using only a flat file and vertical drill. The T-section blocks used with the digital callipers were made on a milling machine, which I acquired recently. The alloy channel section started out as

a complex alloy extrusion used in some way, by shop outfitters. From this extrusion, using a hacksaw and a flat file I was able to produce the shape of channel required. I have more detailed pictures of this project, if anyone would like to see them please contact me at rodney.oneill@talktalk.net

Now, what will I do next?

Rodney O'Neill



UNITED STATES INDOOR CHAMPIONSHIPS 2011 SCHEDULE

AT ETSU MINI-DOME IN JOHNSON CITY, TN (USA) MAY 24-29, 2011

(ASTERISKS INDICATE NON-AMA EVENTS)

TUESDAY	TABLE SETUP AND GLIDER PRACTICE DAY
24 MAY 2011	

WEDNESDAY 25 MAY 2011	7:30	1:30	1:15	1:31	6:00	6:01	6:30	6:31	10:00
			P-24*						
		IHLG		MASS					
		STD. CATAPULT		LAUNCH	INTERMEDIATE STICK		RETRIEVAL		INTERMEDIATE STICK
		UNLIM. CATAPULT		AT	35 CM*		IF		35 CM*
		RTP SPEED*		1:15	F1D		NECESSARY		F1D
		STRAIGHT LINE SPEED *							
	RACE TO THE ROOF *								
THURSDAY 26 MAY 2011	7:30		12:30	12:31	6:00	6:01	6:30	6:31	10:00
			BOSTONIAN				RETRIEVAL		
			MODERN CIVIL PRODUCTION *		F1D		IF		F1D
		BOSTONIAN MASS LAUNCH	12:15 *		HAND LAUNCH STICK		NECESSARY		HAND LAUNCH STICK
		UNLIMITED RUBBER SPEED*							
FRIDAY 27 MAY 2011	7:30		12:00	12:01	5:00	5:01	5:30	5:31	10:00
		WW I MASS LAUNCH	11:30*						
		DIME SCALE *			MINISTICK		RETRIEVAL		MINISTICK
		SCIENCE OLYMPIAD*			EZ-B		IF		EZ-B
		FAC SCALE *			F1L *		NECESSARY		F1L *
		TOWLINE GLIDER			A-ROG*				A-ROG*
SATURDAY 28 MAY 2011	7:30		12:00	12:01	5:00	5:01	5:30	5:31	10:00
		COCONUT SCALE*			A-6*				A-6*
		NO CAL SCALE *			PENNY PLANE		RETRIEVAL		PENNY PLANE
		WWII MASS LAUNCH*	11:15		MANHATTAN		IF		MANHATTAN
		COCONUT MASS LAUNCH*	11:45		HELICOPTER		NECESSARY		HELICOPTER
		WALLY MILLER EZ-B*			ORNITHOPTER				ORNITHOPTER
					RODEMSKY LPP PRO/AM				RODEMSKY LPP PRO/AM
				WALLYMILLER				WALLYMILLER	
SUNDAY 29 MAY 2011	7:30		11:30	11:31	12:00	12:01	3:00	3:01	6:00
									PREPARATION TO DEPART
		LIMITED PENNYPLANE			RETRIEVAL		LIMITED PENNYPLANE		THE BUILDING MUST BE
		F1M*			IF		F1M*		CLEARED PRIOR TO 6 PM
		ELECTRIC FF DURATION			NECESSARY		ELECTRIC FF DURATION		* = NON AMA EVENTS
	(EVENT 221)					(EVENT 221)		HAVE A GREAT WEEK !!!!	

