THE VALLEY FLYER

JUNE 1986

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

HI!

THERE WASN'T A TREMENDOUS TURNOUT FOR THE THREE-VIEW, ARM-POWERED CONTEST, BUT THOSE WHO DID SHOW UP SEEMED TO HAVE A GOOD TIME. FOR THOSE WHO WEREN'T THERE, LET ME SUM UP WHAT TRANSPIRED.

WE HAD FLIGHTS IN THREE CATEGORIES; DURATION, DISTANCE AND SPEED. THE WINNERS ARE LISTED IN THE MINUTES.

BOB ADAMS, WHO GOT THE NICKNAME OF "CLAY NOSE ADAMS" AFTER LAST YEARS EVENT, WILL NOW BE KNOWN AS WINGLESS ADAMS. HE ACTUALLY BROKE BOTH WINGS OFF HIS MODEL (INTENTIONALLY), ADDED ABOUT ONE HALF POUND OF CLAY AND TRIED TO STICK IT INTO THE FAR WALL. NOT AS GOOD AN ATTEMPT AS LAST YEAR, BUT A GOOD TRY ANYWAY. WHAT ARE YOU PLANNING FOR NEXT YEAR, BOB?

GENE SIDWELL HAD AN UNUSUAL MODEL THAT HE PICKED UP ON A RECENT TRIP OVERSEAS. IT WAS A PAPER MODEL OF THE ZLIN 250L WHICH GENE SLIGHTLY MODIFIED WITH WHEELS AND REINFORCEMENT. FLEW JUST GREAT! ALL THE MODELS LOOKED AND FLEW GREAT.

THIS MONTH, LOYD TAYLOR WILL BE OUR GUEST SPEAKER. START WRITING DOWN THOSE QUESTIONS ABOUT RADIOS AND INSTALLATIONS. UNFORTUNATELY, I WILL BE OUT OF TOWN ON A BUSINESS TRIP SO I WON'T BE THERE. THIS SHOULD BE A GOOD MEETING.

NEXT MONTH WE WILL HAVE HERB HOYER WHO MANUFACTURES A LINE OF MODELS FOR 1.2 FOUR STROKES. SOUNDS INTERESTING, ESPECIALLY WITH THE GROWING INTEREST IN FOUR STROKES.

PETE CHAGARES

Minutes of the San Fernando Valley Flyers Club meeting, May 28, 1986

The meeting was called to order at 7:46 p.m. by the President, Ken Tyler, followed by the Pledge of Allegiance.

New members at the meeting were:

Marshall Appel
Jim Bradley - Eagle 63
Marc Broadnax
Vincent Carbiho
Richard DelliVeneri
Vincent Homand

Also attending were Adam ∂ Alex, Mike Price, and Evan Davidson.

Vic Martin, President of the Valley Flyers Foundation, discussed using new and used merchandise purchased from people leaving the hobby in the raffles for the remainder of this year. This would allow the raffle fund to build up so that nicer raffles would be possible in the future.

The Quickie 500 race will be held June 1. Mel Gifis passed a sign-up sheet and requested support for the event.

Marv Zauss, President of the San Fernando Valley Flyers Giant Scale Club, reported that the Fun Fly held May 5 and 6 was very successful. $500 of the proceeds was donated to the Valley Flyers Foundation.

Ralph Rosen reported on the Porta Potty Flyin at El Mirage hosted by Robin Hambly.

Ron McClave read the April treasury report.

Pat Baner, Field Manager, presented the tentative plan to utilize the entire runway by relocating the pilot's boxes a little further back. The resurfacing of the main road has been postponed until November 1986 with completion tentatively planned for January 1987. There is a possibility that gravel could be applied in the interim to smooth the surface now.

Newsletter editor, J. W. Hedden, proposed the addition of a classified section in the newsletter in which members could advertise items they want to sell or exchange. Bobby Edwards volunteered to do the photographic work.

J. W. Hedden was unopposed for the Goof Bowl award. He converted 3 channel to 4 channel and flew his plane into the pits - twice.

Minutes of the San Fernando Valley Flyers Club meeting, May 28, 1986 (con't)

Results of the Unpowered Contest:

DURATION:

1st	Marv Zauss	Bear Cat
2nd	Ralph Council	Guillows Starfire
3rd	Gene Sidwell	Zlin 250L

SPEED:

1st	Gene Sidwell	Zlin 250L
2nd	Bob Adams	The Force
3rd	Marv Zauss	Bear Cat

DISTANCE;

1st	Gene Sidwell	Zlin 250L
2nd	Ralph Rosen	Extra 230
3rd	Ralph Council	Guillows Starfire

BEST MODEL:	Ralph Rosen	Extra 230
BEST FINISH:	Marv Zauss	Bear Cat
MOST UNUSUAL:	Gene Sidwell	Zlin 250L

Raffle winners were Ken Turner, Richard Ford, Willie Gardner, Bill Nocter, Vic Martin, Alex Rose and Bill Shelly.

