



NEWS RELEASE

NMPPRA

NATIONAL MINATURE PYLON RACING ASSOCIATION IN

→ FORMULA I → QUARTER MIDGET →

MAY 1978

AMA AFFILIATED

SINCE 1965

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PRESIDENT'S PAGE

I have received some comments regarding qualifying at the Nationals, both for and against, and I would like at this time to explain again why I feel qualifying is needed.

Since qualifying was done away with, the Nationals has become just another contest. The prestige of winning "The Nats" is gone. Qualifying will make for a more exciting contest, and a more meaningful victory.

After the contest is over, we are going to run a pole as to the success of qualifying, and determine its necessity at future nationals. If you have any comments at the present time, please direct them to me.

A schedule for the Nationals is in this issue.

Bakersfield 1978 was won by Tom Christopher from Southern California. Tom has 8 firsts and 1 third with consistant good times. It was a well deserved win -- congradulations Tom.

Bob Smith

SECRETARY'S PAGE

First order of business this month is:

My change of address: Gary McPike
22247 YBarra Road
Woodland Hills, Ca. 91367

Last month I gave you a guide-line for out of district races. One thing I neglected to clarify is that if you do fly in an out of district race it does not count for district points; Only National.

Lastly, I have a few lost racers out there. It seems I have the wrong addresses for the following people.

1. Donald W. Anderson
of Champaign, Ill.
2. Robert Hunt
of Puyallup, Wash.
3. Kenneth Taylor
of Detroit, Mich.

Anyone knowing the where abouts of these people, (Sounds like a police report.) Please have them contact me with their proper addresses.

That's it for now. Im going to go and unpack a few more boxes, I hope I can find those Formula 1 engines before the next race! Otherwise my arms are going to get very tired!

Good Racing
Gary McPike

OOOOOOOOOOOOOOOOOO

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QUARTER MIDGET

QM PRESIDENT'S MESSAGE - May Issue

As of April 6, 1978 I was informed that I am the QM President for this year. The time is late and several items must be accomplished as soon as possible;

I want to express my appreciation for those who will be your AVPs for the year, many for the second time: Bob Gillispie, West Coast; Vince Caluori, North West; Charles Mounet, South Central West; Art Arro, North Central East; Len Wiederhoeft, North East; Greg Doe, South Central East; Jack Aycock, North Central West.

This years QM Championship will again be held at Rough River, Sept. 8-9. AMA rules including 1/2 point off on landing. The same as last year will be the unslotted pipe. Shorty Holsclaw who has done an excellent job in passed years and will be this years C.D.. Thanks Shorty.

The Nationals at Lake Charles will use the AMA rules, heats will be run as last year (not eliminations), 1/2 point off on landing. The pipe rule has not been decided, but must be decided by the end of April to meet AMA's suspense dates. Inform your AVP of your desires.

We will continue the point system as in previous years. You or your C.D. must get your points to your AVP and he in turn will forward them to George Zink who will monitor the overall program this year.

C.D.s try a regional championship race. So far there is an Eastern states championship and a just concluded Southern states championship. The Southern championship gave away \$100 for 1st., 2nd. and 3rd. (\$50, 30, and \$20) 5 Cox engines and 2 X 40's, Prather kit, and other merchandise. One renewal and 6 new NMPRA members were obtained. The Fort Wayne is the money bigge with \$250, \$150 and \$100 and that is a F1 and QM. July 8th. and 9th. James Gager (219) 485-3467.

Bob Smith in his February message outlined three goals which I also support for QM. "Updating the Race Procedures Guide; Money Races, and to promote the NMPRA", and NMPRA-QM. It may not be evident to some but there are a great many QM flyers throughout the country and still increasing. In the past two years there has been as many QM National flyers as Form I, and AMA provides the same number of race days. The QM Nationals at Rough River has grown to the extend that a lid was imposed on the number of contestants who could enter last year. The problem QM faces is in NMPRA determining how many QM flyers there are. On the application blank you can only check "interest" in QM, Form I or both, not flys QM, Form I or both. So some people when the count QM count Form I as everthing but QM. This problem may be semantic and may be eased by adding in addition to interest to the application blank the "Flys" QM, FormI or both. Interest does not mean Flys. Quoting from the Nov. newsletter there were, "202 Form I members, 146 Flying Both and 57 people we do not know what they fly or if they fly". In the same paragraph it states that there are 40 QM members. We have our work cut out for us. This year we will determine what categorys those people are in who forget to check a category, and we will work to increase the "40" QM flyers. I'm sure there isn't any one who thinks there are only 40 QM members in NMPRA last year. Bob Smith recognizes this problem as I do. In many cases QM flyers fly Form I and in some cases Form I flyers fly QM. In any event the interest in "BOTH" must mean QM and FORM I equally.

