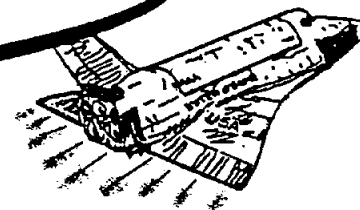


# *The* **R** **C** *Flyer*



March 1997

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

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## President's Corner

Mike Laible

I want to start this months column by pointing out the fact that our club meetings are picking up steam. I noticed over 30 members in attendance at last months meeting and over 35 the month before. Not only that, I was part of and listened to several interesting conversations after the meeting. This is what the club is all about. Sharing the camaraderie and knowledge. Hopefully the 7 PM start time will continue to increase attendance and enhance the after meeting participation.

It seems that all the small things that this Club has done with youth is paying off. Here's to everyone that is making an effort. I notice several junior members in attendance on a regular basis. Ron Madsen donated his PT .40 to a young member (Kellan Goertimiller) at the February meeting. Kellan has since joined the club and has purchased an Airtonics 4 channel radio. I am topping off his system ~~with~~<sup>by</sup> donating my old Supertigre .40. He is very excited and can't wait to fly the trainer. He is currently training on the club trainer, Royal .40 low wing. He is doing very well on the Royal .40 and should be able to land the PT .40 in no time. He is already scheming his second plane. In addition to the above I believe we have a number of other youth training going on. Keep it up! Nothing better than to see a young member show his excitement.

Another item pertaining to youth is that Creekside Intermediate has once again asked to hold a youth day at the field. The preliminary date has been set for April 12th. I need volunteer instructors and a couple of trainers with buddy cords. We already have the use of the club and Ed Copelands' trainers. Two more should do the trick. Always nice to have a back up. This is truly a wonderful experience and should be somewhat more organized this time around. One thing that may help is if someone has a kit in the skeleton stage to demonstrate construction of the models.

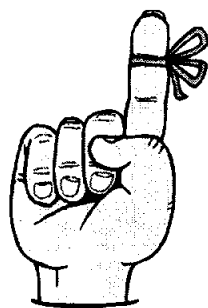
I always mention the net and assume that everyone has access to the internet. This is not so. So what happens is that I write a number of articles that only net users can see. So beginning with this issue I am going to print a portion of our homepage (which by the way is one of the most informative). This month I start with an article and pictures John Kiker gave to me awhile back. Look for it later in the newsletter. Enjoy and read. The net has opened up numerous avenues for modellers. I continually receive email for information about our club.

One last item before I go. From the last meeting it was decided that the club auto traffic will be between the pit and pilot line. This was voted on and passed, not what I personally wanted, but ~~it~~<sup>it</sup> passed so lets all ADHERE to it. I still would like to investigate the fact of making more permanent improvements to the field. Like extending parking with some gravel and building a shelter with benches. I feel this is well within our budget and the

time is right for getting it approved by NASA. So lets think about some ideas and talk about them. Maybe someone knows someone with a gravel outfit or lumber outfit to help keep the cost down. In the mean time I will alert the Rocket club to stop and proceed on the far side of the field for through traffic.

Safety is following the club rules when no one else is around!!!!

Till next month. Safe flying.



REMEMBER,  
MARCH MEETING  
STARTS AT 7 PM

Also, if you haven't paid your dues,  
this will be the last newsletter you will  
receive.

## Flutter

By: TED CANNELONGO

Edited & Compiled By: Leon H. Raesly

Many times when I have been to the flying field I have noticed models flying with a buzzing sound also known as flutter. More recently, one of these models was my own. Usually this sound seems to occur only when flying at high speed, but I think the problem may also exist even at slow speed, only it is less severe and no longer loud enough to be heard.

Control surface flutter is generally indicated by a low frequency buzzing sound. If, when flying a model, you hear this sound land the model immediately. This is because flutter can QUICKLY destroy the components of your airplane. As we all

know, deterioration of any component can (and probably will) result in a crash. Find the cause of the problem and correct it.

IF IT FLUTTERED ONCE, IT WILL FLUTTER AGAIN!

