

FLYING LINES

1411 BRYANT AVENUE
COTTAGE GROVE, OREGON 97424

EDITOR: JOHN THOMPSON
PUBLISHER: MIKE HAZEL

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CLAMBASH '80 -- GOOD TURNOUT, GOOD COMPETITION -- GOOD FUN

The Oregon Coast's annual "bash," the CLAMBash put on by the Astoria and Seaside CLAMS club, was a success in nearly every way. Weather started out acceptable and got downright nice. Turnout was the best in the contest's three years with plenty of competition in each event. Competition -- the quality, that is -- was excellent. Combat featured lots of good flying, few air-time matches, and great action for the spectators. Even the $\frac{1}{2}$ A event, sometimes a prop-flipping derby, turned out to be a great demonstration of combat. The Northwest Sport Race, though not lightning-fast, was close with only seven seconds separating first and third places.

Perhaps the most fun, for those who hung around to the bitter end to watch, was a new event called CLAM Scale -- a static and flight competition for scale (or almost scale) airplanes with loose rules based on the fun of model building. Five souls participated with planes ranging from the stunning to the, uh, peculiar.

Detailed reporting on the contest was provided by Dave Green, the CLAMS able president and contest director, and by stunt enthusiast Rich Porter. Below is Dave's report, with some appropriate comments added by your editor. Rich's stunt report follows that. The contest was held June 15, at John Warren Stadium, Astoria, Ore.

Contest Director's report, by Dave Green

We had 23 total entries and after a lot of figuring I think we made \$2 on the whole thing, which pleases me no end because I figured we would lose money.

(The CLAMS' secret to making money on contests may be their ambition in making their own trophies -- always nice-looking and distinctive. -- ed.)

Half-A combat had 10 entries, proving once again the popularity of the $\frac{1}{2}$ A events. First place went to Bill Varner, for some unaccountable reason. (When you're hot, you're hot -- see AMA combat results. -- ed.) Second went to Jeff Young of Florence, Ore., and third went to Free Flight King Jim Cameron of Seaside, Ore.

AMA combat had eight entries, with first place again going to Astorian Varner. Second place went to John "Stone Ax" Thompson (Shhh! Don't give away my secrets. -- ed.) and third to Ken Burdick of Seattle, Wash.

Northwest Sport Race was won by (ho, hum) John Thompson with a Cro-Magnon plane and engine combo. (When you're hot, etc...) Second went to Bruce Guenzler, of Cottage Grove, Ore., who is really making his presence known in sport race. Third was taken by P.T. Granderson of Seattle. Phil had a rather bad day all the way around. He not only couldn't get it together in combat, but after getting third in sport race he was drafted into being a judge for CLAM scale.

In beginner-intermediate stunt, we had four entries. Jeff Young came in first with a score of 318. Terry Miller took second with a 235. Kevin Buzzell took third in his first effort at flying stunt with a 201. Young is from Florence, Ore., Miller from Salem, Ore., and Buzzell from Seaside.

In advanced-expert there were four entries. After a hard-fought duel which lasted all afternoon, Rich Porter, the $\frac{1}{2}$ A wizard, came out on top with a score of 418. Rich Schaper of Kelso, Wash., who usually doesn't get to fly because he has to judge, came in second with a 415, and Don McClave of Portland, Ore., who is just getting back into the stunt scene, took third with a 413. Five points separated Porter, of Stayton, Ore., from third place. That's tight flying!

Last, but not least, came CLAM scale. There were five entries. Terry Miller won with a more-or-less scale-looking Navion (built from an old Sterling kit). His static scores weren't the best but his maneuvers were outstanding. Dick Salter took second with a good-looking SE-5. He had the highest static scores but suffered in maneuvers. Mike Hazel of Salem, Ore., took third with a scale? model of what he claims is a Cro-Magnon Air Force plane. He might have won if he hadn't tried to hit the judges with the bomb drop. Jim Cameron might have done better with his $\frac{1}{2}$ A Fokker Triplane if he could have got it to do anything but a barrel roll on takeoff.

That about covers the meet, except for the Outstanding Crowd-Pleaser Award. This is an annual award that we give out for the best crash or incident which wows the crowd the most. This year it went to Jim Cameron for his free-flight combat match. If you ever have seen a $\frac{1}{2}$ A combat plane

CLAMBASH, continued

get loose, go up to 200 feet in the air, come back down to about 5 feet, and then go back up to 400 feet, and then land three blocks away in the middle of the street and not even break the prop, then you'll know what I mean.

I want to thank all the people who braved the volcanic ash to come and make our meet a success.

Stunt Report by Rich Porter

Here are the stunt results of the "CLAMBash '80" put on by the North Coast Control-line Aero-Modelers' Society of Astoria and Seaside, Ore., an AMA-sanctioned AA contest.

BEGINNER-INTERMEDIATE

- 1. Jeff Young 318 -- Modified Nobler, 2½" longer tail moment than original, 43-cunce, stock OS .40, Zinger 10x6, K&B 500, 70'x.015" lines, Yellow Econokote and Formula U finish.
- 2. Terry Miller 235 -- Tutor, K&B .35 greenhead, Duke's Fuel, Zinger 10x6 wide blade, Monokote finish, 60'x.018".
- 3. Kevin Buzzell. 201 -- Twister, OS .35, Top Flite Super M 10x6, Sig 5%, Monokote and K&B Super Foxy, .015'x00'.
- 4. Dick Salter. 60 -- Sterling Mustang, 1960 Fox .35, Sig 5%, .015x60'

ADVANCED-EXPERT

- 1. Richard Porter 412, 418 -- Ridiculous, 580 in², 21½ oz., new built-up 2½" streamlined wheel for better grass field performance, Tee Dee .049, Cox gray 5x3 at 22.2K air RPM, Glo Bee racing plug, Cox blue Label fuel, Monokote finish, 52'x.012 lines with 3° line rake on first official and 4½° line rake on second official which allowed maneuvers down enough to make all the difference.
- 2. Rich Schaper 415, 412 -- Sig Super Chipmunk, 44 oz., OS .35, 65'x .015 lines. (He got away before other info could be obtained.)
- 3. Don McClave. 413, 400 -- Stiletto 660, 66 oz., Martine HP .40, Rev-Up 12x5W, K&B 500, Aero Gloss dope finish, 63'x.018.
- 4. John Clemans 293, pass - Banshee, OS .35, silkspan and dope (John got away too quick also -- Washington guys just couldn't wait to get back to their volcano.)

