

Display for Local Event



Last Saturday Larry Tener, Don Tillotson, and Marvin Blankenship did a static display, and a flight demo for the Catholic care center at 6700 East 45th St north this was between 10 am and 2:00 in the afternoon there were also a hot air balloon and several classic cars on display. We had a good time lunch was great! Thanks to Sandi Timmons-Vix for inviting us to share our great hobby!

In-Flight Photo

Submitted by Marvin Blankenship
This photo was taken from the canopy of my F 16. The aircraft in the photo was Terry Grimes' F 16 on a turn and Burn with the sun in his background. This was taken with the Camera I passed around for show and tell at last months meeting.



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Trimming Guide

A model is not a static object. Unlike a car, which you 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.

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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 adhesive 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° 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 weather vane. 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 maneuvers.

Do all maneuvers at full throttle. The only deviation from this is if the plane will routinely be 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 add power again, did the nose pitch up a bit? If so, you need some down thrust, 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 mislead 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 adjustments until you have the thrust line 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.

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Marvin Blankenship called the meeting to order.

Minutes of the April meeting were not available due to a technology failure.

Visitors: Terry Dobson

Reports:

Safety – Mike Tallman had reminded some flyers not to fly behind the safety line.

Newsletter – please send articles.

Website – no report

Afton – Russ reports sun shades were moved out, and 4 were rebuilt with new pads and posts. Still need some work, but have withstood the storms.

Don Pemberton was not present, but Loren Tregallas reported that Don had more to report on the work going on there. The park has been asked to put picnic tables under the shelters. Members are encouraged to go check out the handiwork! About \$375 additional was spent, and Fred Tosh donated paint. Receipts will be submitted with a full report of the work completed.

Chapin – Martha Tregallas reports that plans were approved by the City Parks department. Mike Tallman was present at that meeting. Has 2 additional donors of \$5000 each, which will allow the runway to be 30x400 instead of the originally planned 20x400. Handout was distributed, and will be included as attachment for next newsletter. Martha proposes the club contribute \$5000 for an escrow account the city will maintain. Any funds remaining after the project is complete will come back to the club per a written agreement. The club will be provided an itemized statement each month. She believes the club will get some money back after the project.

Ken Chadwick asked if any other area aircraft companies had been approached for additional grants. Darwin Hawkins reported that he had previously approached these companies for grant dollars, but many of those contacts are no longer available.

Martha mentioned that non-members should be given the opportunity to contribute. She would like to move quickly on this, to lock in the current bid and let the City know the funds are secured.

Gene Morse asked if the City would give a long-term use agreement vs. the current year by year. Martha was confident that we are in a good position to ask for such an agreement with this investment. She also noted the public and media interested in this project.

Marvin Blankenship asked if the field would be named “Beech Field at Chapin” as had been rumored. Martha had not heard that for certain, and thought we should ask for that at a future time to keep from any confusion. She also feels that since the WRCC has a huge investment in the field and in the project.

Fred Tosh moved that the club contribute \$5000 to match the donation to for a wider runway per Martha’s proposal. Seconded by Darwin Hawkins.

Mark Kilby asked if this plan still included additional shelters. Martha said it did. Murfin is including 3 shelters with the work. The total improvements are included.

Vote passed with one dissenting vote.

Treasurer – Terry Powell gave report.

Calendar – Loren Tregallas had a flyer ready for the Jumbo Fly

Fall Jumbo Fly –

Auction –. Taxes still need to be remitted to the City pending billing from them.

New Business:

Terry Dobson brought a proposal to the club from the Kansas Aviation Museum. The Museum will have 3 large events for capitol improvements including bathrooms and elevators. These include a Motorcycle event, a kids day camp for a week, and then annual car show in September. The Museum would like borrow the club’s cooker to serve food. In exchange for letting them use it, they would offer storage in one of the Museum’s new buildings.

Marvin confirmed that it does need new tires.

David Wise moved that \$100 be spent to replace the tires. Ken Chadwick seconded. Passed unanimously.

Ken Chadwick asked if the location was locked down during off hours, and Terry confirmed. A call to Terry or the Museum would allow access.

Marvin asked if anyone in the club was opposed to this idea. Motion passed

Open discussion:

none

The group took a break.

Show and Tell:

Marvin Blankenship showed a video camera he bought for his plane. They run \$50-\$100. Has a stabilization module on it, and a USB connection. Records for 2-2.5 hours of motion, and can also take still photos. Had video on his laptop to show.

Attendance Drawing:

\$20. Wayne Lawrence was drawn, but was not in attendance.

Raffle:

Fred Tosh	Jim Sheils	Mark Kilby
Russ Hull	Gene Morse (2)	Ken Chadwick
Richard Bereman		

Meeting adjourned

Handout distributed by Martha Tregallas breaking down Chapin Field finances:

Current approved and funded runway:

The estimate is based on \$2.35 per sq/ft for the 3" asphalt on 3" rock base.

20' X 400' asphalt runway (8,000 sq/ft.) $(8,000 \times 2.35) = \$18,800$.

The estimated dirt work \$10,000.

Runway plus dirt work \$28,800.

To propose the following:

30' X 400' asphalt runway (12,000 sq/ft.) $(12,000 \times 2.35) = \$28,200$.

The estimated dirt work (same as the 20' x 400') \$10,000.

The project total cost \$38,200.

The overall cost difference between the 20' wide vs. a 30' wide runway is \$9,400.

The difference of will need to be paid by private funds. Currently there are pledges for \$5,000. It is requested for matching \$5,000 with the balance to be returned to the club and donors at completion of the runway. The City will send itemized monthly statements and will sign an agreement for any remaining funds to be returned at the completion of the runway.