

# THE VALLEY FLYER

FEBRUARY



1986



Photo by Marv Zauss

President: Ken Tyler  
818/886-0203

Vice President: Larry Laulom  
818/342-5225

Secretary: Art Pelka  
818/341-7194

Treasurer: Ron McClave  
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Event Director: Gene Sidwell  
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Program Chairman: Pete Chagares  
818/362-3231

Membership Chairman: Bob Adams  
818/345-7223

Field Manager: Pat Baner  
818/705-2546

VALLEY FLYERS REGULAR MEETING:

4TH TUES. OF EVERY MONTH - 7:30 P.M.  
ENCINO COMMUNITY CENTER  
4935 BALBOA BLVD., ENCINO, CA



HOME FIELD  
SEPULVEDA BASIN MODEL AIRPORT

PRESIDENT'S MESSAGE

We have so far received over \$400.00 in contributions to the Valley Flyers Foundation in memory of our late members Reed Packard and Bob Scheuerman. The names of the donors are listed in this newsletter. Those who might be thinking of donating should send your check to me, since I am the Chief Financial Officer of the Foundation. The money will go directly into the flying field in the Sepulveda Basin.

In that connection, I spoke with Jim Andevitch, who is the Parks and Recreation supervisor for the area in which the field is located. He had some bad news and some good news. The Bad news is that work will not begin on the improvements we previously mentioned until November 1st. The Good News is that the paving of the parking lot and road is now on stream and contracts will be let this July. He asked me whether the Club would rather have a fence around the field to keep out 4-wheelers or high intensity lighting over the Pit area. I told him I felt sure the club would rather have the high-intensity lighting, because we have had so much trouble with Vandals. Also, the fence would represent a hazard to the models, and some of them would undoubtedly hit it, no matter where it was placed. He stated there would not be enough money for both, so it will be almost certain we will get the lighting.

And now, to those of you who have been missing club meetings, I would like to make a special plea. Make a special effort to come. I know it seems that your presence doesn't make much difference, but it does. Come and contribute your ideas. Speak up. It's your club, --yours as much as anyone else's. We will listen to your ideas and suggestions. We need input from the members. Ask questions. This is a voluntary organization and a democracy. We are proud of what we have accomplished so far, but we have a long way to go and you can help.

KEN TYLER  
PRESIDENT



HOME FIELD  
SEPULVEDA BASIN MODEL AIRPORT

LIST OF DONORS TO VALLEY FLYERS FOUNDATION  
IN MEMORY OF REED PACKARD

1. MARVIN ZAUSS 8200 RHODES AVE., NORTH HOLLYWOOD CA 91605
2. Phyllis Zauss 8200 Rhodes Ave . North Hollywood Ca 91605
- 3, Ken Tyler 17244 Exeter Place Northridge, Ca 91325
4. W.L. Gardner 6703 McLennan Ave Van Nuys Ca 91406
5. C.S. McCoid 2999 Westminster Ave Seal Beach Ca 90740  
Sandra McCoid
6. Eileen Dreyspring 1909 Golden Ave., Long Beach, Ca 90806
7. Mildred Brown 4015 West Olympic Blvd., L.A. Ca 90019  
Brown s Photo
8. Mrs. Fred Fosbender 3824 Vantage Studio City Ca 91604
9. Victor M. Martin  
Carol Martin 5834 Shoshone Encino Ca 91316
10. Arthur W. Roberts 5461 West 76th St., Los Angeles 90045
11. Madeline Harrison 4460 Calhoun Ave Sherman Oaks, Ca 91423
12. Myrtle A. Mumford 4460 Calhoun Ave Sherman Oaks, Ca 91423
- 13, Eugene C. Packard 17406 Lindgren Ave Sun City Az 85373
- 14, Alfa Color Labs 535 West 135th St Gardena Ca 90248  
Richard P. Leupp
15. Electro-Mechanical Imgg- 11411 Bradley Ave Arleta Ca 91331  
ineering
16. Harry S. Audell 4701 Monarca Dr. Tarzana, Ca 91356

The meeting was called to order by Ken Tyler at 7:40pm. Ken led all those in attendance in the Pledge of Allegiance to the Flag. There was a moment of silence for prayer to the seven astronauts that were killed in the Challenger launching earlier in the day.

Ken introduced the guests and new members to the Club.

Tom Evans (joined today)  
Ed Larson (guest)  
Dave Bossert (joined today)  
Kurt Young and son Mark (guest)  
Earl Wilson (guest)  
Gerald Lifhtsey and Mark (joined today)

The Club Members extended a warm welcome to the guests and new members.

Ron McClave, Club Treasurer, gave the 1985 years end report

Ken Tyler explained to the new members and guests the function of the Valley Flyer Foundation. The foundation is a seperate organization from the Valley Flyers Club. The funds of the foundation can only be used for youth programs or improvements of the flying field.

