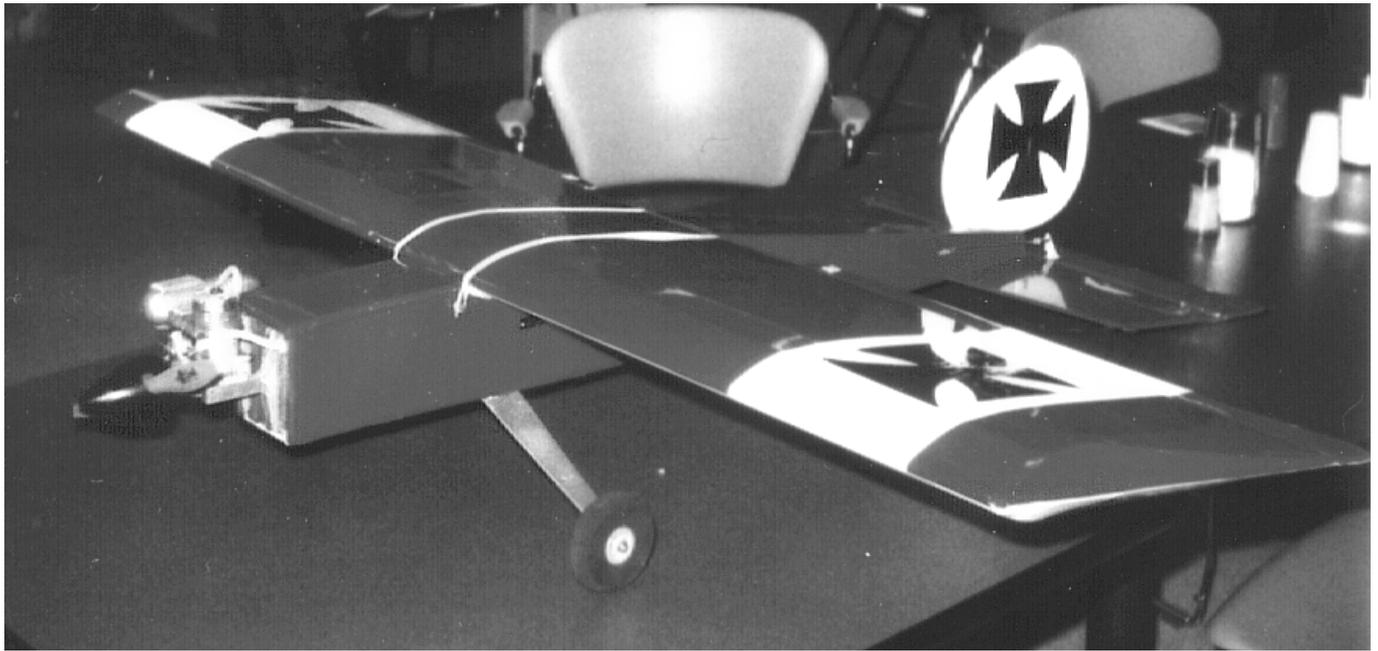


# FlightLine

A Monthly Publication of Collins Model Aviators

March 1997



March's Featured Model — Jim Doty's Reconditioned Sweet Stik

**☛ Reminder:** March's CMA meeting is on Thursday the 6<sup>th</sup> in the main plant cafeteria at 5:00 p.m.. Rich Dean will make a presentation on: *Two-Cycle Glow Model Engines.*

The March Build session will be Thursday the 13<sup>th</sup> from 6 to 9 p.m. in the main plant cafeteria.

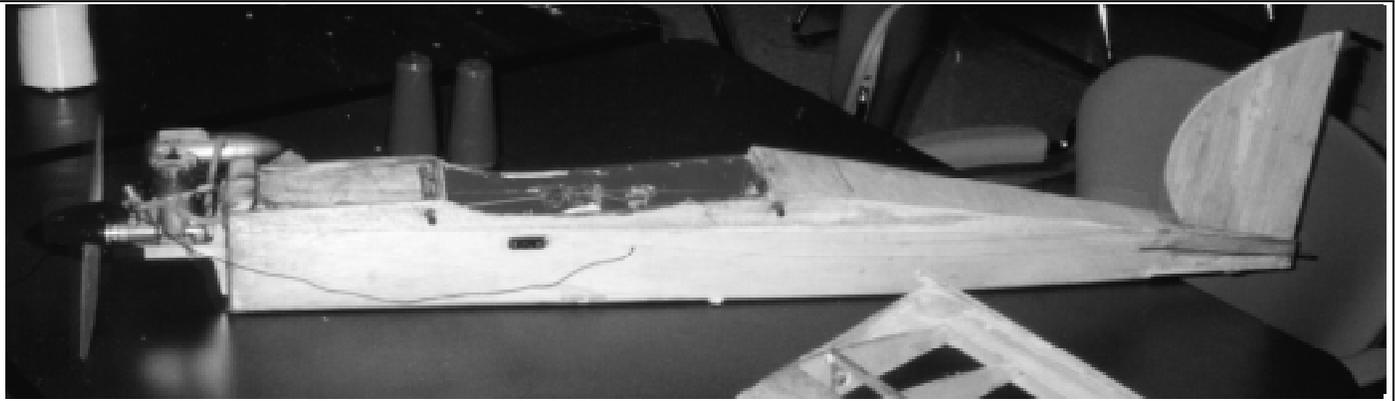
**March's Featured Model:** This month I take Editor's privilege again and feature another one of my models (besides it was the only finished model at the build session). You may have seen this plane out at the field last year in its old covering, but now it's been fully reconditioned and it looks like a completely different plane.

