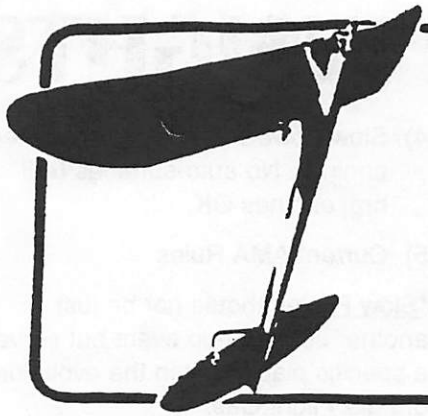


MINNEAPOLIS MODELER

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Issue No. 265 **Nov. / Dec. 1998**

Coming events:

November 1st., 1998

Turkey Shoot... Any airplane-any power... longest string of maxes wins the "Frozen Trophy".

November 6th, 1998

Club meeting @ Air National Guard Museum.....7:30 P.M.

December 4th, 1998

Club meeting @ ANG Museum.....7:30 P.M.

DENNY'S THOUGHTS & INSIGHTS

This contest season sure went fast! Here it is October and the next to last contests are history with the turkey shoot left on November 1. This is the latest the turkey shoot can be. Just to refresh your memories, the winner, who gets the turkey, is the contestant with the most consecutive maxs. If you drop a max you can re-enter, for a $1.00, and start again.

The aforementioned next to last contests" Oct. 3-4 at Lawrenceville, IL was attended by a bunch of guys from the MMAC. Jack O'Leary, place third in Mulvihil. Gary Oakins took second in A-Gas and third in 1/2 A-Gas. Dick Bloomquist placed first in NOS Gas. That weekend we, in the Twin Cities, had terrible weather very windy and rain. While Lawrenceville had good contest weather. All around the contest area the conditions were poor. At least for our club members that was great after traveling so many miles. Some MMAC guys even camped out.

Our Oktoberflug contest, October 11, weatherwise, according to the weatherman, was supposed to be a complete bust, rains and winds 15 to 25 mph. The first hour of the contest was foggy, after it lifted the winds were calm but gradually increased to 15 to 25 mph by about 1:30 and varied through the afternoon with a few periods of 10 to 15 mph. Nice to have a huge field.

Slow power was brought up at the October 2 MMAC meeting again. There were a few suggestions for a name more palatable than SLOP. The name voted on and adopted for MMAC contests was "Classical Gas."

I received a letter from Harry Murphy who very nicely took exception to our questionnaire on slow power. It read as follows:

Dear Denny:

Noted your material in the last Minn Modeler relative to SLOW POWER. As the drafter of the original rules for Nostalgia Gas for the NFFS (in cooperation with Ralph Prey), I wish to voice the following opinions:

Placing Slow Power in the AMA Rule Book as an AMA event is inconsistent with the way "era restrictive" events have been handled in the past. I feel it should be monitored by the NFFS in the same manner as Nos Gas is at the present.

The organizational structure is already in place and it would be a simple matter for the current four district NFFS Nos Gas Reps to monitor Slow Power events as well. A simple change in titles form Nos Gas Reps to Nos Gas and Slow Power Reps would suffice as soon as basic rules have been laid down.

Slow Power should serve a purpose in the evolution of FF Gas in permitting powerplant equivalents of the era between Nos Gas (1957) and the Schneurle engine era.

This would include such as the ST G-21 and OS Max-H series engines, loop scavenged K&B's, etc. Ball bearing engines are of little or no significance as ball bearings go more to extend engine life than improve engine performances. (Preceding O.T. and Nos Gas eras permit ball bearing engines such as McCoy, O&R, Super Cyke, etc.).

To date all "era restrictive" Free Flight event have served a single purpose: To permit competition once again using the designs and engines of the targeted eras while permitting inactive FF'ers to pop back into competition at the approximate levels at which they may have left.

i.e.

1) Antique: Pre-1939 Designs/Ign. Engines
2) Old Timer: Pre-1942 Designs/Ignition Engines
3) Nostalgia Gas: Pre-1957 Designs/Early Glow Eng.
4) Slow Power: Pre-Scheurle-ported engines. No auto-surfaces Ball brg. engines OK.
5) Current AMA Rules

*Slow Power should not be just another conjured-up event but serve a specific placement in the evolution of Free Flight Gas.

Harry S. Murphy, Jr.

Thanks Harry, the "original rules" should be what we use to start the 1999 contest season. The MMAC meeting, November 6, will be the forum to adopt "Classic Gas" event. Comments can be addressed to me or Joe Huetl.

Thanks to John Watkins who volunteered to help me with this project.

We haven't as yet decided when or where the MMAC Christmas Party is to be held. As before we've had the party at a member's home with a wonderful time had by all. It's potluck and let me tell you the food is fabulous. We need a volunteer and thank you in advance.

