The Carrier Wave

PHANTOM FLYERS R/C CLUB

AMA #393 SAINT CHARLES, MO

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Phantom Flyers R/C Club Newsletter

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To join or renew membership go to phantomflyersrc.com/membership/

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Club Events

Club Meeting: The next club meeting is scheduled for Monday November 16, 7:00pm via zoom.
Christmas Party Dec 5, 2026.

From the Desk of the Prez

Fellow Club Members,

It is that time of year when we take nominations for Club Officers. If you wish to nominate someone or would like to become a Club Officer please respond to this email or send an email me at president@phantomflyersrc.com.

The positions open are:
President
Vice president
Treasurer
Secretary
Board of Directors X2

We will vote for Officers at the November meeting.

I am very happy to report that we have taken in enough funds for the runway repair that no further donations are required at this time. The club is in the process of applying for an AMA grant which could pay for up to a quarter of the cost of this field maintenance item. If we are approved, we will be very close to paying off the loan.

I want to thank all of the club members who donated and supported the club through this effort! The sale of donated RC equipment has also helped us out. Thanks to all the members who bought this equipment and special thanks to Larry Andersen and Jan Jansen for their help in selling it! Finally a big thanks to the club member who loaned us the money. The runway looks much better is a lot smoother and should last longer as a result.

Thanks,

Jim West

Phantom Flyers RC Club Meeting

Phantom Flyers RC Club Meeting Minutes October 19, 2026

Attendees: The meeting was called to order by President, Jim West at 11:35 AM at the field. Members present were: Larry Anderson, Jack Buydos, Kevin Cox, Jose Espinoza, Don Grzina, Bill McMenamy, Jim Rusk, Wes Wallin, Jim West and Ed White.

Tech Session: No Tech Session.

Secretary's Report: The September meeting minutes were published in the Carrier Wave but were subsequently revised. The revised minutes were accepted by club vote. We currently have **41 members**. The Secretary received an offer from an individual in Tennessee who is offering to make club membership cards. We haven't made cards for several years. Jim West was probably the last club Secretary to make membership cards. He related that making cards is both time consuming and requires supplies. The club had a laminator which died and was not replaced. Also, distribution of the cards was sometimes a problem. Also, making cards is not something that can be done once in bulk. Every time a member renews membership or a new member joins, a new card needs to be made and delivered to the member. The club members present did not feel strongly that cards are necessary and no motion was put forward to return to providing membership cards.

It is the season to start renewing memberships for 2027. Please use the online form! **But also send an email to secretary@phantomflyersrc.com to tell me you did so.** A glitch in the system caused me to stop being notified when people submitted forms.

Treasurer's Report: Large checks were written for the field lease (due in Sept) and for the runway repairs. Smaller checks were written for mower repair and operating expenses. These are detailed in the Field Managers report below.

Membership Team Report: Jan was not in attendance so there was no additional report. We've not had a lot of new inputs and so Jim plans to ask Jan for a final report.

Safety Report: We completed our annual review of the AMA Safety Code and primarily focused on safe distances from the flight line for helpers and other club members who are not flying. Other clubs are reported to have had issues with gas big birds hovering at unsafe distances from observers. We have several pilots who fly large gas planes but all are extremely conscientious about flying at safe distances from themselves and other people. We did have an incident with a guest flyer using a repaired propellor. This is a completely unacceptable practice in violation of AMA safety rules

Field Managers Report: Expenses include $5500 for the lease for the coming year; $6750 for the runway repair; $190.80 for replacement/repair of the Z-turn mower PTO; $100 for latrine service for the Open House; $22.55 for paint to repaint the runway stripes. Sub-total

= $312.35 not including the lease or runway repair. As of the meeting the total donations to runway repair fund are $4676.02. We still anticipate requesting flying site improvement funds from AMA but will not know how much they will be until February or March at the earliest. The plan is to stop accepting runway fund donations at this time until we find out how much we will get from AMA. Once we know that we will reopen requests for donations as needed to reach the total $6750.

Activities Report: The Pattern Contest took place on Sept 26 with Jim West CD'ing. There were not many contestants, primarily due to the Pattern Gods being displeased with many of our club members. There was 1 flyer in Sportsman (our own Kevin Cox flying in his first pattern contest), 2 flyers in Advanced (Bill Ahrens and one from Wisconsin) and three in Masters (Jan, Mark W from Iowa and Stan M from Midwest Air Wing)

Jan Jansen will CD'd the Fun Fly on Oct 17. Some carnage but could have been worse. A piece of advice, if you are ever asked to act as a pylon for the taxi event, respectfully decline the honor.