For more about the Stik's rehabilitation see Sweet Stik Refurbishing on page 2 ☛

James H. Doty, FlightLine Editor ☛

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**Sweet Stik fuselage during refurbishment. After many years, it was still in good shape and only required a little filling and strengthening near the tail**

## Sweet Stik Refurbishing

by Jim Doty

Above is a picture of the fuselage of my Sweet Stik while it was undergoing refurbishment this winter.

I first built the Sweet Stik with the help of my father when I was just 13 or 14 years old. My dad has been flying it on and off for the last 20 some years.

When I started flying again, my father brought the plane from Indiana for me to fly. Last fall I pulled the servos and engine out of my Tiger Trainer (June 1996 featured model) and installed them in the Sweet Stik.

The engine was a rather weak Thunder Tiger 40. I had been having problems getting the Tiger off of the ground in tall grass, so I decided to convert the Sweet Stik to a tail dragger.

The conventional gear (tail dragger) configuration has less resistance rolling through tall grass. Even though I didn't have much experience flying tail draggers I was able to get the Stik into the air without much problem.

Once in the air the shallow dihedral and symmetrical air foil of the Stik give it good aerobatic characteristics. Even though the Stik does not have the slow flight or inherent stability of a trainer, its still fairly tame in the air. With my crude flying skills I wasn't always able to complete all the maneuvers I attempted, but I never felt the plane was

out of control. The plane was very predicable and it wasn't hard to recover after a botched maneuver.

Landings were a bit more problematic. The higher approach speed and control sensitivity gave me difficulty keeping it headed straight down the runway. A few times I hit the beans just after touchdown because I focused too much on the flair and not enough on directional control.

The Stik is actually not that hard to land. Rollouts after touchdown were straight with no tendency to swerve on touchdown. The landing problems were entirely due to my not keeping the approach down the center line.

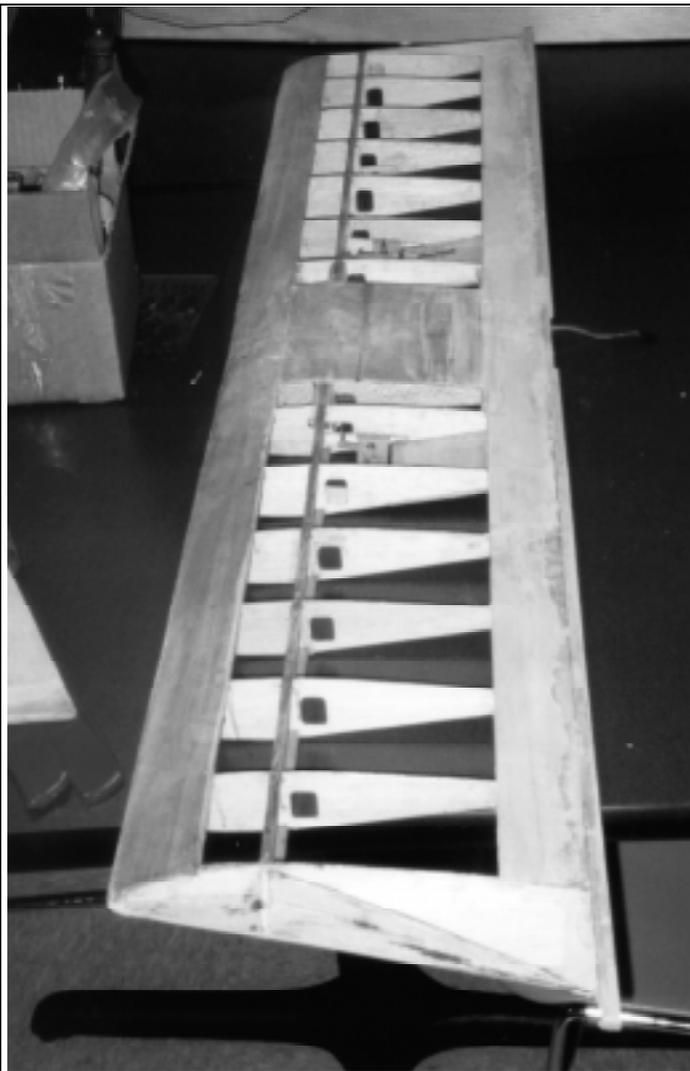
I guess all the abuse weakened the old wing. I was making a high-speed turn when suddenly the plane wouldn't stop rolling. With full aileron I was just able to stop the roll but I couldn't level out. I figured the plane was a goner, and pulled the throttle back to try to minimize the damage.