Vic Martin passed out brochures by Airtronics Inc. on the basics of Radio Control Flying. These are to be given out by club members at the flying field. They are stamped with Vic's name and phone number, with the hopes that the club will gain new members.

Carl Stronberg informed the members that he discovered a new rust preventive fuel, OMEGA, at a reasonable cost. This fuel looks like a good buy. If any members are interested, they should call Carl at (818) 700-1837.

Ron McClave spoke about the Craft Air products, that were offered to the club at 50% discount off list price. This offer is good until February 15. Anyone interested, please contact Ron at (818) 882-0510 to place your order.

Marty Mallow spoke in regards to a Van Nuys Airport Police Officer being out at the field because an R C pilot was exceeding the 200 ft. ceiling. On the same issue of flying too high, Ken Turner spoke about when the wind blows from the north and the planes from Van Nuys are landing from the south, they are at a 600 ft. altitude when they pass over our flying field. He insisted that every R C pilot should have a spotter with him when flying to be on the look out for the full size planes.

Gene Sidwell announced that the club will promote five events at the field this year. He was asking for help on these events. He needs volunteers to be Contest Co-ordinators, Timers and Judges.

Pete Chagares, our Program Chairman, introduced Larry Laulom who gave the Club Members a demonstration on cutting and shaping foam wings. Once again, Larry baffled the members with his great aircraft building skills.

The following Show and Tell entries were:

Mike Wright presented a Strike Master, Gene Sidwell a Formula 1 Polecat, John Rice a Bi-plane, George Romain an SE5, Dick Hill a yellow high wing plane made from the Goldberg Anniversary kit, and Colby Evett an F16 jet.

GENERAL MEETING CONT.

AFTER THE BREAK, THE FOLLOWING SHOW AND TELL AWARDS WERE MADE:

SCALE: COLBY EVETT      SPORT: MARK WRIGHT

THE GOOF BOWL AWARD WENT TO KEN TYLER WHO LEFT HIS TRANSMITTER ON AND ALMOST CAUSED A CRASH. THE HAPPY NOMONIES THAT LOST WERE LARRY LAULOM, GEORGE ROMAIN AND ART PELKA.

THE RAFFLE WINNERS WERE: ERIC DRUCHER, PETE CHAGARES, MARK SUTTER, BOB GRAY AND GRACE PELKA.

THE MEETING WAS ADJOURNED AT 9:30 P.M.

ART PELKA

SECRETARY

I WOULD LIKE TO TAKE THIS OPPORTUNITY TO EXTEND A WARM WELCOME TO ALL NEW AND RENEWAL MEMBERS TO THE VALLEY FLYERS. SO FAR WE HAVE APPROXIMATLY SIXTY MEMBERS SIGNED UP. THOSE STILL WISHING TO BE A MEMBER OF THE VALLEY FLYERS PLEASE SIGN UP AS SOON AS POSSIBLE SO YOU CAN BE PUT ON THE MAILING LIST TO RECEIVE YOUR NEWSLETTER.

YOURS TRULY,

BOB ADAMS

MEMBERSHIP CHAIRMAN

HI,

JUST A NOTE TO LET YOU KNOW OUR GUEST SPEAKER WILL BE JAY REPLOGLE OF THE HOBBY HOUSE. JAY WILL DO A 'SHOW AND TELL' ON WHAT'S NEW IN THE HOBBY INDUSTRY.

MANY THANKS TO LARRY LAULOM FOR ANOTHER FINE PRESENTATION. I'VE WORKED WITH FOAM BEFORE, BUT I LEARNED SOMETHING NEW WATCHING LARRY.

SEE YOU AT THE MEETING. DON'T FORGET IN APRIL WE WILL HAVE THE ANNUAL ARM POWERED CONTEST.

YOURS TRULY,

PETE CHAGARES

PROGRAM CHAIRMAN

RAFFLE FOR FEB. '86

THIS MONTH'S RAFFLE IS A REAL WINNER; JUST LIKE YOU CAN BE IF YOU ATTEND THE MEETING AND BUY A FEW RAFFLE TICKETS.

O. S. MAX .46 VF ABC

DELUX KNIFE SET

13 BALLDRIVER HEX METRIC AND S.A.E. TOOLS

MINI TESTER

Q. B. KIT

SIG SUPER-CHIPMUNK

BOARD OF DIRECTORS MEETING - JANUARY 14, 1986

The Board of Directors Meeting on January 14, 1986, was held at the home of Pat Baner. Those in attendance were: Ken Tyler, Art Pelka, Ron McClave, J. W. Hadden, Marty Mallow, Pete Olson, Marv Zauss, Vic Martin, Pete Chagares, Pat Baner, Bob Adams, and Gene Sidwell.

The meeting was called to order by Ken Tyler at 7:35pm. Ken opened the meeting by discussing his interperatation of the responsibilities and performance of all the Board Officers. This performance description was discussed, embellished and agreed upon by the Board of Officers. A description list will be given to the Board Members at the next Board Meeting from Ken.