Continuing to fly a model with flutter is asking for an accident to happen. If you must "test fly" the model after attempting to cure the problem, try to keep away from the pit and spectator area or test fly "off hours" when there are few people at the field. If the model vibrates apart and crashes, you don't want it to come down in a populated area of the field. First check the servo mounts for deterioration. This is often said to be an indication of which surface is causing the flutter (imagine what this does to your servo) . If this is not successful, here are some things known to cause flutter:

1. Pushrod slop or flexing of the linkages.
2. Play in clevis pin at control horn attachment. Replace the horn or use a different hole that allows no play.
3. Play in clevis pin at servo arm attachment. Replace the servo arm or use another hole with no play.
4. Sloppy Z-bend fit in servo or servo arm hole too large. Replace the servo arm or use another hole with no play.
5. Control horns not solidly mounted. Use CA to harden the wood. Be sure screws are secure.
6. Side-play of plastic pushrod caused by tight bends. Reroute the pushrod.
7. Elasticity present in flexible plastic pushrods. Use heavy duty flexible rods, wood or fiberglass pushrods. Don't use any bents in control wire over 30 degrees.

8. Improperly mounted flexible pushrods (insufficiently supported along the center portion). Flexible pushrods must be secured at increment along the entire length. Not just at the ends.
9. Poorly glued aileron torque rod (drill proper size hole and use sufficient epoxy where the rod goes into the aileron wood) .
10. Poorly glued elevator joiner wire (drill proper size hole and use sufficient epoxy) .
11. Excessive hinge gap. Remove hinges and reinstall with less gap or iron on a plastic film strip to seal the gap.
12. Aileron flex due to wood which is too soft. Build and install new ailerons.
13. Not enough or insecurely glued hinges.
14. Hinges installed too far from the end of control surfaces. Install hinges according to the plans.
15. Excessive play (backlash) in servo gears. Replace servos or install new gears.
16. Poor (insecure) servo mounting. Remount according to the manufacturer's instructions.

Using the guide above as a check list, I solved the flutter problem in my model . I had drilled out the holes in the aileron servo arm to make it easier to install the z-bend rods, but I drilled them slightly too large allowing a fraction of a millimeter of play in the linkage. Simply drilling the proper Size hole in a replacement servo arm solved the problem. I couldn't believe only a fraction of a millimeter of play could cause such flutter if I didn't see it myself. (Editors note: My ultimate had flutter in the elevator halves. Once I put ball links connecting the control horn, everything was fine)

## Did You Know

by Steve Kielb

**AILERONS INSTEAD OF WING WARPING - ???**  
 Glenn Curtiss developed ailerons. I'm sure you knew that, but did you know why? It wasn't because he thought that ailerons were better than wing warping. It was because he was not permitted to utilize the Wright Brothers patented wing warping invention.

There was a curious aftermath to the Wright's success. While the Kittyhawk event occurred in 1903, no one believed what was accomplished. Even when subsequent demonstrations were conducted for the press, reporters did not believe what they were seeing. It was stated that it was all trickery and the Wrights were charlatans and opportunists. It wasn't until 1908, when Wilber demonstrated a second Wright Flyer in France that the world finally believed that man could successfully control a heavier than air machine in the air. The foreign press actually shamed the American Press into accepting the Right's accomplishments. Wilber and Orville never forgave their countrymen, In fact they did nothing to promote "good will" and were not very friendly or popular.

In 1909 the brothers sued airplane designer Glenn Curtiss for patent infringement involving their wing warping device. The case took five years and the outcome was that the brothers won their case. Curtiss then developed ailerons to avoid further legal altercations associated with wing warping.

After the court's decision was rendered, the Smithsonian Institution gave permission to Glenn Curtiss to overhaul Samuel Langley's unsuccessful airplane in an attempt to fly it. Curtiss performed extensive design modifications to both engine and airframe which enabled the airplane to make several short and wobbly (barely controllable) flights. The Smithsonian then proclaimed that the Langley

machine was actually the first aeroplane capable of sustained flight with a man aboard. The Langley machine was then hung in the Smithsonian for all the world to see. This marked the beginning of a campaign to belittle the Wright Brothers by the Smithsonian. As a result, in 1928 Orville had the original 1903 Flyer shipped to the Science Museum in London. It remained there until 1948. It was not until 1942 that the Smithsonian retracted the falsehoods and slurs against the Wrights.

If the Wright Brothers were more sociable and friendly, Curtiss might not have needed to invent ailerons. Imagine, P-51s, F-15s, B-52s, etc. with wing warping instead of ailerons. I guess our RC Models would be a little different as well. Who knows? **tf**

**Owen Morris** - Ace Shrike Commander. Two TD .051's modified for throttle, better fuel draw. Foam wing covered with Solarfilm.

**John Kiker** - Sterling WACO SRE. KB .40 Standard. Field and Bench project with no modifications to kit.

**Harvey Duck** - Slo-Poke built by Del Kotz. K&B with pipe.

Charlie Palermo won.

