

FlightLine

A Monthly Publication of Collins Model Aviators February 1996

Reminder: February's CMA meeting is Thursday the 1st.



February's Featured Model — Wayne Savold's Great Planes Electric Cub

Electri Cub Statistics:

- Wing span - 59 in.
- Wing area - 480 in.²
- Weight - 51 oz. (w/ 7 cell battery pack)
- Wing loading - 15.3 oz./ ft.²
- Motor - Goldfire 550
- Prop - 8-4
- Thrust - 17 oz. at 10,000 rpm
(measured with a digital fish scale)
- Power - 20 Amps at 6.2 Volts across motor (125 Watts)
- Battery pack - 7 cell, 1.4 Ah SCR batteries
- Charger - Pro-Tech Autopeak charger
- Radio pack - 4 cell, 250 mAh
- Servos - Miniature
- Radio - 4 channel Futaba FM
- Speed Control - SC-4
(drops about .29 volts at 20 Amps)

February's Featured Model

Great Planes Electri Cub

by Wayne Savold

The Electri Cub is a Great Planes kit that I decided to try after my first disastrous attempt at getting into electric's. My first plane was a Partenavia P.68 twin using motors of unknown heritage. It lacked power and crashed immediately after hand launch. With this experience under my belt, I decided to buy a plane and motor combination with proven performance and measure it's characteristics to apply to future projects.

The Electri Cub flies well (for about 5 minutes) and seems to have "enough" power. I did have a major rebuild after spinning out of a climbing turn after take off. The electrics are not as powerful as their gas counterparts so you need to be careful not to push them too hard.

If you are interested in getting into electrics, get a copy of the Hobby Lobby catalog. It has a lot of products, motor specs., and hints. For instance, advise on choosing an electric motor indicates that a thrust-to-weight ratio of 1/3 (which is what mine has) should give " short take offs from pavement,

acceptable takeoffs from short grass, and a 20 degree climb from hand launch." This is about the way mine performs.

Now that I know what it takes for a successful electric, I'm ready to start on my next project -- I've got to have a twin!

Wayne Savold →

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🖥️ CMA goes on-line!

by Tom DeWulf

Early in January CACD responded to a request by the Collins Model Aviators (and several other clubs) to use company resources to establish pages on the World Wide Web.

Rockwell granted these requests and setup up a "Rockwell Clubs" link on the CACD home page. CMA now has its very own WWW home page. The URL shall be listed in the footer of this (and future) issues of *FlightLine*. Some of the things you can expect to find in the CMA web page are:

- An archive of *FlightLine* news letters
- A schedule of CMA and R/C events
- Instructions on how to join CMA
- Names and photo's of club officers
- A map to CMA's flying field
- Links to other R/C related WWW pages
- much, much more.

The CMA's page is currently under construction. As such, it is being updated almost daily. I currently maintain CMA's home page and request club members submit electronic material for publication. All submissions should be sent to My email address: tvdewulf@cacd.rockwell.com

Currently CMA's home page can only be viewed from within Rockwell's computer network. In the future you can expect this page to move to a server viewable from the internet. All Rockwell employees are reminded that company policy restricts the use computer resources for non-business related purposes to before 7:30 AM, after 4:30 PM, or from noon to 1 PM.

Tom DeWulf, CMA Web Page Editor ➔

New Officers Preside over first CMA meeting of '96



The new CMA Officers held the first CMA meeting of 1996. Left to right: Secretary/Treasurer Duane Smith, Vice President Tom DeWulf, and President John Michael

Minutes of December's CMA Meeting

The January 4, 1996 meeting of the CMA was opened by president: John Michael at 15:55.

An overview of the December 7 meeting minutes were read.

No treasures report was available.

Old Business:

Rich Dean reported that Mark Woytassek was unable to make contact with the owner of the Eagle 2 airplane.

It was reported that the old, 25 size, 3 channel trainer was sold at RC Adventures. The club will receive \$45.00.

Tom DeWulf had the new trainer aircraft on display. Approximate cost \$ 86.00.

New Business:

Rich Dean suggested the club pay our 1996 rent for flying field in January. Duane Smith and Rich Dean took responsibility for getting the rent.

Rockwell is letting CMA setup a home page on the World Wide Web. Tom DeWulf is working on a CMA web site. Send electronic files about R.C. flying to Tom DeWulf.

Meeting Adjourned.

Duane Smith CMA Secretary ➔

Thanks from the Editor

Two issues down, and so far so good. I'd like to thank all the contributors to the January and February *FlightLine* issues. Response from the members has been great. Nearly everyone I've asked has responded with an article.