To all we will try to help you and keep you informed. Let us know. George Zink has done an outstanding job with the QM Newsletter section so far, and I know he will continue to try to out do himself. Give George some help and send George your newsletters and tips. He has up to seven pages (including my stuff) to fill.

NORTH WEST PYLON RACING ASSOCIATION
BOUNDARY BAY, B.C.

The first pylon race of the season was held on April 8th. and 9th. at Boundary Bay. Four classes of racing were held including novice which is designed for the newcomer to pylon racing. Novice and Sport pylon was held on Saturday and in the sport class strong wind, mid-air, radio problems reduced the initial entry of 19 aircraft to 6. Fortunately, not all of these were write off. Sunday saw a much nicer day for flying with sunshine and a gentle breeze straight down the runway. Racing started with quarter Midget which was almost accident free except for Bryan Boutry's Miss BS Mustang which burried itself in the turf and had to be removed with a shovel.

Formula 1 took over in the afternoon with 20 entries from such far away places as Portland, Post Falls, Idaho, Yorkton, Sask., Calgary and the Seattle area. There were 4 casualties in Formula 1. 2 with radio problems and 2 shed their wings while flying. One of these wing shedder was our own Len Yuen. This was bad luck for Len as he definatly had one of the fastest Formula 1 in the race.

R.C.F.C.B.C. awarded trophies to 3rd. place in each class and Labatts Breweries awarded a beautiful trophy for Formula 1 Fast Time.

Fly-off for 2-3-4 were flown in novice and a fly-off decided 1-2-3- in Formula 1.

Helpers were again plentiful and I would like to thank all of them for their help. I would also like to give a big thank you to Doug Rankin for all the work he did on the field.

Andrew McIndoe
(McIndoe Scotland)
Pylon Contest Director.

QUARTER MIDGET APRIL 9th. 1978

		<u>Fast</u>	<u>Average</u>	<u>Plane</u>	<u>Engine</u>	<u>Points</u>
		<u>Time</u>	<u>Time</u>			
1st.	Ray Strom	1:49		P 51	Cox	15
2nd.	W. Chickmoroff	1:43		Rickey Rat	Cox	12 1/2
3rd.	Ralph Cooney	1:37		Toni	Rossil	12
4th.	Doug Rankin	1:43		Rickey Rat	Cox	11
5th.	Larry Eckersley	1:35		Toni	Rossi	10 1/2
6th.	Andrew McIndoe	1:47		Toni	Rossi	10 1/2
7th.	Bill McClement	2:31		P 51	K & B 15	10
8th.	Barry Berlin	1:54		P 51	Cox	9
9th.	Guy Johnson	1:38		Toni	Cox	7
10th.	Nelson Eddy	1:45		Toni	Rossi	5
FAST TIME: Larry Eckersley		1:35				

FORMULA 1 APRIL 9th. 1978

1st.	Guy Johnson	1:32	1:40	Toni	Lee Custom	20
2nd.	Joe Gauthier	1:39	1:45	Toni	X 40	20
3rd.	Jim Safarik	1:31	1:33	Rickey Rat	X 40	20
4th.	Nelson Eddy	1:28	1:34	Toni	TT	16
5th.	Greg Simpson	1:31	2:00	Pole Cat	X 40 (R. T.)	12
6th.	W. Chickmoroff	1:43	1:59	Toni	K & B	11
7th.	Al Livesey (Waxed)	1:39	1:48	Toni	X 40	10
8th.	Bob Hunt	1:35	1:39	Toni	X 40	8
9th.	Berry Berlin	1:43	1:49	Pellet	K & B	7
10th.	Ralph Cooney	1:35		LRIA	TT	4
FAST TIME: Nelson Eddy		1:28				