Program: Charles Danley gave a talk on flight trimming a pattern aircraft. **tf**

Lighter Than Air

The R/C Flyer

EDITOR

Michael R. Laible

ASSEMBLY, POSTING, DISTRIBUTION

Bob Blaylock

Articles and want ads can be submitted to Mike Laible at 474-1255, on 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"

Twenty Years Ago

MSC RCC

March 10th, 1977

Very little business. Model of the Month: entries: **Hugh Bittner** - Hughes 500 helicopter, scratch built. Aided by drawings and markings from the Houston Police Department.

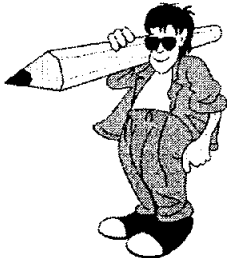
**Charlie Palermo** - 1/4 scale Reed conversion clipped-wing J-3 Cub. Copied from Hazel Sig's Cub. Data from Sig. KB .61 Pumper, Full interior.

**John Campo** - Das Box Fly. Ply fuse, .20 O.S.



All in favor of amending the amendment we just amended in old business under new rules, say aye!

## Minutes from the February 1997 Meeting



Minutes by Bill, the Secretary

The February 13, 1997 MSC R/C Club meeting was called to order at 7:33 by President Mike Laible. There were 37 members and visitors in attendance.



### General:

Minutes of the January meeting were approved.



### Old Business:

A problem with the field box blowing over was reported. Don Fisher said that he was looking at replacing the wheels with 4x4 skids, which should make it harder for the wind to blow the box over.

Mike Laible circulated pictures from the December Youth Fly event and invited everyone to check the club website to see some of the pictures which had been posted there. (Club home page is <http://www.phoenix.net/~mlaible/msc.html>)

Anyone who has an e-mail address is encouraged to contact Mike so that he can continue to expand the directory of club e-mail address. Mike can be reached at "mlaible@phoenix.net"

The deadline for items for the R/C Flyer is the Friday a week after a club meeting. Anyone who has an article, announcement, or item to sell is encouraged to turn them in to Mike.

The layout of the field and the associated auto traffic pattern was discussed at length. Finally a motion was made and approved to formally adopt the traffic pattern that has been generally observed

since we approved driving out last year. This pattern will be for through traffic (rocket club) to keep to the north side of the pavement and for the club to drive down the center or to the south side of center between the flight line and the pits, depending upon the field activities and number of people/pits set up. As always the key is to be careful and watch where people and aircraft are.

The Fun Fly Committee has not met yet but will soon.

About 12 gal. of club fuel remain. There was some discussion about seeking other fuel sources or stopping the purchase of club fuel, but the consensus was to continue as we have been as a convenience to the members. A fuel order will be placed after the March meeting so please make any special needs known.



### New Business:

Brian Morris offered a motion for the club to reimburse the cost of providing handouts or other materials for anyone making a presentation to the club on some aspect of the hobby. This motion, to encourage people to make technical presentations at the meetings, was approved.

Brian offered a second motion for the club to reimburse the cost of pre-approved equipment, hardware, kits, etc. that were used for evaluation or research leading to a technical presentation. This motion died for want of a second, as most people thought that it was unnecessary since these items would be handled on a case by case basis for approval in advance.

A motion was made and approved to change the meeting start time from 7:30 to 7:00, at least during the school, so that more youth could attend the meetings.

Jeff Longmore will provide the March refreshments.



### Show and Tell:

There were no models for show and tell or model of the month. Bill Langdoc brought a book of model aircraft in the Smithsonian Air and Space Museum. Included were pictures of the first successful R/C airplane -- Good Brothers' "Guff" from 1937 --, and the first successful R/C helicopter, by David Gray, which was first publicly demonstrated in 1970.



**Program:**

The program was provided by Dave Davila who demonstrated his smoketunnel. A cylinder, wedge, sphere and airfoil were all demonstrated as part of a

discussion on aerodynamics. Dave has done this talk in area schools for about 5 years as a means to stimulate an interest in science, particularly for at risk students