The last event of the year is the Christmas Party. Rumors are at Pio's in St Charles on December 5.

GSLMA Report: Nothing new to report.

Old Business: Jim Alberico has volunteered to take a shot at revising our website. Wes Wallin also volunteered to help then promptly went on a 3-week vacation. Clever strategy.

New Business: We will need to vote on elected club officers for 2027. These are President Vice President, Secretary, Treasurer and two members of the Board of Directors. Any club member can self-nominate for any of these positions. Nominations will remain open until they are voted closed at the November meeting.

Meeting adjourned at 12:52 PM.

Ed White, Secretary

From the Desk of Harold Weaver

I found a copy of the 8 page April 1959 McDonnell Airscoop in my archives that had a photo on the 8th page which I have attached of the RC branch of the McDonnell model airplane club members and a short paragraph saying that the model airplane club had just a acquired a place to fly at Kratz field located next to the Rock road where I and another U of I graduate Elmer Kolkmier from St. Charles also working at McDonnell bought a 1948 Luscombe 8A and moved it to Smart Field.

Photos of the Month

Campus Lights and Fountain Sprites



FOUNTAIN SPRAYS...Point, Reflection and Lights...Are Attractive Night Scene

Model Builders

MEMBERS of the Radio Control section of the McDonnell Model Airplane Club show off some of the models they will enter in the annual St. Louis Institute of Aeronautical Science Model Airplane Meet to be held in early June at Smartt Field. Built by club members, the large and more complicated "R.C." models are remotely controlled by radio signals.







Spring

LOVELY Carole Ann Fischer (right), receptionist in the Engineering Campus Military Visitors office, helps usher in the spring housekeeping program at McDonnell. Photo on left shows speakers at the 1958 Annual Housekeeping Meeting. They are, from left: R. D. Singleton, Senior Facilities Engineer; Walter Watson, Housekeeping Coordinator; Adm. Lloyd Harrison, USN (Ret.), Vice President, Procurement and Quality Control; Al Hartwig, Chief Industrial Engineer; T. C. Linck, Industrial Hygienist and Clay Bostin, Chief Facilities Engineer.



Model Builders

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Spring

LOVELY Carole Ann

How to Attract More People to Radio-Controlled Aircraft Flying

I think the best way to attract people to RC aviation is to let them experience the excitement of flying an airplane themselves, without making them feel that they have to buy a lot of equipment or learn a complicated set of skills first.

RC flying has a lot to offer: the thrill of piloting an aircraft, the satisfaction of mastering a skill, the engineering and aerodynamics, and the camaraderie of a flying club. The challenge is that

newcomers often see the expense, the technical terminology, and the difficulty of learning to fly before they see the fun.

Here are the approaches I believe would work best.

1. Let people fly on their first visit





The most effective recruiting tool is a hands-on flying experience.

Instead of simply inviting someone to watch a club fly, offer a supervised introductory flight. An experienced pilot can use a buddy-box system, which connects two transmitters and allows the instructor to take control instantly.

A good introductory session might include:

- A brief explanation of how an RC airplane flies.

- Watching an experienced pilot take off and fly a circuit.
- Letting the newcomer control the airplane at a safe altitude.
- Letting them experience a gentle turn and perhaps a climb or descent.
- Explaining how they can learn to fly independently.

The goal isn't to teach someone to fly in ten minutes. It's to let them experience the feeling of controlling an airplane and leave thinking, "I'd like to do that again!"

2. Make the first step inexpensive and simple

One of the biggest barriers to entry is the belief that RC flying requires hundreds or thousands of dollars in equipment.

Offer a clear, affordable path into the hobby. For example:

- Start with a durable foam trainer rather than an expensive scale model.
- Provide access to club training equipment.
- Let prospective members try the hobby before purchasing a transmitter or airplane.
- Explain the true costs of getting started, including batteries, a charger, and other necessary equipment.
- Consider a club-owned trainer that beginners can use during lessons.

A newcomer shouldn't need to understand battery chemistry, radio protocols, servos, or motor selection before experiencing the hobby.

Sell the experience first; explain the equipment later.

3. Put on public flying events, not just club meetings







A flying field can be intimidating to a newcomer who doesn't know anyone. A public open house makes the hobby more approachable.