WILLOW LAKE PYLON CLUB

MARCH 22, 1978

WILLOW LAKE FARM

* See Enclosed Map

C.D. Dave Harter

April 22	Quarter Midget	1:00 PM	Trophy's Thru 5th. Place
April 23	Form 1	8:00 AM	Trophy's Thru 5th. Place
June 10	Quarter Midget	1:00 PM	Trophy's Thru 5th. Place
June 11	Form 1	8:00 AM	Trophy's Thru 5th. Place
August 19	Quickie 500	1:00 PM	Trophy's Thru 5th. Place
August 20	Form 1	8:00 AM	Trophy's Thru 5th. Place
Sept. 23	Form 1	1:00 PM	Trophy's Thru 5th. Place
Sept. 24	Form 1	8:00 AM	Trophy's Thru 5th. Place

The September Race will be a 2 day event for Form 1, With our District Dinner Meeting and possible Calcutta Saturday Night.
More on this later.

WE PLAN ON HAVING A LUNCH WAGON ON SUNDAYS ONLY.

Again this year we are going to use the Boy Scouts for flagmen, this will be the second year for this same Troop which should make it easier for them.

NOTE: AMA -- NMPRA Memberships required.

SPECIAL NOTE: This will be your only formal announcement of these 4 contests so keep up with it. For those of you that are interested, there is a Glider Contest as well as a Pattern Contest being planned at Willow Lake, Bill Kuhns will C.D. the Glider and Dick Russ will C.D. the Pattern Meet. Dates have not been set at this time.

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1978 SEMPRA RACING SCHEDULE

		FORM 1	1/4 MIDGET
	May 27, 28 Atlanta	X	
	June 3, 4 Birmingham, Al.		X
**	June 10 Bowie, Maryland	X	
	Standard & Expert		
	June 24, 25 Monroe	X	
	July 2, 3 Orlando	X	
**	July 30 thru Lake Charles, Louisiana		
	August 6 1978 Nationals		
	Sept. 2, 3 Monroe	X	
	Sept. 16, 17 Asheville		X
	Sept. 23, 24 Valkaria	X	
	Sept. 30 & Nashville		X
	Oct. 1		
**	Oct 21, 22 Texas	X	
	Formula 1 Championship		

SEMPRA MEMBER POINT STANDINGS -- 1978 THROUGH TITUSVILLE, FLORIDA, RACE (two races)

<u>FORMULA 1</u>	<u>Points</u>		<u>Points</u>
1. Jake Jacobson	183.7	14. Bob Silwanicz	80.4
2. Dennis O'Brien	177.5	15. Jim Moorhead	79.2
3. Bill Preis	169.1	16. Brian Richmond	74.7
4. Carl Simms	147.8	17. James Little	56.7
5. Tom Pownall	145.4	18. Dave Donat	53.2
6. Clyde Yarbrough	117.5	19. Cliff Telford	50.2
7. Jim Maki	112.9	20. Bob Reuther	35.1
8. Bob Brogdon	110.4	21. Bill Helms	31.4
9. Bob Violet	103.0	22. Bob Schuster	27.6
10. Dave Pearce	94.9	23. Dallas Buck	12.5
11. John McDermott	94.8	24. John Thomas	11.6
12. Greg Doe	92.9	25. Dan Johns	6.4
13. Bill Williamson	92.5		

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Arthur Talisman of the Metropolitan Air Racing Association gave us the following MARA Schedule. For further information call George Zink (212) HO43160. There are 9 other Q-500 meets in the schedule.

<u>DATE</u>	<u>HOST/LOCATION</u>	<u>CONTACT & PHONE</u>
May 7	CPPRA Lehighton, Pa.	Dave Latsha (717) 737-7577
June 4	CPPRA Lehighton, Pa.	Dave Latsha (717) 737-7577
July 2	CPPRA Lehighton, Pa.	Dave Latsha (717) 737-7577
July 15	VFSS Warminster, Pa.	Joe McDermott (215) 527-0508
Aug. 6	CPPRA Lehighton, Pa.	Dave Latsha (717) 737-7577
Aug. 20	PARCS Floyd Bennett, N. Y.	George Zink (212) HO4-3160
Oct. 15	Sky Pirates Warminster, Pa.	Mark Freiberg (215) RA5-1207 MARA Champions

Most of the races in this schedule will fly Standard and Expert together. Prizes will still be awarded to the highest finishing Standards.

Comments:

This is the CPPRA QM series of 4 races. Season Trophies from CPPRA are based on these. NMPRA-QM NE Championships.