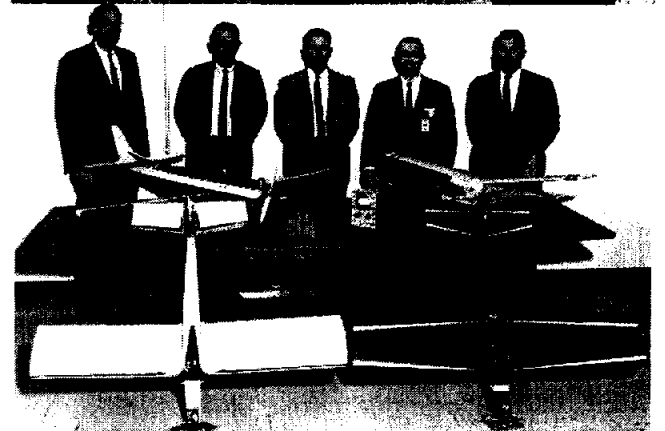
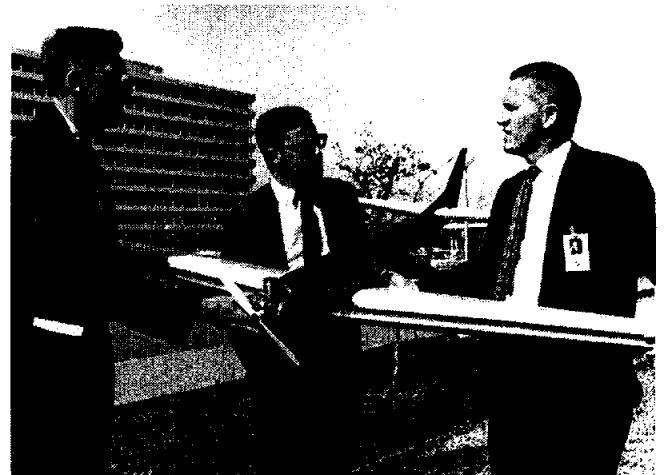
Next months program will be given by ROMCO Mfg. makers of Tru-turn spinners

The meeting was adjourned at 9:05

**Next Meeting on Thursday  
March 13th, 1997, 7:00 PM  
Clear Lake Park Building**

### MSC RC HISTORY

Below you will find an article that John Kiker wrote in the early '70s. The article is accompanied with photographs taken of the MSC/RC Club during this time period. However, before we begin I would like to share some other photos I received from John's archive illustrating the importance of modeling at the Johnson Space Center, originally named the "Manned Spacecraft Center". The first photo (across) was taken in 1966, before man landed on the moon. These are some early members of the club, left to right, John Kiker, Tom (?), and Frank Borman. The second photo (lower right) is of an early club meeting. The photo



date is 1967. Note the early radio equipment and support equipment. The last Photo (left above) is of an early proto type of a fly back booster. This model was designed and built by Gene Ashley. I hope you enjoyed these photo's and the article to follow. Below you will find John's article.

"The Apollo Space Program has been one of the greatest technical achievements of this decade. During the Apollo 14 mission, Cliff Weirick and RCM photographer Dick Tichenor visited the Center. I was fortunate enough to have the opportunity to show them around part of our facilities. After their visit, I realized a number of the people that are involved in this great space program started their careers as model airplane builders and now are actively engaged, as time permits, in building and flying R/C models. Cliff and Dick's interest in the Center spurred me on to write about the MSC/RC Club and to show with photographs some of the activities.

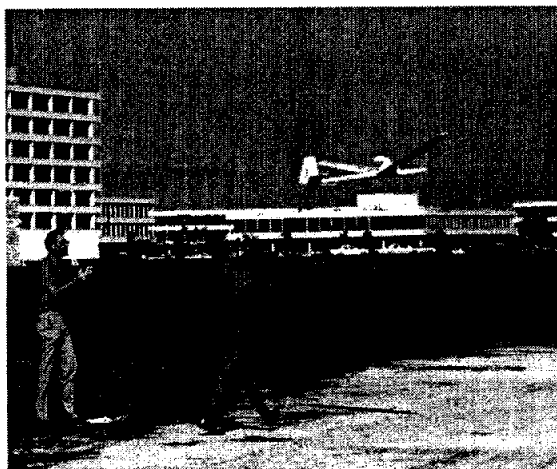
Before I describe the photographs, perhaps a little description of our club would be desirable. The MSC/RCC is primarily a fly-for-fun group. This has evolved as a result of the pressure of the Apollo program. The RC model building and flying provides an escape from the day-to-day problems and frustrations. Some years ago, when a number of us were at Langley Field the main interest was in designing and building experimental or unusual models or tinkering with the radio. There has not been time for this in the past ten years during the development

of Apollo; however, now there should be time to return to experimenting. So like any other group of people that travel a lot, have little free time, and lots of pressure on the job our modeling activities reflect the need for relaxing.



Now to the photographs. The first photograph (across) is of our club (editors note: This is a picture of the MSC/RC Club in 1971). From left to right Paul Kloetzer, Bill Lofland, Gene Ashley,

Kevin Fatorny, Charles Palermot, Owen Morris, Frank Fatorny, Mike Gaudiano, Joe Martin, John Kiker, Tim Brown, Karl Remmler, and Chuck Deiterich. As you would expect on any one day, this represents about half the club members.



