

MODEL

01 / 2020

BRINGING MODELERS TOGETHER \$6.95US \$7.95CAN

AVIATION

PAGE 18 /

Clover Creek Senior TOC/ Freestyle Invitational

SENIOR TOC PILOTS REUNITE



PAGE 28 /

ALLEN BRICKHAUS MEMORIAL

PAGE 33 /

PRECISION MACHINING

PAGE 45 /

MAXFORD USA 1/9 RUMPLER TAUBE REVIEWED



THE OFFICIAL PUBLICATION OF
THE ACADEMY OF MODEL AERONAUTICS

HITEC

MIGHT OF THE MINI

WHO EVER SAID A STRONG PERFORMANCE
CAN'T COME IN A SMALL PACKAGE!

RDX1 *Mini*

AC BALANCE CHARGER/DISCHARGER

Our RDX1 Mini is the sleek, portable, 65-watt power-packed battery charger you've been waiting for. Storing up to 10 battery profiles with a maximum 6-amp charge rate and 2-amp discharge rate, this mini charger brings the reliability required to keep all your battery chemistries locked and loaded when you need them the most.

- STORES 10 DIFFERENT BATTERY MEMORY CHARGE/DISCHARGE PROFILES
- USER-FRIENDLY LCD INTERFACE
- TERMINAL VOLTAGE CONTROL

LiPo
2-4 cell

LiHV
2-4 cell

LiFe
2-4 cell

Lilon
2-4 cell

NiMH
6-8 cell

NiCd
6-8 cell

PB
6-12V



RF9

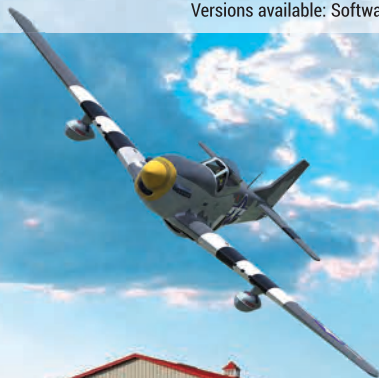
REALFLIGHT®

Now available with Spektrum™ InterLink® DX controller!

The world's #1 RC flight simulator takes another leap forward with many new aircraft, a dynamic new PhotoField™ flying site, updated training lessons and more. Most exciting of all, RealFlight 9 is now available with the brand new InterLink® DX controller. Engineered by Spektrum™ radio designers and modeled after DX-series transmitters, it works just like your favorite radio, with all standard switch locations and functions – plus the popular Reset/Rewind button. Get RealFlight 9 for an authentic RC flying experience you can't find in any other simulator!

- Fly more than a dozen new aircraft from E-flite®, HobbyZone®, Hangar 9®, and Blade®
- Explore the newest PhotoField™ flying site – the iconic Eli Field
- Learn to fly with updated VFI training lessons
- Enjoy classic RealFlight features including an easy-to-use interface and unparalleled True-to-Life™ physics
- Choose from over 160 total airplanes, helis, and drones and more than 40 PhotoField and 3D flying sites

Versions available: Software with Spektrum™ InterLink® DX Controller – RFL1100 | Software Only – RFL1101



 **FIND A DEALER**
www.HorizonHobby.com

RF1101 is also available for digital download on horizonhobby.com, towerhobbies.com, and Steam® Distribution Platform.

© 2019 Horizon Hobby LLC. RealFlight, the RF logo, E-flite, HobbyZone, Hangar 9, Blade, InterLink, DSM2, DSMX, PhotoField, True-to-Life, Apprentice, and the Horizon Hobby logo are trademarks or registered trademarks of Horizon Hobby, LLC. The Spektrum trademark is used with permission of Bachmann Industries, Inc. The E-flite Aerosports logo and Havoc Xc name and design are trademarks or registered trademarks of E-flite Aerosports, Inc. used under license. Cub Crafters, Carbon Cub, associated emblems and logos, and body designs of vehicles are either registered trademarks or trademarks of Cub Crafters, Inc. and are used with permission. All other trademarks are property of their respective owners. 63164

**BEST
BRANDS
IN RC**

HORIZON
H O B B Y

Sign Up For Our Email Newsletters at:
towerhobbies.com

- Special, money-saving offers!
- New product announcements!
- Special buys, closeouts, inventory reduction savings!

INTERNATIONAL ORDERS ACCEPTED

WANT TO SAVE MORE? Join the **SUPER SAVER CLUB**

for details use number
AL1001

Just Starting Out? Tower Hobbies

Tower Hobbies, your get started headquarters

EASYRC.COM

Eflite



Su-30 Twin 70mm
EDF BNF Basic



Timber X 1.2m BNF Basic

EFLA2237	E-flite Timber X 1.2m BNF Basic.....	3-Pay \$83.33	\$249.99
ELFA2499	E-flite Su-30 Twin 70mm EDF BNF Basic.....	3-Pay \$183.34	549.99
EFLA2379	E-flite F-18 Hornet 80mm EDF BNF Basic.....	3-Pay \$156.67	469.99
EFLA1015	E-flite Valiant 1.3M BNF Basic.....	3-Pay \$56.67	\$169.99

RF9
REALFLIGHT

The most realistic RC flight simulator yet!



RealFlight RF9 Software
Digital Download now available!



RFLZ1100	RealFlight RF9 w/Spektrum InterLink DX Controller.....	3-Pay \$60.01	\$179.99
RFLZ1101	RealFlight RF9 DVD Software Only.....	2-Pay \$50.00	99.99
RFLZ1103	RealFlight RF9 Software Only Digital Download.....	2-Pay \$50.00	99.99
SPMZ1050	Spektrum Wireless Simulator USB Dongle.....	3-Pay \$50.00	39.99

SPEKTRUM



Spektrum DX8
Transmitter only



Spektrum iX20
20 Channel
Transmitter Only

SPMJ1041	Spektrum iX20 20 Channel Transmitter Only.....	2-Pay \$700.00	\$1,399.99
SPMJ1043	Spektrum DX6e 6 Channel Transmitter Only.....	3-Pay \$56.67	169.99
SPMJ1015	Spektrum DX8 Transmitter Only Mode 2.....	3-Pay \$110.01	329.99
SPMJ1010	Spektrum iX12 12 Channel Transmitter Only.....	3-Pay \$210.01	629.99
SPML1034	Spektrum AR620 6 Channel Sport Receiver.....	3-Pay \$39.99	39.99
SPML1009	Spektrum AR636 6-Channel AS3X Sport Receiver.....	3-Pay \$79.99	79.99

Futaba



14SGA



16SZA

FUTJ1009	Futaba 32MZ 2.4GHz FASSTest 18Ch Radio System Air.....	3-Pay \$299.99	\$299.99
FUTK9460	Futaba 16SZA 16-Channel Air FASSTest Telemetry Radio.....	3-Pay \$233.33	699.99
FUTK9280	Futaba 12KA 14-Channel T-FHSS/S-FHSS Telemetry System.....	3-Pay \$110.01	329.99
FUTL7627	Futaba R617FS 7-Channel FASST Receiver.....	3-Pay \$49.99	49.99
FUTM0004	Futaba S3004 Standard Ball Bearing Servo.....	3-Pay \$13.99	13.99

HANGAR 9



Timber 110
30-50cc ARF



Ki-43 Oscar
50-60cc 88" ARF

HANA1635	Hangar 9 Timber 110 30-50cc ARF.....	3-Pay \$233.33	\$699.99
HANA1683	Hangar 9 Ki-43 Oscar 50-60cc 88" ARF.....	3-Pay \$300.01	899.99
HANA1613	Hangar 9 P-51D Mustang 20cc 69.5" ARF.....	3-Pay \$133.33	399.99
HANA1000	Hangar 9 Ultra Stick 10cc ARF.....	3-Pay \$76.67	229.99

PHOENIX MODEL®



F4U Corsair 1.20/20cc
GP/EP/Gas ARF



Aurora Sport Aero
EP/GP .46-.55 ARF

PMMA1003	Phoenix Model Slick Aerobat EP/60cc ARF 86.5".....	3-Pay \$160.00	\$479.99
PMMA1001	Phoenix Model Aurora Sport Aero EP/GP .46-.55 ARF 59.1".....	3-Pay \$74.67	223.99
PMMA1845	Phoenix Model F4U Corsair 1.20/20cc GP/EP/Gas ARF 70.9".....	3-Pay \$133.33	399.99

HITEC



HS-5645MG



HS-82MG

HRCM3645	Hitec D645MW D-Series Metal Master High-Torque 25TBB Servo.....	3-Pay \$29.99	\$29.99
HRCM0927	Hitec HS-645MG High-Torque 2BB Metal Gear Servo.....	3-Pay \$29.99	29.99
HRCM0645	Hitec HS-5645MG Digital Ultra-Torque Metal Gear 2BB.....	3-Pay \$29.99	39.99
HRCM3282	Hitec HS-82MG Standard Metal Gear Micro Servo.....	3-Pay \$20.99	20.99

SAVE \$25

off any order of \$210.00 or more during January.


Use coupon code
AMA25
when ordering


Only one Coupon Code per order please. Not retroactive. Does not work on all brands/items shown. Some restrictions apply.

CONTENTS



FEATURES

18  **Clover Creek**
Senior TOC/Freestyle
Invitational
By Jennifer Alderman


28  **Allen Brickhaus Memorial**
Western Kentucky/Southern
Illinois Stunt Champs
By Rachelle Haughn


33 **Precision Machining Without Precision Machines**
Basic shop tools to the rescue
By Jim Ryan


DIGITAL CONTENT ICONS

-  Video
-  Additional Photos
-  Social Media/Conversation
-  Downloadable Content/Plans
-  Additional Content

REVIEWS

37  **Horizon Hobby E-flite P-39 Airacobra 1.2m BNF Basic With AS3X and SAFE Select**
Uncommon warbird is as much fun as the well-known fighters
By Terry Dunn

41  **Horizon Hobby E-flite F-4 Phantom II 80mm EDF BNF Basic**
Increased scale detailing without added complexity
By Kyle Jaracz

45  **Maxford USA 1/9 Rumpler Taube EP 64-Inch ARF**
Experience early aviation with fully functioning wing warping
By Jon Barnes



45



84



18

COLUMNS

- 04** View from HQ
By Chad Budreau
- 06** The Inside Loop
By Jay Smith
- 07** Click On
- 08** AMA In Action
- 12** Product Spotlight
- 14** In the Air
- 52** Focal Point
- 54** Vintage Viewpoint
By Bob Noll
- 56** Micro-Flying
By Joe Malinchak
- 60** Safety Comes First
By Dave Gee
- 64** Born to Fly
By Jim T. Graham
- 68** Advanced Flight Technologies
By Patrick Sherman
- 72** Around the Patch
By Thayer Syme
- 76** RC Scale
By Stan Alexander
- 80** RC Soaring
By Gordon Buckland
- 84** RC Aerobatics
By Peter Vogel
- 86** RC Jets
By Jim Hiller
- 90** RC Pylon
By Tim Lampe
- 94** Control Line Aerobatics
By Joe Daly
- 98** Indoor Free Flight
By Don Slusarczyk
- 129** MA Marketplace
- 130** Index of Advertisers
- 131** Viewfinder
- 132** I Am the AMA
By Jay Smith

AMA NEWS

- 101** Donations
- 106** AMA Election Results
- 107** Money Matters
By Keith Sessions
- 108** District News
- 119** AMA Enrollment Form/
AMA Safety Code
- 120** Education Through
Aviation
By Kyle Jaracz
- 121** Plans Service/
Submission Guidelines
- 122** Sanctioned Event
Calendar



ON THE COVER

The Tournament of Champions competition, which took place between 1974 and 2002, was revived in the form of a reunion in 2019 and held at the Clover Creek Aerodrome in Toone, Tennessee. The invitational contest/reunion was held during the same time as the Clover Creek Freestyle Invitational, allowing pilots of all ages to fly together.

Will Jackson's Extreme Flight Laser-EXP was one of many aerobatic models flown throughout the event. To learn more, turn to page 18. PHOTO BY JENNIFER ALDERMAN.

BECOME A MEMBER!

Join the Academy of Model Aeronautics for access to bonus content including how-to videos, interviews, event coverage, and free downloads! Learn more at www.ModelAviation.com.



ADVOCATING FOR ALTITUDE

By Chad Budreau, AMA Executive Director | chadb@modelaircraft.org

THERE SEEMS TO BE much confusion around a 400-foot altitude limit being discussed by lawmakers, FAA, and AMA. Allow me to shed some light on the situation, but first I should clarify that AMA's government relations efforts are evolving daily. By the time you receive this article, details might have changed. I encourage you to visit www.modelaircraft.org/gov, social media, and AMA's blogs for the latest developments.

AMA's safety program has remained steadfast that all model aircraft must remain within visual line of sight of the operator and/or spotter. This is not only an unwavering safety mandate, but also creates a more enjoyable experience for those in the hobby—after all, what's the fun in flying a model you cannot see? As a result, most of our members fly models at or below 400 feet.

With that noted, not all models are designed to be flown below 400 feet. Models that fit the Large Model Aircraft program, turbine jets, sailplanes, and sometimes even trainers fly above 400 feet. When Congress began discussions about creating a 400-foot "line in the sky," AMA adamantly opposed it. Congress clarified that its intent was to prevent careless or uneducated drone operators from flying above 400 feet. Because most manned aircraft operations begin at approximately 500 feet, this creates separation between manned and unmanned aircraft.

After lengthy discussions with Congress, legislators created carve-outs that direct FAA to accommodate safe operations within community-based organizations such as AMA. As a result, AMA began work with the FAA to create opportunities for our members to continue flying as they have in the past.

At the time of print, AMA has made tremendous strides in safely breaking the 400-foot line in the sky for our members who need additional altitude. In uncontrolled airspace, which accounts for roughly 90% of our 2,400 chartered club flying sites, initial policy might permit members to fly at 700 feet or 1,200 feet. For operations in controlled airspace, typically areas with significant manned traffic near an airport with a control tower, modeling operations

will be limited to 400 feet. This affects roughly 250 of our 2,400 flying sites.

Although some of our flying sites and members have indicated that this is a great victory, we acknowledge that it is not enough. These altitudes, while an improvement, still unjustly prevent some members from enjoying our safe hobby. In October, AMA asked members to write to Congress to clarify its intent to allow members to continue enjoying the hobby without arbitrary and unjust altitude restrictions. Simply put, we have made progress, but still have more work to be done.

As a result of our members' actions and AMA's advocacy efforts, we are working toward expanding the altitude limits to safely accommodate our member operations. I must caution that the federal government is not designed to work swiftly. Multiple stakeholders and federal agencies are involved; these negotiations will take months and likely years.

My request to AMA members is twofold. First is to continue to engage Congress and ask that FAA safely accommodate our 80-plus-year hobby as Congress intended.

Even if you or your club needs no more than 400 feet, fellow AMA members or a flying site in a neighboring community might need higher altitudes. Let's stand together for everyone in the hobby.

Even if you or your club needs no more than 400 feet, fellow AMA members or a flying site in a neighboring community might need higher altitudes. Let's stand together for everyone in the hobby.

Second, while we work through these regulatory issues, I encourage members to continue enjoying the hobby. The FAA has assured us that we can continue flying as we always have while we work through implementing Section 349.

Thank you for your commitment to safety, your efforts to promote

the hobby, and your patience while we work on advocacy efforts. The hobby will be here for many generations to come.

Stay safe! 



BETAFPV

ONE OF THE PREMIERE DRONE COMPANIES IN THE WORLD

SPECIALIZED IN MICRO DRONE WHICH IS A TINY FIRST-PERSON-VIEW AIRCRAFT

Experiencing flight easier for the beginner FPV WHOOP RACING STARTER KIT

If you are new to racing drones and want to give it a try, this RTF kit would be a good choice. With Beta65S Lite BNF, VR006 Goggle, Lite Radio TX and spare parts you need to get started, learning to fly has never been easier.

 \$
129.99
USD



PREVIOUSLY
BETA75X 3S WHOOP
PAGE 5 - 12 / 2019

Join us on   

Order online at betafpv.com



ALLEN BRICKHAUS MEMORIAL

Jay Smith, Executive Editor
jays@modelaircraft.org

HAVE YOU EVER gone to a club field and noticed that one or more of the people in attendance never put in a flight that day? There could be several reasons why, but I surmise that one possible reason is because they are there for the people more than the aircraft.

Getting together with like-minded individuals who share the same or similar passion makes this hobby enjoyable, and is also a great way to learn more about others as well as the aircraft.

Although we have many great people in our hobby, some really stand out. It could be for his or her knowledge, eagerness to help others, or just for being a great person. Allen Brickhaus was one who could check all of those boxes and more.


“If you knew Allen, think back and try to find even one time when he was not

outwardly friendly, supportive, helpful, consoling, jovial, and happy around you as the situation required,” wrote former *Model Aviation* editor Bob Hunt.

I had the good fortune of knowing Allen for roughly 5 years. We worked together on feature articles for the magazine and the *NatsNews*. Anytime Allen came to AMA, he made it a point to stop in at the Headquarters building and say hello to all of his friends. I know several of the AMA staff looked forward to seeing him. I was happy to call Allen a friend in the time that I knew him.

Three days after Christmas 2013, Allen, strong in his faith, frequent *Model Aviation* contributor, contest director, event organizer, longtime *NatsNews* reporter, teacher, musician, and friend to so many, passed away.

“Although we have many great people in our hobby, some really stand out. It could be for his or her knowledge, eagerness to help others, or just for being a great person. Allen Brickhaus was one who could check all of those boxes and more.”

Allen has now been gone longer than the time I knew him, but he is not forgotten. I hope all of his friends reading this and the article on the Western Kentucky/Southern Illinois Stunt Champs Allen Brickhaus Memorial, will take a moment to remember Allen and his positive impact on all of us. 

Correction: The names of the members of the 2020 US F2D Control Line Combat team were incorrect on page 28 of the November 2019 issue of *Model Aviation*. The team will be made up of Mark Rudner, Chuck Rudner, and Radik Magzianov. Jeff Johnson is the first alternate, and Alexandra “Sasha” Nadein will compete as the Junior team member. Rylan Ritch will also go to Poland to defend his 2018 Junior World Champion title. Aimee Olson Bagley is eligible to compete as an extra team pilot. We regret the error.

President Rich Hanson
Executive Vice President Randy Cameron
Executive Director Chad Budreau

STAFF:

Director of Communications
Rob Kurek

EDITORIAL
Executive Editor
Jay Smith

Managing Editor
Elizabeth Helms

Associate Editor
Jennifer Alderman

Multirotor Associate Editor
Matt Ruddick

Staff Writer/ Copy Editor
Rachelle Haughn

ART/DESIGN
Art Director
Lynn Balderrama

Graphic Designer
Aaron David Howard

MULTIMEDIA
Digital Experience Lead
Dillon Carpenter

CONTRIBUTING EDITORS:

Stan Alexander, Bob Angel, Gordon Buckland, Sal Calvagna, Fred Cronenwett, Joe Daly, Don DeLoach, William Drumm III, Dave Gee, Greg Gimlick, John Glezellis, Jim T. Graham, Ken Hawkins, Jim Hiller, Louis Joyner, Tim Lampe, Joe Malinchak, Bob Noll, Dennis Norman, Jennifer L. Reynolds, Mark Rudner, Patrick Sherman, Don Slusarczyk, Thayer Syme, Pat Trittle, John Vlna, Peter Vogel

Academy of Model Aeronautics
5161 E. Memorial Dr.
Muncie IN 47302
Phone: (765) 287-1256
Fax: (765) 289-4248
www.modelaircraft.org

Editorial offices
8 a.m.–5 p.m. weekdays
Phone: (765) 287-1256,
extension 225
Fax: (765) 289-4248

ADVERTISING:

Advertising Account Executives
Jonathan McGraw (410) 316-9863

Model Aviation is an official publication of The Academy of Model Aeronautics Inc., an associate member of the National Aeronautic Association (NAA). NAA is the official U.S. representative of the Fédération Aéronautique Internationale (FAI), the world governing body for sport aviation, and represents the U.S. at FAI meetings. NAA delegated to the AMA supervision of FAI-related aeromodelling activities such as record attempts, competition sanctions, and selection of U.S. teams for World Championships. (ISSN 0744-5059, USPS 087-930 Publications Agreement No. 40688541) is owned exclusively by The Academy of Model Aeronautics Inc., a nonprofit organization, and published monthly at 5161 E. Memorial Dr., Muncie IN 47302. Periodical rate postage paid at Muncie IN and at additional mailing offices. Canadian return address: Station A, PO Box 54, Windsor ON N9A 6T5

© 2020 Academy of Model Aeronautics, Inc. (“AMA”). All rights reserved. Reproduction in whole or in part without the express written permission of AMA is prohibited. *Model Aviation* is a registered trademark of AMA.

Visit www.ModelAviation.com/bonuscontent

See bonus content related to this issue. You can also comment on articles, view past issues, search the Digital Library, and manage your subscriptions.



Tournament of Champions

Digital & Web:

Learn more about it in our *FlyBy* series on YouTube: <https://youtu.be/T7xBGQL0Q5s>.

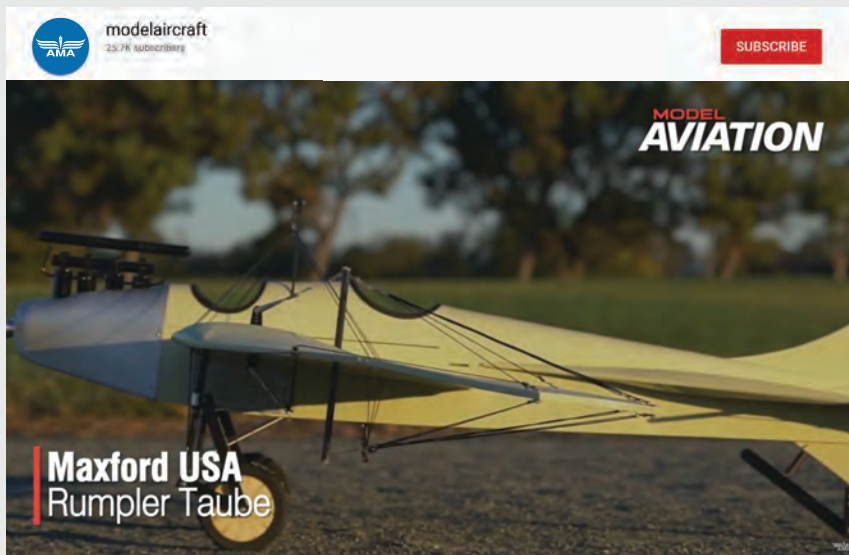


RC Aerobatics

Digital & Web:

Watch Jay Gerber's videos www.ModelAircraft.org/AMAFilms.