The new "funny money" certificates for prizes at contests will now have a redeem by time which will be one year from the contest date on the certificate.

There are some old rules set down by the MMAC forefathers that have not been adhered to in recent years. Brought to my attention by ever-vigilant Tim Johnson. One of which is to have a card for each event flown by each contestant and mark the flights down before they are posted on the main board. This procedure would help to avert the problems with; who timed my last flight, or somebody forgot to put down one of my flights. This too will be on the docket for the November meeting.

See ya at the field!

Denny

MMAC MINUTES FOR THE SEPT. 11 MEETING

The Sept. meeting was called to order at 19:50 by Denny Sussman. The meeting was held in the Air National Guard Museum library. This will now be the regular meeting place for all future MMAC meetings.

Number in attendance---17

The minutes for the Aug. meeting were accepted as published in the Newsletter.

The Treasurers report was read minus the June 6th receipts.There were several questions about the "funny money" outstanding. Denny agreed to keep track of how much is awarded for prizes. It was decided there should also be a time limit on redeeming the money.

CORRESPONDENCE:
Jim Ladwig read a letter from the Oakie flyers. Don Patterson read a letter from Sue Howard (the Northview school teacher) We will be helping her class again this year. The sad news on the death of Sid Jepson's wife was reported by Jack O'Leary. Orders for the EAA calenders was taken. The Secretary gave an update on the SLOP survey.

OLD BUSINESS :
There was discussion on where we will fly this indoor season . Gordon Dona reported that there may be a Navy hanger available for test flying or fome schedule meets. He will check on it. Jack O'Leary reported on FAC rules and how we may use them. Gary Oakins suggested we do something to show our appreciation to the owners of our new flying field. We will do more on this at a later meeting. There was a discussion on where to set up for the contests at the sod field.

NEW BUSINESS:
Don Patterson showed an issue of the Private Pilot Magazine that had several Aviation Gallery paintings.
Jack O'Leary asked that we show the video,on tissue covering,at the next meeting.
The meeting adjourned at 20:35
Denny handed out some Peck-Polymer catalogs.
There was no show and tell.
Harold Wachtler won the raffle--It was an .020 Cabin Playboy.

OLD DOGS, NEW TRICKS by Dave Mills

I've been experimenting with different brands and batches of rubber for Catapult Glider and I decided that TAN II is not the best choice for launching these models. An old box of 1/4" Champion rubber provided the best results, the models gaining about twenty feet of altitude over the more popular TAN II.

I reasoned that the old Champion rubber gave up it's energy more quickly than the TAN II, accounting for the added boost. Thinking back several years, I recalled how TAN II displaced all the others because of it's superior cruise power. This supported my line of thinking regarding the behavior of the Champion rubber. I now had my secret weapon for the '98 AMA Nats.

I quickly noticed on the day that Catapult was flown in Muncie that others had arrived at the same conclusions. About half of the top ten weren't using TAN II, but had off-color rubber on their sticks. The nods and knowing glances were telling. Subsequent interviews revealed some individual use of Sig and Perelli, while most used Champion. I've had a pound of 1/4" Champion in the frig for several years and that's a lifetime supply.

Via the TTOMA *Thumb Print*

1998

MMAC MINUTES FOR THE OCTOBER 2nd MEETING

The October meeting was called to order at 19:58 by Denny Sussman. Number in attendance---16

The minutes for the Sept. meeting were read and accepted.

The Treasurers report was read and he reported that he had still not received the money from the June 6th contest. He contacted Mike Spiess, and Mike said he had sent it. Mike will check into it further.The report was accepted.

CORRESPONDENCE;
The secretary read a letter from CDR Nordmeyer on the availability of the Navy hanger. He gave us the dates and the rules of use. The decision on action was deferred to Jack O'Leary. The secretary reported on the Eisenhower and the Robbinsdale school gyms. These [redacted] also will go to O'Leary for action.

OLD BUSINESS;
The results on SLOP were reported. There were 8 and 1/2 returns on the survey. It was voted on that we should call this event Classic Gas. The results were given to Denny Sussman and John Watkins to come up with a set of rules for the club to vote on.

NEW BUSINESS;
Don Patterson handed out several copies of Hints And Tips on building models to anyone who wanted them.
Denny handed out Sattelite coupons for Hot Stuff.
Jim Ladwig took orders for English winders.
Greg Thomas displayed his kits and plans from THOMAS DESIGNS.

Raffle; Hank Liljequist won the $20.00
Don Patterson won the Comet kit.