Photograph No. 2 (not shown) is of Tim Brown's beautiful original Semiscale. It has the general dimensions of the Sperry Messinger, Supertigre .51 for power, and Monokote for covering. It flew just great until a short

in the transmitter caused it to be totaled.

Photographs No. 3 (above) and No. 4 (above) are of my Graupner Cirrus and Cumulus sailplanes. Both are beautiful performers. The Cumulus is Mr. Graupner's new ARF models. It can best be described as superb. Photograph No. 5 is of Owen Morris' original sailplane. It has an easy does it Hoby Poxy fuselage with a sharks head painted on the nose. It is a beautiful flying model. He is Chief of the Lunar Excursion Module Project Office. I do not know how he found time to build the sailplane with his traveling and heavy responsibilities.

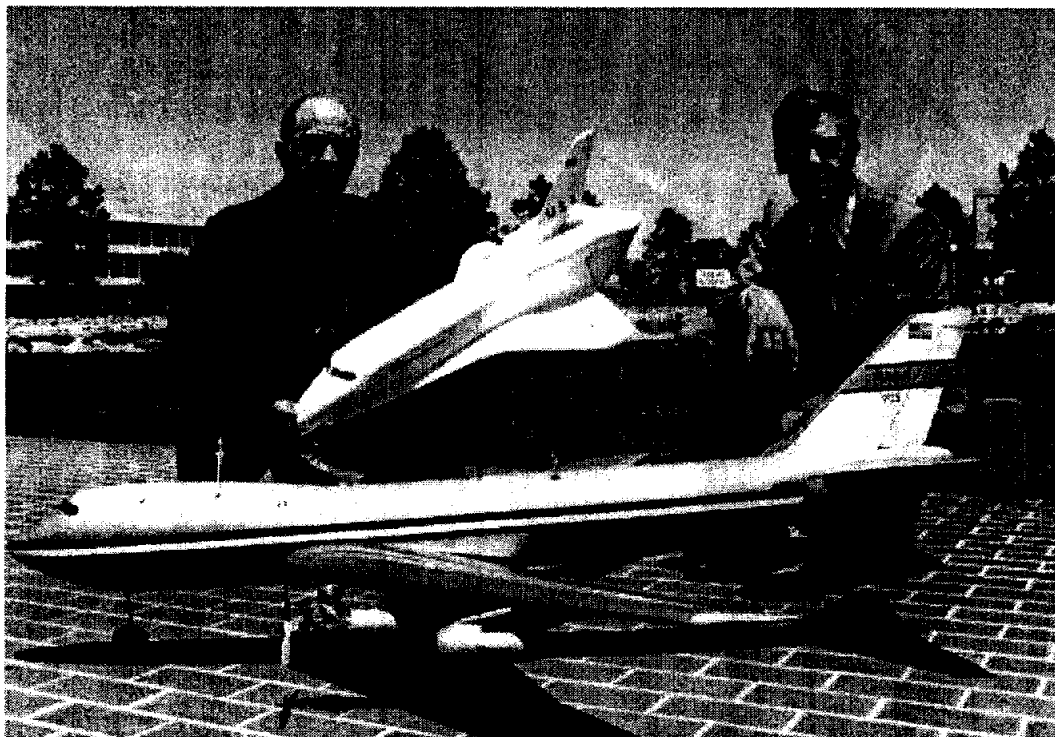
Photograph No. 6 (not shown) is of Charlie Palermo's (editors note: His name pops up quite often in the presidents corner in the '70s) Scale fine flying Spirit of St. Louis. He recently won RCM model of the month award with his Travelaire.



The club members that like to fly pattern were absent that day. However, the trend has been to fly kit types of past winners such as the Kwick Fly or else plastic ARF's such as the Dee Bee, Pilot, and Lanier.

As you can see, the interest is varied. With the main concern being to relax and enjoy the hobby. We all hope to soon have time to get back to the experimental model plane. This to me is the real fun. Photograph No. 7 (across) shows a model of Bill Loflands early Orbiter Concept. We all know what happen with this model. The last photograph (below) shows a model of the space shuttle that

Bill Lofland and myself built (editors note: this model is now in the AMA museum). This model was built for test flights and early development of the Shuttle 747 Ferry.





**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

**Club Officers**

President	Mike Laible	474-1255
Vice-President	Frank Jenson	470-1025
Treasurer	Dave Hoffman	476-5206
Secretary	Bill Langdoc	482-2369

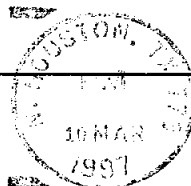
**Instructors**

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 Laible	474-1255(H)	244-8376(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

**The *R/C* Flyer**



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