Join the conversation on YouTube



In late October 2019, we gave our YouTube subscribers a sneak peak of an airplane featured in this issue of *Model Aviation*. The video is of the Maxford USA 1/9 Rumpler Taube EP, reviewed by Jon Barnes. The 64-inch, rarely modeled aircraft has generated some reactions from our viewers.

David King: Wow, that looks very relaxing to fly, I love it, looks like it wants to keep flying like my sig planes.

Curtis Sidles: Thank you AMA and Jon Barnes for highlighting this amazing Maxford USA model. It flies REALLY well and is SO much easier to assemble than at first it appears! Classic!!

Raymond Ellsworth: Just beautiful!

David Hogue: Very nice, Jon, long time no see you!

Hal Roofner: Outstanding!!!!!!!



DESERT DA AIRCRAFT
High Performance Aircraft Engines
The Choice of Champions!

New 3 year warranty!

DA-170



Displacement: 10.48 ci (171.8 cc)
Weight: 8.00 lbs
Props: 32x12, 32x10 **\$1695.00**

DA-85



Displacement: 5.24 ci (85.9cc)
Weight: 4.3 lbs 4.53 lbs w/ignition
Props: 26x12, 27x10 (28x10 w/tuned pipe) **\$795.00**

DA-100L Now Lighter!



Displacement: 6.1ci (100cc)
Weight: 5.47 lbs 5.783 lbs w/ignition
Props: 2 blade: 26x12, 27x10, 28x10 **\$999.00**

DA info@desertaircraft.com
Phone: 520 722-0607
Fax: 520-722-5622

DA-50R, DA-85, DA-100 and the DA-150 all available at: www.desertaircraft.com



© SHUTTERSTOCK / AEYPIX

CONGRESS REQUESTS FAA UPDATES

By **Tyler Dobbs, Government Affairs Director** | tylerd@modelaircraft.org

AS MOST OF YOU ARE AWARE, the FAA is currently working to implement new requirements for recreational UAS users. During this implementation process, clubs that operate in controlled airspace have been required to create mutually agreed-upon operating procedures with their local air traffic control (ATC) facilities. During this process, some clubs have been unable to agree upon the altitude limitations proposed by the ATC.


In an effort to allow our clubs to continue operating as they have in the past—often for decades—AMA has continued working

with the FAA and Congress. In fact, U.S. Sen. Todd Young and Rep. Greg Pence penned a joint letter to the FAA requesting that the FAA find solutions to the 400-foot altitude restrictions and requested that the FAA keep them updated through this implementation process. We appreciate Todd's and Greg's continued support of AMA and model aviation.

See Something, Say Something

AMA has a long history of working with the FBI and other security agencies around the country, and we recently joined an FBI

law enforcement task group in the state of Indiana.

The FBI recognizes that AMA members and local hobby shops are often the first line of defense against someone looking to use a UAS for a malicious purpose. Please contact your local law enforcement agency or FBI to report any suspicious UAS-related activity. 

Congress of the United States

Washington, DC 20510

November 8, 2019

The Honorable Steve Dickson
Administrator
Federal Aviation Administration
800 Independence Avenue, SW
Washington, DC 20591

Dear Administrator Dickson:

As the Federal Aviation Administration (FAA) develops rules for recreational Unmanned Aerial Systems (UAS), we urge you to continue to work with the Academy of Model Aeronautics (AMA) to ensure the aeronautic hobbyist community is not unduly burdened. Should the FAA move forward to impose uniform restrictions on local clubs, we are concerned that this multimillion dollar industry and pillar in the recreational community will be jeopardized.

Headquartered in Muncie, Indiana, AMA represents a membership of more than 195,000 and charters over 2,500 model airplane clubs across the country. Since the 2018 FAA Reauthorization Act became law, the FAA worked collaboratively with the AMA to implement provisions of the bill impacting the model aviation industry. We were pleased to learn that the FAA established a "Tiger Team" to work with the AMA to ensure the implementation of the bill would not adversely impact the modeling community. However, we maintain concerns that the FAA may limit AMA clubs in controlled airspace to a 400' altitude limit, or potentially prohibit their operations altogether. As you may know, a 400' operational limit could result in the closure of local clubs that remain committed to aviation safety and have operated in the National Airspace System for many decades.

Furthermore, the uncertainty surrounding this rulemaking is already adversely impacting the AMA community. The declining membership has forced the AMA to downsize their operations in recent months. If the AMA cannot continue to host aerial competitions at its headquarters, communities in Indiana will lose significant economic investments from visitors and competitors alike.

As the process moves forward, we urge you to consider the impact this proposal will have on the AMA community nationwide. We respectfully request that any developments on this matter are communicated to our staff, and thank you for your attention to this important issue.

Sincerely,


Todd Young
United States Senator


Greg Pence
Member of Congress



20 Freestyle Aerob

In 2019 the three most prestigious Freestyle Aerobatic competitions in the world were held in North America: The XFC V2, The Clover Creek Invitational and the Tucson Shootout. Team Extreme pilot Jase Dussia won all three events flying a box-stock, off-the-shelf Extreme Flight 104" Laser EXP using the recommended equipment. If you want to experience aerobatic perfection, there are no secrets; fly Extreme Flight aircraft.

EXTREME FLIGHT

www.ExtremeFlightRC.com

(770) 887-1794

2019 Automatic Triple Crown



*Jose The Ace
Lussia*



➔ New Products that are Worth a Closer Look

REALFLIGHT 9

By Jay Smith | jays@modelaircraft.org

Minimum Recommended System

- Windows 7, Windows 8, or Windows 10
- Intel Pentium 1.0 GHz or equivalent
- 512 MB RAM
- 10 GB hard drive space
- DVD drive
- 3D accelerated video with 32 MB dedicated video memory
- Fully DirectX 9 compliant (Shader Model 2.0 or better)
- InterLink DX, RealFlight compatible controller, or other gamepad/joystick
- Internet connectivity required to download additional content and updates

Optimal System for Best Graphical Performance

- Dual Core 2.4 GHz CPU
- 2 GB RAM
- 3D accelerated video with 512 MB dedicated video memory

Multiplayer requirements:

- Broadband internet connection
- Computer microphone for voice chat

InterLink DX Controller Requirements

USB port
Compatible FM or FM-selectable transmitter (if using the interface mode)

VR Requirements

- Compatible with some VR sets (available separately). Check manufacturer's requirements for VR system use.
- Works with both the Oculus Rift and HTC Vive VR headsets
- Online activation required

RealFlight 9 is available as software only or with a USB transmitter. The is vastly different from what was bundled with previous versions. This transmitter is a Spektrum Interlink DX Simulator Controller. It has a new look and layout and even has gimbals with adjustable springs and throttle tension to get the feel you are comfortable with.

After checking out the new transmitter, it was time to install the software that is provided on two discs. There is also an option for a digital software download. I used my external Blu-ray drive for installation on my laptop, which took roughly 30 minutes. I used a Dell

laptop to install RealFlight 9. This allowed me to easily connect it to my TV and make my simulator experience portable.

RealFlight 9 offers simulator pilots 46 flying sites, 121 airplanes, 10 sailplanes, 36 helicopters, and 19 drones to fly.

A feature that I quite enjoy is that you can incur damage or have flight failures with your aircraft and continue to fly, while the aircraft handles differently. This feature allowed Jim Bourke, of Knife Edge Software, to successfully land a Giant Scale aircraft after losing half of its wing. He had practiced this several times on the simulator and when it unexpectedly happened, he was ready.

You can get instructions on how to hover an airplane or practice your orientation with a heli. You can progress through different modes that cover airplanes and helicopters, and the difficulty increases as you work through them.

Multiplayer mode allows you to fly with your friends, much like at a flying field, or compete with others in combat and streamer cutting. In Challenges, you can perform things such as a Balloon Burst, Air Race, and FPV Drone Racing.

RealFlight supports Virtual Reality (VR), and through the use of a headset, VR provides a computer-generated simulation of a 3D image or environment that can be interacted with in a seemingly real way. So, what does that mean?

By donning either the Oculus Rift or HTC

Vive headset, you are transported to the flying field. All of the surroundings you see in the headset are at the airport you selected. Turn around and you will see what is behind you, such as a pit area or clubhouse. You can look down and see the ground and look up into the sky. When flying your RC aircraft, you will track it with your head just as you would when actually flying.


If you decide to try flying in VR, you will need to purchase a VR headset and confirm that your PC meets the requirements. When

you begin flying RealFlight in VR, it will be hard to get that smile off your face.

RealFlight 9 incorporates flying, instruction, and fun that any simulator pilot should enjoy. Other than an issue with the screenshot function, I haven't run into any problems and I find myself continually going back to it to put in one more flight.

I have been using RealFlight since version 2. I believe it has helped me to become a better pilot and has allowed me to tackle new maneuvers on the simulator that then can be

transitioned to actual flight. During the winter, I fly RealFlight more than any aircraft I own.

If you are interested in investing in an RC flight simulator, you should definitely consider RealFlight 9. 

SOURCES:

Horizon Hobby
(800) 338-4639
www.horizonhobby.com

➔ New Products from the *Modeler's Mall*



Hoosier Hotshot @ \$78.25 + S&H from BMJR Models

Box 1210, Sharpes FL 32959;
Tel.:(321) 537-1159; www.bmjrmmodels.com

The Hoosier Hotshot is a Nostalgia-approved design from 1956 by Bob Larsh and has been selected as a 2020 National Free Flight Society One-Design model.

With a 56-inch wingspan and a 450-square-inch wing area, the Hotshot has an uncovered weight of 5.9 ounces. The final flying weight using Polyspan, dope, and an O.S. .15 engine for power is 14.25 ounces. The only deviation from the original plans was to add shear webs to the front and rear spars for additional wing stiffness.

To fly in 1956 Vintage FAI, with a total wing area of 578 square inches and using an O.S. .15 engine, the minimum flying weight should be 17.64 ounces.

RDX1 Mini AC Charger @ \$42.99 + S&H from Hitec RCD

12760 Danielson Ct., Unit E, Poway CA 92064;
Tel.:(858) 748-6948; www.hitecrd.com

Expanding on the popularity and superior performance of the RDX1 line of chargers, Hitec is proud to introduce the RCX1 Mini, a sleekly designed, compact AC input charger that packs 65 watts of power into half the size of most other chargers.

Compatible with a full range of popular battery types, including the new-generation lithium high-voltage (LiHV) batteries, the RDX1 Mini boasts 6 amps of maximum charging current and 2 amps of discharging current. With a user-friendly interface, it stores 10 battery memory charge/discharge profiles, has a built-in JST/XT balance connector, can balance cells while discharging, and has balance, standard, fast, and storage modes for all lithium battery chemistries.

Also featured are a re-peak charge mode and delta-peak sensitivity for NiCd/NiMH batteries, an optional temperature sensor for NiCd/NiMH charging, a built-in XT60 connector, and a smart ventilation fan. The RDX1 Mini set contains the charger, a power cord, and a two-pin T-type charging cable.



Texan 484 @ \$89.50 + S&H from BMJR Models

Box 1210, Sharpes FL 32959;
Tel.:(321) 537-1159; www.bmjrmmodels.com

The Nostalgia-legal Texan 484 was designed by Jim Summersett and Ed Miller in 1952 and appeared in the January 1960 issue of *American Modeler*. The 1952 version has been selected for the 2020 National Free Flight Society One-Design competition. The model is intended to be flown with a Nostalgia-legal .15 engine; however, with its robust structure, it would do well in Class B with a .21 or .23 engine.

With a 61-inch wingspan and 484 square inches of wing area, the all-up weight of the Texan 484 using a tracker is 20.05 ounces. For 1951 to 1956 Vintage FAI, with a total wing area of 698 square inches using a .15 engine, the minimum flying weight is 19.19 ounces.



2019 U.S. SCALE MASTERS HELD

ERIK LACOUR, president of the Clovis Area Modelers RC Club, shared a report about the U.S. Scale Masters 40th Annual Championships, held at Peg Field in Reedley, California. Here's what he shared:

The Clovis Area Modelers RC Club is proud to have been selected to host the U.S. Scale Masters, held October 17-20, 2019.

Some of the finest Scale model aircraft in the US compete at regional levels across the country. Those who qualify at these regional contests can compete in the national championships.

The U.S. Scale Masters began more than 40 years ago and is the oldest RC model championship in existence. The fine scale details that are required to compete at the U.S. Scale Masters level must be seen to be believed. Countless hours are spent perfecting these masterpiece aircraft models. The builders must also be able to fly their models like the full-scale aircraft and are judged on their ability to do so.

There were all types of aircraft models at the event. World War I, World War II, jets, and civilian aircraft were all represented.

Nine Scale Masters judges scrutinized every detail of the models. The contest was open to the public and free of charge. Spectators had the opportunity to see these highly detailed models up close. There was a large media presence from local television stations and newspapers, and the parking lot was packed.

The Clovis Area Modelers RC Club is a community-based, nonprofit organization that benefits youth and active military. The club has 136 members and is growing rapidly. It has a vision for young people in the community.

The club started two years ago and has made unprecedented progress. Its field boasts a 3,100-foot long runway that is 60 feet wide. It is great for even the largest of RC aircraft. The club recently resealed and striped 600 feet of the runway for RC use.

The surrounding area is beautiful. Foothills of the famed Sequoia National Forest are nearby and the area abounds with fruit blossoms and wildflowers in the springtime. With no noise restrictions or airspace problems, this is an RC pilot's dream come true. Peg Field is only 25 minutes from hotels, restaurants, and the Fresno


Yosemite International Airport.

The Wyndam Garden hotel was the venue for the awards banquet and did an outstanding job on Saturday night.

Expo Events teamed up with the Clovis Area Modelers RC Club to put on this great contest. The result was impressive to say the least—from the 5,000-square foot pit tent, vendor areas, covered spectator areas, not to mention skirted pit tables and artificial turf everywhere. These people even had luxury, air-conditioned bathrooms on site.

The sound system was also provided by Expo Events. This company is serious about top-of-the-line events and really raised the bar on this one.

The opening ceremony was put on by the Air Force ROTC color guard from Clovis East High School. Our nation's flag was presented with the national anthem. The armed color guard was really sharp!

Competitors had a great time at this world-class event. Clovis Area Modelers RC Club members know how to put on a top-notch contest and are looking forward to doing it again, even bigger and better. The club members are always striving to make the community a part of what they do. They like to share our great hobby, and most of all, have fun! 



FORMER AMA FOUNDATION BOARD CHAIRMAN PASSES



ONE OF THE first members of the AMA Foundation Board of Directors has passed away. Dr. Laird Jackson, age 89, died October 17. He served as the foundation board's first chairman.

Laird was a physician certified in internal medicine, clinical genetics, and clinical cytogenetics, with a principal interest in prenatal diagnosis.

As an AMA member, he flew Control Line and Free Flight for many years. He also worked with the AMA and FAI in national and international competitions. At one time, he served on the AMA Model Aviation Hall of Fame Selection Committee.

He was inducted into the National Control Line Racing Association Hall of Fame in 1977 and was awarded the FAI Gold Medal in 2010. The AMA Foundation was started in 2015.

Laird is survived by his wife, two sons, and two granddaughters. 

AMA Thanks Its Lifetime Supporters!

The Academy of Model Aeronautics recently welcomed Life Members Donald J. Degidio, Springfield PA; Matthew Anderson, Las Vegas NV; T.J. Barcanic, Oxnard CA; Marland P. Oliva, White Plains NY; John M. Poma, Freeland MI; Marvin Mattingly, Louisville KY; and James M. Hubbell, Springfield MO.


For information about becoming a Life Member, contact AMA Headquarters at (800) 435-9262.

—AMA Membership Department

MUSEUM HOURS CHANGE

THANK YOU for another wonderful season at the National Model Aviation Museum in Muncie, Indiana.

The museum had a great year of new exhibits that were shared with visitors. The facility is now closed for the winter. The staff at the museum looks forward to seeing everyone when it reopens on Memorial Day weekend in 2020.

While the museum is closed, you can visit it virtually and view its digital collections by clicking on the museum tab at www.modelaircraft.org. 

AMA MODEL AVIATION HALL OF FAME

INDUCTION INTO the AMA Model Aviation Hall of Fame is one of the most prestigious honors that an AMA member can receive. Established in 1969, the award recognizes those who have made significant contributions to aeromodeling. Recipients are chosen by committee and are considered based on volunteering, competition, product development, and/or administrative duties.

AMA congratulates the following 2019 inductees:

- Mitchell Poling, Port Townsend, Washington (deceased)
- Irving W. "Bud" Chappell, Portland, Connecticut (deceased)
- Douglas Powell, Wichita Falls, Texas
- Jerry Bates, Mobile, Alabama
- Walt Mooney, San Diego, California (deceased)
- James Broberg, Crystal Lake, Illinois
- Don Coleman, Mobile, Alabama (deceased)

History Preserved

THE BING AUTOPLAN

By Claire Aldenhuisen

As you walk into the National Model Aviation Museum's Free Flight gallery, it is practically the first artifact that you encounter. Displayed in a position of prominence in the first exhibit case, looking by all accounts like a winged, elongated tin can, is the Bing Autoplan, the oldest artifact in the museum's collection.

Built in 1914, this unusual compressed-air model is a rare find for the museum. Compressed-air models were attractive to early aeromodelers because of their reciprocating engines, which resembled the internal combustion engines employed by full-scale aircraft. However, compressed-air models, such as the Bing Autoplan, were not only fragile and expensive, but they flew poorly. Despite this, they remained popular for their novelty.

The Bing Autoplan was manufactured by a German toy company known as Bing or Gebrüder Bing (Bing Brothers), which was founded in 1863 by



Some of Bing's first products were fine pewter and copper tableware, such as tea sets.



The Bing Autoplan on display at the National Model Aviation Museum.

Ignaz and Adolf Bing in Nuremberg, Germany. Bing was originally a tableware company. Its initial products were fine pewter and copper tableware, such as tea services.

Bing added toys to its catalog of products in 1880. These additions included clockwork toy trains and steam-powered toys. It also offered a large range of kitchen products, office equipment, record players, and more.

The Bing Autoplan debuted in the *1914 Bing Brothers Toy Catalogue* as a continuation of a line of rubber-powered flying toys. An aspiring aeromodeler who ordered the Autoplan would receive both a ready-to-fly aircraft and an air pump for filling the tank. It retailed for 12 guineas, which would be equivalent to roughly \$1,500 today.

A review of the aircraft in the February 19, 1915, issue of *Flight Magazine* noted flaws in the wing design and chassis, but commended Bing on the construction of the motor and tank. V.E. Johnson, the author of the review, considered the Autoplan a commercial success because it was “very clever, well designed and very thorough, and beautifully finished.”

Like many of the artifacts in the collection, the National Model Aviation Museum’s Bing Autoplan has a fascinating backstory. It was used as a decoration during a party honoring Charles Lindbergh in St. Louis in 1927. One of the attendees, a vaudeville actor who went by the name Chief Little Elk, convinced the organizers to give him the Autoplan when the party ended. He passed the model on to his nephew, who recalled flying (and chasing!) it down the street in Quincy, Illinois. It was eventually passed to his nephew, Dick Moyer, who contacted the museum in 2013 for help with identifying the disassembled and coverless model.

Recognizing its significance to the history of aeromodeling, Dick donated the Autoplan to the National Model Aviation Museum in 2013, a year shy of its 100th birthday. It was initially displayed in the Hands-On Gallery, until a decision was made to have it professionally conserved by the Intermuseum Conservation Association (ICA) in 2014.

One of the primary concerns with conserving the Autoplan was to restore the wing’s covering. Many model aircraft of this time period were covered with silk, but the ICA determined

that another material was used. With help from the Spielzeug Museum, a German museum dedicated to the Bing Brothers Toy Company, the original ad for the Autoplan was translated and its covering was described as a “water-resistant rubber textile.”

Before the ICA could obtain a covering that matched the original description, however, *another* Bing Autoplan came to the museum staff’s attention—this one in original condition, with linen stitched onto the wing. The ICA chose to follow the example of the other Autoplan and used linen to cover the wing.

As for the “water-resistant rubber textile,” it is unknown what happened to the museum’s Autoplan between its time of manufacture and when it was obtained by Dick’s great-uncle. Perhaps it was damaged and the covering was replaced by another material, as implied by the remnants of covering it had before its conservation.

Today, the Bing Autoplan is one of the first stops on a tour of the museum, accompanied by a guessing game for younger visitors. After all, it’s not often that you see a model airplane



Two pages from the 1914 Bing Brothers Toy Catalogue featuring the Bing Autoplan. Photographs provided and shared courtesy of the Spielzeug Museum in Germany.



An undated advertisement for Bing Brothers toy products, with a drawing of the Bing Autoplan. Image shared courtesy of the Spielzeugmuseum in Germany, and www.trixum.de.



that’s more than 100 years old, let alone a Bing Autoplan.

As of 2014, there were only four Bing Autoplans in existence. Check it out next time you’re in the area or view the Bing Autoplan on the National Model Aviation Museum’s Digital Collections at <https://modelaircraft.pastperfectonline.com> by searching for its name, or by its ID number, 2013.36.01.

Up Your Game
With Industry Leading Airframes And Accessories



AJ-AIRCRAFT.COM

Monday thru Friday 9am - 6pm EST (734) 244-4015

CLOVER CREEK



Senior TOC/ Freestyle Invitational 2019



*Once a competitor,
always a competitor:
Senior TOC pilots reunite*

By Jennifer Alderman
Photos by the author
jennifer@modelaircraft.org

Forty-five years ago, RC modeler Bill Bennett, owner of the Circus Circus Hotel and Casino in Las Vegas, had a vision to bring attention to model aviation. Along with *Model Airplane News* publisher, Walt Schroder, he formed the Tournament of Champions (TOC) competition, bringing 20 of the top US and international pilots to the North Las Vegas Model Airfield—later known as the Circus Circus RC Field and now as Bill Bennett Field—to challenge themselves and test their skills against one another. As Don Lowe noted in his February 1983 *Model Aviation* coverage of the event, “From the beginning, the driving desire was to create an event that would eventually emulate, in model form, the same spectacle of aerobatics as the manned full-scale aircraft flown by our brothers.”