I would organize events with a variety of aircraft and demonstrations:

- Warbirds: P-51 Mustangs, Corsairs, and other recognizable aircraft.
- Aerobatics: Loops, rolls, inverted flight, and precision maneuvers.
- Scale aircraft: Models that look and sound like full-size airplanes.
- Trainers: Demonstrations of how beginners learn to fly.
- Helicopters and multirotors: To show the different ways people enjoy RC aviation.

Have pilots explain what they're flying, how much it costs, and how they got started. Keep the atmosphere welcoming rather than making the event feel like an exclusive gathering for experienced modelers.

4. Recruit young people through schools and youth organizations







Young people are a natural audience because RC aviation combines science, technology, and hands-on activity.

Potential partners include:

- Middle and high school STEM programs.
- School science and engineering clubs.
- Scouts and other youth organizations.
- Civil Air Patrol units.
- Aviation museums and local airport events.

A particularly effective program would let students build a simple foam airplane, learn why it flies, and then fly it with an instructor.

That approach introduces several concepts at once: lift, drag, thrust, stability, control surfaces, and the relationship between design and performance.

It can also appeal to students who enjoy video games, engineering, model building, or aviation but haven't yet considered RC flying.

For youth programs, appropriate supervision, field safety, and any applicable FAA requirements need to be addressed.

5. Make the hobby welcoming to adults, too

Not every prospective pilot is a youngster. Adults may have dreamed of flying since childhood but never pursued it. Others may be retired, enjoy woodworking, have an interest in aviation, or simply want an outdoor activity that challenges them.

Clubs can make it easier for these people by offering:

- A designated instructor who enjoys teaching.
- Scheduled beginner sessions.
- A loaner airplane and transmitter.
- Patient instruction without pressure to buy equipment.
- A clear progression from first flight to solo flying.

One important point: Don't assume that everyone wants to build an airplane from scratch. Some people love construction; others want to fly. Make room for both.

6. Use video and social media to show the excitement

Short videos are an excellent way to demonstrate what the hobby offers.

Rather than posting only pictures of finished models, show the airplane in flight. Include onboard footage, landings, aerobatics, and short clips of beginners experiencing their first flight.

A useful video might be titled:

- "Your First RC Airplane Flight"
- "How Much Does It Cost to Start Flying RC?"
- "Can You Learn to Fly an RC Airplane in One Afternoon?"
- "Why Does This Airplane Stay in the Air?"
- "Five RC Airplanes That Look Like the Real Thing"

Include the club's location, meeting times, and an invitation to visit or try flying. The call to action matters: a great video is less useful if viewers don't know what to do next.

7. Create a simple path from spectator to pilot

Here is how I would organize a club's recruitment program.

Step 1 — Watch

Invite people to a public flying day. Let them see different airplanes and talk to pilots.

Step 2 — Try

Offer a supervised buddy-box flight using club equipment.

Step 3 — Learn

Provide a few scheduled lessons with a consistent instructor and a club trainer.

Step 4 — Join and fly

Help the newcomer choose appropriate equipment, learn field procedures, and become part of the flying community.

The key is to avoid losing people between steps. Someone who enjoys a trial flight should leave with a specific invitation to return for a lesson, not merely a business card or a suggestion to come back sometime.

8. What to prioritize

If I were helping an RC flying club attract new members, I would concentrate on three things first:

Priority	Activity	Why it matters
1	Free introductory buddy-box flights	Converts curiosity into personal experience
2	A reliable beginner training program	Turns first-time visitors into independent pilots
3	Public demonstrations and community outreach	Introduces the hobby to people who haven't considered it

I would also track how many visitors attend, how many try flying, how many return, and how many eventually become members. That would help the club identify which activities actually work.

Bottom line

The hobby shouldn't be presented primarily as a collection of airplanes, radios, batteries, and technical challenges. It should be presented as the opportunity to take the controls of an aircraft, learn a remarkable skill, and join a community of people who share that interest.

The equipment is the means. The experience of flying is the attraction.

One question that would help me tailor this advice: Are you trying to attract new members to an existing RC flying club, or are you looking for ways to get more people interested in the hobby generally? The best recruitment strategy differs a little depending on which goal you're pursuing

The above was written by AI which can make mistakes.

Dear Jake
(what are the aerodynamic properties of a cowpie?)