The meeting was adjourned at 9:00 p.m.

Respectfully submitted.

BOARD OF DIRECTORS MEETING -- MAY 13, 1986

Club President, Ken Tyler, called the meeting to order at 7:20pm. Those in attendance were: Ken Tyler, Art Pelka, Ron McClave, J.W. Hedden, Gene Sidwell, Pete Chagares, Bob Adams, Pat Baner, Phil Mosko, and Marty Mallow.

The treasurer, Ron McClave, opened the meeting with the Treasurers report. He reported that the club purchased new "Walkie Talkies" to be used at all the flying events. Marty reminded the board, that when the treasurer gives his report, it does not include the value of the clubs assets.

There are now 124 paid members in the club. It was suggested that the club place a membership sign at the field. This suggestion is being taken under consideration by the board.

It was decided that the club roster be included in the May Club Newsletter. This is an annual practice of the club.

It was suggested that a letter be sent to the members that have dropped out of the club, by the Membership Director, asking them why they did not renew their membership.

A discussion was held about what the club can do to get more members involved with helping at the club activities. A motion was made by Bob Adams, that a workers raffle be held after the flying events. This motion was seconded and passed.

Pat Baner requested that we put an asphalt coating on the taxiways and runways. He also suggested that the pilot boxes be repainted. Pat will get estimates on the cost to do this before the board will approve any asphalt coating or striping.

Pete Chagares read the rough draft of the First Valley Basin Newsletter. This letter will be available to the membership, included with the Club Newsletter. For non-members, the Newsletter will be available at the Hobby Shops. Phil Mosko suggested that we contact the Valley News to see if they would print the Newsletter.

The Veterans Hospital in Sepulveda has requested that the Valley Flyers have another fun fly on the hospital grounds. This will be the third year that the club will have a fun fly there.

It was also suggested that a fun fly be held on the club barbacue. A letter to the members explaining this event, will be sent to the members within the next three weeks.

The meeting was closed at 9:10pm.

SEPULVEDA BASIN FLYING RULES

1. NO HELICOPTER FLYING OUT OF THE PIT AREA OR ON TAXI WAYS.
   REASON! IT IS A SERIOUS HAZARD TO PILOTS IN THE PIT AREA.
   THEY SHOULD BE FLOWN AT THE NORTH OR SOUTH END OF THE PIT AREA.

2. TAKEOFFS AND LANDINGS WILL BE FROM THE NORTH END OF THE RUNWAY
   UNLESS THE ARROW POINTS NORTH.

3. TRANSMITTER FLAGS ARE REQUIRED ON ALL TRANSMITTERS!!
   REASON!! THIS IS FOR THE PROTECTION OF EACH AND EVERY PILOTS
   AIRCRAFT. IF A PILOT FORGETS TO PUT A FLAG IN THE FREQUENCY POLE
   WE CAN CHECK THE TRANSMITTER FLAG ON THE RUNWAY, BEFORE TURNING
   ON IN THE PITS.

4. NO TAKEOFFS OR LANDINGS FROM THE PIT AREA OR TAXIWAYS.
   REASON!! FOR THE SAFETY OF THE PILOTS IN THE PIT AREA OR RUNWAY.

5. OBSERVE AMA SAFETY RULES.

6. FAA. RULE 200 FT. MAX. ALTITUDE MUST BE OBSERVED AT ALL TIMES.
   REASON!! FULL SIZE PILOTS HAVE THE RIGHT OF WAY!! FAILURE TO COMPLY
   WITH THIS RULE CAN RESULT IN THE LOSS OF THE FIELD AND IS A GREAT
   DANGER TO THE LIVES OF FULL SIZE PILOTS.

7. NO LOW PASSES OR FLYING OVER CROWDS OR PIT AREA.

8. ALL FREQUENCIES POLICE THEMSELVES

9. PILOTS MUST STAND ADJACENT TO THE RUNWAY WHEN FLYING.

10. NO SPECTATORS ALLOWED PAST FENCE.

11. CLEAR RUNWAY AS SOON AS POSSIBLE.

12. AMA MEMBERSHIP DESIRED. INSURANCE DOESN'T APPLY TO NON-AMA
    FLYERS.

13. DO NOT POST FREQUENCY FLAG IN ONE AREA AND PIT AIRCRAFT IN
    ANOTHER.

14. ONLY ONE PILOT AND ONE CO-PILOT ON THE RUNWAY. NO SPECTATORS.

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818-886-0203 KEN TYLER. COMPENSATION NEGOTIABLE.