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CLAMBASH, continued

Wind was almost as strong as the Northwest regionals but much more turbulent. Don's ship literally parted the grass on a nasty down-draft during an outside maneuver. Many of us nearly suffered heart failure but fortunately no damage to his ship, or for that matter any other stunter during the day. Not the case over in the combat event, however...

We all had a great time and are looking forward to continued growth in stunt in the future, volcano permitting.

Here is a listing of the complete results of the CLAMBash (except for the stunt results, listed above):

- | | |
|--|--|
| <u>AMA COMBAT</u> (10 entries, single-elimination) | <u>AMA COMBAT</u> (8 entries, single-elim) |
| <u>AMA COMBAT</u> (10 entries, single-elimination) | <u>AMA COMBAT</u> (8 entries, single-elim) |
| 1. Bill Varner | 1. Bill Varner |
| 2. Jeff Young | 2. John Thompson |
| 3. Jim Cameron | 3. Ken Burdick |
| 4. Phil Granderson | 4. Mike Hazel |

NORTHWEST SPORT RACE (9 entries)

1. John Thompson. 9:40 (Ringmaster, McCoy .35)
2. Bruce Guenzler 9:42 (Ringmaster, K&B greenhead .35)
3. Phil Granderson. 9:47 (Ringmaster, McCoy .35)

CLAM SCALE (5 entries)

1. Terry Miller. Sterling Navion
2. Dick Salter SE-5 biplane
3. Mike Hazel. Throttled jet-style bomber

JOIN OF SPORT RACE

Two kinds of Northwest Sport Race for 1981 -- Double your fun

After a year of taking polls, thinking, examining, exploring pitfalls and eyeballing other regions' successes and failures, some decisions have been made about firm proposals for 1981 sport racing in the Northwest.

It became clear within the last year or two that while NWSR, our beloved event that pits beginners against pros with a more or less equal chance, was beginning to suffer some problems. Among all concerns, probably the paramount concern was the unavailability of a couple of engines which had emerged as dominant. Secondly, it became clear there were some who wanted to go a little faster, use a few more technological tricks and gadgetry, while some wanted to slow down and get back to basic beginners' off-the-workshop-wall racing.

Though it took a while to sort out the various opinions, a consensus did emerge. To call it unanimity would be an over-statement, but the response coming in to FL "racing central" has been clear enough to draw some firm conclusions.

The answer, most felt, was to split NWSR down the middle.

That resulted was two events that meet both the emerging needs: One event returns NWSR to the slower, more low-key event it used to be, while promising to bunch up the competitors much closer together. Best of all, that event requires the use of the cheapest and most readily available control-line engine there is, and shouldn't obsolete any current airplanes.

The other event answers the need for a race that goes a little bit faster, allows "intermediate" fliers to play with some of the more advanced technology, and still does not obsolete any current NWSR equipment.

Event No. 1 will still be called Northwest Sport Race. If you examine the rules printed in this issue of FL, you'll see that it is almost identical to current NWSR rules. The single major exception is that the only allowable engine will be the Fox .35 stunt engine. The new rules also clarify somewhat the kit specifications, with wording intended to outlaw sheet-wing or competition-designed high-performance kits (very few of these have shown up, but old rules did not guard against the potential for "cheater" kits).

Event No. 2 will be called Northwest Super Sport Race. This event is designed to allow direct transition of all current NWSR airplanes and engines. However, the new event relaxes airplane and engine rules slightly to open the door for individual experimentation. It is anticipated that current NWSR equipment will be used initially, with a gradual shift toward equipment tailored closer to this event's ultimate potential. At the same time the rules guard against an escalation into an AMA slow rat-type of high-technology grind.

Key differences from NWSR are that the aircraft may be original-designed to slow rat specifications, and engine rework is not prohibited. However, the Super Sport rules specifically prohibit slow rat-type carburetors and tanks in the interest of keeping the event from being a machine-shop derby. On the engine matter, reworking is no longer prohibited provided original manufacturers' parts are used. Intake modifications not involving variable carburetors, are permitted. Since this event is moving slightly beyond the beginners' base level, the availability problem is not seen as as large a problem as in

SPORT RACE, continued

sport race, since several options -- including reworking and spending a few more bucks in the search for power plants -- are open to the competitors. Finally, the Super Sport event opens up the use of shutoffs, fastfills and hot gloves, long taboo in NWSR.

It is anticipated that the new rules for MMR and NWSR will take effect in December of 1980, to coincide with the 1981 Drizzle Circuit opener. However, FL is planning to sponsor a "new events day" later this year as a kickoff for these events, along with Gene Pape's Northwest Sport Combat event.

It will be a year or so before the most important results are in -- how the events were accepted on the contest trail. After a year of working on this project, we at FL are optimistic, and indeed hopeful, that the right decisions were made.

The rules for both events are below. The final drafts were written by Mike Hazel, author of the original Northwest Sport Race event. Mike is the region's representative on the AMA Racing Advisory Committee, the 1979 Drizzle Circuit sport race grand champion, and an active participant in rat, Goodyear, sport, mouse and slow rat racing.

1981 RULES FOR NORTHWEST SPORT RACE

1. PURPOSE: It is the intent that this event will provide the novice competitor a beginning racing event, racing with other competitors using similar and designated equipment which is readily obtainable and operates in a basic fashion.
2. All pertinent rules from AMA unified racing rules shall apply, in regard to safety and conduct of races, except as follows.
3. ENGINE: The only allowed engine shall be the Fox stunt .35, and shall operate on suction feed. No exhaust extensions are allowed except bona fide mufflers, which do not increase engine performance.
4. AIRCRAFT: The model shall be built from a commercially manufactured kit. It must be similar to one of the following examples: SIG: Banshee, Fokker D-7...CARL GOLDBERG: Shoestring, Buster, Cosmic Wind...M&P: Mon_goose, Cherokee, Cardinal, Bonanza...MIDWEST: Magician...TOP FLITE: Flite Streak, Tutor...STERLING: Ringmaster, Yak-9. The kits listed are .35 size and of the profile fuselage type, with full built-up wing.
MODIFICATIONS: Major changes to the kit design such as clipped wings, shortened fuselage, partial omission of tail assembly, etc., are not allowed. Reinforcement of the nose and engine mount areas is permissible. Landing gear location and construction is entirely optional from what may be included in the kit. The only requirement for landing gear is that it shall have a minimum of one wheel, two-inch diameter or larger, and the plane shall rise off ground.
5. FUEL TANK: The fuel tank shall be fully external and forward of the wing leading edge, and located on the outboard side of the fuselage. The tank may not be designed so as to cowl the engine. All tank vents are limited to a maximum size of 1/8" outside diameter. The tank may not be pressurized, but the vents may be directed forward into the airstream.