A memorial for Reed Packard, our past Club Photographer, will be announced at a later date. It was requested by the family that all donations for flowers be made to the Valley Flyers Foundation in Reed Packard's name.

Club Raffle: Larry Laulom will be the responsible person to purchase the gifts for the Club Meeting Raffle. It was voted by the Board that the Club take advantage of the 50% discount offered to the Club by Craft Air on their products. The Club will purchase a total of \$500.00 in Craft Air products to be used for the Club Raffle. This is a \$1,000.00 value. The board will determine what prizes will be raffled at the mettings.

Safety: Each board member will draft up a list of safety rules for the flying field that will be discussed at the next Board Meeting.

All Valley Flyer members must have a flag on their transmitters before they fly. Other Valley Flyer members should try to enforce this.

A motion was made and passed to make signs that will indentify the designated area for helicopter flying.

Membership: A motion was made and passed that the Membership Chairman place an ad on membership recruitment in the Recycler paper.

Miscellaneous: A calander of the field events for the year of 1986 was presented to the board by Gene Sidwell.

Treasurer is to speak at the next meeting about the Craft Products 50% discount available to the Club Members.

Dave Peltz from AMA District 10, requests that the Club send him a monthly Newsletter.

It was voted and approved by the Board to change the title of Field Marshall to Field Manager.

A member is needed to manage the sales of Club hats, shirts, jackets, patches, and T-shirts. Marv Zauss currently has the items and all purchasing information.

Giant Scale Squadron had a booth complete with video tape displays at the IMS in Pasadena on January 11 and January 12. Excellent interest was shown at the booth from the visitors.

Marv Zauss has Volunteered to continue to manage the refreshments at the club meetings.

## 1985 FORMULA 500 RACING RULES & REGULATIONS

1. All clubs, prior to holding a race, must advertise their intention to race in accordance with the following rules. The Contest Director shall not deviate from these rules, once published.
2. Consideration of safety for the spectators, contest personnel and contestants is of the utmost importance. Any unsportsmanlike conduct or repeated hious flying shall be cause for immediate disqualification. NOTE: In regards to this particular rule, the OPINION of the Contest Director shall govern at each event. However, any flying over the pit area or the spectator area shall:
  - A. The first time - cause disqualification for that heat. You shall immediately land the airplane.
  - B. The second time - disqualification for the day.
3. A race matrix shall be prepared prior to racing and no deviations shall be made, unless and except dropout of aircraft makes it necessary to reform heats so that a minimum of two aircraft are scheduled to fly in each heat. No single aircraft shall be scheduled to race alone at any time. A maximum of four aircraft shall be scheduled per heat.
4. A maximum of two aircraft per contestant shall be allowed. Both aircraft must be the property of the pilot. Both aircraft must be declared prior to the start of racing. No aircraft shall be flown by more than one person at any race. Both aircraft shall be on the same frequency as the original entry, since use of the second aircraft is dependent upon openings in the race matrix. Both aircraft shall conform to all of the rules. If contestant goes to his backup aircraft, he may again use his number 1 aircraft provided it passes a required safety check by the contest management.
5. No contestant shall buy or borrow another contestant's aircraft at a race for the purpose of racing it at that race.
6. The construction of all model aircraft shall meet the following minimum requirements. No tape-ons, add-ons, etc. shall be allowed to meet the measurements. NOTE: IF THE MEASUREMENT IS;
  - A. A minimum measurement - then you may go larger, but not smaller.
  - B. A maximum measurement - then you may go smaller, but not larger.
7. Violation of any of the rules or the basic intent of any of the rules shall be cause for immediate disqualification