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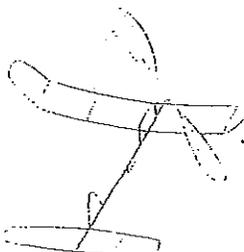
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USE A HEAT GUN TO CHANGE THE PARAMETERS OF YOUR PLASTIC SO PROP BLADES

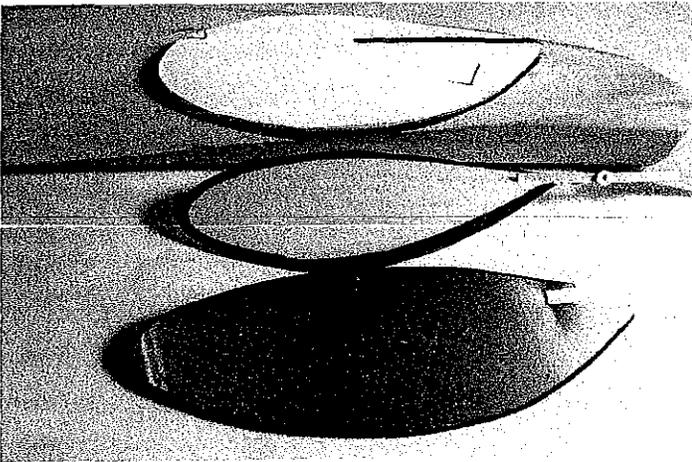
Larry Coslick

The plastic prop that was used for this project was purchased from FAI Model Supply, Part # SOP95A, 9.5" wide blade version. The blades were cut down to 3.5" long and 1.4" at its widest point. A poster paper template of the new blade shape was made and traced on the original blades, then cut out with scissors.

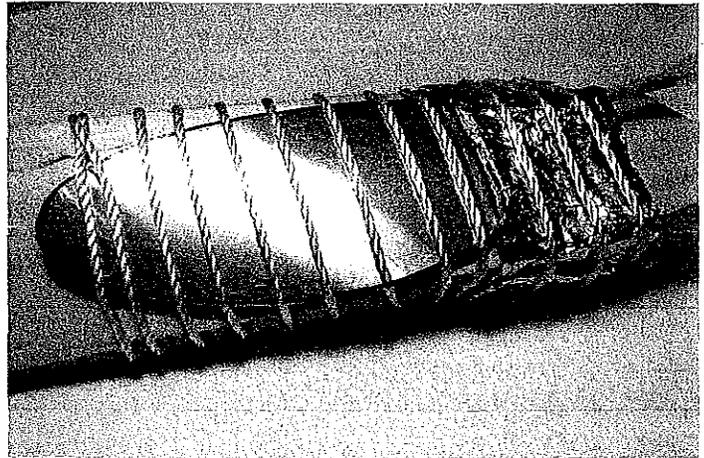
Any pitch block can be used for this procedure as long as the chord width of the block will accommodate the blade width of your prop.

To change the shape of the plastic blades a camber form is made out of $\frac{1}{4}$ " 5-5.5# A grain balsa. Trace the outline of the prop blade on the balsa and make it at least $\frac{1}{8}$ " larger on all of its edges then boil the form in a covered sauce pan for 25 minutes. Make a protective cap out of $\frac{1}{16}$ " hard balsa and strap the cap and camber form down to the pitch block. You really have to pull hard on the strapping twine to get the form to conform to the pitch block.

After the camber form has dried, sand an airfoil on the form and the $\frac{1}{4}$ " thickness along the leading and trailing edges allows for changes to the tip and hub angles so that they can be washed out if desired. The blade camber was reduced by 50%.



[1] This shows the order of placing the prop and aluminum cap on the camber form. The cap is made out of aluminum flashing material which most hardware stores carry. There are 2 alignment holes in the cap that match the pins on the camber form. Make the aluminum cap at least $\frac{3}{32}$ " larger on all of its edges than the prop blade because the heat from the 1000 watt Hanger 9 heat gun will melt any plastic that is not covered by the cap. Color was added to the prop outline and camber form for contrast. The black line on the camber form shows the groove for the plastic prop spar to set in. The placement of the aluminum cap in the picture makes it look larger than it actually is.



[2] Everything is tightly tied together with 6' of twisted nylon multi-purpose twine. Make sure that the outside edges of the cap are lying flat against the camber form, because a small kink in the blade could occur if a section is raised. Place 3 plies of aluminum foil over the prop hub to protect the plastic hub from the heat. Place the heat gun on high and watch the heating element until it glows orange. Use a stop watch to time the procedure, then place the nozzle 1" away from the cap and go over the entire cap for 15-20 seconds, no more. Let the cap cool to room temperature and the prop blade will conform to the camber form with no spring back.

INDOOR

NEWS and VIEWS

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