I hope to include articles from even more members in future issues.

Remember you don't need to be an expert flyer to write an article. Most of us are still fairly novice flyers and will really appreciate hearing about the building and flying experiences of others new to the sport.

A good mix of experienced and novice flyers is what makes a club, and a newsletter, the most interesting.

Jim Doty, *FlightLine* Editor ➔

* Winter Projects

by: Rich Dean

Winter is half over, the days are getting longer, and it won't be long till Spring is here. That is what I keep telling myself to keep working on these winter projects, so I am not caught without a plane ready when the weather turns nice again.



Two more of the electrics brought to January's CMA meeting: Mike Reisdorph's Goldberg Mirage 550 (left) and Rich Dean's Ace Puddle Master (right)

By the look of things there is a lot of activity in workshops around the area. Following the January meeting was a display of electric powered planes. Four showed up and two had been flown. Wayne Savold's Great Planes Electri Cub and Mike Reisdorph's Goldberg Mirage 550 were the ones that had flown. Charles Ward had an electric powered ducted fan that he was scratch building, sorry I can't remember the name, and I had an Ace PuddleMaster seaplane still under construction. There was talk about motors and how to break them in, battery packs, speed controllers and chargers. It seems to be quite a different world with new challenges and we will enjoy seeing these planes at the field.

The January build session was also well attended. Duane Smith and I were continuing fuselage construction on our Sea Cats. John Michael was figuring out how to finish a plane that was given to him without any plans. It is framed and should not be too bad. Basil Tilley was showing good progress on the front end of his 1/3 scale Laser. It will have a Zenoah G-63 3.7 cubic inch engine for power, what a brute! Can't wait to see that one in the air.

Bryan and Michael Wesner showed up without a plane, they had not received a Northeast Aerodynamics Sport Air 40 that they had ordered. They said it should be at the February build session. With three build sessions down, and three to go, I hope everybody's Winter projects are half done.

Rich Dean, CMA Flight Instructor ➔

CMA Gets New Club Trainer

Club trainer survives maiden voyage

by: Tom DeWulf

I managed to finish the final construction on CMA's new club trainer. It's a Sturdy Birdy II, and was on display at January's club meeting (see photo). High temperatures (mid 50's) on Saturday, Jan 14th, allowed me to make a trip out to Beverly Gardens for a test flight. I was quite pleased with the result.



New Club Trainer — Tom DeWulf brought the new Sturdy Birdy II club trainer to the January meeting. Construction is nearly complete. The plane uses the club's .25 engine and has a durable plastic and aluminum fuselage.

Specs. on Sturdy Birdy:

Wing span: 53"

Wing area: 503 sq in

Engine: 0.25 OS FP

Construction:

Wings: Foam reinforced with strapping tape, and covered in monokote

Airframe: Plastic/aluminum

Stabilizers: (horizontal and vertical) solid balsa (monokoted)

Wing: 11° of dihedral, 3° of washout

The OS 25 engine supplied ample power (for a trainer) and takeoffs were quite easy from Beverly Garden's asphalt runway. Almost no trim adjustments were required (a few clicks of elevator trim and a few clicks of aileron). I was able to sustain a 30 degree angle of climb with losing air-speed. The plane was slightly nose heavy, which lead to pleasing stall characteristics. I set control surface throw to the amount specified in the plans but these proved to be **way** to hot. I switched immediately to low-rates and flew the rest of the day that way. I will need to readjust the mechanical linkage to give about half as much throw on the ailerons and elevator.

As expected, the plane flies fairly fast for a trainer but is more maneuverable. Inverted flight wasn't hard. Rolls were fairly snappy and loops fairly tight (even on low-rates). I

spent most of the day on full throttle, and maintaining altitude required at least 1/3 throttle. The OS 25 ran like a champ. It never quit in flight so I haven't tried a dead stick landing yet.

Landings would certainly be a problem for a beginner. Cutting the throttle to idle brings the plane down a glide slope of about 10 degrees. Airspeed **must** be maintained or the plane drops straight down like a brick with air-brakes. I believe most experienced pilots would have no problem bringing the plane down at a quarter throttle, and feathering the landing right at the end. I made several landings this way without incident; however I did use the entire length of Beverly Gardens landing strip to do it. While high-speed landings may prove difficult for a beginner, the plane should be tough enough to handle some "less than gentle" touch downs.