### MODEL AIRCRAFT SPECIFICATIONS

8. **Fuselage ---**
  - A. The depth of the fuselage, measured at the deepest point, shall be not less than 3 5/8 inches. The measurement may include the thickness of the wing, with the wing mounted and ready to fly.
  - B. The width of the fuselage, measured at the widest point, shall be not less than 2 15/16 inches.
  - C. The length of the fuselage, measured from the firewall to the rear end of the fuselage, shall be not less than 35 inches.
  - D. The fuselage shall be rectangular in shape with no more than 1/4 inch radius on all corners.
  - E. There shall be no wing fillets.
  - F. There shall be no engine cowling. The engine mount and all mounting bolts shall be exposed on all four sides.
  - G. The Firewall: a) the dimensions measured without the radius shall not be less than 2 1/2 inches by 2 1/2 inches.; b) one side ONLY of the firewall may be relieved to allow the mounting of the exhaust system. The area relieved MUST BE FILLED by the exhaust system to maintain the basic integrity of the 2 1/2 inch by 2 1/2 inch firewall. WARNING - ALL VIOLATIONS OF THE BASIC INTENT of this rule SHALL mean immediate disqualification.
  - H. The minimum distance from the trailing edge of the aileron to the leading edge of the horizontal stabilizer, measuring down the side of the fuselage, shall not be less than 14 inches.
9. **WING:**
  - A. The wing span, ready to fly, measured from tip to tip, shall not be less than 50 inches.
  - B. The wing shall be of rectangular planform except that at each tip, 1 inch and only 1 inch may be rounded.
  - C. The chord shall be constant (except for the 1 inch at each tip) and shall measure not less than 10 inches including the ailerons.
  - D. The thickness of the airfoil of the wing, measured at it's deepest point, shall be constant and shall not be less than 1 1/8 inch deep.
  - E. The leading edge shall have a radius of not less than a full 1/16 inch.
10. **HORIZONTAL STABILIZER & ELEVATOR:**
  - A. The area of the stabilizer plus the area of the elevator shall be a total of not less than 80 square inches - No Exceptions!
  - B. NOTE: If the stabilizer and/or the elevator is made so thin as to be unsafe, in the OPINION of the Contest Director, the aircraft shall NOT be allowed to fly.
11. **WEIGHT:**
  - A. All aircraft, including the alternate, shall be weighed and measured prior to racing.
  - B. The weight of the aircraft shall be not less than 3 1/2 pounds.
  - C. After the weigh-in, no parts or pieces of the aircraft may be removed or replaced for the purpose of reducing the weight of the aircraft.
  - D. ALL winning aircraft SHALL be re-weighed, on the line, at the end of each heat. If weight is less than 3 3/4 pounds the aircraft is disqualified for that heat.
12. **LANDING GEAR:**
  - A. The main gear of the aircraft shall have no less than two wheels with a diameter of not less than 2 1/2 inches each.
  - B. Shall be fixed aluminum or wire type only.
  - C. The wheels shall be not less than 8 3/4 inches apart, measured from inside to inside.
  - D. No wheel pants shall be allowed.
13. **PROPELLER:**

All contestants to bring their own two-bladed, wooden, 8 7/8 inch minimum diameter, any pitch, any make propeller.
14. **MUFFLER:**
  - A. All engines shall be fitted with either an unaltered commercially available muffler, or an unaltered commercially available tuned pipe muffler.
  - B. A pressure fitting, may be added to the muffler, for the purpose of pressurizing the fuel tank.

15. **SPINNER:**  
 A. A rounded spinner or AMA nut shall be used.  
 B. A double propeller nut shall not be used.
16. **ENGINE:**  
 A. Any front rotor .40 cubic inch displacement R/C engine, non-pump, shall be allowed.  
 B. Muffler pressure only shall be used to pressurize the fuel tank.
17. **CARBURETER:**  
 A. All engines shall be equipped with a "Throttle Type" carburetor.  
 B. The carburetor venturi SHALL BE ROUND with a diameter not larger than 8mm or .315 inches.  
 C. The carburetor MUST shut off the engine while in flight. No inverted flights, fuel shut-offs or devices other than the carburetor shall be used to shut off the engine.  
 D. Any plane which does not shut off in flight SHALL: a) the first time it happens - receives a warning; b) the second time it happens - be disqualified for that heat; c) the third time it happens - be disqualified for the day!
18. **REGISTRATION NUMBERS:**  
 A. Shall be the last two numbers of the contestants AMA number followed by the first letter of the contestants last name.  
 B. Shall be displayed on the upper right wing panel.  
 C. Shall be not less than 2 inches in height.
19. **RACE COURSE:**  
 A. The distance between pylons 2 and 3, measured in a straight line, shall be 100 feet.  
 B. The distance, measured perpendicularly from the straight line between pylons 2 and 3 to pylon 1, shall be 400 feet.  
 C. At each pylon there shall be one judge, who will note all cuts.  
 D. No flagging shall be allowed at any of the pylons, or any artificial signaling devices for the purpose of improving course times.  
 E. All take-offs shall be ROG. No mechanical device shall be used in the launching of the aircraft.  
 F. A race shall be 10 laps around all three pylons, starting and finishing at the start/finish line.
20. **RACE OPERATION:**  
 A. Take-off position on the starting line shall be determined by the sequence that the names appear on the score sheet.  
 B. Maximum time of 90 seconds shall be allowed for starting the engine, adjusting the engine and being ready to fly.  
 C. All starts shall be "Racehorse Starts." EXCEPTION: A contestant may hold his aircraft for one second, if he has informed the starter.  
 D. Any aircraft released before the starter drops the flag SHALL be blackflagged and SHALL IMMEDIATELY land his aircraft.  
 E. The starter will drop the flag at 90 seconds. However, the flag may be dropped sooner if all pilots in that heat signify their readiness to start.  
 F. The starter shall have the ABSOLUTE AUTHORITY to black flag ANY AIRCRAFT for ANY REASON he feels necessary. Any contestant who does not immediately land his aircraft after receiving a black flag may be disqualified for the rest of the day.
21. **SCORING:**  
 A. 1st Place = 4 Points  
 B. 2nd Place = 3 Points  
 C. 3rd Place = 2 points  
 D. 4th Place = 1 Point  
 E. If one cut ONLY - 1 point, regardless of finish.  
 F. If two or more cuts = zero points.  
 G. The winner of the event is the contestant who has accumulated the most points at the conclusion of all rounds. -- a) In the event that there is a tie in points, then there shall be a fly-off between those tied; b) in the event that there cannot be a fly-off, due to frequency conflict, then the winner (amongst those who are tied) shall be the contestant with the lowest elapsed time for a heat in which he had no cuts; c) If, during a fly-off, all participants have two or more cuts, then the winner (amongst those in the fly-off) shall be the contestant with the lowest elapsed time for a heat in which he had no cuts.
22. **FUEL:**  
 A. Fuel shall be supplied by the contest management.  
 B. The fuel shall not contain more than 12% nitro.  
 C. The contest management shall empty all fuel tanks each and every time before the fueling operation. Electric fueling is recommended.  
 D. All aircraft shall remain in the ready box after fueling. Any contestant not doing so shall be disqualified.  
 E. Injection of fuel by a contestant or use of a short pickup tube shall cause immediate disqualification.
23. **RADIOS:**  
 A. There shall be no radios allowed in the pits.  
 B. All radios shall be kept in an impound area under the direct supervision of the contest management.  
 C. All radios, when not in use for racing, shall be in the Off mode and shall have the antenna removed.  
 D. All contestants, at the end of each heat and before leaving the flight line SHALL, show the starter and/or his designee that contestant's radio is in the OFF mode & the antenna has been removed.
24. **TWO CLASSES:**  
 A. Standard Class: For those who are beginners and/or flying heat times taking times greater than 1 minute 22.0 seconds.  
 B. Expert Class: For those who are experienced and are flying heat times of 1 minute 22.0 seconds or less.  
 C. Advancement to the Expert Class from the Standard Class shall be in effect at the next scheduled race date after qualification for expert class. A pilot shall advance to the Expert Class when he has turned heat times of 1 minute 22.0 seconds or less in two heats. Times for Expert Class qualification shall be carried forward from each race and are accumulative.
25. **EFFECTIVE DATE: ALL THE ABOVE RULES & REGULATIONS SHALL BE IN FULL FORCE & EFFECT BEGINNING 4/1/88**