CLOVER CREEK

Don went on to write, “Both aircraft and equipment used in the tournament represented the most advanced concepts in aircraft design, engine development, and accessories in use. The combination of an evolutionary change in aircraft requirements, patterns flown, and other competition rules has created a class of model aircraft that can be said truly representative of its full-scale counterpart.”

The competition was held annually from 1974 to 1978, biennially from 1980 to 1994 with a break in 1986, then annually again from 1996 to 2000. The TOC was skipped in 2001 and the last one was held in 2002, a couple of months before Bill passed away. It was the richest cash prize aeromodeling competition in the world, with the purse totaling more than \$180,000 in the last year that it was held. It drew thousands of spectators, and being invited to compete in the TOC was an honor.

The TOC was innovative in many ways, creating the pathway for other genres of model aviation and model aviation competition, including International Miniature Aircraft Association (IMAA) Giant Scale aircraft and International Miniature Aerobatic Club (IMAC) and 3D competition, as well as the advancement of technology and electronics such as radios and gyros.

Fast-forwarding approximately 42 or 43 years after that first competition, the thought of holding a TOC reunion at the International Aeromodeling Center in Muncie, Indiana, passed through the minds of AMA’s National Model Aviation Museum Director Michael Smith and Technical and Safety Director Tony Stillman. Their original idea was to hold a reunion of the TOC participants to reminisce about the events, airplanes, maneuvers, and how the model aircraft technology had advanced, as well as offer a chance to bring the memorabilia together that competitors had kept from those significant years.

Clover Creek Aerodrome in Toone, Tennessee, carried this thought a step further. The owner, John Schroder, who passed away in 2018, was the son of TOC founder Walt Schroder. John held an invitational Freestyle 3D competition every year opposite of the invitational Tucson Shootout—both of which followed the same basic maneuvers that started with the TOC.

At the same time that Michael and Tony were considering a reunion, before John’s death, he, Gil Major, and David Moser from Clover Creek began talking about holding a reunion, although John hesitated, stating that the TOC pilots would not come.

Gil said, “[John] slowly started wearing down, and in 2017, [we] kinda started talking about it ’cause we were thinking about our 2020 event, ’cause the deal was that Clover Creek would be in the even years and Tucson would be in the odd years.

“So we were talking about it and how we were going to do it and everything, and in 2018 we started talking

01, 02. Mike Klein prepares to take off during a Known maneuver flight. Chuck Edwards is his caller/spotter. Chuck loaned Mike the Carden Extra 300 Pro, which was built by his late father, Bob, for the contest. It featured stickers on both wing halves in memory and dedication to Bob and Mike’s brother, Matt. Mike competed in the 1992, 1994, and 1996 TOCs.

03. Although the weekend was hot and humid, the sky was blue and spirits were high with excitement, making it perfect for the Clover Creek Senior TOC and Freestyle Invitational contest, as well as a reunion of pilots!

04. Tyler McCormack leaves a smoke trail during his Freestyle flight. Tyler also competed in the 2016 Clover Creek Freestyle Invitational.



about it a little more, and then, of course, John passed, but then David and I started talking about it again later in ’18. So, the first part of February [2019], I get a text from David. ‘Have you seen Facebook?’ No. ‘Go to the Clover Creek page.’ Tina [John’s widow] has announced that 2019 Labor Day, we’re gonna do a TOC reunion at the event! I said, ‘Well, David, I guess we’re about a year behind!’”

Tina connected with Tony, who got the ball rolling and helped her with information about the TOC senior pilots, and she, Gil (as the contest director), and Skip Kixmiller (the flightline boss) ran with the idea of holding a Senior (50 years of age or older) TOC invitational contest/reunion at the same time as the Clover Creek Freestyle Invitational. Invitations were sent at the beginning of 2019 for the event, which would be held Labor Day weekend, August 29-September 1, 2019, at, as Gil called it, “our little slice of heaven.”

Twenty-one Senior TOC pilots were invited. Many, unfortunately, could not attend because of travel arrangements, health, work, or other reasons, but six pilots made their way to southwest Tennessee several days ahead of the event for a week of fun and flying, and to show the 15 invited “young guns” who would compete in the Freestyle portion of the event how it all started and what they could still do.

The flights for the Senior TOC Invitational would include preliminary rounds of Known maneuvers based on the Aresti system on Thursday, Friday, and Saturday. One Unknown round of maneuvers would be flown on the final day, Sunday, with two more rounds of Knowns before the winner was determined. Of note, the Unknowns that were used were those that were flown by TOC competitors in 1988.

Unlike the original TOC competitions, the Senior pilots did not fly Freestyle; that was instead left up to the younger pilots to fly choreographed flights to music. Rounds for the Senior and Freestyle portions

alternated to allow pilots and judges a chance to take a break from the hot, humid weather.

The Senior TOC Invitational pilots included Mark Radcliff, Don Szczur, Bill Cunningham, Mike McConville, Mike Klein, and Frank Noll. With those six pilots, all of the TOC competitions were represented. Mark was one of the first to participate when the TOC was sponsored by Circus Circus, and Don and Mike McConville participated in the last event when it was sponsored by the Sahara Hotel and Casino.

All of the Senior TOC pilots brought fantastic memorabilia in the form of programs, awards, photos, magazine articles, and clothes, including the famous pink Circus Circus silky jackets and the blue silky Sahara jackets. Don flew his original TOC airplane and he even still had and used his original stick airplane to practice the maneuvers!

Bill Cunningham reunited for only the second time in 31 years with his original caller/spotter, Rick Pellicciotti. The two had not flown together since 1997, until 2 years ago at the Red Flag contest in Lakeland, Florida.

These men had the time of their lives! The flying was just a small portion of the event. They had more fun reminiscing and hanging out with each other under the Aerodrome’s hangar eaves and their shade canopies than anything else. The laughs, talking, and smiles never stopped. Although some of these pilots have competed in more recent events and are still active in the model aviation hobby, others do not fly as often, but they all picked it up easily again—similar to riding a bicycle.

The Freestyle pilots seemed to enjoy having the Senior pilots there and might have even had a few history lessons about how the competition style that they all enjoy began. Many felt honored to be with those who started it all several decades ago, and the feelings were mutual. The Senior pilots were in awe of how far the hobby has come and the skill of these up-and-coming pilots.

The Freestyle pilots are fun to watch. Their style is different from their predecessors, who flew high in



ACCESS EXTRA DIGITAL CONTENT!

Check out bonus content—including photos, videos, and interviews—at www.ModelAviation.com/bonuscontent.

05. Adi Kochav, from Israel, was one of four international pilots invited to compete in the Freestyle portion of the contest. Adi was honored with the International Miniature Aerobatic Club (IMAC) President’s Award during the 2019 Nats in July at the International Aeromodeling Center in Muncie IN for his work with the international membership of the Special Interest Group, but he was not able to pick up the award until his visit to Clover Creek.

06. While the younger pilots were affectionally called the “Adderall” generation and the older pilots the “Geritol” generation, all came together and learned from each other throughout the event. Many were seen, as in this photo, sitting with each other to watch the competition and smiling and laughing.



CLOVER CREEK

07. The 2019 Clover Creek Senior TOC and Freestyle Invitational pilots (front, L-R): Senior TOC pilots Frank Noll, Mike McConville, Mark Radcliff, Don Szczur, Bill Cunningham, and Mike Klein. (Back, L-R): Freestyle pilots Miguel Alcala, Bryant Mack, Santiago Perez, Kal Reifsnnyder, Mel Lipkow, Adi Kochav, Will Jackson, Jacob Ramsey, JJ DeAngelo, Rhett Lambert, Tyler McCormick, Tom Edgecombe, Jase Dussia, Christopher Gini, and Spencer Nordquist.

08, 09. Don Szczur (R) shows the National Model Aviation Museum's director, Michael Smith, some of his memorabilia from the TOC contests he competed in. Don, who competed in the 2000 and 2002 TOCs, was the only Senior pilot in attendance to fly using his original TOC airplane (inset). He also used his original stick plane to practice the Aresti maneuvers.

the sky as they most likely did during TOC contests. Low rifle rolls, inverted and knife-edge passes, and hovering with smoke on low to the ground were the order of each day's Freestyle rounds, and all of the pilots brought their A games, upping their previous flights with each round to better their scores. There were a few mishaps, but other competitors offered backup airplanes and helped pilots get back in the air.

Because of generous donations and raffle prizes, the purse between the Senior TOC and Freestyle classes was \$10,000. Mike McConville was the Senior TOC Invitational top pilot and Jase Dussia won the Freestyle Invitational.

The Senior pilots all agreed that the flying portion was great and reignited their love of the hobby, but it was not the most important part of the event. "The Senior TOC reunion was the highlight of my year," Mike Klein said. "It rejuvenated my passion for flying RC. Most of all, the chance to reconnect with lifelong friends and make many new friends was so special. I cannot wait to do it again!"

Mike McConville felt that it might have been the best TOC he had ever participated in. "I was amazed at how well all of the Senior TOC guys flew. No one seems to have lost any skills. And meeting many of the young guns in Freestyle was a highlight. [They are] great kids with absolutely mind-blowing flying skills—all of them!"

Bill Cunningham felt blessed and honored to be a part of this significant event. "It was most humbling for a group to have remembered us, and then to have put together a reunion for us to fly at. Remembrances mean a lot! We had a great time back in the day. It was the most amount of effort of any modeling activity any of us were involved in, but the highest reward. I'm just awed [that] someone would want to put forth the effort to have us fly nowadays."

The Senior TOC was an amazing event in Mark's

opinion. "The best part for me was [that] it allowed me to fly with TOC competitors [whom] I had never flown with, and I enjoyed talking to and getting to know the new 3D young guns of today. I enjoyed answering their questions about the TOCs I had competed in."

All six of the reunion attendees hope more TOC pilots from yesteryear will take an active role in the next Senior TOC and Freestyle Invitational, which is scheduled to be at Clover Creek Aerodrome on September 3-6, 2020. Because of the 2019 Invitational, they have rejuvenated their interest in competing. Don stated that he has become more focused on competing and would like to see others participate and build the event into a larger reunion, while Mark felt that it forced him to practice aerobatic skills that he hadn't used in years, making him fly much better.

Several people asked Frank his thoughts about the event. "I'm sure we all feel the same about the experience, and would I do it again? [Heck] yeah! I tell them the same thing ... [it's] the most fun I've ever experienced at a competition. Getting to see and hang out with [everyone] was the highlight of my summer for sure.

"We as a group need to pressure the rest [of the Senior TOC pilots] to attend next year so they can see




07





what they missed. [I] can't wait to see all of you and do it again! 'In the box!'"

Many thanks go to Clover Creek Aerodrome, AMA, Tina, Gil, Skip, David, the volunteers, donors, and sponsors, for their hospitality and support in making this event happen and keeping the love of model aviation and competition going, no matter the generation! 



SPONSORS

Desert Aircraft
 PowerBox Systems Americas
 AJ Aircraft
 Academy of Model Aeronautics
 Horizon Hobby
 JTEC Radiowave
 JR Propo/Dee Force Aviation
 SewBusy Embroidery
 Hero RC Custom Charging Equipment
 Classic Awards and Engraving
 Holy Smokes Smoke Pumps
 Spektrum RC
 Loose Change Fabrications
 Tru-Turn Spinners
 FlightReviewz.com
Model Aviation
 FlyingGiants.com
 Discount Hobbies
 Budweiser
 Coca-Cola



CONTEST WINNERS

Freestyle

1. Jase Dussia
2. Spencer Nordquist
3. Kal Reifsnyder
4. Santiago Perez
5. Bryant Mack
6. JJ (Hedrick) DeAngelo
7. Christopher Gini

Senior

1. Mike McConville
2. Frank Noll
3. Don Szczur
4. Mike Klein
5. Bill Cunningham
6. Mark Radcliff

SOURCES:

Clover Creek Aerodrome

www.clovercreekaerodrome.net
www.facebook.com/CloverCreekAerodrome
www.facebook.com/events/2366178513613698/?active_tab=discussion

FlyingGiants.com: Clover Creek 2019 Senior TOC videos
<https://bit.ly/32iqYd>

FlyingGiants.com: Clover Creek 2019 Freestyle videos
<https://bit.ly/2NnU04b>

FlyingGiants.com: Clover Creek TOC/Freestyle scores
<https://bit.ly/2PUSdoD>

Clover Creek Senior TOC and Freestyle Invitational Flickr album

www.flickr.com/photos/modelaircraft/albums/72157711434531372

AMA Podcast, Episode 1: The Tournament of Champions
<https://bit.ly/2CoNt2B>

National Model Aviation Museum Blog: Tournament of Champions

<https://amablog.modelaircraft.org/amamuseum/tag/tournament-of-champions>

10. Bill Cunningham concentrates on his flight while Rick Pellicciotti calls his Unknown maneuvers on the final day of the competition. Bill and Rick reunited for only the second time in 31 years as pilot and caller from their TOC days in Las Vegas. Bill competed in six TOCs and was a two-time finalist.

11-13. Some of the TOC memorabilia that the Senior TOC pilots displayed at the Saturday night banquet dinner included jackets, shirts, programs, awards, stickers, pins, and photos from both the Circus Circus and Sahara-sponsored competitions. The pilots even wore their jackets during the cool mornings of the competition and hung shirts up on shade canopies for all to see.

AVIOS

MiG-17 FRESCO

Avios MiG-17 FRESCO 1200mm
SKU: 9306000383-0



Albatross HU-16

Avios Albatross HU-16 Flying Boat
1620mm (63.7") PNF
SKU: 9310000350-0



HobbyKing.com®

AVIOS



C-130 HERCULES

Avios C-130 Hercules Military Gray
1600mm (63") (PNF)
SKU: 9306000465-0

GRAND TUNDRA



Avios Grand Tundra - Green/Gold
1700mm (67") Sports Model (PNF)
SKU: 9499000262-0



SPITFIRE MkVb

Avios Spitfire MkVb Super Scale 1450mm
ETO Scheme Warbird (PNF) w/80A ESC
SKU: 9499000365-0

Visit www.hobbyking.com/modelaviation for more!

H-KING



FOKKER D.VII

H-King Fokker D.VII Biplane
925mm (36.4") (PNF)
SKU: 9419000020-0

SKIPPER

H-King Skipper All Terrain Airplane EPO
700mm (28") Orange (PNF)
SKU: 9215000136-0



Regional warehouses available



THE WORLD'S BIGGEST HOBBY SHOP

H-KING



H-King Flycat 70mm 12-Blade EDF Jet
1042mm (41") (PNF)
SKU: 9310000366-0



TL2000

H-King TL2000 EPO RC Plane 1160mm (45.7")
(PnF) w/Floats
SKU: 9152000018-0

BIXLER



H-King Bixler 1.1 EPO
1400mm Glider (PNF)
SKU: 9306000428-0



RADIO SYSTEM

ORX TX6i

Full Range 2.4GHz DSM2/DSMX compatible
6ch Radio System (Mode 2)
International Version
SKU: 9171001328-0

Turnigy 5X 5Ch Mini Transmitter
and Receiver (Mode 2)
SKU: 9331000003-0

TURNIGY 5X

ORX TX10i

Full Range 2.4GHz DSMX/DSM2 Compatible
10CH Radio System (Mode 2) International Version
SKU: 9171001401-0

TURNIGY Evolution PRO

Turnigy Evolution PRO
Digital AFHDS 2A Radio Control System
w/TGY-iA6C Receiver
SKU: 9171001386-0

SKU: 9345000002

TURNIGY

Rechargeable Battery AA
2550mAh NiMH
SKU: 9985000005-0

SKU: 9345000001

TURNIGY

Transmitter Bag / Carrying Case

T-SIX not included



HobbyKing.com®

THE WHOLE FPV PACKAGE

FPV GOGGLES CYCLOPS DIVERSITY

Quantum Cyclops Diversity
DVR FPV Goggle
SKU: 9171001337-0



FOXEEER

Foxeer Falkor 1200TVL
Mini/Full Size Camera 16:9/4:3
PAL/NTSC G-WDR 1.8mm (White)
SKU: 9740000140-0

IMMERSION RC

ImmersionRC Tramp HV
5.8GHz FPV Video Transmitter V2
(International version)
SKU: 277000091-0

PAGODA-3

Quantum Pagoda-3
Omnidirectional Antenna 5.8GHz
RHCP-SMA (2pcs)
SKU: 9171001377-0



Visit www.hobbyking.com/modelaviation for more!



TURNIGY power systems

Power on Demand **PANTHER** THE NEXT GENERATION IN PERFORMANCE



ZIPPY Compact 5000mAh
3S1P 20C Lipo Pack
SKU: 9067000450-0



Turnigy 3000mAh 3S 20C
Lipo Pack w/XT-60
SKU: 9067000248-0



Turnigy Graphene Panther
1600mAh 4S 75C Battery Pack
SKU: 9067000364-0

Nano-Tech **PLUS+**
HIGH DISCHARGE LIPO BATTERY



Rhino 2200mAh
3S 25C Lipo Pack w/XT60
SKU: 9952000024-0



Turnigy Nano-Tech 1300mAh 4S 70C
Lipo Pack w/XT60
SKU: 9210000263-0

Regional warehouses available



THE WORLD'S BIGGEST HOBBY SHOP

TURNIGY power systems

PLUSH-32 SERIES SPEED CONTROLLERS



ESC Programming Card
SKU: 9351000115-0



150A Speed Controller w/BEC
SKU: 9351000114-0



120A Speed Controller w/BEC
SKU: 9351000113-0



100A Speed Controller w/BEC
SKU: 9351000112-0



2830 920KV
SKU: 9192000242-0



3548 700KV
SKU: 9192000257-0



4250 350KV
SKU: SK3-4250-350





James Mills carries Matt Neumann's own-design Star Trek Enterprise airplane away from the flight circle. The top of the aircraft features the science fiction theme, while the bottom has an eye-catching phoenix.



*Western Kentucky/
Southern Illinois Stunt Champs*

ALLEN BRICKHAUS MEMORIAL

*Twenty-six years
of building memories*

By **Rachelle Haughn**
Photos by the author
rachelteh@modelaircraft.org

Those who have been in the hobby for at least a handful of years know that it is about much more than building and flying.

The cofounder of a 26-year-old Control Line (CL) Precision Aerobatics (Stunt) contest, Allen Brickhaus, knew that truth. For him, aeromodeling was about making memories. That was his goal when he and fellow modeler Charlie Reeves launched the event in St. Louis in 1993.

01. The Adam's Special is an Allen Brickhaus design. This one was also built by Allen.

02. Western Kentucky/Southern Illinois Stunt Champs Allen Brickhaus Memorial judges Lou Rankin (L) and Zuriel Armstrong (R) present Charlie Reeves with a wing signed by all of the pilots.



By the time the 2019 event rolled around, attendees of the Western Kentucky/Southern Illinois Stunt Champs Allen Brickhaus Memorial had plenty of memories to share. Some were happy, some sad, and some were funny. Many of their memories revolved around Allen—whether it was his larger-than-life personality, his love of great food, or his faith.

After the August 17-18, 2019, contest concluded, it too would be just a memory. Because of health problems, Charlie and co-contest director (CD) Jim Lynch made the tough decision that the contest had to end.

“It’s not something that we want to do, it’s just that we don’t have a choice,” Jim said after the first day of the contest. A few attendees heard the news through the grapevine before arriving at McCracken County Model Air Park, in Paducah, Kentucky, and came armed with mementos to share, while others learned the news on the first day of the event.

The decision to end the contest clearly wasn’t an easy one for Charlie and Jim, but that didn’t stop them and 26 pilots from having fun and enjoying quality time with their friends.

“Oh man, I just get here, and they close it ... because nobody can stand me,” pilot Joe Pederson joked. This was his second year attending the contest.

The Lutheran pastor from Missouri could only attend the first day because he had to preach on Sunday. “I came back [this year] because this is the best fun I’ve ever been to—and we fly airplanes sometimes.” Joe added, “I’m congratulating myself for not destroying my model.”

Like Joe, Allen, who passed away in 2013, was a devout Lutheran. On the Sunday morning of the contest each year, he read a devotion to the pilots shortly before flying commenced for the day. Since his death, Jim has given the devotion each year to honor his friend.

Charlie reflected on how and why the Western Kentucky/Southern Illinois Stunt Champs was founded.

“[Allen] needed a co-CD, so I fell right in with him.” Charlie shared that the inaugural contest was held in St. Louis because “Allen had good contacts in the Stunt community and had contacts in St. Louis and they allowed us to have it there.”

He added that they decided to create the contest “because we both flew Stunt and we enjoyed it. We [thought] everybody should fly it.” Charlie has served as the contest’s co-CD since its first year. The largest group of pilots that the event attracted was 45.

The 1994 contest was held in Metropolis, Kentucky, and later moved to Barkley Regional Airport in Paducah. The final 10 years of the gathering took place at McCracken County Model Air Park, the home of the Paducah Aero Modelers club, of which Charlie is a member.

In 2015, Allen Brickhaus Memorial was added to the contest’s name.

“Any time I wanted to fly, I’d call Allen,” Charlie said of his late friend. “We’d get together and fly and go eat something.”

“Allen was a great guy, a good guy,” said Dan McEntee of Missouri. “We miss him a lot.” Although Dan had some serious things to say, his red KidVenture hat with a propeller, windsock, and tail stated otherwise. He explained that he wears the hat when he volunteers at EAA’s AirVenture in the KidVenture area. Dan flew frequently throughout the Paducah contest and pitted for other pilots. He competed in the Expert class.

Two steps below the Expert class was the Intermediate class. Pilot LeRoy Polk, who has come to the Paducah event for roughly six years, competed in that class. “It’s a hobby that’s been good to share with other people,” he said about aeromodeling. “Every time we get together, I learn something new from somebody.” He added that the people are what have brought him back to the event each year.



Matt Neumann, of Vincennes, Indiana, has been coming to the contest for twice as long as LeRoy. He stopped to chat shortly after flying his original-design Star Trek Enterprise airplane with a large phoenix on its underside.

He first met Allen at the AMA Nats, where Allen served as the *NatsNews* reporter for CL Stunt for many years. Matt added that Allen invited him to his contest approximately 15 years ago.

When asked how he felt about the contest ending, Matt said, “I’m gonna miss it, considering there aren’t a lot of contests in my region.”

LeRoy felt the same way. “I’m gonna miss it. I found a good one in Canton, Georgia, but it will never replace this one. We all go to a barbecue place [in Georgia], but it’s not like going to Charlie’s house” for a cookout the night before the contest begins. Allen’s wife, Kathy, was at the cookout this year.