---NOTICE TO CLUB MEMBERS---

PATCHES AND RAFFLE TICKETS WILL BE AWARDED TO CLUB MEMBERS WHO VOLUNTEER THEIR TIME AND ENERGY AT CLUB SPONSORED EVENTS. DETAILS WILL BE FORTHCOMING IN NEWSLETTER.

MARK YOUR CALENDER ON AUGUST 10 1986 FOR VETERANS HOSPITAL FUN-FLY. WE WILL NEED PILOTS, PLANES, AND SOME WORKERS FOR THIS EVENT. MORE INFORMATION LATER!!

J. W. HEDDEN

FOR SALE

A GIANT SCALE ECHO 20 GP-R HUGHES 300 WITH ENGINE. 56 1/2" ROTER SPAN.

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FLIGHT TRIMMING

. . .A model is not a static object. Unlike a car, which can only hunt left or right on the road (technically, a car does yaw in corners, and pitches when the brakes are applied), a plane moves through that fluid we call air in all directions simultaneously. The plane may look like it's going forward, but it could also be yawing slightly, slipping a little and simultaneously climbing or diving a bit! The controls interact. Yaw can be a rudder problem, a lateral balance problem or an aileron rigging problem. We must make many flights, with minor changes between each, to isolate and finally correct the problem.

The chart accompanying this article is intended to serve as a handy field reference when trimming your model. Laminate it in plastic and keep it in your flight box. You just might have need to consult it at the next contest! The chart is somewhat self-explanatory, but we will briefly run through the salient points.

First, we are assuming that the model has been C.G. balanced according to the manufacturer's directions. There's nothing sacred about that spot — frankly, it only reflects the balance point where a prototype model handled the way the guy who designed it thought it should. If your model's wing has a degree more or less of incidence, then the whole balance formula is incorrect for you. But, it's a good ballpark place to start.

The second assumption is that the model has been balanced laterally. Wrap a strong string or monofilament around the prop shaft behind the spinner, then tie the other end to the tail wheel or to a screw driven into the bottom of the aft fuse. Make the string into a bridle harness and suspend the entire model inverted (yes, with the wing on!). If the right wing always drops, sink some screws or lead into the left wing tip, etc. You may be surprised to find out how much lead is needed.

At this point the model is statically trimmed. It's only a starting point, so don't be surprised if you wind up changing it all. One other critical feature is that the ailerons must have their hinge gap sealed. If shoving some Scotch tape or Monokote into the hinge gap to prevent the air from slipping from the top of the wing to the bottom, and vice-versa, bothers you, then don't do it.

To achieve the maximum lateral trim on the model, the hinge gap on the ailerons should be sealed. The easiest way to do this is to disconnect the aileron linkages, and fold the ailerons as far over the top of the wing as possible (assuming they are top or center hinged). Apply a strip of clear tape along the joint line. When the aileron is returned to neutral, the tape will be invisible, and the gap will be effectively sealed. Depending on how big the ailerons are, and how large a gaping gap you normally leave when you install hinges, you could experience a 20 percent increase in aileron control response just by this simple measure.

. . .Your first flights should be to ascertain control centering and control feel. Does the elevator always come back to neutral after a 180-degree turn or Split-S? Do the ailerons tend to hunt a little after a rolling maneuver? Put the plane through its paces. Control centering is either a mechanical thing (binding servos, stiff linkages, etc.), an electronic thing (bad servo resolution or dead-band in the radio system), or C.G. (aft Center of Gravity will make the plane wander a bit). The last possibility will be obvious, but don't continue the testing until you have isolated the problem and corrected it.

. . .let's get down to the task of trimming the model. Use the tachometer every time you start the engine, to insure consistent results. These trim flights must be done in calm weather. Any wind will only make the model weathervane. Each "maneuver" on the list assumes that you will enter it dead straight-and-level. The wings must be perfectly flat, or else the maneuver will not be correct and you'll get a wrong interpretation. That's where your observer comes in. Instruct him to be especially watchful of the wings as you enter the manuevers.

Do all maneuvers at full throttle. The only deviation from this is if the plane will be routinely flown through maneuvers at a different power setting. . .