SHOW AND TELL
Jim Ladwig showed his mixture of UHU and Alcohol for tissue covering
He also reported that we have a dome date Wed.Oct.21 09;00-13;00. Kids (10;00-12;00)
The meeting adjourned at 20;48

Change in Oil Content Due to Amount of Added Oil per Quart of Fuel

AMOUNT OF OIL ADDED PER QUART

Oil Content of Fuel (by volume)	Stated	+1 oz	+2 oz	+3 oz	+4 oz
	14%	16.6%	19.1%	21.4%	23.6%
	16%	18.5%	20.9%	23.2%	25.3%
	18%	20.5%	22.2%	25.0%	27.1%
	20%	22.4%	24.7%	26.9%	28.9%
	22%	24.4%	26.6%	28.7%	30.7%

The Effect of Adding Oil on Nitromethane Content Fuels (for pints: halve the amount, quarts: 4 times the amounts)

Stated Nitro Content	+2 oz oil	+4 oz oil
15%	14.1%	13.3%
20%	18.8%	17.8%
25%	23.5%	22.2%
30%	28.2%	26.7%
35%	32.9%	31.1%
40%	37.6%	35.6%
50%	47.1%	44.5%
65%	61.2%	57.8%

Contest Results
Fall Meet
September 6, 1998

1/2 A Gas

1st.	Dick Bloomquist	104	97	120	321
2nd.	Bill Roush	71	120	67	258
3rd.	Gary Oakins	66	120	69	255
4th.	Terry Taylor	54	-	-	54
5th.	Don Messerly	14	-	-	14

A Gas

1st.	Dick Bloomquist	120	120	116	356
2nd.	Gary Oakins	120	120	89	329
3rd.	Clyde White	120	-	-	120

BCD Gas

1st.	Denny Sussman	120	120	120	120	120
2nd.	Gary Oakins	120	120	120	85	
3rd.	Dick Bloomquist	120	120	120		

Nos Gas

1st.	Dick Bloomquist	120	120	120	360
2nd.	Denny Sussman	72	119	120	311
3rd.	Gary Oakins	74	120	95	289
4th.	Hank Liljequist	61	87	-	148
5th.	Pete Owen	87	-	-	87

Pee Wee Gas

1st.	Hank Liljequist	213	655	360	1228
2nd.	Terry Taylor	500	207	113	820
3rd.	Pete Owen	187	-	-	187

Mulvihill

1st.	Jack O'Leary	120	120	120	180	240
2nd.	Joe Huettl	120	120	120	180	123
3rd.	Aaron Peterson	120	120	83		

Coupe d' Hiver

1st.	Herman Fessler	33	120	120	273
2nd.	Aaron Peterson	115	49	93	257
3rd.	Hank Liljequist	63	73	120	256
4th.	Ted Wlazlo	91	42	120	253
5th.	Warren Ringlien	57	59	36	152
6th.	Jack O'Leary	69	-	-	69

P-30

1st.	David Peterson	120	120	111	351
2nd.	Joe Huettl	102	120	120	342
3rd.	Herman Fessler	78	89	120	287
4th.	Warren Ringlien	120	120	11	251
5th.	Aaron Peterson	56	83	46	185
6th.	Gary Oakins	62	87	32	181
7th.	Hank Liljequist	54	56	68	178
8th.	Terry Taylor	43	72	54	169
9th.	Bill Rogers	46	120	-	166
10th.	Duane McDonnell	69	39	57	165
12th.	Jim Anderson	26	-	-	26

Embryo

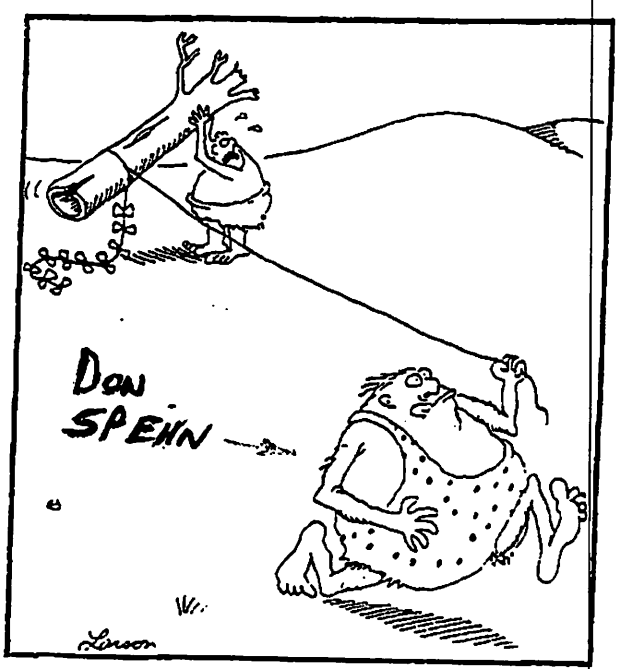
1st.	Herman Fessler	120	111	-	9	240
2nd.	Aaron Peterson	22	55	45	5	127
3rd.	Jim Anderson	22	62	14	9	107
4th.	David peterson	15	28	20	5	68