Fortunately, as soon as the throttle came back the excess turning tendency vanished and I was able to regain control of the plane. I was a little shaken up, and I wasn't sure what to expect next, so I called Rich Dean over for the landing. The plane gave no further problems, and Rich was able make another one of his textbook landings.

On the ground there was nothing visibly wrong with the plane. The ailerons and rudder moved freely and didn't have any looseness in the linkages. But when I

picked up the plane I noted that the wing was overly flexible.

When I got the plane home I removed the covering and found that there was a crack in the leading edge of one half of the wing and another crack in the trailing edge of the other. Under the aerodynamic forces of the high speed turn, the wing must have warped causing the undesirable turning tendency.



The Sweet Stik wing before covering. Note the added 3/8 inch on the training edge to give room to install the hinges and add a little more wing area

As it was late in the fall, I decided to entirely strip the covering off of both the wing and the fuselage and refurbish the whole airplane for next spring. I replaced some of the sheeting on the trailing edge and reinforced most of the old glue joints of the wing.

There wasn't much left of the trailing edge, in the old hinge locations, so I decided to add a 3/8 inch piece of balsa. This added a little extra strength and allowed me to cut hinge slots in the new wood. It also gave me a bit more wing area, which couldn't hurt.

The fuselage was in pretty good shape but the stabilizer had a lot of damage on its leading edge. The plane had been hung up on the wall by its tail for years and the hanger had cut into the stabilizer.

The original stabilizer had a straight leading edge, but I replaced it with a slightly swept surface with the same length at the tips but with a little extra cord in the middle. This added area should help compensate for the added wing area and add strength by increasing the bond line between the fuselage and tail.

I covered the plane with *True Red Monokote*. On the bottom of the wing tail and fuselage I used sky blue. I kept the traditional Stik crosses (inspired by WWI German aircraft insignia) on the wing and tail. I wasn't able to get all the wrinkles out of the Monokote, but the shiny bright red looks a lot better than the dull, shabby old covering it had before I started.

I've got the plane ready to fly. All I need now is some good weather and I'll try it out in the air.

James H. Doty, FlightLine Editor ➔

## From the President

by John Michael

The months are rolling along. At the time I'm writing this we had a few nice warm days that melted much of the snow. Spring is in the air. We can all start thinking about and making plans for getting out to the field and getting our flying thumbs limbered up again.

The build session we have had over the winter have been fun. I don't know how much building actually gets done, but everyone seems to have a good time visiting, looking over airplanes and the progress being made, and sharing ideas. If you haven't been to any build session yet, there's one more in March. Stop by and see what's going on.

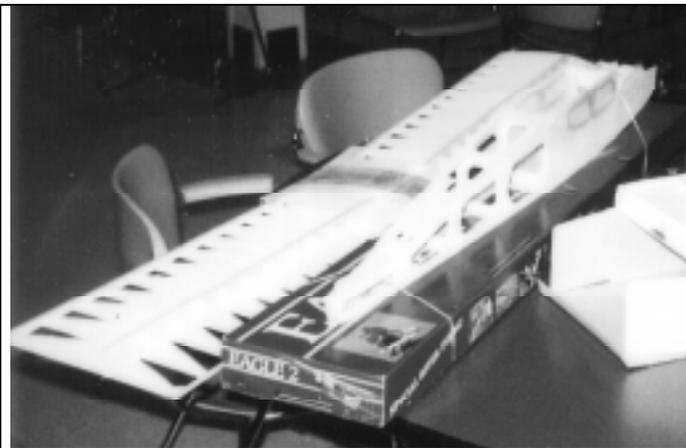
On Monday, April 7th, Jim Doty has scheduled a Brown Bag for us in the 106 auditorium. I haven't

seen the official minutes from the last meeting yet, but if my notes are correct, this Brown Bag will include, but not be limited to, the annual club beauty contest. We can clean up any last minute details at the next meeting. The reality is that we need large participation from the club members on this. Bring your airplanes or whatever on that day. It should be fun, and I suspect that we could have a good turnout. Bring any ideas you have to the next meeting.

Speaking of the next meeting, we'd like to see everyone there. First Thursday of March, March 6, 5:00 (no later), in the Main Plant Cafeteria.

See you there.

John Michael, CMA President →



The club trainer was brought to the February CMA meeting. The assembly for the wing, fuselage and tail surfaces is complete. The plane is almost ready to cover. Thanks to all those who are working hard to get it ready for spring training.

## CMA Meeting Minutes

by David Gillespie

Minutes of CMA meeting: 2/6/1997

The second meeting of the new year, was called to order by President John Michael.;

### OLD BUSINESS :

I, David Gillespie, reported that I had gotten the money for the field rent and was ready to pay Doc.