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NORTHWEST SPORT RACE RULES, continued

6. PROHIBITED EQUIPMENT: Equipment and devices standard to full race aircraft are prohibited. These include: fuel shutoff, pressure re-fuelers, fastfill systems, "hot glove" electric contact systems.
7. PULL TEST: The plane and entire control system shall undergo a pull test of 35 pounds.
8. LINES: The minimum diameter of lines shall be .018" and shall be of the stranded type with a length of 60 feet measured from the handle grip to the fuselage, plus or minus 6 inches.
9. RACES: Preliminary heats shall be of 70-lap duration, with one pit stop minimum required. The final or feature race(s) shall be of 140 laps duration with two pit stops minimum required. All races shall be flown with at least two entrants, and not more than four entrants. At contests where entrants fly preliminary heats to determine finalists, at least three entries shall proceed to the final race(s). The decision on number of final entrants shall be made by the event director, and made in advance before the start of any preliminary heats.
10. It is assumed that the usual sportsmanship conduct of Northwest modelers will prevail in the running of this event. The event director may disqualify any entrant that he feels is not keeping with the spirit or intent of this racing event.

6-24-80 mwh

RULES FOR
NORTHWEST SUPER SPORT RACE

1. PURPOSE: It is the intent that this event will serve as an intermediate racing class between Northwest Sport Race and the AMA racing events.
2. All pertinent rules from the AMA control line racing unified rules section shall apply in regard to safety and the conduct of races, except as follows.
3. ENGINE: The engine shall be of .36 c.i.d. maximum, and shall operate on suction feed. The engine shall be of the plain sleeve bearing type, with single bypass intake port. No variable or in-flight adjusting carburetors are allowed as used in AMA slow rat race; however, any other modification of the intake is permissible. There is also no restriction regarding engine rework, although all major components shall be produced by the original manufacturer. No exhaust extensions are allowed except bona fide mufflers, which do not increase engine performance.
4. AIRCRAFT: The model shall conform to the AMA slow rat specifications:
"Models must be of profile fuselage type, and must conform to the general profile definition. The model must have a minimum fuselage length of 24" when measured from the propeller thrust washer face to the leading edge of the movable elevator surface.
"The minimum wing area shall be 300 square inches. The wing must have a minimum thickness of one inch when measured at any point along the span, with the exception of the last two inches before each wing tip.
"All models must have a canopy, horizontal stabilizer, elevator and vertical fin...Models must have a fixed landing gear with a minimum of one wheel."
5. FUEL TANK: The fuel tank shall be fully external and forward of the wing leading edge, and located on the outboard side of the fuselage. The tank may not be designed so as to cowl the engine. The tank may not be pressurized, but the vents may be directed forward into the airstream.
6. PULL TEST: The plane and entire control system shall undergo pull test of 35 pounds.
7. LINES: The minimum diameter of lines shall be .018", and shall be of the stranded type, with a length of 60 feet measured from the handle grip to the fuselage, plus or minus 6 inches tolerance.
8. RACES: Preliminary heats shall be of 70 laps duration, with one pit stop minimum required. The final or feature race(s) shall be of 140 laps duration, with two pit stops minimum required. All races shall be flown with at least two entrants, and not more than three entrants. At contests where entrants fly prelims to determine finalists, at least three entries shall proceed to the final race(s). The decision on the number of finalist entrants shall be made by the event director and be made in advance before the start of any prelims.

JUNE BASH JUGGLES STANDINGS

Standings for precision aerobatics, combat and sport race were juggled as a result of the CLAMBash June 15 in Astoria, Ore.

Flying Lines keeps track of the standings in each competition event for Northwest fliers in Northwest contests. Standings are scored according to the number of entry in contests, with first place being worth the number of entries, second worth one less, etc., through fourth place. Only those placing first through fourth receive points.

Listed below are the current standings in the events held at the CLAMBash. Also listed are the number of contests and entries. (When two classes are held on a single day, we call it two contests.)

Stunt fliers will notice one change in their standings. We started out listing all precision aerobatics standings together, but the apparent growth of the Old-time stunt event has won it its own standings. Thus, you'll notice the points scored by the OTS fliers in their one contest this year are deducted from the PA standings and transferred to the OTS category. There will be a second OTS contest in July to further flesh out those standings. Half-A stunt remains combined with PA, but could be broken out if there are more contests. There only has been one $\frac{3}{4}$ A contest so far this year.

Here are the updated standings:

AMA COMBAT

(3 contests, 19 entries)

1. John Thompson.	16
2. Ken Burdick.	12
3. Bill Varner.	10
4. Gene Pape.	8
5. Norm McFadden.	7
6. Mike Hazel	5

OVERALL COMBAT

(10 contests, 55 entries)

1. John Thompson.	29
2. Bill Varner.	27
3. Gene Pape.	18
4. Jeff Young	17
5. Jim Cameron.	14
6. Ken Burdick.	12
7. Keith Iwanski.	8
8. Norm McFadden.	7
Phil Granderson.	7
10. Dick Salter	6
11. Mike Hazel.	5
12. Rich Porter	4
John Knoppi	4

OVERALL RACING

(15 contests, 124 entries)

1. John Thompson.	96
2. Jim Cameron.	40
3. Rich Schaper	39
4. Dave Green	30
5. Mike Hazel	25
6. Bill Varner.	24
7. Bruce Guenzler	16
8. Tom Knoppi	14
9. Dan Burdick.	12
10. Richard Simpson	10
11. Willie Naemura.	8
12. Dave Mullens.	6
13. Dick Salter	5
Phil Granderson	5
15. Jay Just.	4
16. Roger Simpson	3
17. Joe Just.	1

OLD-TIME STUNT

(1 contest, 4 entries)

1. Bob Emmett.	4
2. Dick Salter	3
3. Dave Gardner.	2
4. Joe Just.	

$\frac{3}{4}$ A COMBAT

(4 contests, 24 entries)