HL/Catapult Glider

1st.	Herman Fessler	58	43	67	168
2nd.	David Peterson	37	49	43	129
3rd.	Duane McDonnell	55	20	22	97
4th.	Dick Diers	28	35	31	94
5th.	Ted Wlazlo	24	30	30	84
6th.	Al Nephew	20	19	20	59
7th.	Joe Huettl	14	16	24	54
8th.	Warren Ringlien	9	13	7	29

Junior Event

1st.	David Peterson	73	75	65	213
2nd.	Nico Kubota-Armin	52	92	44	188
3rd.	Kiyoshi Kubota-Armin	28	35	30	93



"OKAY,DON...GO! GO! GO!"

Contest Results

Octoberflug

October 11, 1998

1/2 A Gas

1st.	Gary Okins	84	120	120	324
2nd.	John Watkins	84	120	115	319
3rd.	Terry Taylor	59	99	120	278

A Gas

1st.	Clyde White	86	116	-	202
2nd.	Gary Oakins	72	-	-	72

BCD Gas

1st.	Denny Sussman	120	120	120	360
2nd.	Dick Bloomquist	120	118	-	238
3rd.	Tim Johnson	107	120	-	227

Nos Gas

1st.	Gary Oakins	103	74	111	288
2nd.	Dick Bloomquist	120	120	-	240
3rd.	Tim Johnson	21	21	-	42

.020 Rep.

1st.	Gary Oakins	15	95	-	110

Junior Event

1st.	David Pederson	120	15	-	135
2nd.	Colleen Watkins	24	61	46	131

Mulvihill

1st.	Gordon Dona	120	120	120	180	240	780
2nd.	Jack O'Leary	120	120	120			360
3rd.	Warren Ringlien	120	120	-			240
4th.	Aaron Petersen	120	99	-			219
5th.	Joe Huettl	106	-	-			106

O.T. Rubber

1st.	Aaron Petersen	120	103	88	311
2nd.	Herm Fessler	83	72	-	155
3rd.	Jim Anderson	42	31	50	123
4th	Ted Wlazlo	40	-	-	40

Coupe d' Hiver

1st.	Warren Ringlien	97	90	91	278
2nd.	Joe Huettl	46	-	-	46

Embryo

1st.	Herman Fessler	100	120	-	229
2nd.	Aaron Petersen	68	120	-	189

P-30

1st.	Joe Huettl	120	120	112	352
2nd.	Aaron Petersen	120	86	53	259
3rd.	Tim Johnson	54	66	120	240
4th.	Gary Oakins	65	50	72	187
5th.	Herm Fessler	48	66	-	114
6th.	Jim Anderson	24	-	-	24

HL/Catapult Glider

1st.	Gordon Dona	59	86	120	265
2nd.	Herm Fessler	59	56	57	172
3rd.	John Watkins	41	42	41	124
4th.	Bill Rogers	47	20	26	93
5th.	Doug Zimmer	16	23	22	61
6th.	Warren Ringlien	15	8	11	44
7th.	Terry Taylor	11	8	5	24



"Do you have one that smells like balsa wood?"



Herman Fessler

1998 Outdoor Points Champion

[1]	Herman Fessler	146	[6]	Dick Bloomquist	87
[2]	Gary Oakins	111	[7]	Jack O'Leary	72
[3]	Aaron Petersen	110	[8]	Gordon Dona	56
[4]	Warren Ringlien	92	[9]	Bill Rogers	40
[5]	Joe Huettl	91	[9]	Denny Sussman	40

Juniors

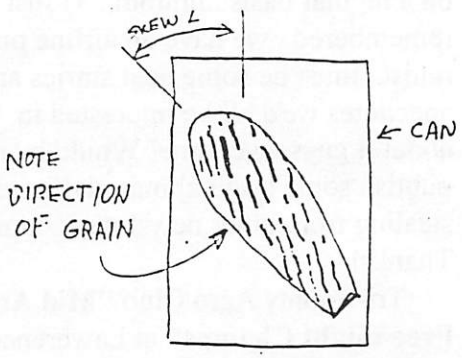
[1]	David Peterson	40	[4]	Colleen Watkins	2
[2]	Jason Schuler	5	[4]	Nico Kuboda-Armin	2
[3]	Matt Dona	3	[7]	Kiyoshi Kuboda-Armin	1
[4]	Jacob Dona	2			

Congratulations Herman and David. I think y'all better watch out for David... looks like he's a real up and comer. Thanks to all C Ds and contestants for an excellent flying season

LAMINATED PROP BLADES by Tom Arnold

Just when I was bemoaning the fact that my soaked-laminated-wrapped-around-a-can prop blades seemed to be slowly straightening out, I got a nice note from the old master Clarence Mather:

Your curveless prop blades reminded me of the same problem I had a few years ago. I laminated blades of 1/32 sheet and used Titebond glue. The glue doesn't set real hard I guess. Anyhow, the model, a Mulvihill, staggered around and fell out of the air! I've had fewer problems with the old plastic glues such as Ambroid and Sigment. Also, the bent blades are really a compound curve. Cutting blades so the wood grain is at an angle to the center line allows the blades to bend easier. Even so, my blades spring back a little from the form. When you put them on the the form skew them a little more than you really want and they will come out good.