### NEW BUSINESS:

Tom DeWulf brought in the Sturdy Birdie. Tom has removed the radio and his engine in preparation to sell the plane. Tom has raised the question on how to go about selling the plane.

Suggestions included: hanging the plane at RC Adventures, advertising it in the monthly news letter, and possibly selling it at this months swap meet at Palo.

Rich Dean has acquired the Eagle II from Dave Decker. The plane has been modified by leaving the window cut-outs in to add strength to the fuselage. This plane is to be used as a club trainer. The trainer does need an engine and Rich plans on using the radio from the Sturdy Birdy for the Eagle II.

John Michael brought up the motion to sell the Sturdy Birdy for \$70 and use the proceeds to buy the engine. Duane Smith seconded the motion.

Tom DeWulf motioned to amend the previous motion by adding the stipulation that the club asks for best offer after the end of the month. That motion was seconded by Duane Smith.

The amended motion was passed unanimously.

John Michael brought up a motion to purchase a Super Tiger 45 from RC Adventures, along with covering for the Eagle II trainer. Projected engine cost would be approximately \$130. Motion seconded by Duane Smith. This motion was also passed unanimously.

Rich Dean plans on purchasing the fore mentioned items, and will perform the break-in on the new engine.

John Michael asked about progress on CMA flier. Bryan Smith said he has not finished one yet, but felt he might be able to have one done by 2/13/97 (next build session).

Discussion was started about an upcoming Brown Bag/Beauty Contest. Rich Dean and Jim Doty suggested that the brown bag be opened to all planes and that the beauty contest be held separately at the April club meeting.

The idea of a separate beauty contest was rejected. Instead it was decided that the beauty contest will be held at the brown bag, and that visitors will be asked to vote for their favorite models. Separate tables will be

provided to display models not entered in the contest. The beauty contest will be open to all models (new and old) that have not been previously entered in a CMA beauty contest.

Jim Doty volunteered to coordinate with Sandi Strike to try and acquire the 106 auditorium sometime in early April.

John Michael is looking for someone to coordinate announcements in the A&C Today and the Rockwell News Network. Unfortunately no one volunteered at the meeting.

Tom DeWulf announced the fact that we had visitors to our meeting. The visitors were; Floyd and Ehren VanAuken, Crist Rigotti, Steve Timm, Mark Moller, Steve Plattenberg. (Please forgive me if I spelled your names wrong). Tom explained some of the AMA and CMA club rules.

John asked if there should be a change in CMA policy to eliminate the \$25-\$30 spent a month on door prizes. No one felt that it should be raised, lowered, or eliminated. Amount and frequency shall remain the same.

Tom DeWulf motioned that only paid CMA members would be allowed to receive door prizes. The motion was seconded by Doug Emerson. Voting on this motion resulted in 5 for and 5 against. The motion did not pass. For now, everyone attending the meeting will be eligible to win the door prizes. The CMA club might reconsider if it becomes a problem.

Duane Smith asked the visitors where they heard of CMA. One was from a coworker, one was from a relative and three were from the A&C Intranet CMA Web page. My thanks to Tom DeWulf, Jim Doty and all others responsible for the fine work on the CMA home page.

John Michael asked about the CMA membership cards. I, David Gillespie will have to send membership names and AMA numbers to John Michael so he can create the cards. Then I will take them to the Rec.-Center to be laminated.

The meeting was adjourned .

David Gillespie, CMA Secretary →

## FOR SALE, STURDY BIRDY



**Former Club Trainer. Good condition**

\$70.00 or Best Offer

Ready to Fly (less engine and radio)

Radio required: 4 channel    Wingspan: 53"

Engine: .20 to .30 2-stroke    Wing Area: 503 in<sup>2</sup>

Weight: 4 lb    Dihedral: 11°

Contact: Tom DeWulf x5-4015 for more information.

## February's build session

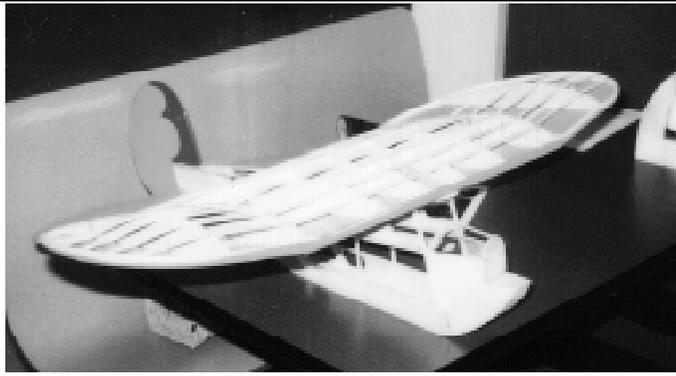
by Jim Doty

February's build session was well attended, and it was evident that people are making a lot of progress on their models. Rich Dean has already started covering his Lazy Bee, and he and Duane Smith had made some more progress on their OV-10 Bronco joint project.

