The RC Flyer

September 1996

The News Letter of the *Manned Space Center Radio Control Club*

President's Corner

Bill Landoc

Thanks to Mike Laible for providing the program for the August meeting on his trip to the National Meet at AMA Headquarters in Muncie, Indiana. The slides he took showed a number of really fine airplanes. The review of the NATS will continue at next months meeting with a video that shows the planes and pilots in action.

Well, the club made it to the Ballunar Festival and survived. It was terribly wet and the ground soon became a quagmire, but this was a marvelous opportunity to showcase our hobby and the club. We had a good booth in an excellent location. We were right opposite the main gate, and the first thing that folks saw when they entered. This was a different location than we had originally been told; but proved to be much better, and much drier. Three helicopters and six different airplanes were on display, along with a club flyer and a lot of handouts on the hobby. Many people stopped by to look and ask questions. A number of them seemed genuinely interested, but only time will tell if we actually gain any new club members.

We had two flight demonstration each day, one in the morning and one in the afternoon. Mike Goza put on an outstanding helicopter demonstration at each of those four times. His impressive show lead to lots of compliments, questions, and many folks who want to fly like Mike.

The airplane demos were another matter. The first one was scrubbed for safety reason's because of too much traffic on the tram way, which was going to be the runway; and a cross wind into the crowd, which was also very close to the runway edge. The second flight by Don Fisher used the antenna range drive as a runway. No problems taking off, but Don's flight was cut short after a few passes when his engine acted up after the smoker was turned on. Having learned from all this we were well prepared for Sunday mornings demonstration with another attempt by Fisher. But this time found that the antenna range was unusable because all of the balloon crews were lined up to refill their propane tanks from a tanker. Sunday afternoon was the last chance to get a good airplane demonstration, and at last some success. Charles Copland flew Mike Laible's Sea Furry and put on a good long exhibition. Don Fisher tried one last time to also fly his Extra 300, but again the engine just wouldn't cooperate.

The club turn out too help was very good. A special thanks to the thirteen members who helped with the booth and flight demo's: Resha Hill, Ray Randolph,

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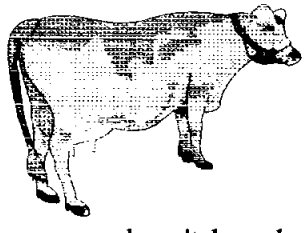
Frank Jenson, Don Fisher, Joe Bayer Jr., Charles Copland, Mike and Sharon Goza, Boyce Sterling, Dave Hoffman, Rig Joosten, Tim White, and Mike Laible *(Editor's Note: And of course a special thanks to Bill for his support)*, plus Wayne Green who loan a helicopter and airplane for display.

For a first time effort we did well, and certainly learned a lot to do better next time. All in all, the Ballunar Festival has to be considered a success for the club.

Words From The VP

Michael Laible

The August meeting was full of new and old business. These seem to interesting and busy times for the MSC/RC Club. The Ballunar festival should be a huge success (See Presidents note). I have called AMA and material/flyers are on their way for the static display. We will have membership packets and extra copies of Model Aviation on hand. In addition, they have also agreed to send information for the development of proposals for flying site upgrades. This information should be helpful for the MSC proposal to the center.



It is very interesting what will be happening around the flying site. You must always take a positive approach to changes. If everyone hasn't heard, the center will be starting a joint venture with the school district for a Longhorn Steer project. The pasture will be located South of the flying site. I really believe this could be something great for the club. I have contacted the schools in the area and all have expressed interest in holding model aviation days at our field. These schools will be contacted to continue discussions for the proposal development. On August 21 I met with NASA to present the MSC/RC Club proposal of this joint project. The proposal consist of the school district/NASA to support a road and parking lot and the club support shade structure and rest areas. The meeting went well, however, the true test will be how aggressive the club gets with the school district. We must work with the schools to include the MSC/RC Club into the plans. We should find out more information near the end of September.

I was looking through some of the old newsletters. I found a newsletter dated September 1980 that had a flyer for a MSC R/C and Model Airplane News Southwest All Scale Fly-In. WOW. Times have changed. I am hoping that with the club making a formal request for site improvements this club can once again hold this type of event.

Last item I would like to mention is that I had a visit with John Kiker the other day to talk about the old days. He has been kind enough to go out of his way to make copies of information and pictures to include onto the club homepage. If you see John tell him thanks. It seems that the club has plenty of roots tracing back to John.