The feasting didn’t stop after Friday night. Members of the Paducah Aero Modelers cooked hamburgers, hot dogs, and other treats to make sure the pilots were well fed throughout both days of the contest.

Like a hearty meal, sometimes good things come to an end. But often, closing a chapter of one’s life means a new chapter is just beginning. When asked about their plans for the future now that they no longer have the annual Paducah contest to run, Jim and Charlie had interesting responses.

Jim, a member of the Millington Barnstormers R/C Club of Tennessee, has been competing in CL Stunt since 1968. “I plan to pretty much retire from the contest scene,” he stated.

Although one aspect of his hobby is slowing down for him, another is picking up steam. “I’m going to work hard for the Millington Barnstormers.” His plans include teaching others to fly, staying active



03




**ACCESS
ADDITIONAL
CONTENT!**

Check out bonus content at www.ModelAviation.com/bonuscontent.

03. Mike Londke performs aerobatics with his SV-22 while competing in the Advanced Stunt class. He finished first and Ben Mills was second.

in his club, and helping his 7-year-old grandson grow in the hobby.

Charlie said he planned to continue competing, traveling, and spending time with family and friends. “I’ve got a contest in Huntersville, North Carolina, in October [2019]. I have a daughter in Savannah that’s a veterinary dentist. I’m going to take her out to eat and then go to Tom Luper’s house and fly.”

During the awards ceremony, Charlie was presented with a wing that was signed by all of the pilots in attendance. 

04



04. (L-R): Tom Luper helps Joe Pederson get ready to fly in the Beginner Stunt class.

05. Young pilot Ben Mills launches an Adam's Special for Dan McEntee.

06. Ronnie Thompson (L) gives Jim Lynch a goodbye hug at the end of the contest.

07. Tom Dixon flies his Stylus airplane low for the judges.

08. Wes Eakin prepares to land his SV-23 Katana. He competed in the Expert class and Old-Time Stunt.



06



07



08

05



CONTEST WINNERS

Beginner Stunt: Joe Pederson

Intermediate Stunt: LeRoy Polk, first; Charles Fowler, second; Sam Londke, third

Advanced Stunt: Mike Londke, first; Ben Mills, second

Expert Stunt: Don Cranfill, first; Matt Neumann, second; Mark Hughes, third

Profile Stunt: Tom Luper, first; Dan McEntee, second; LeRoy Polk, third

Nostalgia 30 Stunt: Don Cranfill, first; Tom Dixon, second; John Simpson, third

Old-Time Stunt: Don Cranfill, first; Wes Eakin, second; Tom Luper, third

Best Warbird PAMPA Flight: LeRoy Polk

Best Old-Time Stunt Model: Don Cranfill

Best Nostalgia 30 Model: Tom Dixon

Pilots' Choice: Jim Lee

High Point Pilot: Don Cranfill

SOURCES:

Paducah Aero Modelers
paducahaeromodelers.com

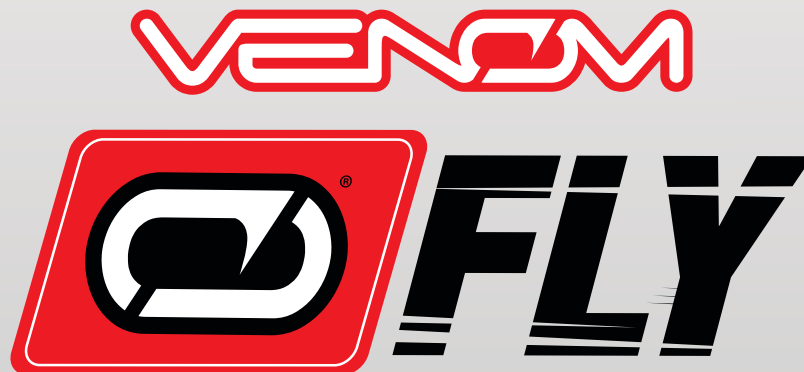
Precision Aerobatics Model Pilots Association (PAMPA)
www.pampacl.org



PRO 4 60W 6A LIPO/LIHV & NIMH CHARGER

30C 2200 4S GRAPHENE POWER

THE PERFECT COMBINATION



We value our customers and their decisions to invest in our quality proven products. Our Limited Lifetime Warranty is second to none! If a problem occurs we've got your back! Experience good ol' fashion USA customer service the way it was meant to be.

WWW.VENOMPOWER.COM | (800) 705-0620



**LEADING
THE CHARGE**

HITEC

MIGHT OF THE MINI

WHO EVER SAID A STRONG PERFORMANCE
CAN'T COME IN A SMALL PACKAGE!

RDX1 *Mini*

AC BALANCE CHARGER/DISCHARGER

Our RDX1 Mini is the sleek, portable, 65-watt power-packed battery charger you've been waiting for. Storing up to 10 battery profiles with a maximum 6-amp charge rate and 2-amp discharge rate, this mini charger brings the reliability required to keep all your battery chemistries locked and loaded when you need them the most.

- STORES 10 DIFFERENT BATTERY MEMORY CHARGE/DISCHARGE PROFILES
- USER-FRIENDLY LCD INTERFACE
- TERMINAL VOLTAGE CONTROL

LiPo
2-4 cell

LiHV
2-4 cell

LiFe
2-4 cell

Lilon
2-4 cell

NiMH
6-8 cell

NiCd
6-8 cell

PB
6-12V

PRECISION MACHINING

without

PRECISION MACHINES

*Basic shop tools to
the rescue*

By Jim Ryan
Photos by the author
jimryanaircraft@gmail.com

As modelers, we occasionally find ourselves needing to do precision machine work, but we lack the tools normally required. However, a little ingenuity and forethought can enable us to achieve accurate results with only basic shop tools.

PRECISION MACHINING WITHOUT PRECISION MACHINES

01. These are the materials and tools for this particular project. I've made copies of the relevant section of the plans, and have heavy-wall 3/8-inch aluminum tube, 3/16-inch aluminum rod, and a 2-inch long 6-32 socket-head cap screw for the control arm. Blocks of medium-density fiberboard (MDF) will be used to hold and locate the aluminum tube during the drilling operations. I also recommend (although it isn't absolutely required) a set of inexpensive digital calipers and a small machinist's rule.

02. I first cut the 3/8-inch tube to the precise length that I needed. Lacking a metal lathe, I cut the tube by spinning it in reverse with my cordless drill (so that the two tools are running in opposite directions) while I cut it with a reinforced cutoff wheel in my Dremel tool. This made it easy to get a square cut without the cutoff wheel catching in its kerf. I cut the tube slightly long then carefully ground it down, checking often with the digital calipers, until I reached the precise 5.5-inch finished length. This is how to cut precision lengths with only a couple of basic hand tools. Be sure to wear approved eye protection during this and all machine operations.

03. I'm drilling 3/8-inch holes in the MDF blocks. Be sure to set the height of your table so that you can bore the 3/8-inch hole with the blocks lying flat and the smaller holes with the blocks up on edge. You don't want to move the table at any point in the drilling operations.


A long piece of poplar is clamped to the table to set the Y-axis of my drilling operation, and the small block of scrap MDF sets the Z-axis. I always use MDF for temporary fixtures. It's cheap, dense, machines easily, and has no grain structure to interfere with accuracy. I like to cut 2-inch square blocks on my table saw, but they don't even need to be precisely the same size, as long as they each have one true 90° corner.

A friend of mine was building an Aviation Concepts 1/5-scale PT-19, and he was having difficulty fabricating the elevator joiner assembly. He'd made a couple of attempts but had been unable to make a part precise enough for his needs.

I offered to make the parts for him to show what's possible with basic shop tools. Although this project is particular to a specific model, the same processes can be used for any number of machining operations, such as fabricating custom rotor shafts for helicopters or machining scale landing gear struts.

The main stumbling of this project was drilling perfectly centered holes in the

3/8-inch aluminum tube that makes up the body of the elevator joiner. The generally accepted fixture for drilling centered transverse holes in round stock is a V-block, but I've always felt that V-blocks are a poor choice for a number of reasons. It's difficult to clamp a V-block to the drill press table perfectly centered relative to the chuck, and the work piece isn't positively locked in place. Perhaps worst of all, a thin drill bit can walk a little before it starts to cut into the surface.

The technique I'm sharing enables anyone with a drill press to drill perfectly centered holes every time, whether it's in aluminum or even hardened steel. 





03

04. Here's where the magic happens. Because all of the holes are bored through the MDF blocks while they're pressed against the fence, their centerlines will always precisely intersect. Also, the MDF prevents the drill bit from walking as it starts to drill into the tube. The result is that the holes in the tube will be perfectly centered. Note that before boring the holes, I marked each block with an arrow so that they'd all have the same edge on the table and the same edge against the fence.



04

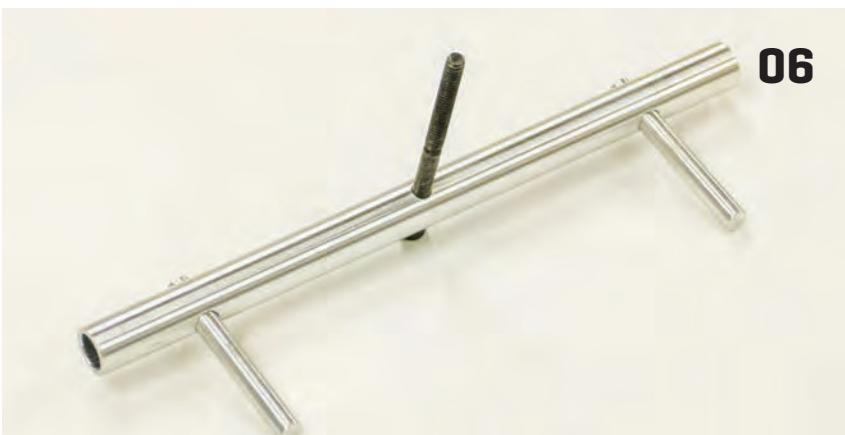
The 3/8-inch tube should fit snugly in the guide blocks. Because this project required the middle hole for the 6-32 socket head to be 80° relative to the 3/16-inch aluminum dowels, I scribed a line on the tube and spray mounted an 80° angle template to the end block. (Regular glue would work as well.) I've clamped a stop block on the table to locate the tube's precise midpoint for drilling the first hole.



05

05. After drilling the 9/64-inch midpoint hole, the tube was carefully rotated 80° using the end template as a guide. Because the two dowel holes were both 1.91 inch from the midpoint, I locked my calipers at the distance between the stop block and the first guide block, zeroed the display, then opened them to 1.910 and locked them again.

The calipers could then be used to move the drilling setup the prescribed distance. After drilling the first dowel hole, a piece of 3/16-inch aluminum rod was inserted into the hole to lock the tube in place while the second hole was drilled, also using the locked calipers for location.



06

During the drilling operations, it's critical that you hold the blocks hard up against the Y-axis fence. For harder material, such as a hardened steel rotor shaft, I clamp the blocks sandwiched between a second piece of poplar. This isn't necessary for aluminum. After drilling down to the tube, I always dribble in a little light oil as cutting fluid before drilling through the tube.

06. Here's the finished assembly. I polished the parts by mounting them on my trusty cordless drill and wet-sanding them with 400-grit sandpaper. The finished assembly has the 3/16-inch dowels perfectly parallel, and all lengthwise hole locations are correct to plus-.005 tolerance. The same general techniques can be used on any number of precision-machining operations. Who needs a lathe or vertical mill when you have a drill press and some MDF?



Dreaming of living in a community with it's own R/C Field?

WAKE UP!

On Top of the World Communities in Ocala, FL offers a lifestyle beyond compare for the flying enthusiast.

Actual photo of facility.

TAKE A TEST FLIGHT WITH A WORLD TOUR ADVENTURE, 3 DAYS & 2 NIGHTS

FOR JUST \$149*



- Private Radio-Controlled Flying Field, Drone Course & Race Car Track
- 4 Fitness Centers plus Tennis, Pickleball & Bocce
- Indoor & Outdoor Pools • 3 Golf Courses
- Dog Parks • Restaurants • Lifelong Learning Center

Our R/C Club has Taken Off! Over 150 Modelers are Living their Dream Right Now!

Maintenance-Free, Single-Family & Luxury Estate Homes from the \$170s to the \$400s

Call today to book your World Tour 866.228.5878 | OnTopoftheWorld.com



*At least one guest must be 55 years of age or older to participate in our World Tour Adventure. All guests must be at least 18 years of age. A tour with one of our knowledgeable Sales Associates is required. Accommodations are limited and available on a first come, first served basis. A 3 Day/ 2 Night World Tour is \$149.00; rates subject to sales tax. Must qualify to be eligible for World Tour. On Top of the World Communities reserves the right to change or withdraw any offer at any time. Prices, features and specifications are subject to change without notice. On Top of the World Communities LLC, Ocala, Florida a 55+ community.



The P-39 is quite fast and aerobatic. It really comes alive with a four-cell LiPo battery.



WATCH A VIDEO!

Access additional content by visiting www.ModelAviation.com/bonuscontent.

UNCOMMON WARBIIRD IS AS MUCH FUN AS THE WELL-KNOWN FIGHTERS

Horizon Hobby E-flite P-39 Airacobra 1.2m BNF Basic With AS3X and SAFE Select

By Terry Dunn | terrydunn74@gmail.com
Photos by the author

THE BELL P-39 was an innovative airplane. It featured a mid-mounted Allison V-12 engine, tricycle landing gear, and a cannon in the nose. Despite these novel features, the Airacobra had a rather unenviable reputation among US pilots during World War II. A popular rhyme of the period sums up their collective antagonism toward Bell's curvy little fighter:

*Don't give me a P-39.
The engine is mounted behind.
It'll tumble and spin,
And soon auger in.
Don't give me a P-39.*

This airplane, however, was no flop. Nearly 5,000 P-39s were used by the Red Air Force, where it engaged primarily in low-altitude dogfights over the Eastern Front. Russian pilots in the Kobrushka (Little Cobra) racked up an impressive record against the best of the German Luftwaffe.

Compared with its peers, such as the P-51 Mustang and F4U Corsair, there have been relatively few P-39 RC models throughout the years. I've always liked the Airacobra's looks, so I was excited by the recent release of E-flite's P-39.

About the E-flite P-39

E-flite's Airacobra is an electric-powered airplane

REVIEW



E-flite's P-39 is largely preassembled and contains many scalelike accents.

made of molded foam components. It is available as a BNF Basic or Plug-N-Play (PNP) package. Both variants include pre-painted airframe components with electric retracts, preinstalled servos, and a brushless power system. The primary difference is that the BNF Basic version adds a Spektrum receiver with SAFE Select stabilization. (I've covered the features of SAFE Select in other reviews.)

As I examined the kit, I was pleasantly surprised by the effort that was made to stay true to the full-scale Airacobra. First of all, this model's profile replicates the distinctive shape of the P-39 well. Other details are more subtle, but equally appreciated.

Take the landing gear, for instance—not only do the struts and wheels have several scale accents, the gear's geometry puts the airplane in the correct stance.

Other notable features include split flaps, a scale three-blade propeller, and a removable drop tank. That's quite a lot to pack into an airplane with only a 47.3-inch wingspan. The overall effect is quite impressive.

Assembling the P-39

As you would expect, most of the airplane is factory assembled. There is little left for you to do after the components have been unboxed. Most of the steps posed no problems, but I did encounter a couple of minor hiccups.

My initial hurdle popped up in the first step. After screwing the horizontal stabilizers into place, I noticed that the elevator pushrod could not be connected as instructed in the manual. The pushrod uses a Z-bend at the servo and a nylon clevis on the control horn. Even with the clevis threaded completely down, the pushrod was too long. I fixed this issue by removing approximately 19 mm (.75 inch) from the servo end of the pushrod and adding a new Z-bend.

Although I truly appreciate the scale three-blade propeller and accompanying spinner with a faux cannon barrel, my spinner did not run true. Additionally, there was too large of a gap between the spinner and the airplane's nose.

I traced the source of both issues to the spinner backplate. The plastic boss that

engages with the motor was not quite flat. I sanded the boss even with the outer rim of the backplate using a 150-grit sanding block. This had the dual benefit of making the boss shorter and level. The spinner now sits correctly and runs through the entire throttle range with no wobbling or vibration.

Between the aileron servos, flap servos, and main wheel retracts, there are three servo leads coming from the wing into the fuselage, but there are no dangling pigtails to manage! The leads are all integrated into a harness that is hard-mounted to the wing. This harness automatically mates with its partner in the wing saddle of the fuselage when you bolt the wing into place. The system works really well.

I thought the loose nest of wires around the receiver was too messy, so I spent a few minutes tidying the area by bundling the wires with zip ties. I also taped the motor leads to the side of the radio bay to prevent them from interfering with the sliding battery tray.

This review covers the BNF version of the P-39. I linked my Spektrum iX12



This built-in harness automatically connects the wing servos and retracts when the wing is mated to the fuselage.



The elevator pushrod was too long and had to be shortened to work correctly.

The tricycle gear with the steerable nose wheel worked very well. I had absolutely no trouble with the model's ground handling.

I started off with the four-cell LiPo battery because it's always nice to have a little extra power when you're testing a new model. And boy does this thing have extra power! The pull is there to jump off the ground quickly if you want to, but the Airacobra really shines with a smooth application of power and an extended takeoff roll.

After it is airborne, you can retract the gear, and the P-39 quickly builds speed. I was surprised by how fast this model can fly. It's no pylon racer, but it can cover the field in a hurry. It even moves at a nice clip with partial throttle settings.

The stock control settings fit my flying style. High-rate ailerons provide crisp rolls that

start and stop in an instant. Low rates make the maneuvers more realistic but full aerobatic capabilities remain.

transmitter to the included AR636 receiver and configured the model profile as indicated in the manual. No other radio setup efforts were necessary. A great thing about the P-39's power system is that it can use three-cell or four-cell LiPo batteries without having to change the propeller. I used four-cell 2,200 mAh 40C batteries by Kinexsis, as well as three-cell 2,200 mAh 30C batteries from E-flite. The model balanced with either battery in the suggested location. No ballast was required.

My static testing of the power system with a three-cell LiPo battery yielded a respectable 401 watts of power at 37.6 amps. Not bad. Stepping up to a four-cell battery boosted the power output to a whopping 781 watts at 55.9 amps. That kind of juice would really get the Airacobra moving! The 40-amp rating of the included ESC, however, did give me some cause for concern. I am happy to report that the ESC worked perfectly throughout my testing and continues to do so.

Flying the P-39

My initial flights with the P-39 took place at a field with a hard-packed grass runway.

start and stop in an instant. Low rates make the maneuvers more realistic but full aerobatic capabilities remain.

Loops and vertical maneuvers can be high when using a four-cell LiPo battery. The Airacobra just keeps on climbing! It's enough to make any full-scale P-39 olive drab with envy.

My favorite maneuver with this model is knife-edge flight. The P-39 looks great zooming across the field with the wing halves vertical. It really locks in and holds position with no coupling.

When using the four-cell LiPo battery, I find that I often fly at 1/2 to 3/4 throttle with only periodic bursts of full power. That gives me more than enough excitement. I set my timer to 5 minutes with the goal of being on the ground as it hits zero.

Flying with the three-cell LiPo shows a different side of the P-39. It is capable of most of the same maneuvers—it just does them more sedately. The model is still fun to fly and it performs well, yet there is no denying that dropping to three cells takes away much of the zest in the Airacobra's flight envelope. Most pilots will be happiest sticking with the four-cell LiPo battery. After all, you can always throttle back, but



At A Glance



Specifications

Type: Sport scale electric warbird

Wingspan: 47.3 inches

Wing area: 420 square inches

Length: 43.3 inches

Radio: Spektrum iX12 2.4 GHz transmitter; Spektrum AR636A receiver (included); seven Spektrum A330 submicro servos (included)

Components needed to complete:

Six-plus-channel DSM2/DSMX transmitter; three-cell or four-cell 2,200 mAh 30-plus C LiPo battery; charger

Minimum flying area: Club field

Power system: BL15 850 Kv brushless motor (included); E-flite 40-amp ESC (included); Kinexsis 4S 2,200 mAh 40C LED LiPo battery or E-flite 3S 2,200 30C LiPo battery

Power output (four-cell): 55.9 amps; 781 watts; 280 watts per pound

Power output (three-cell): 37.6 amps; 401 watts; 109 watts per pound

Flying weight: 60.9 ounces (four-cell); 59.1 ounces (three-cell)

Wing loading: 20.9 ounces per square foot (four-cell); 20.3 ounces per square foot (three-cell)

Flight time: 4 to 5 minutes

Price: \$279.99 BNF Basic; \$249.99 PNP



Pluses

- Speedy, aerobatic flight performance.
- Great scalelike profile and details.
- Effective flaps.



Minuses

- Incorrect elevator pushrod.
- Wobbly spinner.



Manufacturer/Distributor

Horizon Hobby/E-flite

(800) 338-4639

www.e-fliterc.com


REVIEW

the stick only moves so far forward!

The suggested center of gravity (CG) location is conservative. No power and full elevator produces only a mush with no wing drop. I've begun easing the CG rearward on my model and I enjoy the added maneuverability.

The P-39 is easy to land. If the wind is blowing, I keep the flaps up and come in clean. Calmer days call for half flaps or full flaps. There is little change in pitch trim when the flaps come down, so it's easy to manage. Just be sure to carry some throttle all the way to touchdown if you use flaps.

Final Approach

The legacy of the full-scale P-39 is a split decision. Some say the airplane was a dog, while others point to its success in Russian hands. I think that opinions of the E-flite Airacobra will be more one-sided. If you work your way through the minor assembly snags, you will be rewarded with a model that looks good and performs well in the air. 

SOURCES:

Spektrum

(800) 338-4639

www.spektrumrc.com



The scalelike, three-blade propeller and spinner are nice touches. They worked well after a slight modification to the spinner backplate.



The unique profile and stance of the Airacobra are accurately captured with this model.



Even without armament, this aircraft looks mean—in the best way possible!



WATCH A VIDEO!

Access additional content by visiting www.ModelAviation.com/bonuscontent.

INCREASED SCALE DETAILING WITHOUT ADDED COMPLEXITY

Horizon Hobby E-flite F-4 Phantom II 80mm EDF BNF Basic

By Kyle Jaracz | kylej@modelaircraft.org
Photos by Matt Ruddick and the author

I'M DOING MY BEST to remain impartial as I'm writing this review of the E-flite F-4 Phantom II. I'm resisting the impulse to travel down memory lane, but I can't avoid looking down the street! The F-4 is an absolutely stunning aircraft. I remember sitting at air shows as a kid watching the F-4 bludgeon the skies.