1. Jeff Young.	17
2. Bill Varner	14
Jim Cameron	14
4. Keith Iwanski	8
5. Phil Granderson	7
6. Gene Pape	6
7. Rich Porter	4
8. John Thompson	2

NORTHWEST SPORT RACE

(7 contests, 70 entries)

1. John Thompson.	67
2. Rich Schaper	39
3. Bill Varner.	15
4. Tom Knoppi	14
Dave Green	14
Jim Cameron.	14
7. Dan Burdick.	12
8. Mike Hazel	11
9. Richard Simpson.	10
10. Bruce Guenzler.	8
11. Phil Granderson	5
12. Jay Just.	4
13. Dick Salter	2
14. Joe Just.	1

PRECISION AEROBATICS

(7 contests, 28 entries)

1. Rich Porter.	11
2. Jeff Young	10
3. Terry Miller	9
4. Jim Cameron.	5
5. Paul Walker.	3
Marty Phillips	3
Don McClave.	3
Rich Schaper	3
9. Rick Railston.	2
Don Shultz	2
Joe Just	2
Kevin Buzzell.	2
13. Bob Emmett.	1
Bob Kautzman.	1
Dick Salter	1
John Clemans.	1

COPIES OF RULES AVAILABLE

Copies of the Northwest Sport Race and Northwest Super Sport Race rules printed in this edition of Flying Lines are available either individually or in bulk, upon request from the editor. Contact John Thompson, 1411 Bryant Ave., Cottage Grove, Ore., 97424.

the COMBAT ZONE

by gene pape

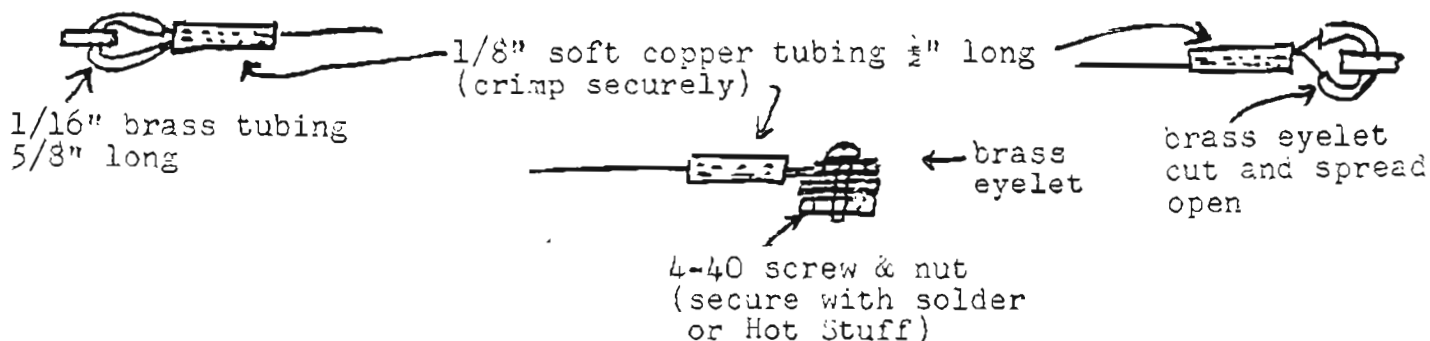
(Editor's Note: Ladies and Gentlemen, introducing...a new column on combat -- by one of the region's top fliers, builders and airplane designers. The Combat Zone is the work of Gene Pape of Eugene, Ore., who has about 20 years of combat flying experience and many big contest wins under his belt. Gene is the designer of the STP, the Sam Too, the FAWF (just published in Model Aviation), the balsa Rotation Station, and numerous other excellent combat designs. His best known and feared design is probably the foam Devastator, the ultimate combat weapon. Many of his construction tips will apply to all aspects of modeling. Read on...)

COMBAT CONTROL SYSTEMS

For quite some time, the performance level of fast combat airplanes has been that many standard procedures for building control systems are no longer adequate. I'll discuss some of the various ways to set up each component so that they will work and mention some ways that can cause failures.

Bellcranks are the heart of the system. The easiest way to have a reliable bellcrank setup is to use a nylon bellcrank with flexible cable leadouts. I have never worn one of these out. Nylon bellcranks have two drawbacks. They are hard to find, and they are somewhat heavier than metal ones.

In my opinion, the best bellcrank setup is a Cox bellcrank with bushed cable leadouts. Three methods of bushing leadouts are shown in the accompanying sketch. Never use cable leadouts without bushings. They will surely fail.



Perfect brand bellcranks will generally work OK but they are softer and wear out much faster.

Music wire leadouts are OK, but I always manage to put kinks in them and they never work smoothly after that.

The other area which has a high failure rate is the bellcrank mount. The type found on Voodoos and many other models where the mount glues on top of two pieces of square balsa is just not good enough. I don't care how much of what kind of glue you use, they will come apart when flying.

In most airplanes, you can tie the bellcrank mount into either the motor mount or a 1/2" or thicker center rib. If you can't do this, make the

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bellcrank mount long enough to attach to at least four ribs. Notch the mount into the bottom of the ribs so that it will also be glued to the planking.

The last item is pushrod routing. People reading this who have seen some of my past models will get a bang out of this. The pushrod must be as straight as possible and must exit as near the trailing edge as possible in order to eliminate flex. A pushrod guide may also be necessary.

If you follow these procedures you should come up with a strong durable control system. Now all you need is a honkin' motor, and you're set.

--Gene Pape, 4528 Souza St., Eugene, Ore., 97402.

RACING ROUNDUP

by mike hazel

Finally, here is your hopefully awaited racing column. As some of you may know, this writer moved to another city recently, and modeling activities including this newsletter had to temporarily take a back seat to work. Things are now back to normal as they ever can be for me.

It seems that it was not too long ago I wrote a column regarding rules changes, but I have some more information regarding same to expound upon. First of all, I have been recently appointed as your representative on the AMA Racing Advisory Committee for this reason. (Good thing -- I'd probably never get elected!) So, to prevent me from voicing only my personal opinions regarding racing rules, you will have to give me some input.

The first RAC business is a tentative proposal to increase the line diameter size of the rat race event, from .018 to .020. The main idea here is to establish a larger margin of safety. The airspeed would also be reduced slightly, but to a rather minimal amount. With more and more participants pushing the 150 mph mark, I feel this proposal is in line. Of interest, the line diameter for rat has been the same now since 1968, and previous to that the line size now specified for Goodyear was in use! Anyway, I know all the arguments for this, and it looks a lot more pro than con, if you think safety.