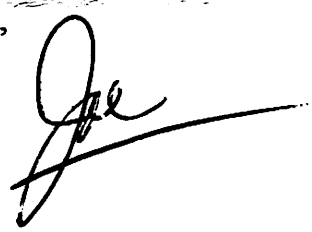
THE GRAIN DOES NOT HAVE TO BE EXACTLY ON THE CAN CENTERLINE BUT SOMEWHERE BETWEEN IT AND THE SKEW ANGLE

Say What ??

Musings from the editor...

- As can be deduced from the Oct. meeting minutes, we have yet to obtain an indoor flying site for this coming winter. When a site is obtained (don't worry... its being worked on by our own intrepid **Jack O'Leary**)and a schedule worked out, a special mailing will notify you of the details. Expect notice of the time, date and place of the Christmas party at the same time.
- I recently learned that **Mrs. Sid Jepson** has passed away. Our condolences to members **Sid** and **Dan** on the loss of your Wife and Mother. God Bless you all...our prayers are with you.
- All you aspiring writers out there take note...this is a call for articles / plans to be included periodically in this humble rag. Doesn't have to be anything earthshaking just something you're familiar with, whether real life or modeling related. A couple of instances would be...(hint hint hint) 1) There's a fella down Ioway way (???) who was a mechanic in a previous life. Sure would be nice to maybe receive an article relating to troubleshooting a balky motorcycle when the damn thing won't start on the morning of a contest...2) Another fellow who almost always wins Mulvihill and Old time Rubber could draw up a simple three view of that Mulvihill so that others can copy it exactly and whip his butt on a regular basis...hmmm...3) Just remembered...we have an airline pilot in our midst...must be some neat stories and/or anecdotes we'd all be interested in. Think about it guys, everyone! Would be nice to publish some original material instead of stealing from other newsletters constantly. Thanks!
- Tri-County Aero Club **"Mid America Free Flight Champs"** at Lawerenceville Ill. was just a dandy contest. Left my clothes at home(thank heavens for all-night Walmart stores)-Had car problems(bad gas...no wonder it's so cheap!)-Lost my new jacket(left it at the restaurant we almost got thrown out of Sat. nite)-Airplanes flew terrible(couldn't possibly be the Gin hangover(s)...no way). Whew...didn't realize I had so much fun! Can't wait till next year. A big Thank You to **Bud Brown**, CD, for retrieving and mailing up my jacket. Had spare car keys, motorcycle/trailer keys and stopwatch in the pocket. Must have had a good time.
- I got a special present for my birthday this year. Mom and Dad sent me $50 and I spent it on an airplane ride. Not just any airplane ride, mind you, but a ride over/around the White Bear and Anoka County area with our own **Gary O.** at the controls. Was somewhat worried about the deer on the runway situation but everything went smoothly. It was a first for me in a light plane at night. Neat.
- The date for submissions for the next newsletter will be 12/12/98. I know that's early but with the holidays and all I'll need the extra time. Thanks in advance to those affected.
- Don't forget the turkey shoot 11/1. Be there or be square!!!

See Ya,



- Late breaking ***FLASH!!!*** All you **indoor** dudes look on the following page for details on a practice session set up by **Gordon D.** Thanks Gordon!