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- 2) Balsa PRESHEEDED FOAM WINGS WITH SHAPED TIPS ANDAILERONS
- 3) PRESHAPED TAIL AND CONTROL SURFACES

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- 3) Balsa PRE-SHEEDED FOAM WINGS

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SPECIAL FEATURES

- 1) Balsa PRESHEEDED FOAM WINGS
- 2) PRESHAPED TAIL AND CONTROL SURFACES
- 3) LIGHTWEIGHT EPOXY GLASS FUSELAGE AND COWL

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- 2) TAIL AND CONTROL SURFACES PRESHAPED
- 3) EPOXY GLASS FUSELAGE AND COWL

SUPER MIDGET MUSTANG I
FORMULA ONE

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- 3) LIGHTWEIGHT EPOXY GLASS FUSELAGE



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POP WHITE MEMORIAL

April 1 & 2

EXPERT:

1. Dave Shadel
2. Bob Smith
3. Jim Stafford
4. Tom Christopher
5. Mike Mitchell
6. Mike Atzie
7. Bob Williams
8. Jeff Bertken
9. Kent Noby
10. Gary Hover

STANDARD

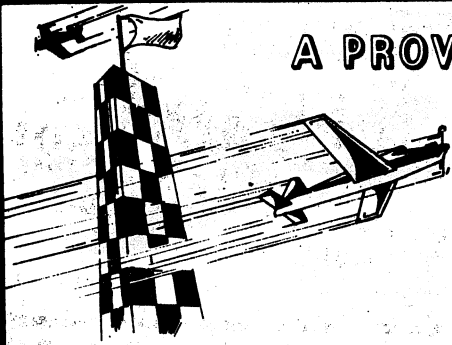
1. Gene Sidwell
2. Dick Farrier
3. Don Kaylor
4. Chick Bentz
5. Gordon Davis

PLANE

PLANE	ENGINE	FAST TIME
Toni	Tigre	1:13.7
Toni	K & B	1:15.5
Brown Bag	Tigre	1:17.5
Brown Bag	Tigre	1:12.9
Toni	Tigre	1:18.6
Toni	Tigre	1:15.8
Toni	Tigre	1:22.5
Polecat	K & B	1:16.3
Brown Bag	K & B	1:14.8
Toni	Tigre	1:23.2

PLANE

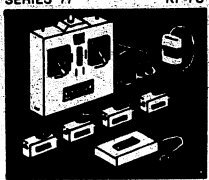
PLANE	ENGINE	FAST TIME
Brown Bag		1:35
Toni		1:49.2
Toni		1:27
Toni		1:37.2
Dara		1:52.5



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 - Joined Epoxy Wheel Pants (Formula I)..... 9.95
 - Joined Epoxy Wheel Pants (Q.M.)..... 7.95
 - Axle Retainers - Formula I (Med.)..... 1.98
 - Axle Retainers - Q.M. (Small)..... 1.79
 - Heavy Duty Dural Gear - Formula I Med..... 5.95
 - Heavy Duty Dural Gear - Q.M. Small..... 4.95
- Available Direct Only
- Customize your S.T. X-40 (Must be new)..... \$90.00
 - S.T. X-40 Rear Exhaust Extension..... 4.00
 - S.T. X-40 Exhaust Adapter "O" Rings - Pkg. 3..... 1.50
 - S.T. X-40 Drive Washer Puller..... 10.00
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 - Rossi Rear Exhaust Extension - 1/4" Slot..... 6.50



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1978 NAT'S

SPECIAL INSTRUCTIONS FOR RC PYLON EVENT

General

All F-I and Quarter Midget aircraft will be checked for conformity to the 1978 rule book specifications and given a special NMPRA type safety inspection during processing. All pylon aircraft will be processed during the same time period as transmitter processing for each event. Contestants must remain with their aircraft until processing is completed.

	<u>Processing Schedule</u>	<u>Late Entry Deadline</u>
Quarter Midget:	Sunday July 30, 1-5 PM	4 PM
Formula I:	Wednesday Aug. 2, 3-7 PM	6 PM
F-I handicap judging for finals:	Friday Aug. 4 4-7 PM	

FLYING SCHEDULE

	MON. July 31	TUE. Aug. 1	WED. Aug. 2	THURS. Aug. 3	FRI. Aug. 4	SAT. Aug. 5
Q.M.	8-2	8-2	8-2			
F.I				8-2 Qual.	8-2 Qual.	8-2 Finals

Awards will be given for places one thru twenty. In addition, a special award will be given for the fastest time in QM and FI, and an award for the best F-I in scale judging for the finals.