Michael and Brian Wesner brought in their Northeast Aerodynamics, Sport-Air 40. It looks like it should be a lot of fun to fly. Brian said that it built up well, but the fuselage required quite a bit of shaping.

It looks great, and Brian was already starting to cover it. Looks like another new plane will be ready for spring.

Dan Cooley showed up with his LT-40 kit. This is his first plane, and he appreciated the detailed instructions and figures in the instruction book. For a first timer he's making fast progress. It won't be long before he'll be needing flight instruction.

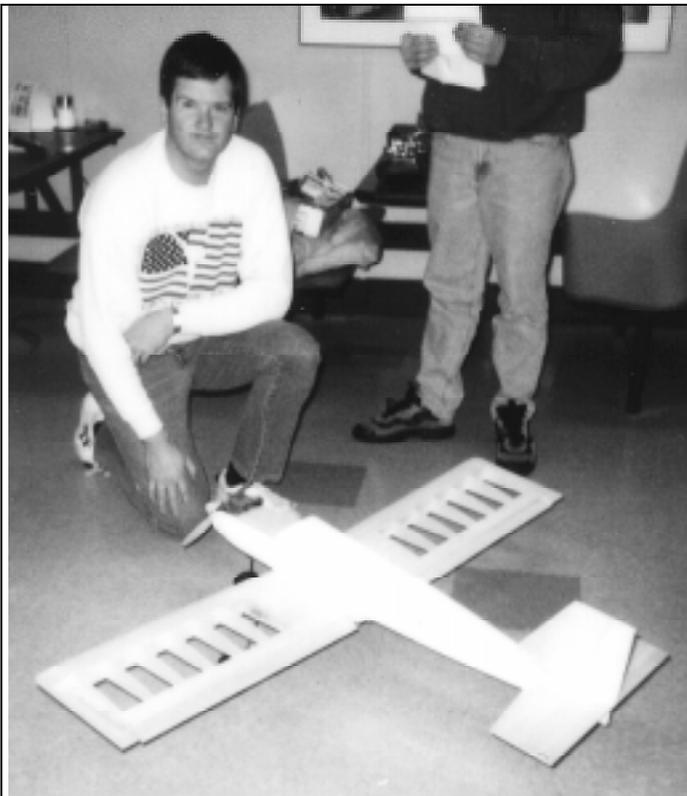


Rich Dean is starting to cover his Lazy Bee. It's sure to be ready for an early spring flight.

From the testing he described it should work fine. I hope he lets us know when the first flight test will be so we can all watch.



Rich also showed the progress on the OV-10 Bronco project he is working on with Duane Smith.



Michael and Brian Wesner brought their Northeast Aerodynamics, Sport-Air 40. It looks like a good sport model.

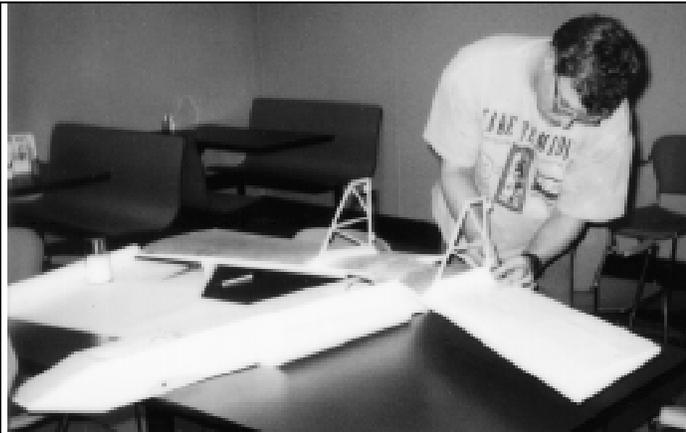


New member Dan Cooley brought his Sig, LT-40 to the build session. He agreed that the LT-40 is a great first plane.