The next idea sounds interesting and should get a response from the Goodyear troops. This has not gone through the RAC yet. How would you like to be competitive in Goodyear without having to go through the effort to obtain a Spaghetti Special? (That's spelled R-O-S-S-I.) The use of 3.5-cc engines (.21) is proposed, and in conjunction with a slightly larger plane. Here's the goodie: These planes would be raced right alongside the .15 size Goodyears. For those of you who may not keep up with other modeling activities, the .21 size is not some wierdo displacement, but has serious racing engines built for cars and boats. The brand names K&B, OPS, and Supertigre come to mind regarding this size, so you know they will be built to go.

Here is a summary of the pro points: Number one, the engines are available and will be nice to have a choice between competitive engines. Number two, and very important, old equipment will not be obsolete. The bigger planes using bigger engines will hopefully give about an even handicap. And, number three, the bigger planes would be easier to handle (some may disagree with that). Ok, now give me some of your thoughts regarding this.

PILOT TECHNIQUE -- SAFETY IN THE PILOT'S CIRCLE

All of you seasoned and some of you fledgeling pilots have seen or been involved in some incident which could have been avoided if everybody had been on their toes. If piloting is a matter of being in the right place at the right time, then it is obvious that you need to pay strict attention to where your bod is, besides your plane. Being in the wrong place at the wrong time can be hazardous to somebody's health. An accident doesn't usually do any wonders for your plane either, but here we are concerned about participant and spectator safety, more paramount in importance than a plane which can be replaced.

To start, refer to your AMA book, and look up the CL racing unified rules. To many people who are not familiar with this section, it would be a good idea to sit down, read and understand what's here. Make sure your team partners are knowledgeable, too.

1. "Pilots must stay within the pilot's circle and walk around in the circle while flying."

This all sounds straightforward, but it is sometimes a problem for the novice. There is a five-foot radius center circle, and I have seen some people attempt to use most of it. The proper technique is to walk as small a circle as possible without hindering the other pilots walking in a small circle. If you walk too large of a circle, you stand an excellent chance of getting behind

RACING ROUNDUP, continued

your plane, which can be a difficult and dangerous situation. Also, it increase your plane's flight radius, thereby slowing it down, and you work harder on top of that. So, not taking your share of the center of the circle works against you and for your competitor.

The other extreme is hogging the center and not walking the circle. This is not only poor technique, but it is against the rules. Making the other pilot(s) go around you may compromise their ability to control their planes adequately.

So far it may sound like I'm describing technique in regard to your advantage and not so much on safety, but remember, a good pilot in full control will be a safe pilot.

2. "Pilots must move to the area between the pilot's circle and the pitting circle to land for refueling...During the pitting or the initial start, the pilot must be crouched slightly outside the pitting circle. Immediately following take-off the pilot must resume position in the pilot's circle."

Normally, not too much of a problem here during two-up racing, but sometimes real circus activity occurs during four-up NWSR. Let's take it from the top: On takeoff, start from a crouched position as mentioned. To do so otherwise might result in being wrapped up in lines. Make sure your stance is such that you are able to lead the plane just as it gets off the ground. I don't need to mention about wind direction, do I? Quickly, get into the pilot's circle at an angle, never walk backwards into it. Always be aware of the pilots still on the ground, as sometimes they are too far inside the pitting circle, giving you something to trip over. Also, pay attention to the pilots just taking off. Keep track of where the other pits are, and when you hear that other engine fire off, you may want to gain a little altitude to give some clearance. Once everybody is in the air, you can breathe a little easier, as takeoff can be the most dangerous phase.

Landing: If there are any novices flying in the center, announcing your shutdown is the courteous thing to do. Just say, "Going down," just before you hit the shutoff. Just as your engine quits, step out of the pilot's circle and move toward the pitting circle in a concentric curve as necessary to stay slightly forward of your plane and maintain good control. Remember, don't walk over the top of somebody already down (and don't fly through another team's pit area -- stay inboard of them until you're past).

If you are flying with novices, keep an eye to your right when you are down, being watchful for another pilot coming down and running over the top of you.

The next rule out of the book is self-explanatory: "During a race, a non-flying pilot must assume a crouched position outside the pitting circle, and must stay out of the way of the other pilots. Pilots will not leave the area of the pitting circle-racing zone without the event director's permission."

That's all for technique for now. Perhaps next time I will cover this in more detail, or discuss how the pitman can be heads-up for safety. By the way, I would suggest to all event directors that they keep a set of good wire cutters handy for emergency purposes, for when participants get too wrapped up in their hobby.

QUICK PIT STOPS

- * Check elsewhere in this issue for proposed rules on Northwest Sport Race and Northwest Super Sport Race in 1981.
- * There will be a big racing and speed meet in Merced, Calif., over the Labor Day weekend. If you have ever wanted to hit a meet down south, this will be the one to go to, as it includes all the AMA and FAI classes. Lots of prizes, too.
- * When mixing larger patches of epoxy, I find it helpful to use the little plastic cups sold by K&B. They have graduations marked on them for accurate measuring. Mix up the glue right in the cup.
- * Speaking of epoxy, when gluing large flat areas, such as doublers, it is really easy to make your job turn out very heavy. Try thinning your epoxy with small amounts of methanol. Mix the two parts first, and blend in the methanol. You will need to allow a little longer curing time.

--Mike Hazel, 1040 Windemere Dr. N.W., Salem, Ore., 97304, (503) 364-8593.

AIR MAIL

Dear FL:

...I can't wait to start reading about all those events and contests you have that I can't get to. I'd be glad to tell you about our local contests. Three weeks ago I came in last in $\frac{1}{2}$ A Goodyear. Last week I was sixth out of eight. Next week I'm taking up knitting. Actually, $\frac{1}{2}$ A racing and combat are pretty popular with our group. There are probably two reasons for this; cheap, and we don't have much for a flying site.

--Raymond Lefrancois, 465 Cinquapin Trail, Christiansburg, VA 24073

AIR MAIL, continued

Dear fellow grown-ups who still play with toy airplanes:

What's all this I hear about a baffle for a Tutor kit? I thought baffles were a part of the engine. Where do you put the baffle on the Tutor? Well, here's a couple of dollars. If I'm too late for the drawing, give the money to your favorite charity.