QUARTER MIDGET

The rules contained in the 1978 AMA rule book will govern this event. A quarter inch wide slot will be required in exhaust extractors. Reworked props will be permitted. The 2 mile QM race course will be used. Heat racing will be conducted to determine the winners of this event. The scoring method will be in accordance with AMA rules pertaining to Operation of the Race and Scoring of the F-I event. Takeoff procedure will be determined by a draw in each round. Hard hats required for pilot and caller will not be furnished. K & B 500 fuel will be furnished.

FORMULA I

Two days (12 hours) of qualification rounds will be conducted to determine the best 28 contestants for the finals. The finalists will be determined by the fastest times posted during the qualification rounds. Ties for 28th. place will be broken by the next best time during qualifying. A minimum of five rounds of qualifying will be conducted. Additional qualification rounds will be conducted if permitted by allocated time.

The names of the 28 finalists will be posted at the flight line on Friday.

No more than 7 contestants will be permitted on one frequency in the finals. Contestants will be required to change frequency if this condition occurs and will be determined by best time. Alternate transmitters and receivers must be processed during registration. If contestants cannot meet these requirements alternates will be selected from qualifying rounds. Handicap judging will be conducted at 3PM August 4, in a special designated area. A ranking system of one thru four will be used, and scale judging will be determined by the event director only. Emphasis will be placed on scale fidelity, workmanship and appearance. No special consideration will be given to black plane lines. Three views will be required.

Seven rounds of heat racing will be conducted during the finals to determine the winners. The scoring method will be in accordance with AMA rules pertaining to operation of the Race and Scoring of the F-I event.

NMPRA-QM South Eastern States Regionals

22 QM racers gathered in Atlanta Ga. April 2nd for some really fine early season racing. Bruce Richmond scored a perfect 20 for the 5 rounds, taking 1st place. 2nd through 5th were decided on time with 4 fliers tied at 16. Cox 15's went to the first five finishers and one to Dave Pearce for the low time of 1:32.5.

Wish we could list each aircraft and engine with the racers, Bruce Richmond was flying a Prather Toni and a Cox. That seemed to be a very popular combination.

With the official race over, a time trial race was organized with the 12 fastest fliers. Gail Jacobson had low time with Dave Latsha and Stu Richmond tied for 2nd. A special run-off was devised and run with Dave the eventual winner. Both Dave and Jake received ST 40's from Hobby World for their efforts. Dave also took home the Prather Toni QM kit for highest finish in the race and the time trials. Jake tied Dave for the kit but graciously declined his half with typical southern hospitality.

Art Chambers, Bob Brogdon and the whole Atlanta R/C Club did an outstanding job on this contest and we suggest that if you are anywhere near Atlanta for the race next year, be there.

RACE RESULTS

P1.	Pilot	Points	Best T	Av. T	Time Trial
1	Bruce Richmond	20	1:34	1:46	1:43.8
2	Dave Latsha	16	1:34.1	1:43	1:37.5 *
3	Gail Jacobson	16	1:36.3	1:39	1:37.3 *
4	Mark Frieberg	16	1:36.8	1:45	1:43.7
5	Paul Zink	16	1:37.2	1:37	NT
6	Dave Pearce	15	1:32.5	1:40	No A/C
7	Stu Richmond	15	1:37.4	1:43	1:37.5
8	Lew Hipkins	15	1:47.8	1:53	
9	Len Wiederhoeft	14	1:44.4	1:50	NT
10	Ron Bressler	14	1:49.9	1:54	
11	Dave Hidden	14	1:51.1	1:55	
12	Al Grove	13	1:47.2	1:53	
13	Bob Reuther	12	1:39.6	1:50	1:38.3
14	Forrest Whitson	12	1:53.1	1:56	
15	Greg Doe	11	1:43.3	1:47	1:43.3
16	Jim Moorehead	11	1:44.2	1:55	1:41.1
17	Toby Grether	11	1:49.4	1:52	2:29.5
18	Clifford Smith	8	1:55.3	1:58	
19	Arthur Dick	7	1:54.7	1:57	
20	Don Coleman	7	1:56.0	1:58	
21	John Sabine	7	1:58.4	1:59	
22	Tom Hottell	4	1:51.4	-	

By the way, NMPRA membership was compulsory for this event and we picked up 5 new members and 2 renewals. The idea of a regional championships seems to be catching on and we expect to see a few more this year.