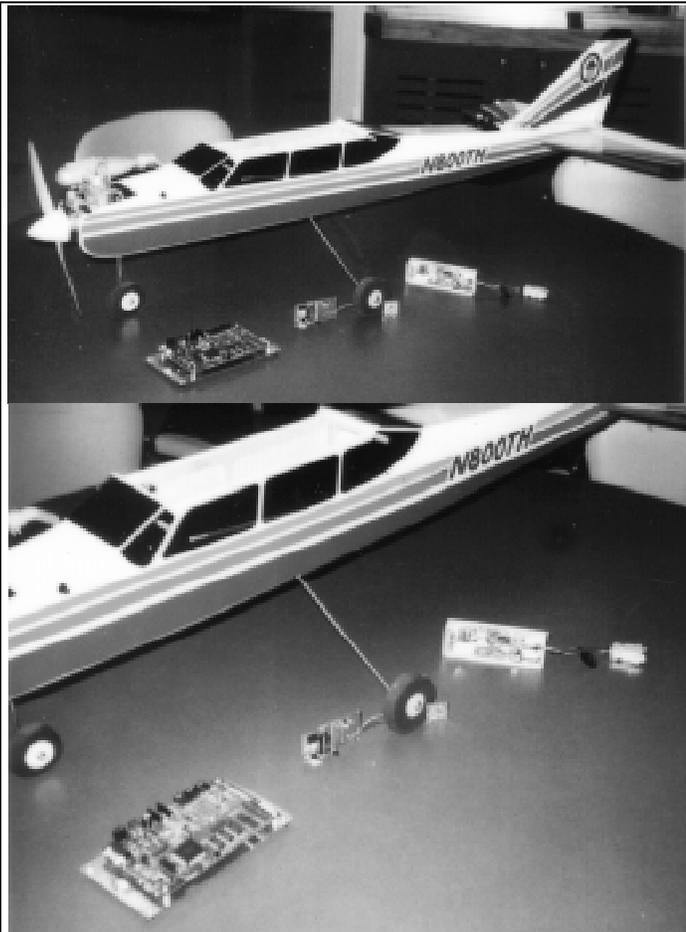
Noah Misner worked on his new experimental aircraft design. He decided to sheet the fuselage to give it more strength. He was covering the wing and fuselage at the build session. There was a lot of discussion about the directional stability of the design. Noah built a small balsa model to test the balance and control surface area requirements of the design.

Tom DeWulf brought by his new Tower Hobbies 60-ARF. He installed all the servos in the nose and tail so that the entire fuselage bay under the wing is available for carrying his electronics projects.

He had three of the circuits he is working on with him at the build session. The three circuits are—



Noah Misner sheeted the fuselage of his new experimental for more strength.



Tom Dewulf's Tower Hobbies 60-sized ARF Trainer modified to carry is electronics projects in the compartment under the wing.

from left to right in the photos:

1. A 56302 evaluation card to be used as an airborne processor to control the plane and

process the data collected by the sensors on board.

2. A small card to buffer the outputs of pressure sensors used to measured air speed and altitude.
3. An inertial measurement system including three solid state gyros and three accelerometers.

I hope Tom will find time to write about his plans for using these circuits in his model. Maybe with a little arm twisting we can get him to write an article for next month's FlightLine. I'm sure we'd all be interested in finding out what his ideas are.