Overall the maiden voyage went quite well. The plane performed somewhat better than I expected, and dozens of people at General Mills sighed in relief as I managed to avoid crashing on their heads. Needless to say I had the airfield all to myself (Although, I really thought I might see one or two other people out there). Personally, I always like to get out at least once in January and fly. It keeps the blood flowing through those long winter build sessions, if you know what I mean. Until next time, I'll see you in the sky.

Tom DeWulf, CMA Vice President →

from the earliest days of free-flight to the newest museum-scale RC planes.



The front window of the museum's "antique" hobby shop displays fuel, radios, and models. Hanging models were built in the 1950's

The centerpiece of the displays is an "Antique Hobby Shop" replica. The Hobby shop is a 18 by 22 foot room packed with models and hobby supplies for the 1950's and earlier. The fictional hobby shop "Middle-Town Models" is set in the 1950's and is "a tribute to the thousands of family-owned hobby shops that once proliferated across 'Middle-Town' America".



National Model Aviation Museum

We're on the road to Muncie

by Jim Doty

During the Christmas break I visited my parents in northern Indiana. While I was in the state I thought I'd take a road trip down to the Academy of Model Aeronautics (AMA) National Headquarters in Muncie.

Along with the AMA offices, the Frank V. Ehling Facility in Muncie also houses the National Model Aviation Museum. This museum preserves the history of model aviation with a collection of thousands of models and modeling related objects. Over 9200 of these objects are displayed in a 4000 square foot area.

The display was designed by the former Museum Curator Mike Fulmer. Mike has since left to make movies full time (he is the head model maker at Industrial Light and Magic), but he leaves a legacy of beautiful displays of model aircraft



The hobby shop also features model boats. My dad still has his cabin cruiser like the one in the window (unfortunately it's not in nearly as good condition)

The remainder of the 4000 square feet is occupied by glass cases stuffed full of models, engines, radios, and other modeling memorabilia. Throughout the museum the ceiling is filled with hanging hanging models of all types, size, and vintage.



Inside the shop is crammed full of hundreds of models, model parts and supplies from the 50's and earlier

In addition to the displays there are two additional rooms. One is a library of modeling magazines dating from the earliest days of modeling all the way to the present. This library is a great resource for writers or anyone else interested in the history of aircraft modeling. Next to the library, is a room with a continuous run video on aircraft modeling (mostly modern RC and control line)

I was very fascinated by all the aircraft and memorabilia, and I learned a lot about early free-flight aircraft from the displays. It was also gratifying to see so many beautiful aircraft (some made of nothing more than tissue paper and balsa) preserved for future generations.

If I had any complaint at all, it was that the models are so tightly packed that there is no room for any written description of who built the model, when they were built, and why they are important. Many of the models are unidentified.

While I was there I meet the Museum's new director Gary Prater. We talked at length, and he showed me the back rooms were they store the new objects donated to the museum. He told me that when models come in, they evaluate them for craftsmanship, historical significance to modeling, uniqueness, and what they can teach about aviation in general. Models and objects which stand out significantly in one or more of these areas are added to the display.

Gary told me that he is currently working through the accreditation procedure of the American Association of Museums to be officially recognized as the National Model Aviation Museum. He expects the accreditation soon.

Gary is also working on plans for a future expansion of the display area. He would like to see a three-fold expansion in the number of square feet. This would allow room for more coherent displays by topic as well as room to add descriptions to better tell the history of the models.

But Gary isn't focused entirely on the display aspects of the museum. Gary told me "the museum is much more than a collection of model airplanes, it is a *learning organization*, committed to continuously cultivating ideas, attitudes, and abilities. As a learning organization, the museum focuses on public service, education, stewardship, and scholarship. It is also an inclusive organization, dedicated to serving the field of aviation to be sure, but existing in the first place for everyone's benefit."

Gary hopes to strengthen the museum as an learning organization. He is currently working with his staff, and others, to better define the vision of what the museum should be. He asks "What do we offer that invites people to learn, contemplate, relax, enjoy, question, and challenge?"

I think that the museum has a very promising future, and that it is an organization that we, as modelers, should help to support. Gary said they are looking for the following items:

- Old free-flight gassies
- Early control line planes like the Cox TD1, 2, or 3
- 1950's vintage tissue paper, rubber, dope, and balsa

If you know anyone with these please encourage them to consider a donation to the museum.

Of course one thing all such organizations can use is cash.