I will have to miss the September meeting, so I will see ya all in October. For the entertainment in September I should have a tape of the 1996 NATS.

The R/C Flyer

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Articles and want ads can be submitted to Mike Laible at 474-1255, on 5.25" or 3.5" floppies in ASCII or Microsoft Word, E-mail at mlaible@phoenix.net, or hard copy formats can be sent to: 2823 Sea Ledge, Seabrook, Texas 77586. Club Homepage at "http://www.phoenix.net/~mlaible/msc.html"

"Support Your R/C Flyer"

Lighter Than Air

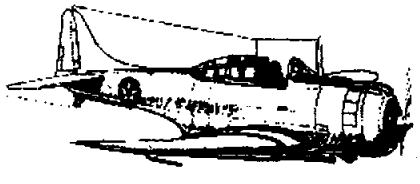
Sam could not find club procedures for his predicament.

How To Trim

by Dan Garvey
(editors note: I have included a trim chart on the last page.)

First off, get the CG in the correct spot. A plane that is tail heavy will be a real handful on the trim flight.

Second, with your new Incidence Meter, insure that the wing, stabs, and engine thrust are set according to plans. With the CG and incidence angles set, center the trim levers on the TX and all control services set with no deflection.



So now, let's fuel her up and head for the sky. Insure that controls work and in the proper direction (you'd be surprised how many people take off with controls that are backwards or do not work at all!).

Feed in the power and start rolling. Make a mental note on how easy or hard the take off was for future reference. Climb to a comfortable altitude, level the aircraft at full power, let go of the sticks and watch the aircraft to see what it does. The first thing I like to trim is the elevator or pitch. Move the trim lever as required to get the aircraft to fly level. Next, move the aileron trim as required to correct roll problems. Next, correct the rudder. The easiest way is to pull up into a vertical climb into the wind, wings level, and watch which way the nose goes. Trim the rudder accordingly.

After that, fly a few loops and check the tracking. You may have to readjust the ailerons a little.

With the plane flying straight and level at full power, pull the throttle to idle. The plane should continue to fly straight and level for a short time and then slowly drop the nose and start a descent. This checks for excessive up or down trim. If the plane balloons up, look for excessive down engine thrust.

Another check to perform is the elevator. At full power, pull a full up loop. If you have too much elevator, the aircraft will snap roll at the top of the loop (this is a high speed stall of the elevator). Reduce the elevator travel as required.

One thing I like to check is the stall characteristics of the aircraft. This is done so that there won't be any surprises on landings. Basically you fly the aircraft to a stall and watch. The ideal stall is one in which the nose drops straight through with no roll over.

So now go ahead and land and check the control surfaces. If you have lots of aileron trim, look at the wings and check for any warp or excessive wash-out or wash-in at the tips.

For pitch corrections, look at the CG again. Check the wing and horizontal stab incidence and check for the wrong engine up/down thrust.

For rudder problems, look at the vertical alignment and excessive engine side thrust.

That's some of the basics for trimming a sport aircraft.

Top Ten Uses For An Ugly Stick

- Coffee Table
- Paper Weight
- Doorstop
- Weed-wacker
- Personal Defense Device
- Fireplace Fuel
- Chew-toy for Large Dog
- Step Stool
- Hammer
- Wheel-chock for 1/2-scale Piper Cub

Easy to build cowl

Authhor unknown from the Internet

You're all done with your new plane and you have no cowling for it. What should you do? Go flying or take 20 minutes to finish the job.

Well I hope you said finish the job. You can build an easy cowling for pennies. Take the back plate from your spinner and use it to trace a circle on a piece of light ply; make two. Find the center of the one of the light ply pieces and drill a hole the correct size of the crank of you engine. The other one cut out the center of it leaving a 3/16 ring. Bolt the light ply to the crank with the other ring between it and the engine. Cut a light ply back plate that fits on the fire wall around the engine mount.

Ok now just cut some balsa square stock from the plate to plate. Just install as many as the engine will let you. Sand and cover with mono coat, drill a few holes for the fire wall install. You can build any cowling like this in 20 to 30 minutes.

Minutes from the August 1996 Meeting

Don Fisher -Secretary

Meeting called to order by Bill Langdoc at 7:30 PM.