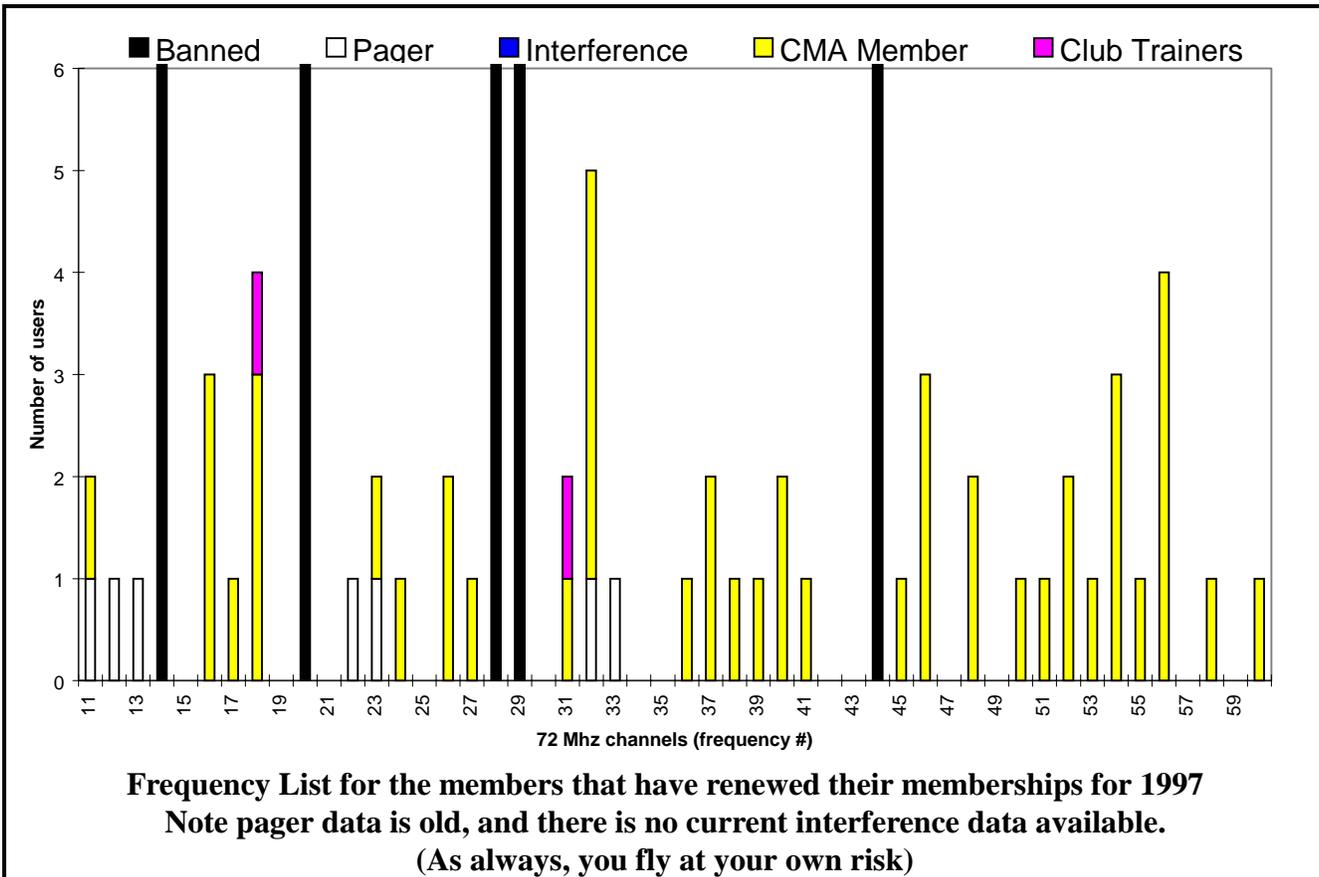
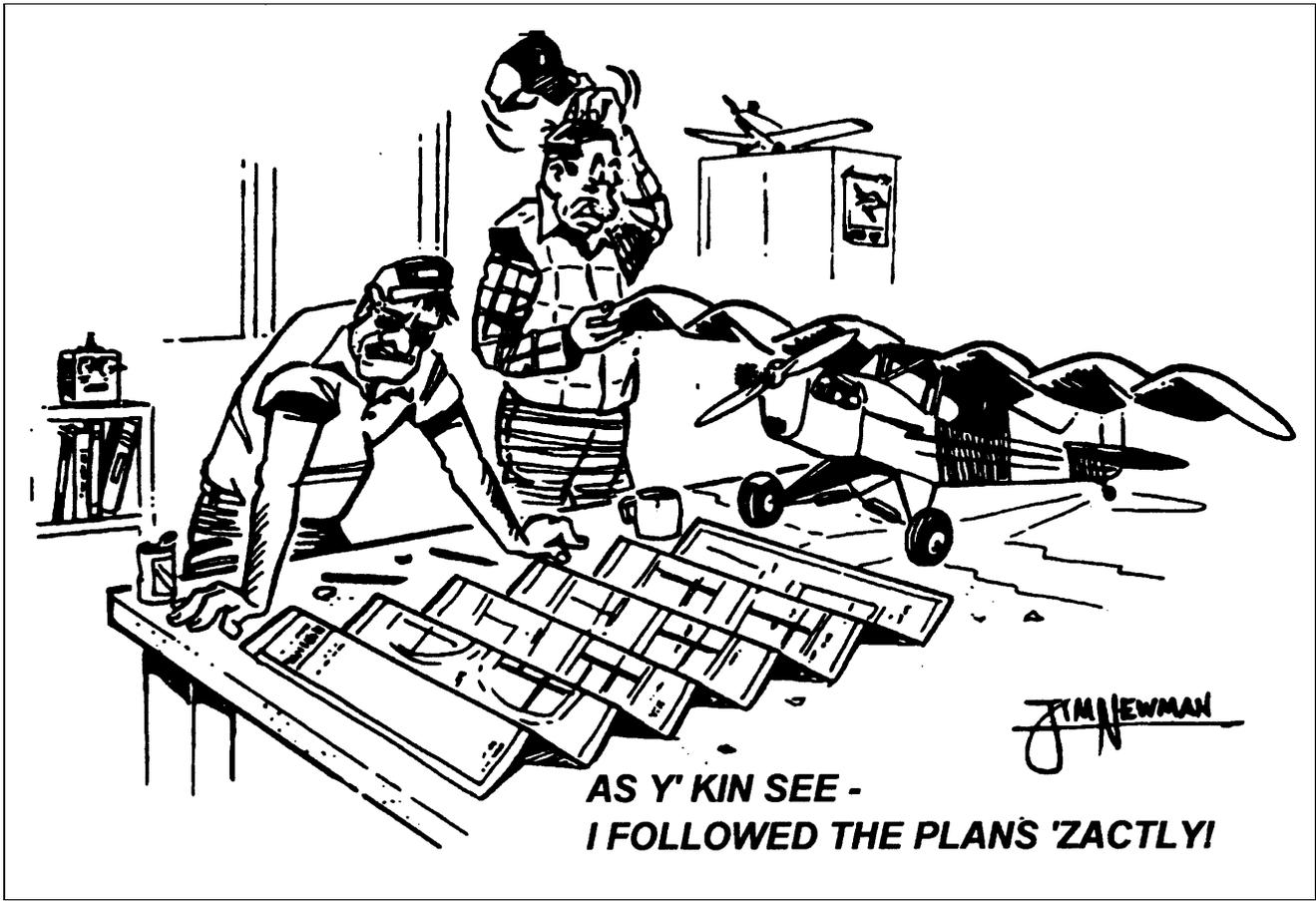
Next month (March) is the last build session for this winter. I hope we can get a good turnout. It's fun to see what people are working on, and it's a great source of ideas. See you there.