Dear Jake,

Growing up on a farm me and my friends would on occasion do battle with whatever objects were readily available, objects such as, dirt clods, rotten guinea eggs, green black walnuts, and the ubiquitous cow pie. Whereas the green black walnuts would sting and leave a mark, the cow pie was the much prized object for its leaving a certain aromatic fragrance upon the victim. Not any cow pie would do. It had to have an outer crust strong enough to hold together during flight yet would disintegrate on impact, and a creamy soft center that would splatter the target with its payload. It got so many of us could identify the perfect pie by sight, while the pinch test would mark one as an newbe. Many a pie would sail straight as an arrow to its target while others would travel like a Phil Niekro knuckler. Which has often made me wonder, what are the aerodynamic properties of a cow pie?

Down on the Farm,

Donnie

Dear Donnie,

It just so happens that was the exact subject of my doctoral thesis while attending Politelycinical University in my youth. Naturally I got an A. Here for your perusal are excerpts from that paper.

The Aerodynamic Properties of a Cow Pie

A Scientific Investigation into One of Nature's Most Underrated Flying Objects

Abstract

The aerodynamic properties of a cow pie represent a fascinating intersection of fluid dynamics, biological engineering, and agricultural humor. Although commonly encountered in pastures rather than wind tunnels, the humble cow pie possesses several characteristics that influence its behavior when subjected to wind, gravity, and, under certain unfortunate circumstances, human propulsion. This article examines the forces governing its movement through the air, the influence of shape and moisture content, and the factors determining whether a cow pie will glide gracefully, tumble erratically, or achieve an abrupt and messy landing.

1. Introduction

For centuries, scientists have devoted considerable attention to the flight characteristics of birds, aircraft, and golf balls. Meanwhile, a potentially significant contributor to the field of unconventional aerodynamics has remained largely neglected: the cow pie.

Unlike a golf ball, which is manufactured to achieve predictable flight, a cow pie is produced through an entirely biological process. Its resulting shape, density, surface texture, and moisture

content vary considerably. These variations make it an unpredictable aerodynamic object and an excellent candidate for theoretical investigation.

The fundamental question is straightforward: What determines the flight characteristics of a cow pie? The answer involves gravity, air resistance, rotational stability, and the unfortunate absence of standardized manufacturing tolerances.

2. Shape and Aerodynamic Profile

A freshly deposited cow pie generally assumes a flattened, roughly circular form. Its profile resembles a low-quality flying saucer, although its resemblance to advanced aerospace technology ends there. Three general aerodynamic configurations may be identified:

The pancake configuration: A broad, relatively flat profile that produces substantial aerodynamic drag when traveling edge-on poorly aligned with the direction of flight.

The domed configuration: A thicker, more rounded profile that may exhibit reduced frontal area in certain orientations but offers little guarantee of stability.

The irregular configuration: A shape characterized by ridges, depressions, and other surface irregularities. This configuration is the most difficult to analyze mathematically and the most likely to produce unexpected flight behavior. A cow pie traveling broadside through the air generally experiences more drag than one traveling edge-first. Unfortunately, unlike a properly designed aircraft, it possesses no mechanism for maintaining the preferred orientation. Consequently, its flight path may be governed less by aerodynamic design than by sheer luck.

3. The Four Principal Forces

The flight of a cow pie can be analyzed using the same fundamental forces applied to other airborne objects. Gravity pulls the object toward the ground, ensuring that even the most ambitious trajectory eventually concludes. Aerodynamic drag opposes its motion through the air. Drag depends on velocity, air density, frontal area, and drag coefficient. For a simplified model, the drag force is

$$ F_D=\frac{1}{2}\rho v^2 C_D A $$

where:

ρ is the density of the surrounding air.

v is the cow pie's velocity relative to the air.

C_D is its drag coefficient.

A is its projected frontal area.

Lift may develop if the object's orientation and airflow produce an appropriate pressure difference. However, because a cow pie lacks a wing, predictable lift should not be assumed. Rotational forces arise when aerodynamic forces act away from the object's center of mass. These forces can cause tumbling, spinning, or sudden changes in orientation.

The resulting trajectory is therefore a complex interaction between a downward gravitational force and aerodynamic forces that change continuously as the object rotates.

4. Moisture Content and Flight Performance

Perhaps no single variable has a more important practical influence on cow-pie aerodynamics than moisture content. A relatively dry cow pie tends to be more rigid and brittle. Its surface may fragment during handling or flight, creating a cloud of smaller particles with their own aerodynamic characteristics. A wetter specimen may deform under acceleration and experience changes in its shape during flight. Its increased mass, if accompanied by a larger drag area, can alter its acceleration and terminal velocity. It is tempting to conclude that a drier specimen will always travel farther. However, this conclusion cannot be justified without controlling for mass, launch velocity, orientation, wind conditions, and fragmentation. The scientifically responsible conclusion is that moisture content is important, but its precise influence requires experimental measurement.