Let's commence with the "engine thrust angle" on the chart. Note that the observations you make can also be caused by the C.G., so be prepared to change both to see which gives the desired result. Set up a straight-and-level pass. The model should be almost hands-off. Without touching any other control on the transmitter, suddenly chop the throttle. Did the nose drop? When you added power again, did the nose pitch up a bit? If so, you need some downthrust, or nose weight. When the thrust is correct, the model should continue along the same flight path for at least a dozen plane lengths before gravity starts to naturally bring it down.

Do each maneuver several times, to make sure that you are getting a proper diagnosis. Often, a gust, an accidental nudge on the controls, or just a poor maneuver entry can misled you. The thrust adjustments are a real pain to make. On most models, it means taking the engine out, adding shims, then reassembling the whole thing. Don't take shortcuts. Don't try to proceed with the other trim adjustments until you have the thrustline and/or C.G. correct. They are the basis upon which all other trim settings are made.

Also, while you have landed, take the time to crank the clevises until the transmitter trims are at neutral. Don't leave the airplane so that the transmitter has some odd-ball combination of trim settings. One bump of the transmitter and you have lost everything. The trim must be repeatable, and the only sure way to do this is to always start with the transmitter control trims at the middle.

The next maneuver is somewhat more tricky than it looks. To verify the C.G., we roll the model up to a 45-degree bank, then take our hands off the controls. The model should go a reasonable distance with the fuse at an even keel. If the nose pitches down, remove some nose weight, and the opposite if the nose pitches up. The trick is to use only the ailerons to get the model up at a 45-degree bank. We almost automatically start feeding in elevator, but that's a no-no. Do the bank in both directions, just to make sure that you are getting an accurate reading of the longitudinal balance.

We now want to test the correct alignment of both sides of the elevator (even if they aren't split, like a Pattern ship's, they can still be warped or twisted). Yaw and lateral balance will also come into play here, so be patient and eliminate the variables one-by-one. The maneuver is a simple loop, but it must be entered with the wings perfectly level. Position the maneuver so that your assistant can observe it end-on. Always loop into the wind. Do several loops, and see if the same symptom persists. Note if the model loses heading on the front or back side of the loop. If you lose it on the way up, it's probably an aileron problem, while a loss of heading on the way back down is most likely a rudder situation.

After you get the inside loops going correctly, do the same maneuver to the outside, entering from an inverted position. . . Before you make too many dramatic changes, glance at the remainder of the chart and note the myriad combination of things we can do just with the ailerons. Each change you make will affect all other variables!

Note that the Yaw test is the same looping sequences. Here, however, we are altering rudder and ailerons, instead of the elevator halves. We must repeat that many airplanes just will not achieve adequate lateral trim with sealing the aileron gaps shut. The larger you make the loops (to a point), the more discernable the errors will be.

The Lateral Balance test has us pulling those loops very tightly. Actually, we prefer the Hammerhead as a better test for a heavy wing. Pull straight up into a vertical and watch which wing drops. A true vertical is hard to do, so make sure that your assistant is observing from another vantage point. Note that the engine torque will affect the vertical fall off, as will rudder errors. Even though we balance the wing statically before leaving for the field, we are now trimming it dynamically.

The Aileron Coupling (or rigging) is also tested by doing Hammerheads. This time, however, we want to observe the side view of the model. Does the plane want to tuck under a bit? If so, then try trimming the ailerons down a small bit, so that they will act as flaps. If the model tends to want to go over into a loop, then rig both ailerons up a few turns on the clevises. Note that drooping the ailerons will tend to cancel any washout you have in the wing. On some models, the lack of washout can lead to some nasty characteristics at low speeds.

The effects noted with the Aileron Coupling tests can also be caused by an improperly set wing incidence. The better test for this is knife-edge flight. . . If the model tends to pull upward, i.e., it swings toward a nose up direction, then reduce the wing incidence. If the model tries to go off heading toward the bottom side of the plane, then increase incidence.

Again, we reiterate that all of these controls are interactive. When you change the wing incidence, it will influence the way the elevator trim is at a given C.G. Reshimming the wing will also change the rigging on the ailerons, in effect, and they may have to be readjusted accordingly.

The whole process isn't hard. As a matter of fact it's rather fun — but very time consuming. It's amazing what you will learn about why a plane flies the way it does, and you'll be a better pilot for it. One thing we almost guarantee, is that your planes will be more reliable and predictable when they are properly trimmed out. They will fly more efficiently, and be less prone to doing radical and surprising things. Your contest scores should improve, too.

We wish to acknowledge the Orlando, Florida, club newsletter, from which the basics of the chart presented here were gleaned.

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