**Donation from a member of
Collins Model Aviators**

Donation:

- Patron.....\$25
- Supporting.....\$100
- Sustaining\$500
- Life.....\$1000
- Other\$_____

Name _____

AMA No. _____

Address _____

City, State, Zip _____

Mail to:

Academy of Model Aeronautics
5151 E. Memorial Drive
Muncie, IN 47302
Attn.: Museum Patron Program

If you want to make a donation of \$25 or more send the enclosed form to the address given, and you'll receive the Cloud 9 museum news letter, a patch, and a bumper sticker.

The enclosed photos were reprinted from Cloud 9 newsletter by permission of The National Model Aviation Museum.

If \$25 is too rich for your blood I'll be collecting smaller donations to give on behalf of the CMA members.

I'll try to keep track of new developments at the museum and publish things of interest in FlightLine. Also the museum is currently putting in a web site system. As soon as they go on-line I'll give the address to Tom so he can put it on the CMA home page.

Keep watching FlightLine, and the CMA Web page, for news and further information about the museum and other AMA activities.

Jim Doty, FlightLine Editor →

From the President

I was able to attend the January build session, maybe the only build session I will be able to attend. It was fun seeing the progress being made on the different planes being built, and exchanging ideas on the various problems that confront a builder during the build process. There are at least two Sea-Cats in various stages of completion, with the hopes of having them ready for flight (float) this spring, and a number of other planes that it will be fun to see flying when they are complete. I took along a plane I have been working on, and received lots of good ideas on its construction. Nothing like experience in knowing the different ways a problem can be solved.

If you have never been to a build session, I encourage you to come sometime and see what goes on. Your experience with building may be just what someone needs to solve a sticky problem they are experiencing, and you can get to know others in the club a little better.

The next build session is in February. Hope to see you there.

Don't forget the February club meeting. We're still talking about some changes to the by-laws, and I hope to have a few door prizes available geared towards the model builder.

See you at the February meeting.

John Michael, CMA President →



Heads Up, CMA Activities

Thursday, February 1, 4:45 pm—Club Meeting

Thursday, February 8, 6-9 pm—Build Session

Friday, February 23, 5 pm—FlightLine Deadline

Thursday, March 7, 4:45 pm—Club Meeting

Thursday, March 14, 6-9 pm—Build Session

Friday, March 22, 5 pm—FlightLine Deadline

Note: All meetings and build sessions are held in the 35th street N.E. Facility (main plant) Cafeteria building 140, unless otherwise noted

1996 CMA Staff

President:	John Michael
Vice President:	Tom DeWulf
Secretary/Treasurer:	Duane Smith
FlightLine Editor:	Jim Doty
Web Page Editor:	Tom DeWulf

Flight Instructors:
Rich Dean
Dave Decker
Dave Dillman
Mark Woytassek

Flight Instructors in training:
Irv Anderson
Tom DeWulf

Test Pilots for first flights of new airplanes:
Rich Dean
Mark Woytassek

Local News and Events

Eastern Iowa Regional R/C Swap Meet

Sunday, February 25, 10 am - 3 pm

Palo Community Center

1006 1st Street, Palo, Iowa

General Admission \$2.00

Sponsored by Cedar Rapids Skyhawks

Send your input for FlightLine to:

James H. Doty

MS 124-300

x2931

jhdoty@crems.rockwell.com



Send your input for the CMA Web Page to:

Tom DeWulf

tvdewulf@cacd.rockwell.com

1996 CMA Membership

<u>M/S</u>	<u>NAME</u>	<u>M/S</u>	<u>NAME</u>
108-103.....	Irvin Anderson	120-105	Elio Picchetti
108-166.....	Geoffrey Barrance	108-136	Gary Prior
124-114.....	Ross Beins	124-123	Wayne Savold
124-111.....	Bob Buschette	106-165	Gerald Showman
124-115.....	Raleigh Dean	108-136	Duane Smith
120-131.....	David Decker	108-136	Brian Smith
153-120.....	Timothy DeWit	105-152	Basil Tilley
153-160.....	Tom DeWulf	124-111	Robert Tribuno
153-163.....	David Dillman	124-111	Robert Tribuno (for Peter Tribuno)
124-300.....	James Doty	124-111	Robert Tribuno (for Michael Tribuno)
120-131.....	Ron Menti	120-131	Ron Menti (for Tony Veit)
108-166.....	John Michael	181-100	Charles Ward
108-166.....	John Michael (for Kevin Michael)	153-264	Bryan Wesner
153-163.....	Darrin Nebraska	107-110	Victor Wolfe
108-136.....	Patrick Neu	124-115	Mark Woytassek
108-136.....	David Neu		
137-136.....	Marion Payne		

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