5. Stability, Spin, and the Question of Distance

The aerodynamic stability of a cow pie depends on the relationship between its center of mass, center of pressure, and rotational motion. A stable aircraft is designed to resist unwanted changes in orientation. A cow pie, by contrast, possesses no deliberate stabilizing surfaces. Its irregular shape can cause aerodynamic forces to vary throughout the flight. A small change in orientation may increase drag, initiate a tumble, or produce a sudden lateral deviation.

Spin could conceivably influence stability, but the effects would depend on the specimen's shape and mass distribution. Unlike a rifled projectile, a cow pie cannot be assumed to benefit from spin stabilization. Maximum flight distance would depend on launch speed, launch angle, air resistance, wind, and the object's changing orientation. The familiar ideal projectile range equation,

$$ R=\frac{v_0^2\sin(2\theta)}{g}, $$

provides a useful starting point, but it assumes that aerodynamic drag is negligible. That assumption is generally unsuitable for a broad, irregular object traveling through air.

In short, the textbook projectile equation may describe the beginning of the investigation, but it is unlikely to describe the entire flight.

6. Wind Resistance and Environmental Effects

Wind introduces another layer of uncertainty.

A headwind increases the relative airflow experienced by the cow pie, potentially increasing drag. A tailwind may reduce relative airflow under certain conditions, although its effect on ground-relative distance depends on the complete flight trajectory. Crosswinds can produce lateral displacement, particularly when the object has a large exposed area. Gusts may also cause sudden changes in orientation. Temperature and humidity can affect the surrounding air's properties, while rain and ground conditions may influence the specimen's moisture content and structural integrity. These factors make comparisons between flights difficult unless environmental conditions are recorded carefully. A serious experimental program would therefore require a calibrated anemometer, a reliable weighing scale, video recording, and a research assistant willing to stand well clear of the landing zone.

7. Proposed Experimental Method

A controlled study could compare cow pies of different masses, moisture contents, and shapes.

Each specimen would be weighed and measured before being subjected to a standardized launch. High-speed cameras would record its trajectory and rotational motion, while environmental sensors would document wind speed, temperature, and humidity.
The primary measurements would include:
Initial launch velocity.
Maximum horizontal distance.
Flight duration.
Number of rotations per second.
Degree of fragmentation.
Final resting orientation.
Repeated trials would help distinguish genuine aerodynamic effects from random variation.
For ethical and practical reasons, the experiments should be conducted in a controlled outdoor area, with appropriate hygiene precautions and no unsuspecting spectators downrange.
It should be emphasized that the proposed study is hypothetical. No experimental results are claimed here.

8. Practical Applications

Although the immediate commercial value of cow-pie aerodynamics may appear limited, the underlying principles have broader applications. Understanding the flight of irregular, deformable objects may offer useful insights into agricultural waste dispersal, the transport of organic particles, and the behavior of materials that do not conform to conventional aerodynamic models. Furthermore, the subject provides an accessible demonstration of an important scientific principle: objects with identical initial velocities can follow substantially different trajectories when their shapes, orientations, and aerodynamic characteristics differ. It also provides an unusually memorable introduction to drag coefficients.

9. Conclusions

The cow pie is an aerodynamically complex object whose flight characteristics depend on shape, mass, moisture content, orientation, rotational behavior, and atmospheric conditions. Its lack of a standardized profile makes theoretical predictions difficult, while its deformable and potentially fragile structure introduces additional uncertainty. A complete understanding would require controlled experiments and careful measurements rather than assumptions based on appearance alone. Ultimately, the cow pie reminds us that the laws of physics apply equally to elegant aircraft and the less glamorous products of bovine digestion.

Final conclusion: Nature has produced many impressive flying machines, but the cow pie was apparently designed with considerably more attention to ground contact than to aerodynamic efficiency. Further research is warranted, although researchers are advised to select their experimental sites with considerable care.
Clarify the aerodynamic terminology
Add a clearly labeled satire disclaimer
Tighten repeated uncertainty statements

The above was written by AI which can make mistakes

Name the Plane

To my knowledge no one named last months plane.

Now for the November name the plane.



Correct answer will be revealed by Don next month. As before, anyone else sending in a correct answer (as decided by Don) will receive guaranteed respect at their next visit to the flying field. (Max duration 5 minutes)

Send your answers to NameThatPlane@phantomflyersrc.com