I recall flight film from the hours of documentaries and descriptions of the missions flown that I've watched—the raw power, mean stance, the presence in the air, the teamwork between the two crew members (pilot and weapons system officer [WSO]), as well as every crewmember who kept this aircraft in top shape and ready for the next call to action action—I'm definitely not biased.

Fortunately, for my journalistic ethics, I can say that this model is a thing of beauty that exceeded my expectations on the ground and in the air. Look

at the lines on this airframe! The decals are pre-installed and the livery of the USS *Coral Sea* Screaming Eagles squadron really stands out in a great way. The easily removable ordnance also looks great.

E-flite has described this as its most detailed foam model to date, and it shows. Panel lines and decals were accurately placed, and the addition of the light package helps both the scale aspect and the flight orientation in the early morning hours or at dusk.

Assembly

Before you get into the air, you'll need to assemble the F-4. This model goes together in roughly 40 minutes! In the box are seven screws and an Allen wrench, and that's all you will need. Be sure to begin charging a battery or two when you start

REVIEW



The battery bay is snug but can accommodate a wide range of batteries.

the process of unboxing. By the time they're charged, you will be ready to taxi out and take off.

The only hiccup I encountered in the build process was a defect in one of the screws (the head was filled in). Fortunately, I had a few spare screws, so I grabbed one and was ready to go. It's such a slight thing that I hate to mention it, but if I hadn't had another screw, I'd have been grounded.

I'd love to have seen E-flite include a spare screw or two, although my experience with Horizon Hobby's customer service has been good. I'm certain that if I had called for a replacement, it would have been mailed promptly.

The landing gear are robust, but the front gear door is fragile. I don't think that it's a problem but be mindful when handling the aircraft. The timed landing light on the front gear is a great addition.

One other detail that many will notice is the lack of a WSO. If you'd like to place a WSO into the back seat, you'll need to order a bust from Horizon Hobby (part number EFL7991) for \$7.99.

If you have access to a 3D printer you can find files online to produce a figure as well. The access hatch to add that figure in is located on the underside of the canopy so it's painless to add one.

Powering the F-4

I primarily flew this aircraft with a 6S 5,000 mAh 40C Kinexsis F-Tek LiPo battery pack. This pack did a great job in both the weight category and the fit within the fuselage. Using this battery, I was able to push flight times to 6 minutes while flying conservatively. Realistic flight times are roughly 5 minutes. This



The F-4 looks great on a half-flap slow pass, full ordnance, and ready to rock!

battery weighs 694 grams.

To get the suggested center of gravity (CG), I placed this battery far forward in the tray. Although the battery fits into the tray fine, you'll need some sort of a tool to wrangle the battery straps. They're slightly shorter than I'd prefer. You can easily change out the straps or add an extension, but I found that tying a string to each end made it much easier to place the battery and access the straps to secure it.

I've heard that some pilots have had success using 6S 7,000 mAh LiPo batteries and, judging by the room in the battery compartment, that should be doable. In theory, that could push the flight times to approximately 7 or 8 minutes. I haven't had a chance to test a battery of that size, so do your own research before trying it out!

When you decide to slow down and make a low approach and pass, the flaps do an excellent job of providing lift. Those slow passes are great training for the upcoming landing, so spend some time understanding how this airframe will react at slower speeds.

I also tried a Spektrum Smart 6S 3,200 mAh LiPo battery that I had available, although it was smaller than the manufacturer's recommended size range. My flight times were significantly reduced, and the CG was off because the smaller battery was nearly 200 grams lighter. I don't recommend this size because unless additional weight is added to the nose of the aircraft, it will be tail-heavy.

Flying

Before the maiden flight, I took the time to check the control throws against the recommendations that are helpfully placed in the manual. I had some extra elevator throw but I figured that more is usually better (not always) and left it where it was. Taxi and ground handling were a breeze. The airframe's wide stance made sure that turns, even at some speed, were safe and comfortable.

The aircraft reached flight speed within 50 feet on the asphalt runway and leaped

into the air. I brought up the gear and returned the flaps to neutral from my partial takeoff flaps setting, and the aircraft gracefully climbed away. I checked my trim and ended up adding some aileron and elevator then allowed the AS3X to recognize the input while it flew steadily on and away.

Upon banking right and pulling back on the elevator, I was surprised by a sudden roll and pitch forward. The airframe acted as though it was tip-stalling at speed for some reason. I remembered the "more is better" assumption that I had made earlier regarding the elevator throw. For the rest of the maiden flight, I was gentle on the elevator input and the F-4 responded predictably. While the battery charged for the next flight, I returned the throws to the recommended values and put

the aircraft back into the sky.

This time, there were no ill effects when utilizing the elevator to the full extent of its recommended throws. This aircraft isn't a speed demon by any means, but the 80 mm electric ducted-fan (EDF) motor provides enough thrust to perform larger maneuvers with relative ease. I generally fly with the ordnance included, but it causes increased deceleration when you reduce throttle.

Top speeds aren't quite as great as without the scale armament, but it looks so good in the air that I don't mind. After some trial and error, I found that 13% up-elevator mix in the trim works great with full flaps, keeping the pitch consistent as you apply the full flaps for landing. I added in 2% elevator for the takeoff flap setting, which functioned very well for me.

I also chose to add three rate settings, and typically fly on the middle setting. This allows me to have a decent amount of input options while also being able to



At A Glance



Specifications

Type: EDF jet
Weight: 6.32 to 6.62 pounds
Length: 53.7 inches
Wingspan: 35.8 inches
Airfoil shape: Semisymmetrical
Material: EPO foam
Power system: 3270-2000 Kv motor (installed); 100-amp ESC (installed); 12-blade 80 mm EDF (installed)
Battery: 6S 4,000 to 5,000 mAh LiPo flight battery with EC5 connector
Price: \$449.99 BNF; \$419.99 PNP



Pluses

- Highly detailed foam model with factory-applied decals.
- Flaps included.
- Robust landing gear.



Minus

- No spare hardware and shorter battery straps.



Distributor/Manufacturer

Horizon Hobby/E-flite
 (800) 338-4639
www.horizonhobby.com

fly in a scalelike manner more easily. Settings for high and low rates are included in the manual, and that's a great starting point.

I used my DX6e transmitter to fly this aircraft and didn't utilize the Safe Select feature; however, if you are a newer pilot or simply want to have all of the safety features enabled or on a switch, you can do so by matching your transmitter to the settings illustrated in the manual, depending on which feature set and channel availability you desire and have.

When you decide to slow down and make

REVIEW



The F-4 on final approach displays its scalelike Screaming Eagles squadron markings.

a low approach and pass, the flaps do an excellent job of providing lift. Those slow passes are great training for the upcoming landing, so spend some time understanding how this airframe will react at slower speeds. As with any EDF, you'll need to anticipate what your aircraft will do next and apply the correct throttle inputs to ensure success. This is often referred to as "flying ahead" of the aircraft and generally relates to anticipating when you will need to speed up and apply the throttle before the aircraft needs the speed.

Landings with the flaps are smooth and

predictable. The large elevator surface enables you to have some semblance of control even at lower speeds, but after you are locked into a degrading glide with a slight pitch upward, use throttle to adjust the altitude and bring it down as required.


I took off and landed on an asphalt runway, but with EDF power on short grass, I'm sure you can take off and land easily on a grass runway. If you would like to see the handling characteristics for yourself, several videos are online that show grass landings and takeoffs.

Take a look at Pilot Ryan Media's observations on taking off and landing his F-4 on fairly rough grass. I'd take off and land on a hard surface if you have it

available! Admittedly, I'm in love with this aircraft and I haven't taken off or landed in the grass.

Conclusion

Is this a beginner's EDF airframe? I would say no. Flying the E-flite F-4 Phantom II isn't as scary as some would have you believe, but if you do make a mistake, things can go wrong in a hurry. The relatively narrow wing surface doesn't lend itself to self-correction as much as other aircraft on the market.

I would recommend it as a second or third EDF for someone with a bit of experience without hesitation. Get your hands on this aircraft! 

SOURCES:

Pilot Ryan Media

www.youtube.com/watch?v=t3K2xRzrOzQ



The lights and ordnance really make this model stand out.



Maxford's vintage-themed models look extremely authentic when they are in the air, although pilots will probably want to spring for the available optional pilot figures to more capably create a convincing scalelike profile.



WATCH A VIDEO!

Access additional content by visiting www.ModelAviation.com/bonuscontent.

EXPERIENCE EARLY AVIATION WITH FULLY FUNCTIONING WING WARPING

Maxford USA 1/9 Rumpler Taube EP 64-Inch ARF

By **Jon Barnes** | barnesjonr@yahoo.com
 Photos by the author

THERE IS NO DENYING the logic behind man's eager efforts to take to the sky in a flying machine. Engineers of the early 20th century understandably attempted to mimic the methods used by birds to change direction and altitude. At least one early effort to imitate the eminently flexible tail and wing feathers of a bird can be seen in a monoplane known as the Taube.

This airplane uniquely utilized warping on its wing and horizontal stabilizer to achieve roll and pitch changes. The only axis to utilize hinged control

surfaces, which would in the future become the standard for almost all aircraft, was the yaw axis.

Designed by Igo Etrich in 1909, the Taube first flew in 1910. It would become the first mass-produced aircraft in Germany, and go on to be used for military purposes by several of the nations that were embroiled in World War I.

Although Maxford USA has christened its 1/9-scale model the Rumpler Taube, the annals of history bear out that the original version was referred to as

the Etrich Taube. Why the seeming disparity? It is primarily because, with no licensing fees, at least 14 companies built variations of the initial design. The two-seat Rumpler Taube ultimately proved to be the most common type and thus most appropriately the subject of Maxford's attention.

Maxford USA's propensity to bring to market obscure, seldom-modeled airplanes that are often from the early decades of aviation, continues to carve out a unique niche market in an industry dominated by

REVIEW



The removable front cockpit hatch opens to a battery compartment that is large enough to accommodate four-cell 2,200 to 2,600 mAh LiPo batteries, although the form factor of larger packs could be a limiting factor.



The suspension-equipped main gear is preassembled at the factory. At 3 inches in diameter, the included wooden, faux-spoked wheels should lend themselves to operations from grass airstrips.

manufacturers that often revisit the same popular modeling subjects.

The popularity of foam-based models, which can usually be assembled in a few hours, has caused traditional balsa-composition ARFs that typically require a greater time investment to assemble, to lose some of their appeal. Pilots who are not racing through life at the speed of light and who still enjoy investing quality time in a modeling project should very much enjoy this aircraft.

Assembly

Maxford sends the Taube kits with all of the airframe rigging installed at the factory. This greatly simplifies what could be complicated construction. Pilots will need to assemble and install the full contingent of pull-pull control cables, which are used on all basic control surfaces. A full complement of hardware is included with the kit, with a slight overage of several fasteners.

The balsa and light plywood airframe components are pre-covered with an ivory/beige iron-on covering. A pair of large black Iron Cross graphics are included with the kit and intended to be applied to the wing

halves. Smaller Iron Cross graphics are preapplied on the twin rudder assemblies. The Taube is specified as being designed to be powered by either an electric power system or a .40-size glow power system.

Maxford offers an appropriately sized brushless electric motor as an added cost option for this model. Other items that pilots will need to purchase from Maxford in order to fully bedeck their Taube and contribute to a more accurate and scalelike appearance include pilot figures and a scale replica of the four-cylinder Mercedes engine that was used in some full-scale Taubes.

The included, preassembled main landing gear assembly features wooden wheels that attempt to simulate the appearance of the spoked wheels used on the full-scale aircraft. Maxford also offers a set of optional-cost main gear with genuine spoked wheels for pilots who are determined to dress their Taubes to the nines.

A minimum four-channel radio is required for completion, as is a pair of high-torque, metal gear servos for the wing warping, a standard-size servo for the tail warping, and a micro servo for the rudder controls. Additional items required for an



This ARF will require much more of a time commitment than the current crop of foam composition plug-and-play kits. Pilots can expect to spend 15 to 25 hours assembling the Taube.

electric-powered model include a 60-amp ESC and a three- or four-cell 2,200 mAh LiPo battery.

Construction

Assembling an old-school ARF is best done using dependable two-part epoxy. Pilots might also find it advantageous to have some medium CA adhesive and accelerator handy. Although the included assembly manual is a departure from the polished assembly manuals that are included with the current generation of models, all information required to complete the assembly is there and supplemented with a variety of clarifying artwork and photos.

Pilots should carefully peruse the entire assembly manual from front to back multiple times in order to give themselves an appropriate overview of the assembly process and the expected order when it comes to assembling this intricate ARF.

I encountered several standout features while assembling the Taube. One item that greatly simplifies the installation of whatever electric motor or nitro engine a pilot procures for the project is the adjustable, sliding motor mount box. Pilots need only mount their powerplant to the firewall then slide the box to the position that creates the appropriate cowling-to-spinner backplate/propeller spacing.

The motor box can be secured in place using fasteners and/or adhesives. Maxford has included two different cowlings in the kit that cover whichever power system option a pilot elects to use. A smaller, compact electric motor allows pilots to easily install the optional, dummy four-cylinder engine on top of the motor box.

One of the two included cowlings is factory-cut to fit around the dummy engine. The other uncut cowling can be used by those interested in using a glow power system.

Pilots will also be pleased with the manner in which Maxford uses a scalelike pilot control yoke as an actual part of the tail-warping control system. The net effect of doing so is that the control yoke can be seen moving as the pilot inputs pitch changes.

Maxford recommends a full complement of Hitec servos for the Taube. The specific Hitec servo types recommended fit perfectly in the model and offer modelers the best bang for their buck.

A few issues were encountered as the Taube was assembled. The long, slender tail section came somewhat warped. Modelers can typically and easily rectify any warped balsa/light plywood airframe components by carefully reheating the iron-on covering and applying pressure to take the warpage out, but the assembly manual explicitly cautions against applying heat to any of the warping surfaces.

Another minor issue involved the large Iron Cross graphics. The assembly manual directs that these adhesive-backed graphics be applied to the top side of the wing. Once in place, a thin, clear plastic overlay needs to be removed. Removing all of the plastic overlay from the graphics proved to be nearly impossible.

It was as though the graphics had been exposed to excessive heat at some point in their travels. Not only was it difficult



At A Glance



Specifications

Model type: Semiscale balsa ARF
Skill level: Intermediate to advanced
Wingspan: 64 inches
Wing area: 653 square inches
Length: 47 inches
Weight: 80 ounces
Power system: 400-watt electric motor or .40-size glow engine
Radio: Minimum four channels required
Construction: Balsa and light plywood
Covering: Mylar iron-on covering
Price: \$299.99

Test-Model Details

Motor used: Uranus 35425-1100 Kv brushless outrunner
ESC: HobbyKing Turnigy Plush 60-amp with 5-amp BEC; Deans Ultra connector
Battery: 14.8-volt, four-cell 2,600 mAh LiPo
Servos: Hitec HS-645MG Ultra Torque (2); Hitec HS-311 Standard (1); Hitec HS-55 Feather (1)
Propeller: APC-E 12 x 6
Radio system: Spektrum DX-9; LemonRX six-channel 2.4 GHz receiver
Ready-to-fly weight: 74.5 ounces
Flight duration: Five to six minutes



Pluses

- Rarely modeled aircraft from the earliest era of aviation.
- Uses scale pull-pull control cables to articulate all control surfaces.
- Wide-track, suspension-equipped main gear enhances tracking.
- All airframe rigging is pre-tied and factory installed.
- Sliding light plywood motor mount assembly allows a variety of electric or glow power systems.
- Two different cowlings included with the kit.



Minuses

- Horizontal stabilizer/elevator assembly was warped when it came out of the box.
- Difficult to remove the clear top layer of the included Iron Cross wing graphics without damaging/lifting the black part of the graphic.
- Dummy engine, pilot figures, and spoked wheels all must be procured at an additional cost.



Manufacturer/Distributor

Maxford USA
 (562) 529-3988
www.maxfordusa.com

REVIEW



Whether perched on the flightline or putt-putting through the air, the Taube's fluted trailing edges and long, tapered tail pay homage to the outstretched wings and flared tail feathers of a soaring bird.



The four recommended Hitec servos fit nicely in their respective locations in the Taube and include appropriate-length servo horns. The powerful 645MG's 100 ounces of torque at 4.8 volts warps the wing with authority.

to get the thin, clear overlay to release, but when it did lift off, it pulled the black ink off of the Iron Crosses in several places. The net effect of the imperfect graphic installation resulted in a model that replicated the look of a well-used and battle-weary Taube.

Flying

Pilots often anxiously suppose the outcome of the maiden flight based on perceived airframe anomalies. The Taube's fixed tail skid and relatively small, twin rudders would appear to suggest that this model might offer challenges when it comes to ground handling and holding the centerline of the runway on the takeoff roll. Surprisingly, the Taube is quite the sweetheart when taxiing and taking off.

As a tail-dragger, the Taube uses wide-spaced, suspension-equipped main gear and a fixed plywood tail skid. The model's stance on its landing gear is notably flat, making it unnecessary to hold in the up-elevator input that is usually required to keep the tail planted while taxiing. Initiating a takeoff roll with a slow and



Pilots can either source their own electric power system or opt for the motor and ESC offered as options by Maxford USA. When equipped with a 12 x 6 propeller, Maxford's Uranus brushless outrunner motor gives the Taube plenty of punch and pull.

easy throttle results in requiring only slight corrective rudder inputs during the takeoff roll.

Maxford suggests a center of gravity of between 3 and 4 inches aft of the leading edge of the wing and a three- or four-cell 2,200 mAh battery. Although I flew the Taube on a 2,200 mAh pack, using a four-cell 2,600 mAh battery on top of the ESC and all the way forward in the battery compartment resulted in optimum results and also extended the potential flight duration.

A hook-and-loop battery strap was not included in the kit. I secured the battery in place on top of the ESC by placing a block of lightweight foam between the aft edge of the battery and the former located at its rear.

When passing directly overhead, the Taube bears an uncanny resemblance to a bird soaring across the sky! Taube, in German, means dove, and one might conclude that Igo Etrich modeled the wing after that of a bird. However, it is interesting to note that the wing's design was actually based on the 13-cm seed of a Javan

cucumber plant.

This seed possesses outstanding aerodynamic capabilities and relative in-flight stability, giving it the ability to glide great distances from its parent tree.


Design inspiration notwithstanding, pilots will find that this model flies quite uniquely. The control surface flexing type of control used on the pitch-and-roll axis of this model results in one that sluggishly responds to requested changes in direction.

Pilots will want to use a combination of rudder and aileron when flying the Taube. Although the wing warping occurs at the outer edges of the wing, I still found that adding in some rudder resulted in more respectable behavior in the corners, and it was often necessary to apply a bit of the opposite rudder input to cleanly exit the turns.

The Taube flies like a lightly loaded model, with the optional Uranus brushless outrunner motor offering plenty of power for this old-timey slow flyer.

Pilots should allow themselves plenty of approach space when lining up for a landing. When the Taube is established on final approach, pay particular attention to keeping the nose down. Only minimal power is required to pull the Taube across the threshold. Soft and easy landings are the order of the day thanks to the suspension-equipped main gear.

Conclusion

With autumn on the wane for many modelers, Maxford USA's Rumpler Taube could be the perfect project to help maintain morale through the dark, cold days of winter. As a bona fide ARF, the Taube demands substantially more time and effort to assemble than the one or two hours that are required by the current crop of plug-and-play foam composition kits. The payoff for pilots willing to invest the time and effort to take on the Taube will be a nice-looking, nice-flying, stand-off scale model of a historically significant airplane that hearkens back to the earliest years of aviation! 

SOURCES:

Hitec RCD
(858) 748-6948
www.hitecrd.com

HITEC

MIGHT OF THE MINI

WHO EVER SAID A STRONG PERFORMANCE
CAN'T COME IN A SMALL PACKAGE!

RDX1 *Mini*

AC BALANCE CHARGER/DISCHARGER

Our RDX1 Mini is the sleek, portable, 65-watt power-packed battery charger you've been waiting for. Storing up to 10 battery profiles with a maximum 6-amp charge rate and 2-amp discharge rate, this mini charger brings the reliability required to keep all your battery chemistries locked and loaded when you need them the most.

- STORES 10 DIFFERENT BATTERY MEMORY CHARGE/DISCHARGE PROFILES
- USER-FRIENDLY LCD INTERFACE
- TERMINAL VOLTAGE CONTROL

LiPo
2-4 cell

LiHV
2-4 cell

LiFe
2-4 cell

Lilon
2-4 cell

NiMH
6-8 cell

NiCd
6-8 cell

PB
6-12V

HARBOR FREIGHT

QUALITY TOOLS AT RIDICULOUSLY LOW PRICES

1,000+ Stores Nationwide • HarborFreight.com

McGRAW *Ideal for Impact Wrench, Finish & Brad Nailers, Stapling, All Purpose Spray Gun & Blow Guns*

20 GALLON, 135 PSI OIL-LUBE AIR COMPRESSOR

NOW \$174.99

SAVE \$75 \$199.99

COMPARE TO PORTER-CABLE MODEL: 118903799 **\$249.99**

ITEM 56241/64857 shown

Customer Rating ★★★★★

Handle and Protective Shroud

Powerful Induction Motor "Won't trip your breaker"

Easy Access Drain Valve

135 MAX PSI 1.6 Running HP 4.0 SCFM Oil Lube Pump

2x LIFE 25% QUIETER 27% MORE RUN TIME

Large Rubber Wheels

Rubber Foot Stabilizers

21370346

LIMIT 1 - Coupon valid through 2/25/20

SCISSOR SUPER COUPON

FREE WITH ANY PURCHASE

OVER 5,000 5 STAR REVIEWS

SUPER BRIGHT LED /SMD WORK LIGHT/FLASHLIGHT

• Super-Strong, Ultra-Lightweight Composite Plastic

• Magnetic Base & 360° Swivel Hook for Hands-Free Operation

• 3 - AAA Batteries (included)

• 144 Lumens

ALL IN A SINGLE SUPER POWERFUL LIGHT

COMPARE TO PERFORMANCE TOOL MODEL: W2364 **\$13.52**

ITEM 63878/63991 64005/69567/60566 63601/67227 shown

21367850

Cannot be used with other discounts or prior purchases. Original coupon must be presented. Valid through 2/25/20 while supplies last. Limit 1 FREE GIFT per customer per day.