There were no visitors or new members to introduce. The minutes of the last meeting were read and approved

Old Business

- Ballunar Festival:
  Bill Langdoc announced/approved to have booth at no cost. The booth will be shared with Clear Lake Chamber of Commerce.
  Signup sheets were distributed to man booths and assist in flight demonstrations.
- Constitution and By-Law changes were discussed and voted on. An agreement to publish club by-laws was agreed upon
- Trial period on parking on flight-line was discussed

New Business

- Discussed Longhorn cattle and shrimp pond plans in a joint JSC/CCISD initiative
- Survey of fuel supply was taken and found to be adequate.
- The monthly drawing for J-3 Cub Ride was won by Kevin Jennings

Members Tip of the Month

Taz demonstrated switch system for dual battery system.

Treasurer's Report

There was no treasurer's report for this meeting.

Model of the Month

The model of the month was won by Ron Madsen with a Taub 83-1/2" wing span (Balsa USA Kit). It was Ron's first kit and the construction was outstanding.

Mike Laible brought in his Hawker Sea Fury that was made from his own plans for "show and tell.

Program

Mike Laible showed videos of the NATS which he attended.

Refreshments

Taz volunteered to bring refreshments for September meeting.

Next Meeting on Thursday
September 12th7:30 PM
Clear Lake Park Building

1996 MSC/RCC Calendar

Date	Event	Date	Event
Sept 7-8	All Scale Flyin, Hockley, TX	Sept 28	Club Fun Fly Annual BBQ
Sept 12	Club Meeting, Nominations	Oct 10	Club Meeting, Elections
Sept 14-15	Texas City Big Bird, Texas City, TX	Oct 12-13	Prop Nuts Big Bird Fly IN
Sept 20-22	Bomber Field B-17 Gathering, Monaville TX	Nov 14	Club Auction
		Dec 12	Club Christmas Party
Sept 28-29	Midwest T-6, Dick Scobee Field		