--Raymond Lefrancois

(Editor's note: No, Ray, you're not too late to get into the baffle. Frankly, we're a little bit raffled by your confusion. Maybe you're thinking about the kind of baffle you eat for breakfast, with butter and syrup.)

Dear FL:

You won't believe this but go ahead and put a Fox .35 on reserve for me, compliments of the excellently thought out Northwest Sport Combat event, not to mention the proven Northwest Sport Race event. Who could resist such an offer?

While other companies are falling all over themselves seeing who can sell the cheapest quality engine for the buy today, fly tomorrow, and then throw away the next day RC market, Fox seems to really care about the quality engines control line enthusiasts require, and apparently is putting a lot on the line for this market. Let's face it, if an incorrigible soul like myself would be persuaded, surely the "Duke" will be supported by sufficient enough numbers to justify his efforts in the production of quality mills control liners need.

Furthermore, if the little Fox will talk to me like I think it will, I don't think I will be able to resist buying another and putting it into a nostalgic Gieseke Nobler, complete with Chrome Monokote finish, stars and bars, and a tiger shark mouth with a big red spinner!

--Rich Porter, 1988 Westown Dr., Stayton, Ore., 97383.

(Editor's note: The sight of Rich Porter flying counter-clockwise with a .35-sized engine will prove it to the world -- there are no absolutes. By the way, Rich, you won't need 15 degrees of offset. We don't know where you'll get 150-foot lines!)

Dear FL:

Read the latest issue when I got home, and must say, the gentleman from California presented a good strong argument for the use of snutoffs. If I made any statements that were inaccurate or half varnished, then I stand corrected.

But -- unglued? I don't think he has any idea of the meaning of the word compared to what I thought when I read your cutesy little editorial comment. I had to wait awhile before I could write anything printable.

One thing I don't need is any help in throwing out challenges from some idiot like you. That is something I can do for myself. If you are going to take up boxing promoting among other things you should go to the State Athletic Commission and get your promotor's license first, and find another contender.

--Bill Skelton, 45 SW 11th, Warrenton, Ore., 97146.

(Editor's note: Bill's letter refers to an exchange of views between Bill and Vic Garner, regarding a now-legendary pilup at the 1978 Regionals, in Northwest Sport Race. Evidently our attempt at injecting a little humor into the subject missed the mark.)

Dear FL:

I certainly do appreciate your cooperation in quickly responding to my request for contest info in Edmonton. I'm getting anxious to make that trip myself.

Please extend a personal thank-you to those responsible for making the Regionals reality. I sincerely did enjoy the whole thing, as well as the journey through your fine state. It pleases me to know that although far and few between, there are some very dedicated CL enthusiasts left. Sometimes I feel as though I'm the only Ukie flier left in Montana. Actually, I think there are six of us! I've been trying to organize a small club for some time, but it is a tremendous battle and time consuming, as well. (i.e. trying to convince someone to forget their motorcycle or water skis for flying miniature airplanes.) In spite of the problems, trying to organize, we have three serious fliers who regularly get together for SA combat, super slow combat (as outlined by Gene last month)...

--Rory Tennison, Rt. 4 Box 1755, Libby, Montana 59923.

AD RATES

Advertisements in Flying Lines cost \$5 per issue for a half page, \$3 per issue for a quarter page, \$10 a year for Hobby Shop Directory listing, and \$1 per five lines of classified ads.

WHERE THE ACTION IS

Below are the contests known to be upcoming in the Northwest.

If you know of a contest or informal event not listed here, remind the contest director to send details to FL for inclusion in the next edition. No need to wait until the flyer is done to get the info in. Give us the outline now so people can start planning. FL will also publish flyers free of charge and report results. Fun-fly events can be listed, too. All events listed here are AMA-sanctioned unless otherwise noted.

- July 12-13...KENT, Wash. -- Boeing Hawks Air Fair 1980. Northwest Sport Race (JS)(O), FAI combat (JSO), slow combat (JS)(O), AMA combat (JSO), precision aerobatics (beginner-intermediate)(advanced-expert), old-time stunt. \$5 entry fee. Site: Boeing Space Center. Contest Director Bob Emmett, (206) 432-0942. Free-flight, RC glider and rocket events also. Skydiving exhibition.
- July 27.....REDMOND, Wash. -- Great Northwest Combat Championships. AMA combat, slow combat, FAI combat. Site: Marymoor Park. Contest Director - Buzz Wilson, (206) 743-1037.
- August 25....EUGENE, Ore. -- Eugene Propspinnners Annual Summer Meet. Hat race, Goodyear, Northwest Sport Race, Northwest Sport Combat (special rules, see FL No. 14), AMA combat, flown in that order starting at 10 a.m. Fee \$5 for first event, \$2 each additional event up to \$10 maximum. Juniors half price. Trophies and merchandise prizes. Site: Mahlon Sweet Airport. Contest Director Gene Page, 4528 Souza St., Eugene, Ore., 97402 (503) 689-1623.

SKYRAIDERS NEWS NOTES

The Seattle Skyraiders remain one of the Northwest's most active clubs, with a variety of happenings around the club field at Carkeek park. Here are some tidbits:

**At a fun-fly meet May 10 at Carkeek, Cecil Swanson won novice stunt and Dave Mullens was second.

**The club has an active junior program. Planes have been donated by club members for juniors' use, and there have been junior building seminars.

**The club held an unsanctioned fun fly June 22, requiring one plane for three events. We'll print results when we get them.

**Problems have repeatedly been encountered with vandalism at the Carkeek field, along with conflicts with other park users who have "moved in" to the model airport. Sound familiar, you Portland Aeroliners?

**An attempt to find a new flying site has been frustrating. Skyraiders showed up for a meeting with the city parks department at Fort Dent, a park on the south end of town, June 4, but the public officials didn't show up.

THE FLYING FLEA MARKET (Classified Ads)

WANTED -- I am interested in buying "run out" motors, old or unique, whatever. Also, old kit plans, such as Renegade, Flying Man, Super Low, Manx Cat, or any others from that era or before. Anything old or collectible interests me. Mary Tennison, Rt. 4 Box 1755, Libby, MT 59923.

FREE ADS -- Every person buying a new subscription or renewing a subscription for a year is entitled to one free classified ad, a \$1 value. Send yours to FL at the address on the cover. Cheap at twice the price.