October 24, 1998

Denny,

I missed the last meeting, and I'm going to miss the next one too, so I need to get you the information on using the Navy Hangar for an indoor practice session . I coordinated with CDR Doug Nordmeyer, the CO of the Naval Reserve Center. He's fine with giving it a try. I set up a session for Saturday November 14th from 8:00 AM to 4:00 PM. See the enclosed letter I gave him. There are a few potential problems, mostly that the Metropolitan Airport Commission (MAC) is also leasing the hangar and can put equipment in the area we intend to use with little or no notice. MAC usually hasn't used the space much so it shouldn't be a problem. The site is an old hangar that is over half empty. It has about a 35 ft ceiling that is fairly clean and has a false ceiling like the Minnetonka Christian Academy site so most of the structural beams aren't in the way. It is heated, but the heaters are easily turned off to stabilize the air. The hangar is fairly near our new meeting sit on the North side of the airport. Take the 28th street exit off of the cross-town freeway (62) and go South on 28th. Turn left at the "T" onto 62nd St. E. Turn into the Naval Reserve center at the guard shack. The Navy is much more security conscious right now than the Air Guard. They are in a high security state due to current world events. Expect to show ID to a Marine guard. They will know about MMAC coming. It will be a Marine Reserve weekend so parking will be a little tough. Drive Left around the back of the administration building and at the stop sign jog 30 ft Left to continue into a parking lot towards the hangar. There is currently NO parking within 50 ft of any building (the security bit again) so park in the lot and walk toward the hangar. The Marines will probably get antsy if someone drives up front by the building to drop off boxes, so for this first time I recommend just parking and humping the boxes into the building the hard way. Enter through the side door in the center of the side you approach. There's a big roll up steel door next to the entrance door. There are no tables available so far. I'm trying to arrange some, but for now expect to bring a table. There are plenty of folding chairs. There are pop machines and a head (you can tell Oakins that's a bathroom) in the hangar. I'm sending copies to Joe and Hank in hopes of getting it into the newsletter so folks get the word in time. I will be there the whole time, and check the day before for any mess MAC might make at the last minute so if anyone's curioius they can give a call 881-4035.

Thanks,

Gordon Dona

ADHESIVES FOR INDOOR NOCALS by Don Slusarczyk

When building a Nocal for indoor flying you should try to stay away from super glues, except for special areas. I use Duco Household Cement diluted with acetone (40% glue, 60% acetone) for most of my gluing on all my models. It is quick drying, about 15 minutes, and it is very light and strong. I only use super glue around the nose bearing, the rear hook, and for gluing the prop shaft to the prop spar. Super glue is quite heavy if used to build the entire aircraft.

When covering the model, I quite often use 3M Spray Adhesive, or sometimes a white glue and water mixture (20% glue, 80% water). Under no circumstance should clear dope be used for covering indoor Nocals! You might as well put a coat of lead on the model and then throw it out.

And that's it! No hocus! No pocus! I hope the information presented here helps out those who are looking for answers on building Nocals. If you would like to ask specific questions, please feel free to E-mail me at Dslusarc@ stratos. net.