James H. Doty, FlightLine Editor ✈

The Following two cartoons were reprinted from the National Newsletter



"See, I told you he can fly the crates th





## Heads Up, CMA Activities

Thursday, March 6, 5:00 pm—Club Meeting

Thursday, March 13, 5:00 pm—Build Session #5

Friday, March 21, 5 pm—FlightLine Deadline

Thursday, April 3, 5:00 pm—Club Meeting

Monday, April 7, 5:00 pm— The First Annual Brown-Bag Beauty Contest and Model Display

Tuesday, April 8, 6:00 pm— First day at the field break-in session (Thursday April 10<sup>th</sup> rain day)

Friday, April 18, 5 pm—FlightLine Deadline

**Note:** Meetings and build sessions will be held in the 35th street N.E. Facility (main plant) Cafeteria building 140.

## CMA Activities

On Thursday March 6<sup>th</sup>

Rich Dean will present:

### *Two-Cycle Glow Model Engines*

at the CMA monthly meeting

Topics covered will be:

- How two-strokes work
- Breaking in ringed vs. ABC engines
- How to set up carburetors.

On Monday April 7<sup>th</sup>

### *The First Annual Brown-Bag Beauty Contest and Model Display*

in the 106 Cafeteria

(Collins road Campus)

Contact: Jim Doty x5-2931,  
Brown-Bag Coordinator for Details.

On Tuesday April 8<sup>th</sup>

### *The First day at the field break-in and training session*

At the CMA flying field

(Sherman Air Field on Center Point Rd)

Rain date: Thursday April 10<sup>th</sup>

Contact: Rich Dean x5-8002,  
Flight Training Coordinator for Details.

### 1997 CMA Staff

**President:** John Michael..... x5-2914

**Vice President:** Bryan Wesner ... x5-3082

**Secretary/Treasurer:** David Gillespie.. x5-8512

**FlightLine Editor:** Jim Doty ..... x5-2931

**Web Page Editor:** Tom DeWulf ..... x5-4015

#### **Flight Instructors:**

Rich Dean  
Dave Decker  
Tom DeWulf  
Dave Dillman  
Mark Woytassek

#### **Flight Instructors in training:**

Irv Anderson

#### **Test Pilots for first flights of new airplanes:**

Rich Dean  
Mark Woytassek

### Send your input for FlightLine to:

James H. Doty

MS 124-300

x5-2931

jhdoty@collins.rockwell.com



### Send your input for the CMA Web Page to:

Tom DeWulf

x5-4015

tvdewulf@cacd.rockwell.com

### For membership information:

Contact: David Gillespie

CMA Secretary/Treasurer

MS 153-163

x5-8512

djgilles@collins.rockwell.com

# 1997 CMA Membership

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<u>M/S</u>	<u>NAME</u>	<u>M/S</u>	<u>NAME</u>
108-103.....	Irvin Anderson	105-167 .....	Noah Misner
108-166.....	Geoffrey Barrance	108-136.....	Patrick Neu
124-111 .....	Alan Bechtold	108-136.....	David Neu
124-111 .....	Bob Buschette	137-136.....	Marion Payne
137-148.....	Brian Collins	108-175 .....	Elio Piccmenti
124-111 .....	Dan Cooley	164-100.....	Crist Rigotti
124-115.....	Rich Dean	124-123 .....	Wayne Savold
153-264.....	Tom DeWulf	108-136 .....	Duane Smith
124-300.....	James Doty	108-136.....	Brian Smith
106-183.....	Mike Eastman	105-152.....	Basil Tilley
153-264.....	Doug Emerson	107-140 .....	Floyd Van Auken
153-163.....	David Gillespie	107-140.....	Floyd Van Auken (for Ehren)
153-163.....	David Gillespie (for James)	139-142 .....	Charles Ward
153-163.....	David Gillespie (for Amy)	153-264 .....	Bryan Wesner
108-166.....	David Mason	153-264.....	Bryan Wesner (for Michael)
108-166.....	John Michael	107-110 .....	Victor Wolfe
108-166.....	John Michael (for Kevin)	124-115 .....	Mark Woytassek

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Mike Crilley  
2090 F Ave. NW  
Cedar Rapids, IA 52405

John Crilley  
2540 Second Ave  
Marion, IA 52302

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Academy of Model Aeronautics  
5151 E. Memorial Drive  
Muncie, IN 47302

R/C Adventures  
PO Box 284  
Marion, IA 52302

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**Is someone you know missing from this list?**  
**Give them a call and ask them to *Come Fly with us in CMA!***