SCISSOR SUPER COUPON

20% OFF ANY SINGLE ITEM*

21370318

Limit 1 coupon per customer per day. Save 20% on any 1 item purchased. *Cannot be used with other discount, coupon or any of the following items or brands: Inside Track Club membership, Extended Service Plan, gift cards, open box item, 3 day Parking Lot Sale Item, compressors, floor jacks, safes, storage cabinets, chests or toolboxes, welders, Admiral, Ranges, Alterra, Bester, Central Machinery, Cobra, CoverPro, Daytona, Diamantwerk, Earthlink, Fisher, Harvick, Iron, Jupiter, Lynx, Poulan, Predator, Taligator, Viking, Walcam, Zurich. Not valid on prior purchases. Non-transferrable. Original coupon must be presented. Valid through 2/25/20.

PITTSBURGH SERIES 2 *1st SELLING JACKS IN AMERICA*

RAPID PUMP® 3 TON STEEL HEAVY DUTY LOW PROFILE FLOOR JACK

• Weighs 78 lbs.

Customer Rating ★★★★★

SAVE \$90

COMPARE TO TEQ CORRECT MODEL: T830018Z **\$189.99**

NOW \$99.99

ITEM 56618/56619/56620/56617 shown

21371379

LIMIT 2 - Coupon valid through 2/25/20

HaulMaster *3/8" x 14 FT., GRADE 43 TOWING CHAIN*

Customer Rating ★★★★★

5400 lb. capacity

NOW \$199.99

COMPARE TO MIBRO MODEL: 426920 **\$64.99**

SAVE 69% \$29.99

ITEM 40462/60658/97711 shown

21371620

LIMIT 4 - Coupon valid through 2/25/20

HARDY *MECHANICS GLOVES*

Customer Rating ★★★★★

AVAIL. IN SM, MED, LG, XL, XXL

NOW \$4.99

COMPARE TO VALED MODEL: 25521 **\$5.99**

SAVE 66% \$14.99

ITEM 62434, 62426, 62433, 62432, 62429, 64178, 64179, 62428 shown

21389758

LIMIT 5 - Coupon valid through 2/25/20

COBRA *8 CHANNEL SURVEILLANCE DVR WITH 4 HD CAMERAS AND MOBILE MONITORING CAPABILITIES*

• Night vision

NOW \$219.99

COMPARE TO ITEM 63890 **\$269.99**

SAVE \$50

21402008

LIMIT 1 - Coupon valid through 2/25/20

NEW US GENERAL *30", 4 DRAWER TECH CARTS*

• 12,600 cu. in. of storage

• 580 lb. capacity

Customer Rating ★★★★★

SAVE \$740

COMPARE TO Snap-on BLUE-POINT MODEL: K8BC10T8PC **\$880**

NOW \$179.99

Item 56387, 64096, 56386, 56392, 56393, 56394

21404638

LIMIT 1 - Coupon valid through 2/25/20

200 LUMEN LED SUPER BRIGHT FLIP LIGHT

• Wireless, tool-free and easy installation

Customer Rating ★★★★★

NOW \$2.49

COMPARE TO PREMIER MODEL: SW-SWITCH-12/24 **\$3.99**

SAVE 50% \$4.99

ITEM 64189/64723/63922 shown

21406175

LIMIT 5 - Coupon valid through 2/25/20

CENTRAL MACHINERY *20 TON SHOP PRESS*

Customer Rating ★★★★★

NOW \$144.99

COMPARE TO STRONGWAY MODEL: 46260 **\$189.99**

SAVE \$235

ITEM 32879/60603 shown

21412857

LIMIT 1 - Coupon valid through 2/25/20

7 FT. 4" x 9 FT. 6" ALL PURPOSE/WEATHER RESISTANT TARP

Customer Rating ★★★★★

NOW \$2.99

COMPARE TO BLUE HAWK MODEL: B68X10-Y **\$8.78**

SAVE 65% \$4.99

ITEM 69115/69121/69129/69137/69249/877 shown

21413364

LIMIT 4 - Coupon valid through 2/25/20

HaulMaster *18" WORKING PLATFORM STEP STOOL*

Customer Rating ★★★★★

350 lb. capacity

NOW \$199.99

COMPARE TO NEOCRAFT MODEL: 60635 **\$399.99**

SAVE 50% \$29.99

ITEM 62515/66911 shown

21413662

LIMIT 4 - Coupon valid through 2/25/20

COVER PRO *10 FT. x 17 FT. PORTABLE GARAGE*

Customer Rating ★★★★★

NOW \$169.99

COMPARE TO SHELTER LOGIC MODEL: 76377 **\$290.75**

SAVE \$120 \$109.99

ITEM 62859/63055/62860 shown

21423456

LIMIT 1 - Coupon valid through 2/25/20

ARMSTRONG *17" - 42" SWIVEL/TILT TV WALL MOUNT*

Customer Rating ★★★★★

NOW \$99.99

COMPARE TO PEERLESS MODEL: ETP2X2 **\$29.98**

SAVE 66% \$16.99

ITEM 64238

21430079

LIMIT 5 - Coupon valid through 2/25/20

CHICAGO ELECTRIC POWER TOOLS *10" SLIDING COMPOUND MITER SAW*

• Powerful 15 amp motor

NOW \$99.99

COMPARE TO KOBALT MODEL: SM2516LW **\$119.99**

SAVE \$129

ITEM 61972/56708/61971 shown

21433076

LIMIT 1 - Coupon valid through 2/25/20

CENTRAL PNEUMATIC *3/8" x 50 FT. RETRACTABLE AIR HOSE REEL*

Customer Rating ★★★★★

NOW \$59.99

COMPARE TO KOBALT MODEL: 56Y-ARR184 **\$99**

SAVE \$39 \$79.99

ITEM 69265/62344/64685/93897 shown

21437579

LIMIT 1 - Coupon valid through 2/25/20

PITTSBURGH *9 PIECE FULLY POLISHED COMBINATION WRENCH SETS*

Customer Rating ★★★★★

LIFETIME WARRANTY

Item 42305 shown

YOUR CHOICE \$5.99

SAVE 66% \$7.99

COMPARE TO HUSKY MODEL: HCW10PCSAE **\$17.97**

TYPE SAE 69043/63282/42304 METRIC 69044/63171/42305

21444023

LIMIT 5 - Coupon valid through 2/25/20

CENTRAL MACHINERY *8", 5 SPEED BENCHTOP DRILL PRESS*

Customer Rating ★★★★★

NOW \$54.99

COMPARE TO WEN MODEL: 4208 **\$79.97**

SAVE 31% \$69.99

ITEM 38119/62520/60238 shown

21444168

LIMIT 4 - Coupon valid through 2/25/20

drillmaster *18 VOLT, 3/8" CORDLESS DRILL/DRIVER KIT WITH KEYLESS CHUCK*

Includes one 18V NiCd battery and charger.

NOW \$19.99

COMPARE TO BLACK+DECKER MODEL: GC1801 **\$59.99**

SAVE 71% \$16.99

ITEM 68239/69651/62868/62873 shown

21451696

LIMIT 5 - Coupon valid through 2/25/20

PREDATOR **✓ SUPER COUPON**

Customer Rating **★★★★**

3500 WATT SUPER QUIET INVERTER GENERATOR

- 11 hour run time

NOW \$699⁹⁹

~~\$799⁹⁹~~

COMPARE TO **\$2,019** **SAVE \$1,319**

HONDA MODEL: EU3000ISA

ITEM 56720/63584 shown

21459913

LIMIT 1 - Coupon valid through 2/25/20

CENTTECH **✓ SUPER COUPON**

Customer Rating **★★★★**

AUTOMATIC BATTERY FLOAT CHARGER

NOW \$49⁹⁹

~~\$99~~

COMPARE TO **\$304¹** **SAVE 83%**

SCHUMACHER ELECTRIC MODEL: SC1

ITEM 69955/64284/42292 shown

214461796

LIMIT 5 - Coupon valid through 2/25/20

U.S. GENERAL **✓ SUPER COUPON**

BIGGER • STRONGER • MORE STABLE SERIES 2

Customer Rating **★★★★**

44" x 22" DOUBLE BANK EXTRA DEEP CABINETS

- 14,000 cu. in. of storage
- 2600 lb. capacity
- Weights 291 lbs.

YOUR CHOICE OF 6 COLORS

NOW \$499⁹⁹

~~\$499⁹⁹~~

COMPARE TO **\$2,735** **SAVE \$2,285**

Snap-on MODEL: KRA4813FP90

Item 64446, 64443, 64133, 64954, 64955, 64956

21474520

LIMIT 1 - Coupon valid through 2/25/20

HaulMaster **✓ SUPER COUPON**

Customer Rating **★★★★**

18" x 12" MOVER'S DOLLY

- 1000 lb. capacity

NOW \$79⁹⁹

~~\$109⁹⁹~~

COMPARE TO **\$229** **SAVE 65%**

BUFFALO TOOLS MODEL: HDFDOLLY

ITEM 60497

61899/62399/63095/63096/63097/63098 shown

21478030

LIMIT 1 - Coupon valid through 2/25/20

HaulMaster **✓ SUPER COUPON**

Customer Rating **★★★★**

TRI-FOLD ALUMINUM LOADING RAMP

- 1500 lb. capacity

NOW \$141⁰⁸

~~\$199⁹⁹~~

COMPARE TO **\$66** **SAVE \$141⁰⁸**

REESE TOWPOWER MODEL: 74554700

ITEM 69595/60334/90018 shown

214885161

LIMIT 1 - Coupon valid through 2/25/20

Quantum **✓ SUPER COUPON**

Customer Rating **★★★★**

588 LUMEN TACTICAL FLASHLIGHT

NOW \$99⁹⁹

~~\$149⁹⁹~~

COMPARE TO **\$599** **SAVE 83%**

STREAMLIGHT MODEL: PROTAC 1L

ITEM 64799/63934 shown

21488255

LIMIT 4 - Coupon valid through 2/25/20

ZURICH **✓ SUPER COUPON**

Customer Rating **★★★★**

OBD2 CODE READER WITH ABS ZR11

NOW \$109⁹⁹

~~\$129⁹⁹~~

COMPARE TO **\$169⁹⁹** **SAVE \$60**

BOSCH MODEL: OBD1150

ITEM 63807

21500613

LIMIT 1 - Coupon valid through 2/25/20

KRAUSE & BECKER **✓ SUPER COUPON**

Customer Rating **★★★★**

AIRLESS PAINT SPRAYER KIT

NOW \$164⁹⁹

~~\$219⁹⁹~~

COMPARE TO **\$299** **SAVE \$134**

GRACO MODEL: 262800

ITEM 62915/60600 shown

21506000

LIMIT 1 - Coupon valid through 2/25/20

HaulMaster **✓ SUPER COUPON**

Customer Rating **★★★★**

4 PIECE, 1" x 15 FT. RATCHETING TIE DOWNS

- 400 lb. working load

NOW \$6⁹⁹

~~\$12⁹⁹~~

COMPARE TO **\$22⁸⁰** **SAVE 69%**

KEEPER MODEL: 5505

ITEM 60405/61524

63056/63057/63150/56668/63094 shown

21508079

LIMIT 5 - Coupon valid through 2/25/20

✓ SUPER COUPON

Customer Rating **★★★★**

36" PICKUP AND REACH TOOL

- 36" reach
- Easy grip

NOW \$199

~~\$329~~

COMPARE TO **\$15** **SAVE 86%**

ARCIMATE MODEL: 325

ITEM 94870/62176/61413 shown

21520831

LIMIT 5 - Coupon valid through 2/25/20

BUNKER HILL SECURITY **✓ SUPER COUPON**

Customer Rating **★★★★**

WIRELESS SECURITY ALERT SYSTEM

NOW \$99⁹⁹

~~\$149⁹⁹~~

COMPARE TO **\$32⁹⁹** **SAVE 69%**

FIRST ALERT MODEL: SF6A00

ITEM 61910/62447/93068 shown

21523481

LIMIT 5 - Coupon valid through 2/25/20

drillmaster **✓ SUPER COUPON**

Customer Rating **★★★★**

80 PIECE ROTARY TOOL KIT

NOW \$64⁹⁹

~~\$99~~

COMPARE TO **\$227⁶** **SAVE 71%**

PROFESSIONAL WOODWORKER MODEL: 51832

ITEM 63235/63292/97626 shown

21526224

LIMIT 5 - Coupon valid through 2/25/20

EARTHQUAKE **✓ SUPER COUPON**

Customer Rating **★★★★**

PRO AIR IMPACT WRENCHES

A. 1/2" COMPOSITE PRO ITEM 62835

B. WITH 2" ANVIL ITEM 63385

Not available in AZ, OH, OK and VA.

• Weighs 5 lbs.

NOW \$94⁹⁹

~~\$119⁹⁹~~

COMPARE TO **\$154⁹⁹** **SAVE \$60**

950 TORQUE FT. LBS. BOLT BREAKAWAY AIRCAT MODEL: 1460-XL-2

ITEM 62835/63385 shown

21528831

LIMIT 5 - Coupon valid through 2/25/20

BADLAND **✓ SUPER COUPON**

Customer Rating **★★★★**

2500 LB. ELECTRIC WINCH WITH WIRELESS REMOTE CONTROL

- Weights 14.3 lbs.
- 11-1/8" L x 4-1/2" H

NOW \$499⁹⁹

~~\$699⁹⁹~~

COMPARE TO **\$189⁹⁹** **SAVE \$140**

SUPERWINCH MODEL: 1125220

ITEM 61258/61297/63476/61840 shown

21534389

LIMIT 5 - Coupon valid through 2/25/20

PITTSBURGH AUTOMOTIVE **✓ SUPER COUPON**

Customer Rating **★★★★**

MULTI-USE TRANSFER PUMP

NOW \$49⁹⁹

~~\$69⁹⁹~~

COMPARE TO **\$149⁹⁹** **SAVE 66%**

SHOP CRAFT MODEL: 3667

ITEM 63144/3878/61364/63591/66418 shown

21534957

LIMIT 5 - Coupon valid through 2/25/20

✓ SUPER COUPON

Customer Rating **★★★★**

AMMO DRY BOX

NOW \$39⁹⁹

~~\$59⁹⁹~~

COMPARE TO **\$99** **SAVE 60%**

RANGEMAXX MODEL: 1312-92

ITEM 63135/61451 shown

21538502

LIMIT 5 - Coupon valid through 2/25/20

PITTSBURGH **✓ SUPER COUPON**

Customer Rating **★★★★**

225 PIECE MECHANIC'S TOOL KIT

NOW \$99⁹⁹

~~\$139⁹⁹~~

COMPARE TO **\$274⁹⁹** **SAVE \$175**

KLUTCH MODEL: 48101

ITEM 64367/62664 shown

21538910

LIMIT 5 - Coupon valid through 2/25/20

PITTSBURGH **✓ SUPER COUPON**

Customer Rating **★★★★**

18 PIECE SAE AND METRIC T-HANDLE BALL END HEX KEY SET

NOW \$129⁹⁹

~~\$179⁹⁹~~

COMPARE TO **\$321⁰** **SAVE 59%**

HUSKY MODEL: HTHKSM14PCN

ITEM 63167/62476/63166/96645 shown

21539074

LIMIT 5 - Coupon valid through 2/25/20

PITTSBURGH AUTOMOTIVE **✓ SUPER COUPON**

Customer Rating **★★★★**

3 TON HEAVY DUTY STEEL JACK STANDS

- Adjust from 11-3/4" to 16-3/8"

NOW \$189⁹⁹

~~\$239⁹⁹~~

COMPARE TO **\$349⁹⁹** **SAVE 45%**

TORIN JACK MODEL: 1007102

ITEM 38846/69597/62392/61196 shown

21539664

LIMIT 5 - Coupon valid through 2/25/20

1,000+ Stores Nationwide • HarborFreight.com

*Original coupon only. No use on prior purchases after 30 days from original purchase or without original receipt. Valid through 2/25/20.

All Harbor Freight Tools, the "Compare to" price means that the specified comparison, which is an item with the same or similar function, was advertised for sale at or above the "Compare to" price by another national retailer in the U.S. within the past 90 days. Prices advertised by others may vary by location. No other meaning of "Compare to" should be implied. For more information, go to HarborFreight.com or see store associate.

Interested in sharing your handiwork? Visit www.ModelAviation.com for submission guidelines.



Supermarine Spitfire Mk Ia

After seeing the recently restored Supermarine Spitfire N3200 fly at the 75th Anniversary Battle of Britain Air Show in Duxford, England, Kurt Jostes (New Orleans, Louisiana; email: kurt.jostes@gmail.com) wrote that he "was ready to re-create the N3200 by converting a Hangar 9 30cc Spitfire Mk IX ARF back to Mk Ia status."

Kurt shortened the nose, replaced the stock canopy, exhausts, and one radiator scoop with parts from DB Sport and Scale. He repainted it using Rust-Oleum and Tamiya paints before adding custom decals from Callie Graphics. Power is provided by an O.S. GT33 engine with a Xoar World War II 18 x 8 propeller.

The photo shows Kurt with the Spitfire at the New Orleans Model Aviation Club's Kelly Field in Westwego, Louisiana, before its successful maiden flight in March 2019.



HSD Navy-Schemed Viper

Gonzalo Bures' (Toa Baja, Puerto Rico; email: gonzalobures@gmail.com) HSD Navy-schemed Viper jet celebrated its 75th flight in spring 2019. The foam jet is powered by a Jet Central JF-50 Super Bee turbine and guided by a Futaba 9C radio.

Gonzalo wrote that the foam jet flies well and is tough and reliable. "I like extended flights, so the smoke tank was utilized as an additional fuel tank," he stated. "It now carries 110 ounces of fuel, which gives 10-plus-minute flights." Gonzalo uses diesel fuel.

The Viper's maiden flight was in July 2017 at the Borinquen RC Club field in Sabana Seca, Puerto Rico. "I hope to celebrate soon with the 150th flight," wrote Gonzalo. He has been an AMA member since the late 1980s.



PT-17 Stearman

Charles Teixeira (Houston, Texas; email: cteix89@comcast.net) built his PT-17 Stearman model after flying in the full-scale aircraft at the Lone Star Flight Museum in Houston.

Charles built it from a short kit of a Royal 65-inch wingspan Stearman. The front is built-up fiberglass cloth layered over foam core then hollowed out. Simulated motor cylinders are from Williams Brothers, and the covering is UltraCote dark yellow and Corsair blue with graphics from Callie Graphics. The radio gear is Futaba, while the model has an onboard glow driver for the Saito 1.20 engine.

Charles wrote that the 15-pound, scalelike Stearman flies well.



Der-Flug and Tarman

Max Blose (Robinson, Texas; email: bpamax@aol.com) designed and built these two aircraft. The Der-Flug (L) was designed in 1974 for an O.S. Wankel engine and built in 2018. It uses the Wankel with an EK Logictrol Championship Series radio system converted to 2.4 GHz.

The Tarman (R) was designed in 1968 and published in the September 1969 *Radio Control Modeler* magazine with a full-page color picture of Max's wife, Sally. The original aircraft flew with an O.S. .60 engine and EK radio. The one pictured was also built in 2018 and is powered with an Evolution .60 engine using a Futaba radio.



FlyLite-2

Marion Kitchens (Hillsborough, North Carolina; email: k4gok@juno.com) submitted a stick-built rendition of the FlyLite. The 35-inch wingspan model weighs 14 ounces.

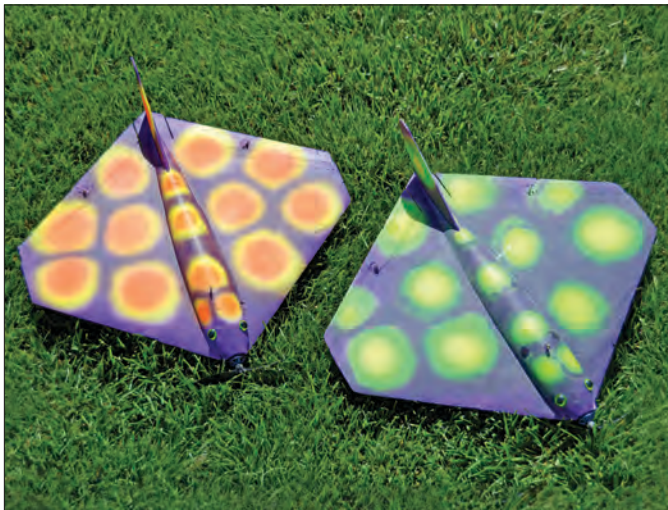
Power is by a 370-size electric motor and a two-cell LiPo battery. Marion tried to make it lightweight. “[I] started with an idea and a box of balsa,” he wrote. “[It was] a really enjoyable build. [I am] awaiting calm air for the maiden flight.”



Burt Rutan Q.A.C. Quickie

Phil Knowlton (Orlando, Florida; email: rpknowlton@bellsouth.net) scratch-built his Burt Rutan Q.A.C. Quickie from *Radio Control Modeler* 1/3-scale plans. Electric power is by a BP 3520 motor on a five-cell LiPo battery.

Phil stated that its flight characteristics are solid and it is quite the head turner at the field. The photo was taken before its maiden flight at the Ocala Flying Model Club field.



Stingray Duo

Mike Gay (Albuquerque, New Mexico; email: cdn102@swcp.com) converted Erazz airplanes into Stingrays. “I removed the original decals, primed them, then used an airbrush and Createx acrylic paint to get the wild colors, with a topcoat of matte acrylic,” he wrote. The eyes are from Hobby Lobby.

The 18-inch wingspan aircraft each weigh 6.3 ounces. Power is from the original Erazz motor and ESC with a 3S 600 mAh LiPo battery. “Speed is estimated at 85 mph,” he wrote, “and they are much easier to see now with the fluorescent colors!”



Sopwith Tabloid

Carlos Rangel (Tucson, Arizona; email: rcpiilot663@gmail.com) scratch-built his 1/6-scale Sopwith Tabloid from Cleveland Model & Supply Company plans.

Power is by a Saito .80 engine and radio control is by Spektrum. The covering is Solartex fabric, with custom decals by Callie Graphics. The foam-core floats have light birch skins. Carlos also used metal Flite-Metal covering.

“This model was purposely built to participate in the Desert Hawks RC Club’s 30-year anniversary of their first Schneider Cup reenactment in Lake Havasu, Arizona [in November 2019],” Carlos wrote. “The original Sopwith Tabloid was the first-place winner of the 1914 Schneider Cup competition held in Monaco.”