NOTE: These rules are set forth in an effort to make our racing more enjoyable. Any violation of the basic intent of these rules as deemed by the Contest Director shall be cause for immediate disqualification.

MAY ALL YOUR FLYING BE SAFE & FUN!



Editor's Comment. The below information regarding THIRD ORDER MIXING PRODUCTS INTERFERENCE was prepared by long time club member and Past President, JACK ALBRECHT. Jack's association with and interest in the Joint Military R/C Flyers Club goes way back to the days when the club was first formed. He has been an active member and valuable consultant and contributor ever since. Although the basic concept has probably been published before, it appears here for the first time exclusively for club members in a easy-to-read format and easy-to-understand explanation of what causes 3 IM and what can be done to prevent it. It also contains the formula for calculating this type of interference, in case you want to do your own thing some time.

IT IS SUGGESTED THAT THIS PAGE BE RETAINED AS A HANDY REFERENCE GUIDE FOR USE AT THE FIELD. IT CONTAINS VALUABLE INFORMATION AND MAY SAVE A VALUABLE AIRPLANE.

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THIRD ORDER MIXING PRODUCTS INTERFERENCE, or for short, 3 IM interference:

It sounds rather ominous, doesn't it! Bill Hershberger, a fellow AMA Frequency Committee member described this problem some years ago, and it explains why we sometimes get those unexplained glitches even when no one is on your frequency. The problem has existed for years, however not too much has been wirtten about it in the R/C publications: until recently. So, what exactly is 3rd Order Intermodulation (3 IM) ??? Essentially, we can describe it as two different frequencies which combine to form a third and totally different frequency. It can occur by having transmitters too close together on the flight line, resulting in the combining of frequencies to form a third frequency which just also might be flying at the same time. What we are saying is that there is a potential for interference, but not necessarily that it will occur. As a matter of interest, the same mixing action can also occur in your receivers RF amplifier or mixer stage. It doesn't matter if the units are AM or FM. Intermodulation doesn't play any favorites. How serious the 3 IM problem is depends somewhat on the equipment in use and its design. Some receivers appear to be more vulnerable to 3 IM interference than others. Any time three or more flyers are in the air on the same flight line, there is a potential for 3 IM interference. So, how do we cope with this potential problem?????????

- FIRST: Consult the below listing for your channel and run field checks to determine if they interfere.
- SECOND: The simplest protection for transmitter generated 3 IM is to spread out on the flight line a minimum of 21 feet.
- THIRD: Have your R/C unit checked by a professional, i.e., a factory authorized service technician that has the necessary test equipment to do a thorough job.
- FOURTH: Use a 1991 type receiver that has the potential capability to give you better protection.