HOBBY SHOP DIRECTORY

SEATTLE AREA

INTERLAKE HOBBIES -- Control-line and RC supplies, specializing in parts. 1406 N. 80th St., Seattle, WA 98103. (206) 525-6757. Owned by the Reifel family. "If we don't have it, we will get it."

HOBBY HOUSE -- Control-line, free-flight and RC supplies. 10011 Holman Road NW, Seattle, WA. Owned by Allyn Johnson (206) 782-1809.

HOBBIES, ETC. -- Specializing in U-control, free-flight and RC. Complete stock of engine parts. 16661 Redmond Way, Dept. FL, Redmond, WA 98052. (206) 883-2811.

PORTLAND AREA

HOBBYLAND -- 20 years serving all model aviation enthusiasts. 4503 N. Interstate Ave., Portland, OR 97217. (503) 287-4090. Owned by Ken Thorstad.

(Hobby Shop Directory listings are presented as a service to area model aviators who want to know where to go for their CL supplies. If your favorite shop isn't listed here, show them your copy of Flying Lines and suggest they sign up. Ad rates listed elsewhere in the newsletter. Support FL advertisers -- they support us.)

FLYAWAYS

(Random tips and ribs from the FL workshop floor)

=====A National Control Line Society? That is the proposal of some movers and shakers in the CL fraternity nationally, such as Dr. Laird Jackson, editor of the FAI Speed & Racing Gazette, Frank McCune, editor of the MACA newsletter, Greg "Chop" Holland of CL-RPM Racing News and other. If anybody wants to put their two bits worth in on the planning for this group, a unified single-voice control-line organization, contact Jackson at Thomas Jefferson University, 1025 Walnut St., Philadelphia, PA 19107.

=====For those of you who aren't "Joiners" here are some items of interest cribbed from the MACA (Miniature Aircraft Combat Assn.) newsletter: World Engines will soon release a new Supertigre combat .35. Two-ball-bearing, schnuerle, the works. \$77.95. The newsletter lists several persons who have Rossi .15s for sale, at prices ranging from \$100 to \$160, foam wing cores for various airplanes, and other goodies. A club in North Carolina has come up with a Fox .35 sport combat event much like the one to be inaugurated in Eugene next month.

=====Speaking of combat, our own Phil Granderson will, by the time you read this, be representing the Northwest and the U.S. at the control-line world championships in Poland. Phil is on our combat team, along with George Cleveland and Paul Curtis. Tom Knoppi, another Seattleite, is going along to hawk at his beloved team race, and to cover the WC for FL. You may read about the world championships here first! By the way, Tom K promises a slide show and film (slides of '80 WC, film of '78) the Saturday night before Eugene's summer meet, Aug. 24, probably at Gene Pape's house. See August FL for details.

=====Howard Rush tells us that all the managers in the Boeing Management Association couldn't manage to put on their annual scholarship contest, but the intrepid Boeing Hawks have come to the rescue with a full-blown two-day contest much like the regular Boeing meet. See flyer in this issue for details. Also upcoming this month, a AMA-slow-FAI combat bash in Redmond, Wash.

LAST CHANCE FOR TUTOR RAFFLE

The drawing for the Top Flite Tutor profile stunt kit will be held July 21, with lovely four-year-old Heather Thompson drawing the winning ticket. As usual, money raised in the raffle will help keep Flying Lines published. Remember, it costs us \$10 to print the newsletter issues we send to you for \$7, so we need the extra cash.

Cost of tickets is 50¢ per ticket, three tickets for \$1, and seven for \$2.

Fill out the form below, or just scratch the information on something, and send the bucks in. Then start planning your color scheme.

Name _____ Telephone _____ Number tickets _____

Address _____ Amount enclosed _____

FOX .35 AVAILABILITY INFORMATION AWAITED

Earlier this year we reported that Duke Fox of Fox Manufacturing Co. had agreed to make Fox .35 stunt engines available to FL at dealer cost or better in order to help get the new Fox .35-only Northwest Sport Race event off the ground.

We have now indicated to Mr. Fox that the event will indeed be created, and we have asked for firm maximum price data. As soon as it is received, we will begin taking orders. This will be a one-time deal, as we at FL don't wish to get into the hobby supply business.

Those interested in getting their name on the list should contact FL. We will start asking for money later.

THOSE WHO AT FLYING LINES

Flying Lines is published monthly by a staff of dedicated volunteers. Please watch your mailing label for your renewal notices, and re-up when the time comes. Flying Lines is your communications link with the rest of the control-line nuts in the Northwest. The price is \$7 for 12 monthly issues. Tell your friends about FL.

Here's who at FL:

Publisher.....	Mike Hazel	Stunt.....	Rich Schaper	Carrier...	Orin Humphries
Editor.....	John Thompson	Combat....	Buzz Wilson	Speed.....	Mike Hazel
Photo Editor...	Chris Genna		Gene Pape	Scale.....	Dave Haught
		Sport.....	Chris Genna	Racing....	Mike Hazel