VINTAGE VIEWPOINT

John Landolfi flew this homemade receiver as did many ham operators who had the electronics skills in the 1950s.



THE AGE OF PROPORTIONAL

By Bob Noll | bobrc@aol.com

WHILE GOING THROUGH my collection of old RC magazines, I came across a *Radio Control Modeler* (RCM) that caught my eye. On the front page was a yellow box with the words “SPECIAL ‘AGE OF PROPORTIONAL’ ISSUE.” The date of that issue was December 1964. It contained articles by Al Doig, Don Mathes, Malcolm Davis, and the RCM staff.

Al’s column was titled, “The Age of Proportional: Realism,” with a subtitle of, “Is it here, or isn’t it? An introduction to a new era in radio control.” Al wrote:

“Interest in proportional radio control has rapidly increased during the past year. The reason for this interest is the current ability (if you have the money) to buy some equipment, to read about other systems, and to listen to flying field scuttlebutt about many more. The gestation period has been lengthy. Equipment has been appearing bravely on the field and retreating painfully to the laboratory. This is a perfectly normal procedure, but this time it has been carried out under the glare of spotlights!”

Al wrote about the differences between analog and digital systems and the debate about which system was better. He wrote that there was actually nothing inherently “better” about one system or the other.

Remember, this was written in 1964, and time has proven that digital became the standard after the lack of immunity to interference was solved. Reliability of the early digital systems was not as good as reed systems, but it didn’t take long before that was not the case.

Arguments could be heard at the flying fields and at RC conferences about the relative merits of two-stick versus one-stick control. This really relates not to the number of sticks, but to the separation of aileron and elevator controls as was the practice in reed systems. This led to two-stick systems that had the ailerons on one stick and the elevator on the other stick.

The Mode 1 versus Mode 2 argument continued with most reed pilots deciding on the Mode 1 configuration. Today, there is still a difference around the world regarding the stick configuration, with more Mode 1 pilots found on the West Coast of the US and in Japan and Asia. Al wrote, "It is this author's opinion that the single stick in one form or another will become the standard." How wrong he was!

The cost of early proportional sets was quite high for some time. However, as we now know, a complete six-channel system can be purchased for less than \$200. I was a reed pilot for many years and had good luck with the Orbit eight-channel reliability. My wife bought me my first proportional system as a wedding present for \$500. It was an Orbit analog system. It wasn't too many years before I moved to a Pro Line digital system.

Malcolm Davis wrote:

"Long before I built my first single-channel model, I dreamt of flying a radio control model. In my fantasies, this airplane had proportional control just like the full-scale ships. I had flown (RN; full size) in the past. It was a great disappointment to me to find that RC'ers were flipping rudders back and forth with escapements and rubber bands, and with a single push button to steer the airplane right or left.

"About 2-1/2 years ago, I had settled down to a Stormer with 10-channel reed equipment and was having a ball. Then people started showing up with various types of proportional gear. They seemed to malfunction continually and were so expensive that my emotions toward proportional ran hot and cold. It is disconcerting to see a beautiful Stormer mashed into the asphalt with seven or eight hundred bucks worth of equipment aboard!"

In 1964, proportional systems were being introduced by many manufacturers. Companies such as Orbit, Bonner, Sampy,

Dee Bee, World Engines, Citizenship, EK, Kraft, Space Control, and many more, advertised in model magazines.

Those early systems were not affordable for the average modeler. A Sampy 404 cost \$400 in 1964, which would be equivalent to \$2,800 today. A Dee Bee Quadruplex cost \$479. In time, however, the costs came down, thanks to those RC pilots who had the money to buy the early RC systems and force the development of more reliable ones.

I remember comments about one system that was packaged in a green metal transmitter case. "They put it in a green case so when it stopped working, all you had to do was throw it into the weeds and no one would ever know."

I also found it interesting that Hal deBolt introduced his LiveWire Jenny, which could be built in 24 hours according to the magazine ad. Do you think Hal was up to something because so many airplanes crashed at that time because of poor system reliability?

Readers Share

John Landolfi of Summerville, South Carolina, wrote:

"[I] love your column and articles of 'Vintage Viewpoint.' [It] keeps us all reminded of the great days of our hobby. Maybe you might be interested [in this].

"Although I am a senior—probably very senior—member [of AMA], I still enjoy flying all kinds of RC; however, I am still hooked on my vintage models. In the 1950s, I built a number of the deBolt series kits. The one I enjoyed the most was the Kitten, powered at that time with an OK .049 [engine] and a Lorenz receiver and a rubber escapement.

"I recently decided to build the Kitten from scratch. Well, yes, I put in an electric motor instead, added elevation, and covered it with Coverlite instead of silkspan. Forgive me. The airplane flies great. [I] have had many flights."

From Joe Pontecorvo, in Kirkland, Washington:

"Hi Bob. In reading your 'Vintage Viewpoint' column in the September 2019 issue, I was fascinated by the Rudderbug item. I had an identical setup, only I made



The Quadruplex 21, by Dee Bee Engineering, was the most reliable pulse-proportional system when it was introduced in 1964.

my escapement, copying the Bonner. I wound the coil and fabricated the rest.


"Later on, I put in a compound Bonner and had a Veco 19 for which I fabricated an exhaust throttle so that I had high and low speed. You are right about lots of batteries.

"I still have my receiver and all of the other equipment and the transmitter. I have my homemade escapement and the Veco with the homemade throttle.

"I am 93 years old and still flying at least once a week (not the Rudderbug). I enjoy your column."

It is always nice to hear from my readers. Keep the emails coming.

I recently had a very interesting exchange regarding how a rudder-only airplane could do the competition maneuvers that were required in the day. I will cover that subject in my next column.

Until then, enjoy building vintage RC airplanes, and don't forget to join the Vintage RC Society (VRCS) by visiting its website, listed in "Sources." 

SOURCES:

VRCS

www.vintagercsociety.org

MICRO-FLYING

At the NEAT Fair micro RC seminars, Matt Keennon (L) and Ben Pipenberg, from AeroVironment, discussed NASA's Mars helicopter program.



NEAT FAIR 2019

By Joe Malinchak | joemal@echoes.net

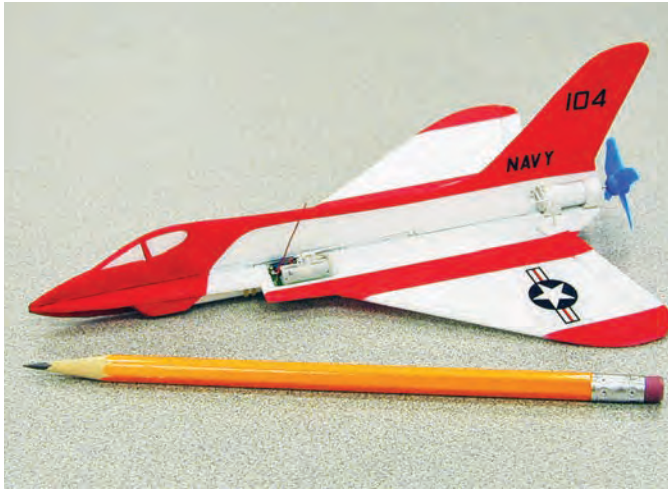
THE NORTHEAST ELECTRIC AIRCRAFT TECHNOLOGY (NEAT) Fair was held September 12-15, 2019, in Downsville, New York, and celebrated its 20th anniversary. I am fortunate that I have been able to attend every NEAT Fair since its beginning.

In the early days of the event, micro RC was just becoming popular. I was flying some of the smallest micro RC model aircraft at that time, with wingspans that were approximately 19 inches. The models used heavy NiCd batteries and brushed motors, but they flew well. I soon discovered that I could use CO₂ motors instead of NiCds as a power source to fly smaller and lighter models.

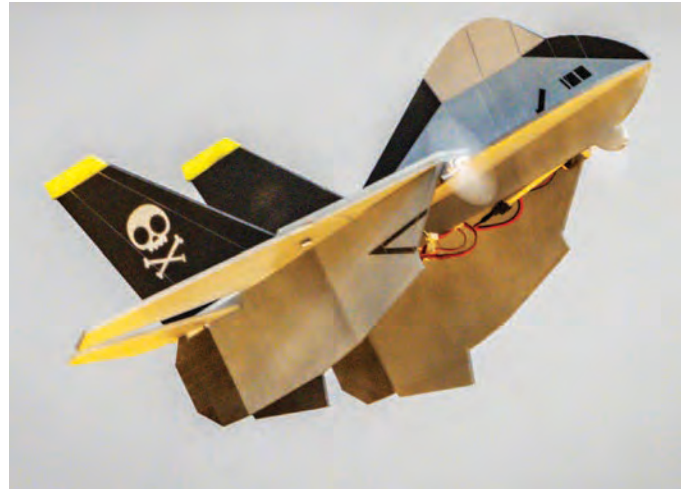
In 2002, Bergan County Silent Fliers (BCSF) president Sergio Zigras asked my friend, Henry Pasquet, and me if we could give a talk about our micro models and some of the construction techniques we were using in the BCSF tent at NEAT. We gladly accepted, and it was the start of the popular micro RC seminars that were held for years in that tent. Through media coverage by the magazines and the annual seminars, we started attracting micro RC pilots from around the world.

This led to the start of Gordon Johnson's Indoor Night at NEAT, and the rest is history! Throughout the years, many good, long-lasting friendships have been made, and we still keep in touch with each other to share ideas. We gather together every so often at the NEAT Fair with our group of passionate micro RC fliers.

For the 20th anniversary, Gordon and I talked about reuniting our group by bringing back the micro RC seminars. He worked on organizing the



Matt flew his 5.5-inch wingspan F5D Skylancer at the Indoor Night at the NEAT Fair. The model uses an E-flite P-51 motor, an Inductrix propeller, and a 220 mAh LiPo battery.



Adam Woodworth flew his great-flying Cartoon Scale F-14. The model features a wing that swings like the full-scale aircraft. Photo by Jonathan Sawn.

seminars and I helped with the indoor event.

The seminars were held on the Friday and Saturday of NEAT in a large tent that was right on the flightline. Sergio started by presenting the history of the NEAT Fair and the seminars.

Next up was Gordon, who spoke about how to make lightweight airframes and his techniques for making molded carbon-fiber parts.

Matt Keennon and Ben Pipenberg, from AeroVironment in California, spoke about NASA's Mars helicopter program. I have to tell you that everyone in attendance was on the edge of their seats listening to all of the challenges of designing a helicopter that will fly on Mars!

I followed Matt and Ben with some information about my scale modeling techniques. Rick Ruijsink and Matěj Karásek from the Netherlands finished out the first day of the seminars with their fascinating DelFly Nimble flapping-wing, insect-inspired robot.

Day two of the seminars started with Henry Pasquet, who spoke about electric duration and CO2 airplanes. Martin Newell followed Henry with his amazing work on micro vertical takeoff and landing (VTOL) model aircraft. Petter Murren, from Norway, spoke about the Prox Dynamics Black Hornet Micro UAV, an airborne personal-reconnaissance system for dismounted soldiers.

Nick Leichy of Micro Flier Radio gave a talk on how to make molded-fiberglass propellers, updates to his servos, and his amazing line of micro RC equipment. Adam Woodworth closed out the seminars with his fascinating talk on the Project X-Wing delivery drone.

This was truly a wonderful lineup of speakers who all did an amazing job, making the 20th anniversary of NEAT Fair an event to remember.

2019 Indoor Night at NEAT

The 2019 Indoor Night at NEAT was held at the Downsview Central High School gymnasium on September 13-14. It was also an event to remember. Matt Keennon

NOW THIS IS FUN!

- * WIDE FLIGHT ENVELOPE.
- * EASY TO BUILD AND FLY.
- * FUSE ACCEPTS A WIDE RANGE OF POWERPLANTS.
- * PRECISION, LASER-CUT.
- * QUALITY USA HARDWARE.
- * PRE-BENT LANDING GEAR.
- * WEB-LOCK WING CONSTRUCTION.
- * ROLLED, FULL-SIZE PLANS INCLUDED.
- * ILLUSTRATED MANUAL INCLUDED.
- * COMPLETE INFORMATION, PHOTOS, AND VIDEOS ARE ON OUR WEBSITE.

WWW.OLDSCHOOLMODELS.COM
 PHONE: 513-755-7494

Let's Build Something.

OLD SCHOOL MODEL WORKS IS AN AIRBORNE MEDIA BRAND.

Javelin

MADE IN USA

\$164.95
 +\$5 SHIPPING IN THE LOWER 48

- * WINGSPAN: 60 INCHES
- * WING AREA: 710 SQ. INCHES
- * WEIGHT: 4.5-6 POUNDS RTF
- * POWER: .25-.51 GLOW OR ELECTRIC EQUIVALENT
- * RADIO: 4 CH.

WE MAKE MUCH MORE THAN KITS!

VISIT OUR WEBSITE TO SEE EVERYTHING ELSE WE MAKE - WWW.OLDSCHOOLMODELS.COM


MICRO-FLYING

built a 5.5-inch wingspan Douglas F5D Skylancer. The model uses an E-flite P-51 motor, an Inductrix propeller, and a 220 mAh LiPo battery.

Adam Woodworth had some incredible new models this year, including a Pogo and a great-flying Cartoon Scale Grumman F-14 Tomcat. Adam won the award for the best Cartoon Scale model.

Graham Stabler came all the way from Oxford, England, to fly with us. He did not bring a model to fly, so he built one at the event! I and others gave him parts, batteries, and other items to help him get an airplane flying.

Mike Cripps and his wife, Sandy, always arrive with some beautiful scale models. This year, Mike had a new 12-inch wingspan Farman Sport Carte Postale, and his wife built a neat-looking Messerschmitt Me 209 V1 prewar German racer. They shared the award for the best micro scale model.

I will have more about this wonderful event in my next column! 



Graham Stabler came from Oxford, England, to fly at the NEAT Fair. He did not bring a model to fly, so he built the one that he is holding while at the event.

RTL
Fasteners
Why Pay a Dollar
for just 4 Screws?
We have the hardware you need
at a fraction of retail!
Order today at:
www.rtlfasteners.com
or call 800-239-6010
708 Battlefield Blvd South #107
Chesapeake, VA 23322

retro RC and FF model
aeroplane kits and
accessories
**2020 WS
Minnow**
\$33
+S&H
Kit builds 2 airplanes • Custom prop kits included
• Span 30 cm • Weight 8 - 9.5g
www.RetroRC.us.com
VISA (248) 212-9666
PO Box 193, Keego Harbor, MI 48320



Sandy Cripps built this unique, 19-inch wingspan Messerschmitt Me 209 V1 prewar German racer. The model features handmade exhaust stacks, a vacuum-formed canopy, and a BL-180 motor.



This is Martin Newell's amazing collection of micro RC airplanes that he flew during the NEAT Fair.

SOURCES:

NEAT Fair
www.neatfair.org

AeroVironment
(805) 520-8350
www.avinc.com

DelFly Nimble—The DelFly Project
www.delfly.nl/nimble

Micro Flier Radio
(941) 377-9808
www.microflierradio.com

HOLIDAY SALE!

10% OFF ANY KIT ORDER*

That's right, take 10% off any kit orders when you order between Thanksgiving (11/29/2019) and New Years Day (1/1/2020)! **Use Coupon Code- HOLIDAY.** Happy Holidays from your friends at Balsa USA!



DON'T FORGET THE STOCKING STUFFERS!

BUILD YOUR DREAM TODAY!

BALSA USA

Build Your Dream Into a Reality!

ORDERS ONLY!
(800) 225-7287
(800) BALSUSA
(No tech calls accepted)
Toll-Free valid in US & Canada Only
Fax (906) 863-5878

CUSTOMER SUPPORT
& TECH HOTLINE!
(906) 863-6421
tech@balsausa.com

BUSINESS HOURS
8:00am to 5:00pm CST M-F
email: balsausa@balsausa.com

www.balsausa.com



NO VOICEMAIL



Find us on **Facebook**

We accept Visa, MasterCard, Discover and personal checks. Michigan residents add 6% sales tax. \$15.95 shipping on orders up to \$100.00, \$20.95 shipping on orders up to \$100.00 that includes 48" wood. All orders \$100.00 and up is FREE Shipping. All orders outside the contiguous United States are charged actual shipping. We recommend credit card payment for any orders that are subject to special shipping terms to avoid over or underpayment. Prices subject to change without notice. 15% Restocking Fee on ALL returned items. *See www.BalsaUSA.com for full sale details.

SAFETY COMES FIRST

The Vulcan bomber's nose probe is 2 inches from the wall! Our model aircraft can also get hangar rash during storage and transportation.



IS AN INCH REALLY AS GOOD AS A MILE?

By Dave Gee | safetycolumn@cs.com

NO, AN INCH is *not* as good as a mile! A close call means that something went wrong and needs to be corrected. RC pilots sometimes send me close-call reports—not to brag about them, but to help prevent a repeat. The idea is to let others know how a near-miss situation happened and how to avoid replicating it. It often comes down to letting part of a model get too close to a person or an obstacle.

When in flight or being prepped for flight, model aircraft should be kept a proper distance from people and things. That distance changes according to whether or not the powerplant is energized, and if the aircraft is moving on the ground or airborne.

Our flying fields are laid out to make sure proper separation is maintained. Pilots want to be certain that if something goes wrong, there is room enough to deal with the situation. A near miss means that luck was the only thing preventing an accident, and savvy pilots don't depend on luck.

Splattered Spinner

John Prewitt is certainly a savvy pilot. He and his “one man pit crew,” Brian Taylor, were completing the preflight check on a gas-powered RC airplane when space suddenly became a valuable commodity. As Brian was making carburetor adjustments, the motor backfired and the plastic spinner exploded into shards. John said that one piece was found 50 feet away! Both men were behind the airplane and out of the line of fire.

Our models have powerful engines and motors. These two modelers took proper precautions, even on a routine flight. Stay out of the path of potential

problems as much as you can. Be conscious of the propeller disc and avoid being where a blade might fly if something goes wrong.

John and Brian knew that they might go their entire lives without seeing an oddball incident such as a shattered spinner—or that it might happen in the next moment.

Road Trips and Home Stands

There are two times when our models are in close proximity to objects: during transport and while in storage. A high percentage of airframe damage happens in those non-flying moments. Some aircraft get to live in special padded boxes, but others ride to the field in the back seat or in a pickup truck bed. Larger airplanes might come apart for transport and storage.

Wings and tail surfaces are notoriously vulnerable. Not everyone has enough space at home to store airplanes in an ideal way. My models sometimes get stacked up or jammed into boxes. It's not unusual to find that this treatment has hurt the airplanes.

Hangar rash on a model could range from mere cosmetic scratches to serious control system damage that might not be visible. Control systems can be overstressed by having the tail surfaces in contact with a car seat or a storage box. If an aileron gets forced against the servo linkage, something has to give. Would your preflight check catch things such as



It's rare, but both gas and electric powerplants can throw blades without warning. Keep out of the line of fire!

a bent servo linkage?

I often forget about minor damage until—sometimes months later—I take the airplane to the field and rediscover the broken parts. As a skilled procrastinator, my current solution is not to actually fix the airplane promptly. Ridiculous!

Instead, I put sticky notes on the aircraft as a reminder to not take it to the flying site until repairs have been made. That way I at least don't have to hear witty comments about bringing precrashed airplanes to the field.

Full-scale airplanes have storage issues too. There is a beautiful Avro Vulcan bomber displayed at the Royal Air Force Museum near London. Space is at a premium in the buildings, so the nose probe of the big jet is less than 2 inches from the wall, right in the corner of the hangar. I'm not sure how they got it there,

but it probably involved one person driving a forklift and another one yelling, "I say, old chap, stop!"

That airplane is not going anywhere soon, but our models have to travel to and from the field then wait in a garage, attic, or workshop until the next outing. It's really worth figuring out a safe storage/travel system.

Cardboard or wooden boxes are good if they are padded or the airplanes are secured inside. Big, plastic storage tubs from big-box stores work well for smaller airplanes when combined with bubble wrap. Larger aircraft sometimes have custom-sewn fabric covers to slip around the wings.

I've seen modelers with special trailers that hold airplanes 24 hours a day, seven days a week so that there is no unloading at home. That's pretty luxurious!

A FULL LINE OF ARF'S IN STOCK

20cc-120cc

www.MILEHIGHRC.COM

Mile High RC offers modern ARF's for modern pilots visit milehighrc.com for a full line of aircraft accessories
US Distributor of EME Engines.

EME, GP, AND DJ GAS ENGINES IN STOCK

DEALERS WELCOME

SAFETY COMES FIRST



The author's granddaughter, Hazel, says that this mystery airplane is an easy one. Email its identity to Dave and win digital P-42 Lancer plans.

Mystery Airplane

This mystery airplane was photographed at the Le Musée de l'Air et de l'Espace (National Air and Space Museum) in Paris. This is the oldest air museum in the world and it's really fun. Aviation buffs will have no problem identifying the aircraft in the picture. My 3-year-old granddaughter, Hazel, happily posed with the 70-year-old fighter bomber. She said it looked just like all of the other airplanes.

The French have great national pride, which is evident throughout the museum. For example, TV screens play informative videos about each aircraft. Visitors can press buttons to hear the narration in French, Dutch, or English. Of course, no matter which button you pushed, it played in French. What kidders!

Any Way You Call It

If you email your mystery airplane guess to me at the address listed at the beginning of this column, I will send you special scanned/digital model plans with parts templates. It's from a 1940s wartime kit for an 18-inch wingspan Republic P-43 Lancer.



Wait. Wasn't the Republic Lancer a P-43? Curtiss built the P-42, but not according to this kit. Win plans by guessing the mystery airplane.

This sleek and beautiful airplane was a predecessor to the P-47 Thunderbolt. The model is well proportioned for Flying Aces Club competition or as a conversion to micro RC. It would also work well for Control Line profile with sheet balsa or foam construction.

The reason the plans are special doesn't have to do with the airplane itself, but rather the labeling. It is listed on the plans and the box as a Republic Lancer P-42. This probably upset the folks at Curtiss, who thought their P-42 (the experimental variation of the P-40 Warhawk) was the only one. The government and everyone else thought that the Republic Lancer was the P-43!

Was it the designer's carelessness, confusion, or an effort to thwart Nazi spies? We will never know, but it'll be fun to argue designations with the scale judge at your contest. 