Adapted from an article published in The *Hangar Pilot* edited by Doc Martin

FLIGHT SCALE TIMER
INSTRUCTION SHEET

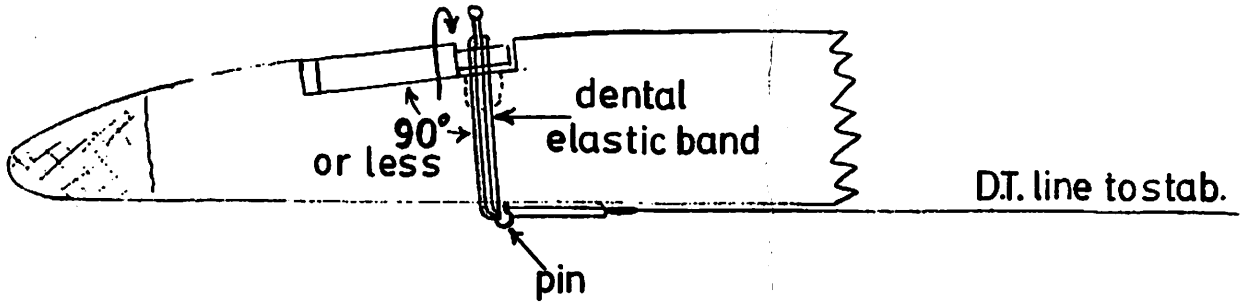
THANK YOU FOR CHOOSING THE FLIGHT SCALE TIMER. THIS IS ONE OF THE LIGHTEST TIMERS AVAILABLE FOR A VERY REASONABLE PRICE. THE TIMER IS AVAILABLE IN TWO SIZES. THE MINI IS CAPABLE OF RUN TIMES OF APPROX. 6 MINUTES ON THE FIRST REVOLUTION AND THE MICRO IS CAPABLE OF APPROX. 3 MINUTES FOR THE FIRST REVOLUTION. ADDITIONAL TURNS CAN BE ADDED IF NEEDED.WIEGHTS ARE 1 AND 1/2 GRAM RESPECTIVELY.INSTALLATION IS SIMPLE AS WELL AS RUNNING OF THE TIMER. A COUPLE OF THINGS MUST NOT BE FORGOTTEN TO USE THIS TIMER. FIRST, THE TIMER IS DEPENDENT ON THE ELASTIC PROVIDED TO RUN IT PROPERLY. YOU MUST PERIODICALY CHECK THE CONDITION OF THE ELASTIC BAND BECAUSE U.V. RAYS ARE HARMFUL TO THEM. THE BANDS MAY ALSO LOSE SOME OF THEIR ABILITY TO PROVIDE PROPER TENSION THROUGH AGEING CAUSING THE TIMER TO RUN SLOWER. REPLACE THE BAND IF NEEDED. A SIMPLE STOP WATCH CHECK MUST ALSO BE PREFORMED BEFORE FLYING TO CHECK RUN TIME AS THERE IS SOME VARIANCE DUE TO TEMPERATURE. THE VARIANCE IS LITTLE WITH TEMPS. ABOVE 70 DEG. F. BUT WILL SLOW DOWN CONSIDERABLY WHEN APPROACHING FREEZING. A SOLUTION TO THIS PROPLEM IS TO INSTALL A SECOND DENTAL BAND (OR A SINGLE SIG # SH-359 NO.8 1/16*7/8 FOR THE LARGE TIMER ONLY) TO PROVIDE ADDITIONAL TENSION TO MAKE THE TIMER RUN FASTER.
INSTALLATION IS AS FOLLOWS: THERE SHOULD BE AT LEAST 2 TO 2 1/4 INCHES BETWEEN THE CENTER SHAFT AND THE D.T. LINE TO PROVIDE ENOUGH TENSION TO RUN THE TIMER. THE ANGLE OF THE ELASTIC BAND TO THE CENTER SHAFT SHOULD NOT BE GREATER THAN 90 DEG. OTHER WISE IT TENDS TO PULL THE SHAFT OUT OF THE MAIN BODY WHICH WILL ALTER RUN TIME. USE THICK C.A. TO SECURE THE TIMER. FOR HLG'S YOU MAY NEED TO MAKE SOME ADDITIONAL ALTERATIONS TO YOUR FUSELAGE AND TIMER FOR IT TO RUN PROPERLY. FUSELAGES OVER 1/8TH THICK WILL NEED THE HEAD OF THE RELEASE ARM (PIN) CLIPPED OFF FOR THE DENTAL BAND TO RELEASE PROPERLY. DEBURE AND ROUND OFF THE END OF THE PIN FOR SAFETY. ALSO IF THE SHAFT NEEDS MORE ROOM TO ROTATE (IT USUALLY DOESN'T FOR A TWO MIN. MAX.)TO ACHIEVE THE REQUIRED RUN TIME YOU WILL HAVE TO FILE A NOTCH OR CUT A SMALL AREA OUT BENEATH THE RELEASE ARM TO ACCOMIDATE IT'S ROTATION (SHOWN BY THE DOTTED LINE IN THE HLG DIAGRAM). OPERATION OF THE TIMER IS SIMPLE. PULL THE DENTAL BAND AND SLIP THE END OVER THE RELEASE ARM AND ROTATE THE SHAFT TO THE DESIRED SETTING. THE SHAFT CAN ROTATE IN EITHER DIRECTION.A SIMPLE PIECE OF CARD STOCK MARKED OFF IN 5 DEG. INCREMENTS CAN BE USED AS A REFERENCE FOR THE DESIRED TIME SETTING. CUT A SLOT IN THE CARD AND SLIP IT OVER THE TIMER,SET THE TIMER AS NEEDED AND REMOVE THE CARD. REFERENCE MARKS CAN ALSO BE MARKED DIRECTLY ONTO THE FUSELAGE AS IN RUBBER POWERED F.F. INSTALLATION. A SMALL FISHING LEADER OR FIGURE 8 WIRE HOOK BETWEEN THE D.T. LINE AND THE DENTAL BAND IS ALSO HELPFUL WHEN CHANGING BANDS IS REQUIRED.SEE THE DIAGRAM FOR FURTHER INFO. AND INSTALLATION IDEAS. COMMENTS , SUGGESTIONS OR IDEAS TO IMPROVE THE TIMER ARE WELCOME .

BARRIE TAYLOR

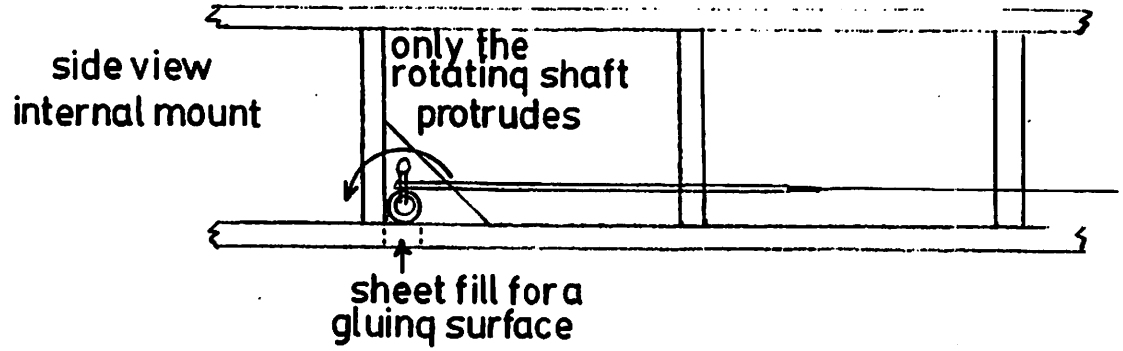
REPLACEMENT DENTAL BANDS ARE AVAILABLE FOR $1.00 OR FROM:
F.A.I. MODEL SUPPLY
P.O. BOX 366 (OR SEE YOUR DENTIST)
SAYRE, PA. 18840-0366
USA *SPECIFY 3/8" DIA. LIGHT PULL ORTHODONTIC BANDS*