I'm sure that eventually all of the R/C manufactures will be marketing a receiver that will have the capability to reject 3 IM as well as other forms of potential interference. A simple table with potential interference combinations for both the old frequencies and the new channels is furnished for your information. By way of explanation, column A frequency, when in proximity to column B frequency, spells potential trouble for column C frequency., i.e., when A and B are both "on", C could experience interference.

Calculation for 3 Im is done as follows:  $A \text{ freq.} \times 2 - B \text{ freq.} = C \text{ freq.}$   
Find your frequency or channel number in column C. Note that it will appear several times. Those frequencies that are to the left in columns A and B are the ones to keep an eye out for when you are flying.

(Continued on reverse side)

Jack R. Albrecht

OLD CHANNELS

NEW CHANNELS (GWI)

| <u>A</u>             | <u>B</u> | <u>C</u>     |
|----------------------|----------|--------------|
| 72.160 x 2 = 144.320 | - 72.080 | = 72.240 MHZ |
| 72.240 x 2 = 144.480 | - 72.080 | = 72.400     |
| 72.240 x 2 = 144.480 | - 72.160 | = 72.320     |
| 72.160 x 2 = 144.320 | - 72.240 | = 72.080     |
| 72.320 x 2 = 144.640 | - 72.240 | = 72.400     |
| 72.240 x 2 = 144.480 | - 72.320 | = 72.160     |
| 72.240 x 2 = 144.480 | - 72.400 | = 72.080     |
| 72.320 x 2 = 144.640 | - 72.400 | = 72.240     |

|              |
|--------------|
| 54 + 52 = 56 |
| 46 + 54 = 38 |
| 48 + 54 = 42 |
| 50 + 54 = 46 |
| 52 + 54 = 50 |
| 48 + 56 = 40 |
| 50 + 56 = 44 |
| 52 + 56 = 48 |
| 54 + 56 = 52 |

NEW CHANNELS 3 IM

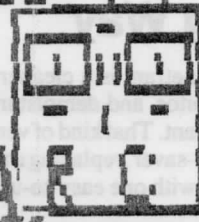
MY FREQ.