BUZZ & THE COLONEL PRESENT

THE GREAT NORTHWEST COMBAT CHAMPIONSHIPS

SUNDAY, JULY 27, 1980

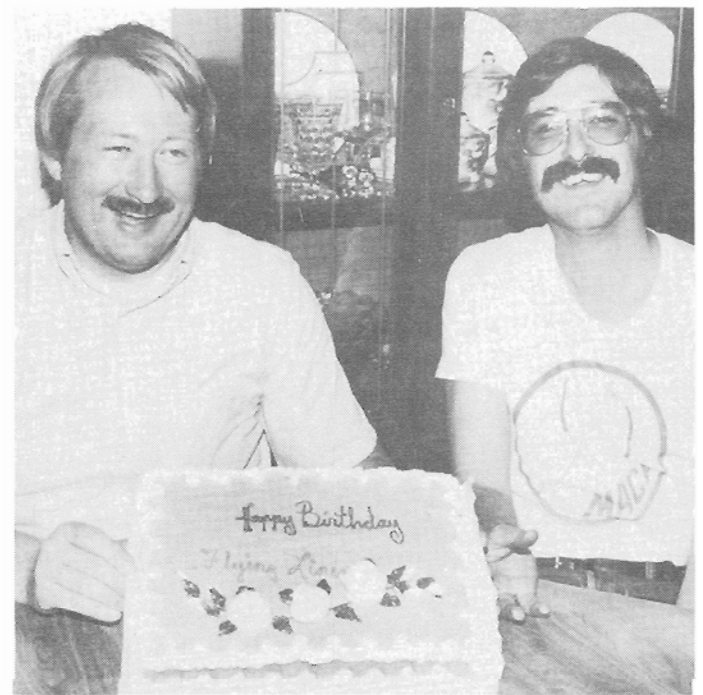
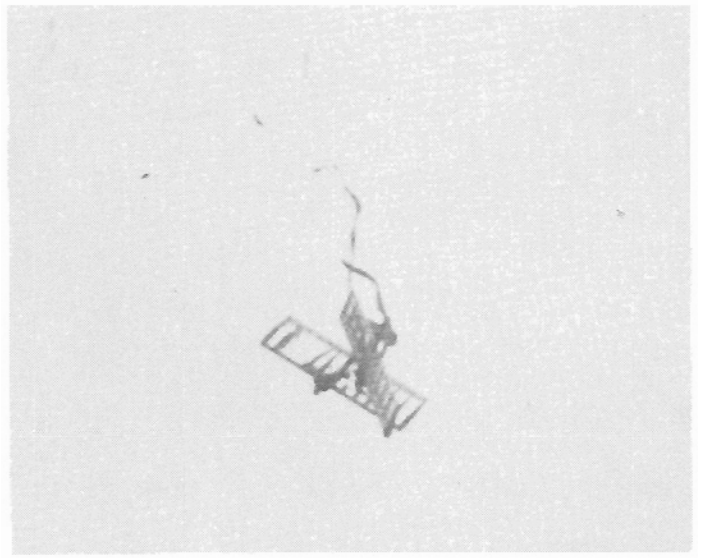
MARYMOOR PARK, REDMOND, WASHINGTON

 **AMA COMBAT**

 **SLOW COMBAT**

 **FAI COMBAT**

What ever happened to Buzz and the Colonel? Why didn't they go to your contest? Sure, they could have spent the winter selfishly building airplanes, drizzling around the drizzle circuit (and probably beating you real bad, I should add (but won't)). But no, they've been planning this fine Great Northwest Combat Championships, raising funds for great prizes, printing up showbiz publicity like this, doing the TV talk shows, etc. And don't forget, this will be your first chance to get at World Champ P T Granderson and get him down off his high horse by cutting his streamer off at the bellcrank. Furthermore if you don't come to this contest, word will go out that you are at best a sissy. For further information call Buzz Wilson, Contest Director, at (206) 743-1037.



REGIONALS ACTION

There was lots of action both on and off the field at Northwest Regional CL Championships, May 24-25, as photos by FL's Chris Genna show.

Clockwise from top left: Scott Newkirk launches John Thompson's second-place Goodyear plane, assisted by Jeff Shelby. Quick shutter finger catches instant after mid-air collision between Norm McFadden and John Thompson in AMA combat finale. Eugene Propsinner Mike Hazel interviewed by Eugene TV news. Hazel and Thompson beam over FL's birthday cake at post-contest newsletter anniversary celebration. Norm McFadden and Jim Cameron (right) relive the events at FL bash. Fred Margarido, left, Bob Boling and John Thompson, right, in Class 1 mouse race final, won by Boling.

HERB'S SPEED & RACING PRESENTS
TWO DAYS OF CL SPEED & RACING PLUS COMBAT

WESTERN STATES RACING CHAMPIONSHIPS

EVENTS: ALL AMA & FAI SPEED AND RACING CLASSES
PLUS FAST & SLOW COMBAT, NW SPORT RACE

AUGUST 30 & 31, 1980
MERCED, CALIFORNIA



SATURDAY (10 to 5)

SUNDAY (9 to 5)

BOTH DAYS

% RECORD

MOUSE RACE CL I (JS) (0)
MOUSE RACE CL II (JSO)
GOODYEAR "
NW SPORT RACE "

SINGLE ELIM SLOW COMBAT (JSO)
DOUBLE ELIM FAST COMBAT "
AMA SLOW RAT RACE "
FAI TEAM RACE "
RAT RACE "

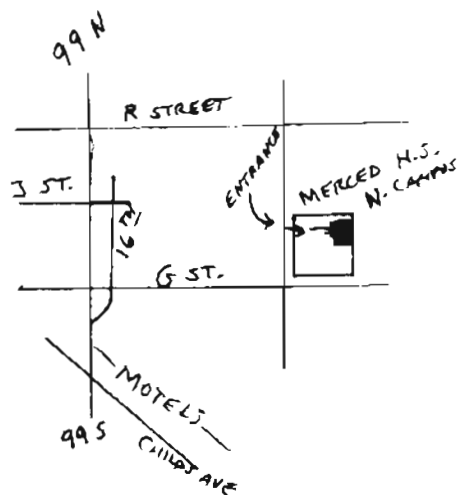
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FORM 21, FORM 40)
A SPEED
FAI SPEED
B SPEED
(D & JET SPEED)

REGISTRATION ALL DAY

REGISTRATION UNTIL NOON

AMA AA SANCTION #1131, AMA MEMBERSHIP REQUIRED
ENTRY FEES: \$4 PER EVENT, JUNIORS \$2 PER EVENT.
AWARDS: TROPHIES & MERCHANDISE FOR EACH EVENT, PLUS AWARDS FOR CHAMPIONS
OVERALL CHAMPIONS: COMBAT CHAMP IS AWARDED A FOX 15 SCHNURLE, RACING
CHAMP RECEIVES ELECTRONIC STOP WATCH, LAP COUNTER, AND RAT PAN.
SPEED CHAMP WILL GET A EPOXY GLASS FUSELAGE AND ELECTRONIC STOPWATCH
CATEGORY CHAMPS ARE DETERMINED BY POINTS EARNED FROM EVENT PLACINGS
FOR OVERALL, COMBAT FLYERS MUST ENTER BOTH EVENTS, SPEED AND RACING
FLYERS PRESELECT THREE EVENTS EACH.
POINTS: UP TO THREE IN EVENT: 1st PLACE=5 POINTS, 2nd=3 PTS, 3rd=1 PT
FOUR OR MORE: 1st=10 PTS, 2nd=8, 3rd=6, 4th=4, 5th=2

THERE WILL BE A
GET TOGETHER ON
SATURDAY NIGHT!
INFO AT MEET



CONTEST DIRECTOR:

FRANK HUNT III
551 BROOKDALE DRIVE
MERCED, CA 95340

HOME PHONE: 209-723-5159
WORK PHONE: 209-722-7836