TO TEST FOR	TEST PROCEDURE	OBSERVATIONS	CK	ADJUSTMENTS
Control Neutrals	Fly model straight and level	Use transmitter trims to achieve hands-off straight and level flight.	☐	Adjust devises to center transmitter trims.
Control Throws	Fly model and apply full deflection of each control.	Check the response rate for each control.	☐	Aileron Hi Rate: 3 rolls in 4 seconds; Low Rate: 3 rolls in 6 seconds.
			☐	Elevator Hi Rate: for smooth square corner. Low Rate: for loop of approx. 130 ft. dia.
			☐	Rudder: Hi Rate for stall turns, Low Rate to maintain knife-edge.
Incidence	Method 1: Power-off vertical dive, cross wind (if any). Release controls when model is vertical.	1-A. Model continues straight down.	☐	1-A. No adjustment.
		1-B. Model starts to pull up (to top).	☐	1-B. Reduce incidence.
		1-C. Model starts to tuck under (to bottom)	☐	1-C. Increase incidence.
	Method 2: Remove power and then suddenly apply power.	2-A. Model maintains level flight	☐	2-A. No adjustment.
		2-B. Model tends to climb when power is applied	☐	2-B. Reduce incidence.
		2-C. Model tends to dive when power is applied.	☐	2-C. Increase incidence.
Center of Gravity	Method 1: Roll into near-vertically banked turn.	1-A. Nose drops.	☐	1-A. Add tail weight
		1-B. Tail drops.	☐	1-B. Add nose weight.
	Method 2: Roll inverted.	2-A: Requires lots of down elevator to maintain level flight.	☐	2-A. Add tail weight
		2-B: Requires no down or model climbs.	☐	2-B. Add nose weight.
Tip Weight (Course adjustment)	Fly straight & level upright, check aileron trim for wings-level. Roll inverted, level wings, release aileron	A. Wings remain level.	☐	A. No adjustment
		B. Left wing drops.	☐	B. Add weight to right tip
		C. Right wing drops	☐	C. Add weight to left tip.
Side Thrust	Fly away from yourself into any wind. Pull into vertical climb. Watch for deviations as model slows.	A. Model continues straight up.	☐	A. No adjustment.
		B. Model veers left.	☐	B. Increase right thrust
		C. Model veers right.	☐	C. Decrease right thrust/ add left thrust.
Up/Down Thrust	Method 1: Fly into wind, parallel to strip at around 300 feet out. At center, pull into vertical climb and release elevator.	1-A. Model continues straight up.	☐	1-A. No adjustment.
		1-B. Model pitches up (towards top)	☐	1-B. Increase down thrust.
		1-C. Model pitches down (towards bottom)	☐	1-C. Decrease down thrust.
	Method 2: Maintain level flight and suddenly cut power	2-A. Model maintains level glide slope	☐	2-A. No adjustment.
		2-B. Model dives when power is cut	☐	2-B. Increase down thrust.
		2-C. Model climbs when power is cut	☐	2-C. Decrease down thrust.
Tip Weight (Fine adjustment)	Method 1: Fly away from yourself into any wind. Pull into fairly small inside loop. (1 loop only).	1-A. Model exits wings level.	☐	1-A. No adjustment
		1-B. Model exits w/right wing low.	☐	1-B. Add weight to left tip/subtract from right.
		1-C. Model exits w/left wing low.	☐	1-C. Add weight to right tip/subtract from left.
	Method 2: Fly away from yourself into any wind. Push into fairly small outside loop. (1 loop only).	2-A. Model exits wings level.	☐	2-A. No adjustment
		2-B. Model exits w/right wing low.	☐	2-B. Add weight to left tip/subtract from right.
		2-C. Model exits w/left wing low.	☐	2-C. Add weight to right tip/subtract from left.
Aileron Differential	Method 1: Fly towards yourself, pull into vertical climb, neutralize controls then half-roll model.	1-A. No heading change	☐	1-A. Differential okay.
		1-B. Heading changes opposite roll direction (i e. heading veers to left after right half-roll).	☐	1-B. Increase differential.
		1-C. Heading changes in same direction as roll command.	☐	1-C. Decrease differential.
	Method 2: Fly model on normal pass and perform 3 or more rolls	2-A. Roll axis on model centerline.	☐	2-A. Differential okay.
		2-B. Roll axis off to same side of model as roll direction (i.e. right roll, roll axis off right wing tip)	☐	2-B. Increase differential.
		2-C. Roll axis off to opposite side of model as roll command.	☐	2-C. Decrease differential.
Dihedral	Fly knife-edge pass; maintain altitude with top rudder(NOT full rudder unless needed). Perform test in both left and right knife edge flight.	A. Model has no rolling tendency in knife-edge flight.	☐	A. Dihedral okay.
		B. Model rolls in direction of applied rudder.	☐	B. Decrease dihedral.
		C. Rolls in opposite directions (both tests)	☐	C. Increase dihedral.
Elevator Alignment (for models with independent elevator halves)	Fly away from yourself wings level, pull into inside loop Roll inverted and repeat as above pushing into outside loop.	A No rolling tendency with elevator.	☐	A. Elevator alignment is correct.
		B. Model rolls in same direction in both inside and outside loops.	☐	B. Elevator halves not aligned at neutral. Raise one half and/or lower other.
		C. Model rolls in opposite direction in inside and outside loops.	☐	C. One elevator half has more throw than the other (Model rolls to the side with more throw). Reduce/Increase throw on one side

Fuel for Sale

Jim Brock		334-1715
John Campo		488-7748
Tas Crowson		474-9531
Don Fisher	474-4942(H)	483-2157(W)
Wayne Green		484-3151
Don White		488-1024

Instructors

John Campo		488-7748
Charles Copeland		474-1195
Paul Ellis	480-3839(H)	488-9878(W)
Don Fisher	474-4942(H)	483-2157(W)
Mike Goza (Heli and Airplane)	554-4016(H)	483-4696(W)
Wayne Green (Heli)		484-3151
Jerry Hajek	486-4722(H)	246-4312(W)
David Hoffman	476-5206(H)	479-1945(W)
David Tadlock (Glider)		481-5227

Club Officers

President	Bill Langdoc	482-2369
Vice-President	Mike Laible	474-1255
Treasurer	Dave Hoffman	476-5206
Secretary	Don Fisher	474-4942

The R/C Flyer

Manned Spacecraft Center RC Club
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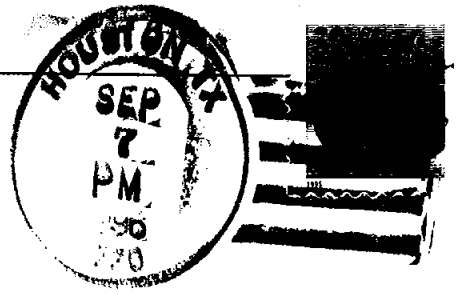

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