| <u>A</u>     | <u>B</u>                    | <u>C</u>        | MY FREQ.               |
|--------------|-----------------------------|-----------------|------------------------|
| 40 + 38 = 42 | Ch 40(72.590) x 2 = 145.180 | - Ch 38(72.550) | - Ch 42(72.630) ✓ 42 F |
| 42 + 38 = 46 | Ch 42(72.630) x 2 = 145.260 | - Ch 38(72.550) | - Ch 46(72.710)        |
| 44 + 38 = 50 | Ch 44(72.670) x 2 = 145.340 | - Ch 38(72.550) | - Ch 50(72.790)        |
| 46 + 38 = 54 | Ch 46(72.710) x 2 = 145.420 | - Ch 38(72.550) | - Ch 54(72.870) ✓ 54   |
| 42 + 40 = 44 | Ch 42(72.630) x 2 = 145.260 | - Ch 40(72.590) | - Ch 44(72.670) ✓ 44   |
| 44 + 40 = 48 | Ch 44(72.670) x 2 = 145.340 | - Ch 40(72.590) | - Ch 48(72.750) ✓ 48   |
| 46 + 40 = 52 | Ch 46(72.710) x 2 = 145.420 | - Ch 40(72.590) | - Ch 52(72.830)        |
| 48 + 40 = 56 | Ch 48(72.750) x 2 = 145.500 | - Ch 40(72.590) | - Ch 56(72.910)        |
| 40 + 42 = 38 | Ch 40(72.590) x 2 = 145.180 | - Ch 42(72.630) | - Ch 38(72.550) ✓ 38 F |
| 42 + 42 = 46 | Ch 42(72.630) x 2 = 145.260 | - Ch 42(72.630) | - Ch 50(72.790)        |
| 44 + 42 = 50 | Ch 44(72.670) x 2 = 145.340 | - Ch 42(72.630) | - Ch 54(72.870) ✓ 54   |
| 46 + 42 = 54 | Ch 46(72.710) x 2 = 145.420 | - Ch 44(72.670) | - Ch 48(72.750) ✓ 48   |
| 48 + 42 = 58 | Ch 48(72.750) x 2 = 145.500 | - Ch 44(72.670) | - Ch 52(72.830)        |
| 40 + 44 = 40 | Ch 40(72.590) x 2 = 145.180 | - Ch 44(72.670) | - Ch 56(72.910)        |
| 42 + 44 = 48 | Ch 42(72.630) x 2 = 145.260 | - Ch 46(72.710) | - Ch 38(72.550) ✓ 38 F |
| 44 + 44 = 52 | Ch 44(72.670) x 2 = 145.340 | - Ch 46(72.710) | - Ch 42(72.630)        |
| 46 + 44 = 56 | Ch 46(72.710) x 2 = 145.420 | - Ch 46(72.710) | - Ch 50(72.790)        |
| 48 + 44 = 60 | Ch 48(72.750) x 2 = 145.500 | - Ch 46(72.710) | - Ch 54(72.870) ✓ 54   |
| 40 + 46 = 38 | Ch 40(72.590) x 2 = 145.180 | - Ch 48(72.750) | - Ch 54(72.870) ✓ 54   |
| 42 + 46 = 46 | Ch 42(72.630) x 2 = 145.260 | - Ch 48(72.750) | - Ch 40(72.590)        |
| 44 + 46 = 50 | Ch 44(72.670) x 2 = 145.340 | - Ch 48(72.750) | - Ch 48(72.750) ✓ 48   |
| 46 + 46 = 54 | Ch 46(72.710) x 2 = 145.420 | - Ch 48(72.750) | - Ch 52(72.830)        |
| 48 + 46 = 58 | Ch 48(72.750) x 2 = 145.500 | - Ch 48(72.750) | - Ch 56(72.910)        |
| 40 + 48 = 42 | Ch 40(72.590) x 2 = 145.180 | - Ch 50(72.790) | - Ch 56(72.910) ✓ 38 F |
| 42 + 48 = 50 | Ch 42(72.630) x 2 = 145.260 | - Ch 50(72.790) | - Ch 38(72.550) ✓ 42 F |
| 44 + 48 = 54 | Ch 44(72.670) x 2 = 145.340 | - Ch 50(72.790) | - Ch 42(72.630) ✓ 42 F |
| 46 + 48 = 58 | Ch 46(72.710) x 2 = 145.420 | - Ch 50(72.790) | - Ch 46(72.710)        |
| 48 + 48 = 62 | Ch 48(72.750) x 2 = 145.500 | - Ch 50(72.790) | - Ch 46(72.710)        |
| 40 + 50 = 40 | Ch 40(72.590) x 2 = 145.180 | - Ch 52(72.830) | - Ch 54(72.870) ✓ 54   |
| 42 + 50 = 48 | Ch 42(72.630) x 2 = 145.260 | - Ch 52(72.830) | - Ch 54(72.870) ✓ 54   |
| 44 + 50 = 52 | Ch 44(72.670) x 2 = 145.340 | - Ch 52(72.830) | - Ch 40(72.590)        |
| 46 + 50 = 56 | Ch 46(72.710) x 2 = 145.420 | - Ch 52(72.830) | - Ch 44(72.670)        |
| 48 + 50 = 60 | Ch 48(72.750) x 2 = 145.500 | - Ch 52(72.830) | - Ch 44(72.670)        |
| 40 + 52 = 42 | Ch 40(72.590) x 2 = 145.180 | - Ch 54(72.870) | - Ch 48(72.750) ✓ 48   |
| 42 + 52 = 50 | Ch 42(72.630) x 2 = 145.260 | - Ch 54(72.870) | - Ch 48(72.750)        |
| 44 + 52 = 54 | Ch 44(72.670) x 2 = 145.340 | - Ch 54(72.870) | - Ch 56(72.910)        |
| 46 + 52 = 58 | Ch 46(72.710) x 2 = 145.420 | - Ch 54(72.870) | - Ch 38(72.550) ✓ 38 F |
| 48 + 52 = 62 | Ch 48(72.750) x 2 = 145.500 | - Ch 54(72.870) | - Ch 42(72.630) ✓ 42   |
| 40 + 54 = 40 | Ch 40(72.590) x 2 = 145.180 | - Ch 56(72.910) | - Ch 46(72.710)        |
| 42 + 54 = 48 | Ch 42(72.630) x 2 = 145.260 | - Ch 56(72.910) | - Ch 50(72.790)        |
| 44 + 54 = 52 | Ch 44(72.670) x 2 = 145.340 | - Ch 56(72.910) | - Ch 44(72.670)        |
| 46 + 54 = 56 | Ch 46(72.710) x 2 = 145.420 | - Ch 56(72.910) | - Ch 44(72.670)        |
| 48 + 54 = 60 | Ch 48(72.750) x 2 = 145.500 | - Ch 56(72.910) | - Ch 44(72.670)        |
| 40 + 56 = 42 | Ch 40(72.590) x 2 = 145.180 | - Ch 58(72.950) | - Ch 48(72.750) ✓ 48   |
| 42 + 56 = 50 | Ch 42(72.630) x 2 = 145.260 | - Ch 58(72.950) | - Ch 48(72.750)        |
| 44 + 56 = 54 | Ch 44(72.670) x 2 = 145.340 | - Ch 58(72.950) | - Ch 50(72.790)        |
| 46 + 56 = 58 | Ch 46(72.710) x 2 = 145.420 | - Ch 58(72.950) | - Ch 46(72.710)        |
| 48 + 56 = 62 | Ch 48(72.750) x 2 = 145.500 | - Ch 58(72.950) | - Ch 46(72.710)        |

FORMULA



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MARCH 22&23, 1986

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## New 3M 5-Way Penetrant: Any Way You Use It, A Little Goes A Long Way

3M 5-Way Penetrant is a cleaner, lubricant, rust inhibitor, and demoisurant, as well as a penetrant. That kind of versatility can be a money-saver, replacing a range of other products with one easy-to-use aerosol dispenser.