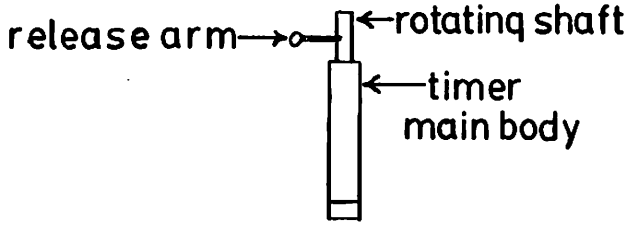
TYPICAL TIMER MOUNTING

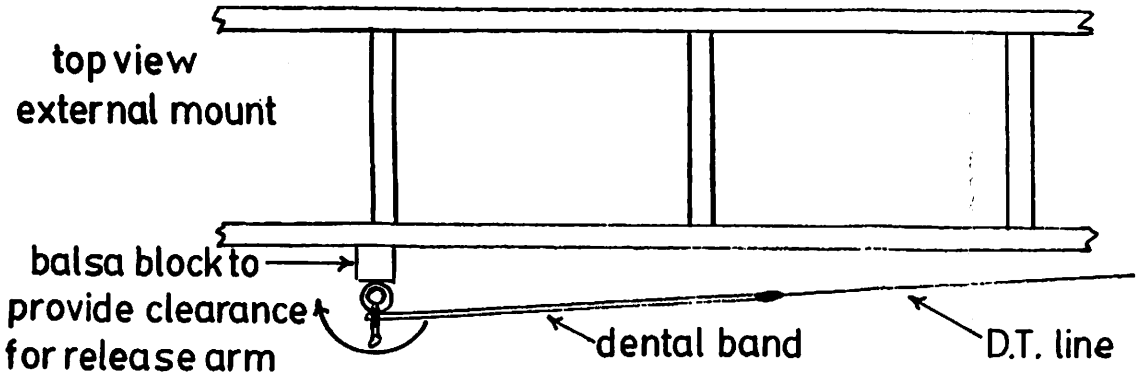
HLG mount



Other F.F. types of installations







11

I'VE ALSO STARTED UP A PLAN SERVICE WI[illegible] PLANS COMPLETE TO DATE FOR SALE. THEY ARE GOOD QUALITY DRAWI[illegible]Y CLEARLY REPRODUCED.

HERES THE LOW DOWN ON THE PRICES OF THIS STUFF. PRICES ARE IN CANUKIAN DOLLARS. I WILL GREATFULLY ACCEPT THE EQIVILENT U.S. DOLLARS THOUGH.
NOCAL PLANS ARE $4.00 EACH AND $2.00 DOLLARS POSTAGE. I CAN MAIL UP TO 5 COPIES FOR THIS RATE. THERE WILL BE SOME NEW PLANS IN THE FUTURE BESIDES THESE FOUR.
LACEY M-10 AN FAC POSTAL COMP. WINNER
HE 119 V6 AN FAC POSTAL COMP. WINNER FOR THE PAST 2 YEARS
I.A.R.-80 INLINE VERSION (THIS IS A WW11 ROMANIAN FIGHTER)
YOKOSUKA MXY-7 OHKA (BAKA BOMB) THIS IS A VERY LARGE NOCAL MEANT FOR THE 6.2 GRAM CLASS AND WILL GIVE ANY RACER NOCAL A RUN FOR THE MONEY.
TIMERS
BOTH SIZES OF TIMER SELL FOR $10.00 EACH AND POSTAGE IS $2.00
READ THE INSTRUCTION SHEET THAT COMES WITH THE TIMER FOR SPECS. ON THE TWO TYPES.
THATS IT FOR NOW. GOOD LUCK AT LAWRENCEVILLE.

BARRIE

SEND ORDERS TO:
FLIGHT SCALE
2 THACKERAY AVE.
WINNIPEG, MANITOBA
CANADA
R3K0H1

The Minneapolis Model Aero Club
1216 N 8th. St.
Wausau, Wi. 54403

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X in box indicates your subscription has expired!