AERODYNAMIC DRAG

CHAPTER 4 - DRAG FORMULAS

The two basics types of drag we will be dealing with are friction drag and pressure drag. With a basic knowledge of both these types of drag we can solve most of the drag problems that can be solved in model aviation.

Both friction and pressure drag use the same formula:

$$D = 0.5 p v^2 S C_d$$

D = Drag (lbs.)

p = Density of the medium @ Air 68°F, sea level (.00233 slugs/ft³)

V = Velocity of the object (ft./sec.)

C_d = Coefficient of drag (has no dimentions)

S = Area of object (ft.²)

D Is the amount of force acting on the body to restrict its velocity in the medium.

p Is set by the medium. Since we fly in air, the value we will assume is .00233 Slugs/ft³. This is the standard value for air at 68°F at sea level. For more accurate work, you would have to look up values of p in tables of varying temperature and pressure. The value for p will not vary greatly however, and for what we want .00233 is good enough.

V Unless you know exactly how fast your aircraft is, you must estimate. To be on the safe side, estimate V a little higher.

S This factor depends on what kind of drag you are looking for, pressure or friction drag. The basic difference between them here is that friction drag acts on the surface which is parallel to the velocity and pressure drag acts on the surface which is perpendicular to the velocity.

See Chart 4 - 1

There are other areas which areodynamisists use. Some C_d values specify the area that they are to be used with. If we run across any of these, we will let you know.

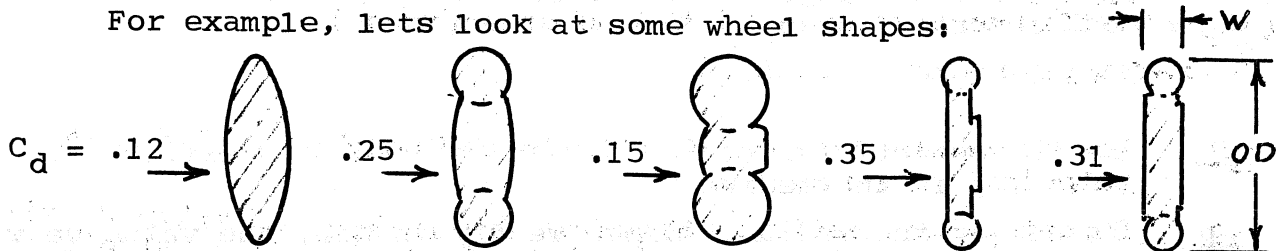
Notice that when you calculate the drag for a wing, the frontal area or thickness is not used. O.K. then, why does a 15% (thickness /chord) normally give a higher drag than a 10% wing of similar shape? The answer is in the C_d, and the C_d takes in several more factors.

C_d Up till now we were dealing with straight forward characteristics of either the medium or the aircraft. Now we must do a little research to find the proper C_d. As you no doubt remember from last month, C_d depends on the Reynolds Number. The first step in obtaining a meaningful C_d is calculating the R_n.

Chart 4 - 2 will be of some help when you are looking for C_d 's of streamline shapes. Chart 4 - 2 is a Log - Log graph and you have to be careful estimating values. The values are not equally spaced, but are divided like the number scale of the slide rule.

When you are looking for shapes which give you the least drag, remember that ρ is essentially a constant value. You pick a value for V and make it a constant value too. This means that the drag is now just a function of the area S and C_d . For comparison purposes, all you need to do is find $S \times C_d$ for one shape and compare it to $S \times C_d$ for the other. Lowest value has the lowest drag.

For example, lets look at some wheel shapes:



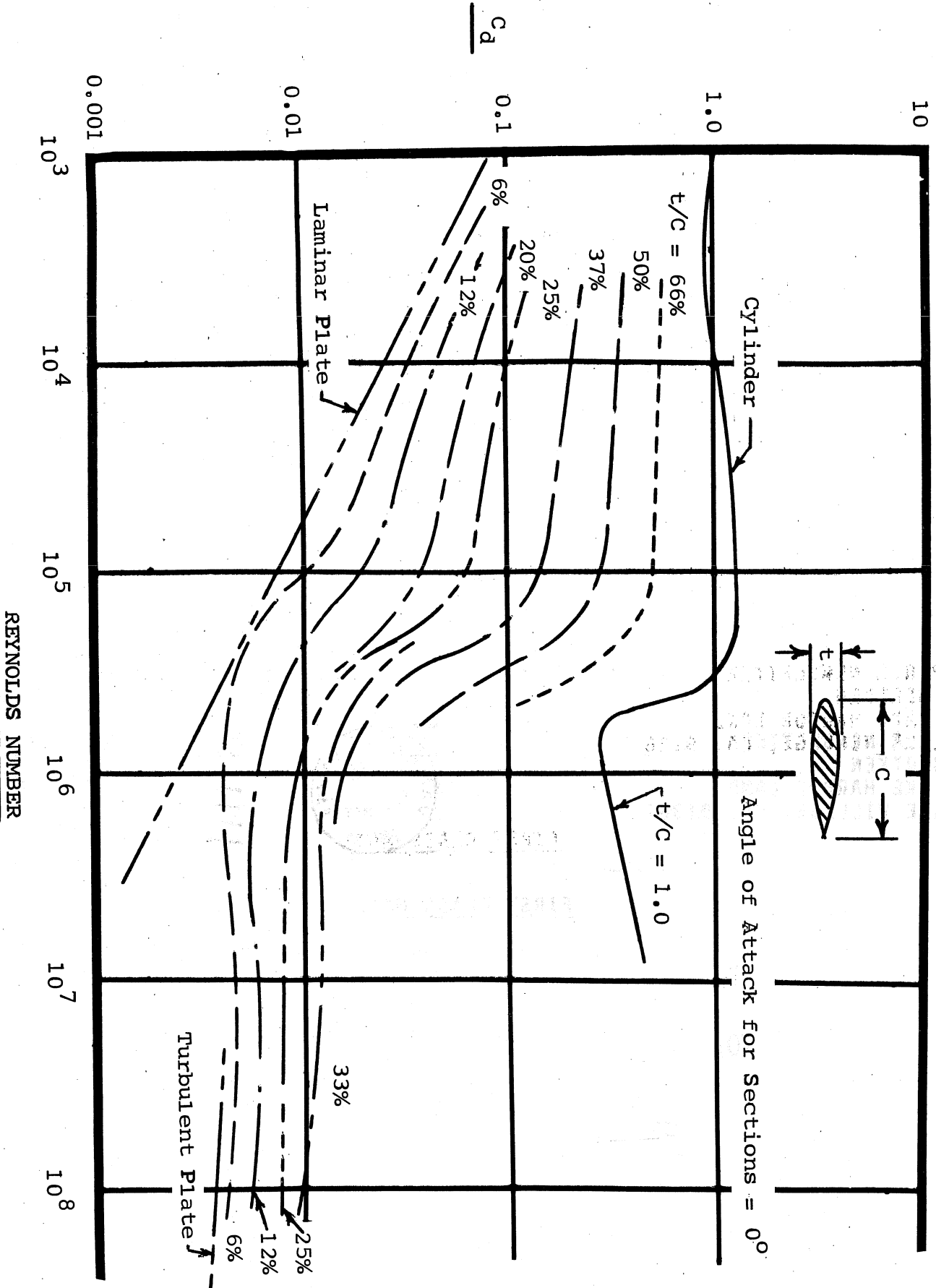
These C_d values are based on an area defined as the tire width \times OD. The R_n for the test data was 2×10^6 .

The wheel on the left has the lowest drag.

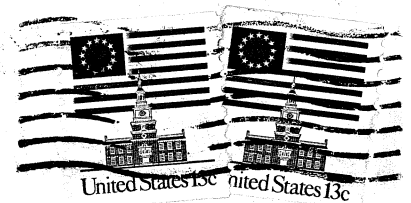
CHART 4 - 1

Object	Example	Friction Drag + planform area	Pressure Drag = frontal area	Total Drag
Sphere	Baseball	negligable	use this only =	
Cylinder	Wire Struts	negligable	use this only =	
Thin Plates perpendicular to velocity	Parachute, Kite	0	use this only =	
Thin Plates parallel to velocity	Prop blades Wing, Stab, Rudder	use this only	negligable =	
Well streamlined bodies	Fuselage Wheel pants	use this only	negligable =	

DRAG Coefficient vs REYNOLDS NUMBERS for streamline airfoil and strut sections



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