Independent laboratory tests have indicated that 5-Way Penetrant outperforms WD-40\*, LPS #1 and others for rust protection, lubrication and penetration. Moreover, 5-Way Penetrant costs less per ounce than WD-40 and LPS #1.

The long-lasting, transparent film of 5-Way Penetrant spreads evenly and completely, penetrating pores, scratches, and cracks. Its low surface tension lets it actually displace moisture present on a surface, forming an effective barrier against subsequent condensation and corrosion.

In addition to the efficiency of 5-Way Penetrant in metal-to-metal component applications, it's harmless to adjoining materials such as plastic, rubber, fabric, paints, lacquers, or enamels.

Typical uses for 5-Way Penetrant include:

- *Cleaning and Penetrating* to loosen rusty or frozen parts; lubricate deep, inaccessible areas; and make dirt and light rust easy to remove.
- *Corrosion Protection* for engines, parts, and machinery manufactured or stored in wet, salty, or chemically corrosive atmospheres; outdoor electrical and electronic systems; stored



tools, dies, jigs, and fixtures; and metal parts for up to one year during storage or shipment.

- *Demoisturizing* of wet metal and metal parts, flooded machinery, electrical equipment, electronic systems, connectors, relays, and switches.
- *Lubricating* of precision machinery, dies, tools, appliances, chain saws, fork lifts, pulleys, hoists, and other industrial and construction equipment.

3M 5-Way Penetrant is packaged in a convenient, 24 fluid oz. aerosol dispenser.

\*WD-40 is a registered trademark of WD-40 Company, San Diego, CA.

### CLUB INSTRUCTORS

Students wishing to participate in this training program please call one of the following instructors for an appointment.

|                |          |          |
|----------------|----------|----------|
| Phillip Mosko  | 645-2957 | Weekends |
| Ralph Rosen    | 472-7723 | Weekdays |
| Bob Schmitz    | 340-4353 | Weekdays |
| Chuck Siegle   | 347-3182 | Weekends |
| Tim Tourtillot | 344-9723 | Weekends |
| Ken Turner     | 340-4876 | Weekends |
| Marvin Zauss   | 768-0855 | Weekends |

# Instant Adhesives Get New Look, Retain Same Ol' Reliability

There's an attractive new label on the Pronto\* Instant Adhesive line, but the reliability and dependability are the same as they've always been: right there when you need them!

Pronto Instant Adhesives provide bonds with tensile strengths of up to 5,000 psi. What's more, these clear, one-part cyanoacrylates are easy to apply and require no expensive equipment or fixtures.

With that kind of performance, Pronto Instant Adhesives can save time and money. And they can do so in virtually any application, thanks to the wide range of formulations available.

Some Pronto Instant Adhesives are multi-purpose, bonding metals, plastics, rubber, and other substrates; others are especially

for difficult-to-bond materials or for bonding rough, uneven surfaces. All come in easy to use dispenser bottles. They can also be applied through accessory automated or manual dispensers.

\* Formerly "Scotch Weld"



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## SUPPORT THE HOBBY SHOPS THAT SUPPORT YOUR CLUB

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|--|---|--|
| Hobby House<br>Jay Replogle                  | 7546 Balboa Blvd. V.N., CA (Just south of Satcoy)   | (818) 786-0701                                     |
| Smith Brother's Hobby Centers                | #1. 8941 Reseda Blvd., Northridge, CA<br>#2. 16217 Victory, Van Nuys, CA<br>#3. 1223 W. Avenue I, Lancaster, CA | (818) 885-8636<br>(818) 786-6583<br>(805) 942-6984 |
| Chuck's Hobby Hanger<br>Chuck Slegle         | 22718 Ventura Blvd. Woodland Hills, CA  | (818) 347-3182                                     |
| Eve't's Model Shop<br>Colby Eve't            | 1636 Ocean Park Blvd., Santa Monica, CA   | (213) 452-2720                                     |
| Robin's Hobby Service<br>Bill Hambley        | 1844 West Glenoaks Blvd., Glendale, CA  | (818) 240-2093                                     |
| MK Model Products<br>Dave                    | 12420 Burbank Blvd., N. Hollywood, CA   | (818) 506-7564                                     |
| Craftsman Hobby Shop<br>Dick & Patty Waddell | 10122 Balboa Blvd., Granada Hills, CA   | (818) 363-3323                                     |
| Montrose Hobby<br>Graig and Maury Foxgord    | 2623 Honolulu Ave., Montrose, CA  | (818) 248-3871                                     |

### THE VALLEY FLYER

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