SOURCES:

National Air and Space Museum of France
www.museeairespace.fr

Royal Air Force Museum in London
www.rafmuseum.org.uk/london

FMS

70mm A-10 V2 THUNDERBOLT II

Upgraded Appearance and Detail



850mm **FLASH**

Ultimate Speed of up to **180MPH**

HORIZON
H O B B Y . C O M

AVAILABLE AT WWW.HORIZONHOBBY.COM OR
YOUR FAVORITE RETAILER



Shown is the NashBro event flightline with the historic homes of Leiper's Fork TN in the background.

HOSTING AN EVENT FOR 16 YEARS

By **Jim Graham** | jimgraham@yahoo.com

WHEN I FIRST got into the hobby, I literally knew nothing. I didn't know how to fly, how to build, or anything about electronics. I just knew that I wanted to be an RC pilot.

At that very moment in time, I walked across the street to my neighbor's garage sale. There, on a table, was a hand-built Italian .40-size trainer airplane that had never been finished or flown, but was fully built. I bought that airplane for \$5. It was known as the Fiver after that.

I was lucky to live only a mile or two from the Edwin Warner Model Aviators' (EWMA) flying field, one of the oldest RC airfields in the country. It is located at Edwin Warner Park in Nashville, Tennessee. With my baby girl in my arms, I went to the field, hoping to meet someone who could help me on my journey into this hobby.

The first person to walk up to me turned out to be the president of EWMA, Richard Rust. He directed me to Bryce Custer, an RC teacher extraordinaire. Bryce said that when he saw me, he immediately thought, "A hippy has stolen a baby!" He taught me to fly, build, and fix my own airplanes—and he also became a good friend.

NashBro, Year One

I hosted my first fly-in 16 years ago. The interesting thing about hosting it was that I had never been to an actual flying event before! I had no idea what the other pilots expected or what you were supposed to do at an RC event.

The good news was that this event was for the Profile Brotherhood, and it turned out that they weren't like other people—which worked out well for

an event based solely on what I thought we should do.

We didn't have a raffle, there were no noontime demos, no landing fee, no rules about hovering over the runway, and less! To my amazement, the Bros all commented on how much they loved that the event was about flying and not about all of the other stuff. My complete lack of knowledge really paid off!

Leiper's Fork

We needed a new venue for the next year, and that's when I reached out to Bryce. Leiper's Fork, Tennessee, was founded in the 1700s by settlers from North Carolina. Today, it is still a one-horse town surrounded by huge, open pastures and ranches owned by country singers and TV stars. The field next to where we fly is owned by Justin Timberlake. Chris Stapleton just bought a house up the street. Tim McGraw lives a few miles up the road. You get the idea ...

Thanks to Bryce and one very intense meeting with county officials, we have



Take an empty field and turn it into an RC nirvana. All it takes is some thought, hard work, and insurance from the AMA!

hosted our yearly NashBro event there for 15 years. The locals are welcoming and come to the field and hang out with us. Pilots who aren't used to the South always comment about how nice everyone is. It's

part of the magic of our event.

The People

I know what it takes to stop your life, pack, and then trek across the country to

VORTECH STANDARD • VORTECH PARABOLIC (P-51) • VORTECH ULTIMATE • VORTECH FAI • VORTECH BIG CUT

Do You Need A Spinner With Special Cutouts? NO PROBLEM!



There's nothing better than having a beautiful, lightweight spinner custom cut for your airplane. We cut our Vortech Spinners to meet special requirements everyday.

Need a spinner for your multi-bladed prop? Maybe something to fit a that special prop? No problem - give us a call and we'll be glad to help.

- Sizes up to 6 inches.
- Standard, Parabolic, FAI & Ultimate styles.
- CNC machined to the highest tolerances
- Strong, yet very light-weight
- Spun from Aluminum using the same techniques used for full-scale aircraft.
- Individually hand polished & inspected
- Made in the USA.





DAVE BROWN PRODUCTS INC.

4560 Layhigh Rd, Hamilton, OH 45013
513.738.1576 • www.dbproducts.com

VORTECH STANDARD • VORTECH PARABOLIC (P-51) • VORTECH ULTIMATE • VORTECH FAI • VORTECH BIG CUT

BORN TO FLY



Each night at NashBro, participants sit around the fire and talk and laugh. It's a good time.



The late Dave Mathewson (L), former AMA president and executive director, and Mark T. Smith (middle L), AMA's former executive vice president, attended the event one year. They flew and presented Jim Graham (R) with an award from AMA. It was a proud moment for Jim.

go to an event each year. I make a big effort to thank everyone who shows up. I have been told, "As long as we can fly in that pasture, I'm going to come out." I have also been told, "I only get one vacation a year and this is what I want to do with that time."

That is when you realize that your RC event is not just about RC—it's more than that. It means something different to each person. It's my job to make sure that each attendee can sit back, relax, and have a good time.

Hosting Your Event

Maybe you have been thinking about holding your own event. I will say that it is a lot to figure out initially then execute. Each year it will get easier. The only stress I have now is that I might forget something on my last ride out to the field. Bryce and

I have worked out a system and we each take care of our jobs. What once required multiple preshow meetings, is now only a few phone calls.


AMA Executive Vice President Randy Cameron and District VI Vice President Gary Himes have attended my event for years. A few years ago, Gary explained to me how insuring my event through AMA would be a good idea.

I started doing that then found out that I could carry extra insurance for the landowner. This is a yearly tradition and without it, I doubt we would be able to use the field today. I offer thanks to the AMA for this service, and to Colleen Pierce, who sanctions events, for always taking care of me.

NashBro starts with me getting to the field early, setting up the flightline, and marking where the tent line is. After that, pilots start rolling in and everything begins falling into place. As the years have progressed, we now see sailplanes, FPV flight, warbirds, and others in the air. Each night, we have a bonfire and the night flying begins. NashBro is about flying, relaxing,

and old friends getting back together.

Your event can be whatever your vision is. Gatherings such as this are what keep our hobby alive, and the reward of hosting your own is huge. NashBro has allowed me to make a ton of new friends, and it makes me happy to host them every year in our pasture.

An annual tradition that Bryce and I have is that after the pilots have left, we get in the old blue golf cart and drive the field, looking for any missed parts or pieces, and discuss the event, the hobby, and the future. With the help of AMA and a few friends or club members, you could start your own tradition and, I promise, it will be worth it! 

SOURCES:

AMA Competition Resources FAQ

www.modelaircraft.org/events/competition-resources/competition-faq#sanction

Colleen Pierce

(765) 287-1256, ext. 252
cpierce@modelaircraft.org



ULTRA STAND

A STURDY STAND FOR R/C AIRPLANES AND POWERBOATS

HOME & FIELD USES:
BUILD - MAINTAIN - TRANSPORT - STORE

ERNST
MANUFACTURING INC.

WWW.ERNSTRC.COM
(877) 376-7885

MADE IN THE USA
LIFETIME GUARANTEE

Distributor and dealer inquiries invited

JETI DS-12 2.4GHZ/900MHZ DUAL BAND RC SYSTEM

JETI QUALITY IN LIGHT PACKAGE

JETI model

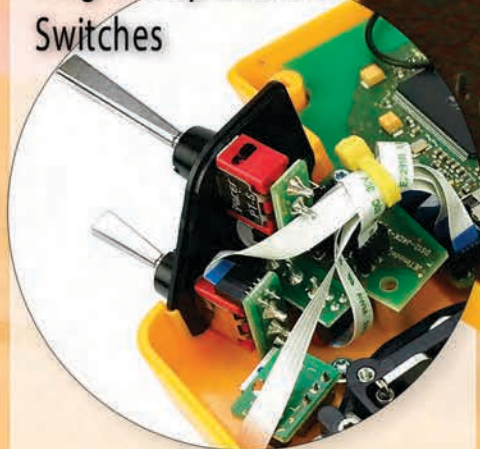
Lua

900MHz Backup Frequency

- (16) 12 Channels
- Telemetry
- Integration
- Built-In Gyro
- Microphone
- Voice, Alarms
- Music, MP3
- Vibration
- \$595.00



Plug-In/Replaceable Switches



(4096 Resolution)

ZZZ -HW186\$ FRP

ZZZ -HW' 6 FRP
ZZZ (VSUW7HFK FRP



As do sUAS, blimps offer compelling advantages over other aircraft configurations, such as long endurance, vertical takeoff and landing, and payload capacities that rival their fixed-wing and rotorcraft counterparts.

BUOYANCY: THE ULTIMATE FLIGHT-TIME BOOSTER

By Patrick Sherman
lucidity@roswellflighttestcrew.com

ASK MOST INDUSTRY professionals which gas will most likely extend the flight time of sUAS and they will answer, “hydrogen.” Fuel cells that are powered by hydrogen offer approximately three times the energy density of LiPo batteries, substantially increasing aircraft endurance.

However, Jonathan Nutzati, the CEO of Mothership Aeronautics, offers a compelling alternative with helium. As one of the six noble gases found in nature, helium doesn’t have the same reactive properties that allow hydrogen to power fuel cells, but it is nonflammable and lighter than air. Pump it into a lightweight, sealed container, whether a party balloon or an aerodynamic envelope, and it will float—or even fly.

In the world of crewed aviation, blimps are a niche platform, but they offer many compelling characteristics such as long endurance, vertical takeoff and landing, and a surprising payload capacity. Throughout the years, they have served in roles that play to these strengths, such as antisubmarine patrols and aerial camera platforms.

Jonathan and his team thought those same attributes would be a huge benefit to the drone industry and set about developing an RC blimp for professional use.

A Winding Road

“Mothership was founded in 2016 with the goal of creating an aircraft carrier for drones using a solar-powered blimp,” Jonathan explained. “We raised \$25,000 for the company on day one and I started working with eBlimp. My plan was to buy the aircraft from them, convert it to solar power,

and use it for pipeline inspection to raise additional funds.”

Three months later, Jonathan had a working prototype and raised an additional \$300,000 from investors. In 2017, another round of fundraising added an additional \$1.45 million, but these new investors had some advice for him.

“They told me that the service provider approach was not going to work because we were working with a very conservative industry—oil and gas—while simultaneously taking two different risks,” he explained. “The first risk was using any type of drone for pipeline inspection, and the second risk was using a relatively untested type of aircraft.”

The investors offered the alternative of becoming an aircraft manufacturer. Jonathan purchased his supplier, eBlimp, and set about building drone airships to fulfill a range of missions.

Gone With the Wind

Jonathan stated that his blimps are rated by their onboard power systems, which in turn determine the diameter of the helium-filled envelopes that keep them aloft.

“For example, our 500-watt blimp can travel at a maximum of 25 mph, which means it can handle wind up to about 15 mph, and that makes it more or less equivalent to the DJI Mavic,” he said. “It’s good for personal or light professional work.

“Our 700-watt blimp is more like the



Blimps rely on their helium-filled envelopes for lift, meaning that electric power is only required for maneuvering. By making the envelope transparent and adding solar cells, flight time can be substantially increased.

[DJI] Phantom 4. It can handle wind up to 20 mph. Our 1,000-watt blimp is about the equivalent of a [DJI] Matrice M200. It can fly in wind up to 25 mph.”

Similar to the drones he used to characterize his own fleet of aerostats, the larger platforms are capable of carrying progressively heavier payloads. The 500-watt blimp, for example, carries approximately 500 grams, which is enough for a GoPro or a simple mapping camera.

Moving up to the 1,000-watt blimp, the payload capacity increases to 1.5 kilograms and is capable of supporting pan-tilt-zoom

cameras or other, more exotic, payloads.

Of course, blimps have both advantages and disadvantages relative to multirotors. Jonathan’s 500-watt platform can stay airborne for at least one hour; however, that result is contingent on the skill of the pilot.

“Technique is a big part of it,” he explained. “If you try to fly it like a conventional drone, you’re probably going to lose it. You always need to keep your nose into the wind—which means sometimes you need to fly sideways or backward to keep it under control and maximize flight time.”

An advertisement for Graves RC. The top half features a blue sky background with a vintage-style biplane flying. Below it, a red banner contains the text "Fast Shipping!". Underneath the banner, there are three circular images: one showing RC engine parts, one showing a quadcopter drone, and one showing a green RC boat. At the bottom, there are two RC cars (a red one and a blue one) and the Graves RC logo, which includes a stylized red and black "G" and the text "GRAVES RC Orlando, Florida". A red banner at the bottom right says "Visit Us At www.GravesRC.com".

ADVANCED FLIGHT TECHNOLOGIES



In addition to control surfaces that are located at the tail of the aircraft, blimps maneuver using “thrusters”—propellers driven by electric motors that can pitch to any angle needed for takeoff, landing, ascent, descent, or forward flight.

Don't Fly—Float!

Similar to a fish swimming in the open ocean, blimps are neutrally buoyant. This means that the lift generated by the helium-filled envelope is precisely offset by the weight of the aircraft and its payload. In perfectly still air, a blimp could theoretically hover indefinitely. All of the maneuvers, including ascent and descent, are accomplished by means of control surfaces and thrusters.

The thrusters are a pair of electric motors with shrouded propellers attached that can pitch to any angle as needed to accomplish flight maneuvers. In addition, blimps have elevators and a rudder located at the tail of the aircraft. Control is achieved by means of a conventional, two-stick radio that would be familiar to any aeromodeler or drone pilot.

“The left stick controls thrust output and

the rudder, and the right stick controls the elevators,” said Jonathan. “During normal operation, the thrusters face forward, but when you saturate the elevator, they temporarily point up or down to help complete the maneuver. After that, they return to their neutral point automatically.”

At takeoff and landing, the pilot rotates the thrusters into a vertical orientation using a separate control to make a direct ascent or descent as needed. Because the aircraft is neutrally buoyant, flight time is limited not by how long it can remain aloft, but on the battery power that is available to operate the thrusters and control surfaces. In short, a little extra power would go a long way toward increasing flight time.

Infinity Cruise

The ability to achieve extended flight time drove Jonathan to incorporate solar

cells into his first airship design. Having identified a type of high-performance photovoltaic cell that converts light directly into electricity, he first sought to mount them on top of the envelope using a rigid frame.


“Unfortunately, that degraded the aerodynamic properties of the airship,” he said, “so we sourced a clear material for the envelope and put the solar panels inside.” According to Jonathan, a blimp equipped with the cells can fly all day, as long as the sun is shining.

“There is a threshold that defines infinity cruise, where you are producing more power than you are using,” he explained. “However, if you’re running at full throttle constantly, you’ll eventually discharge the battery and you will have to land.”

Daylong flights open up missions that would be difficult or impossible to achieve with other types of aircraft, such as the linear inspection of pipelines and utility corridors (as Jonathan originally imagined), but also to overwatch for security and public safety missions. “We are also looking at using our blimps as flying metal detectors, using aerial magnetometers developed by GEM Systems out of Canada,” he said. “It’s a perfect fit because there is a lot less electromagnetic interference from a blimp than there is with a multirotor.”

Safety First

Perhaps the biggest advantage of the blimp is safety, Jonathan explained. “If you get hit by it, or you crash into something, there isn’t going to be any damage. I hit a tree once, and I patched up the envelope with packing tape and we were flying again in two minutes—and there wasn’t any damage to the tree.

“Even in the event of a catastrophic failure, the envelope acts like a parachute. If you shoot holes in the envelope, it’s just going to settle gently to the ground. It really is the safest type of aircraft.” 

SOURCES:

Mothership Aeronautics

(386) 506 9204

www.mothership.aero

www.facebook.com/mothership.aero

GEM Systems

(905) 752-2202

www.gemsys.ca

STILL BOUNCING THOSE LANDINGS? TRY CHANGING YOUR WHEELS!

We've all experienced it. Those rock-hard tires included in your kit are making it impossible to land without those awkward bounces down the runway. Pitch those wheels and install a pair of our 'Lectra-Lite, Lite-Flite, or Big-Flite wheels.

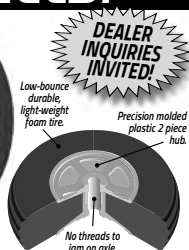
▪ **Exclusive Foam** - absorbs the shock from landings to give you a silky smooth landing, time after time.

▪ **Light Weight** - saving up to a pound in the larger sizes.

▪ **No Run-Away Tires** - hubs snap together, locking tires in place.



Available in regular & treaded versions.



DEALER INQUIRIES INVITED!

For complete information on our Lectra-Lite, Lite-Flite and Big-Flite wheels, or any of our other products, give us a call or visit our website today!

www.ohio-superstar.com • 330-457-0238 • All products made in Ohio, USA since 1974.

Truly unparalleled flight performance with that extra touch of scale appeal!

RV8

Super PNP with *Aura*™

Specifications	
Wing Span	75.8"
Length	66.3"
Weight	10 lb, 3 oz (with 6s 5200 mAh)
Wing Area	1120 sq.in
Channels	6+ (7 if switching night LED's)
Battery	4200 5S -to- 6200 6S
Flight Time	7 to 12 min. depending on flight style
Construction	EPO foam with plywood and carbon fiber reinforcement



Night available in orange and green scheme. Floats also available in both colors.

New orange scheme now available!



Popular green scheme available!

Also check these fantastic Super PNP!

QQ Cap232EX Super PNP

Wingspan: 60.2"
Weight: 6 lb, 2 oz. with 6s 3500mAh.
Power: Electric 60 size
Construction: EPO Foam

FV-31 Cypher VTOL EDF

NEW

Wingspan: 38.2"
Weight: 3 lb, 10 oz. with 3s 3500mAh.
Power: (4) EDF Unit
Construction: EPO Foam

FlexJet Super PNP

Wingspan: 41.6"
Weight: 6 lb, 7 oz. with 6s 4000mAh.
Power: Electric 60 size
Construction: EPO Foam

"Our Flex Innovations products are Designed, Tested, Flown and Supported in the USA"

Order online at WWW.FLEXINNOVATIONS.COM, call us at (866) 310-3539

or visit your local Flex Innovations Dealer. Follow us on

Dealers Wanted! Email us at sales@flexinnovations.com

AROUND THE PATCH

Clancy Aviation should now have kits available for its original, single-engine Stagger Bee. The author's whimsical trimotor conversion waited in bare bones for 18 years before he recently completed it.



READERS' PROJECTS

By Thayer Syme | thayer@flying-models.com

I AM MIXING THINGS UP this month and starting with a few readers' projects before I run out of space with my own ramblings!

First is an update on Steve Heredia's Jungster II. You might recall seeing Steve's project last summer in the July 2019 *Model Aviation*. At that point, he had just framed the wing, and he continues to make good progress. The flying surfaces are now complete and covered, and the fuselage roughed in.

Steve based his model of the 1960s-era parasol homebuilt aircraft on enlarged *Flying Models* plans. I can't say that I've ever seen this design built, and I look forward to seeing how the fuselage looks with all of its stringers in place. This is a unique project and is sure to stand out at his local field.

Fellow *Model Aviation* contributor, Terry Dunn, has a knack for finding diamonds in the rough, as he proved again at the 2019 Northeast Electric Aircraft Technology (NEAT) Fair, held in September in Downsville, New York. Terry sneaked off at some point the previous year—probably so that I wouldn't try talking some sense into him—and returned with a beaming smile and a rather rough Puddle Master. I gave up on trying to convince him to rest it in the fire pit, and just shook my head in confusion.

Its humble beginnings and my skepticism were no match for Terry's vision though. He stripped and recovered much of the airframe and replaced the original brushed-can motor and NiCd batteries with a brushless/LiPo battery combination. He did a wonderful job bringing it back, and it has proven to be well worth the effort.

Rob Caso also arrived at NEAT this year with another great model in tow: a 1:8-scale Avro Avian that spanned 41 inches. It started as just an idea after

NEAT 2018. “How about a simple sport scale model for daily flying?” we mused. As is often the case in Rob’s workshop, it soon took on a life of its own. An immaculately detailed Cirrus engine adorns its nose, and he didn’t cut many corners behind the firewall.

The colorful livery is the primary concession to its sport-flying genesis, and it’s based upon that of another favorite aircraft, a Fairey Swordfish that was enlisted in England’s Merchant Navy. For the Avian though, it is pure fantasy. Perhaps a training aircraft for U-boat spotting?

Like the prototype, Rob’s Avian features folding wings. It is also readily convertible to wheels. Rob has graciously entrusted me with the sticks twice now, and it is a delight. It is scheduled for publication in England’s *RCM&E* magazine.

Neglected Projects

Let’s now have a show of hands. How many of you have a few neglected projects tucked away in your workshop? No, I don’t mean the ones that you set aside a month or two ago. How about those that have been languishing in a dark corner for years, perhaps even a decade or more? Whether they await restoration like Terry’s Puddle



Rob Caso’s Avro Avian began with his desire for an unusual, but practical, model for everyday flying. Its folding wings, dummy engine, and immaculately painted finish highlight his craftsmanship. Photo by Tom Droege.

Master, or were never completed, they all count.

Both of my hands are up—and up high. I’m not quite sure what sparked it, but I’ve been on a kick to finally dust off a few such projects that were set aside back when and have been patiently waiting ever since.

Because this was a big anniversary for

the NEAT Fair (the 20th year), I decided to bring a model that I flew my first time at the show in 2004, which was the Year of the Great Flood. Before the local sheriff issued evacuation orders, I spent quite a bit of time flying a float-equipped Graupner Wingo from the pond, with my transmitter wrapped in a garbage bag.



Last seen in the July 2019 issue of *Model Aviation*, Steve Heredia’s 100-inch Jungster II is progressing nicely. Based on enlarged plans from *Flying Models*, this is sure to be an eye-catcher.

AROUND THE PATCH



Terry Dunn's Puddle Master is enjoying its new life with brushless LiPo power and underlung ailerons. He refinished the floats, pylon, and forward fuselage as part of his successful restoration. Photo by Greg Cardillo.



The author's Graupner Wingo, shown at the 20th anniversary NEAT Fair, now uses brushless power. Extended duration came with the much larger LiPo battery that was needed to maintain proper balance. Cardillo photo.



Fab Comp Models

Home of the Finest Composite Jets




Featuring:

- 90-120mm size SR-71 Blackbird and B-1 Lancer
- Custom composite parts manufacturing and repair
- Vortex Rectifier units for your next EDF upgrade

Learn more at: Fab Comp Models.com
 Email: FabricatedComponents@yahoo.com
 Tipp City, OH. 45371


Not flown for more than a decade, I pulled the old bird off of its perch a few days before packing the car last fall to see what it needed. The 72 MHz receiver had long since been repurposed and was replaced with a new 2.4 GHz Hitec Minima 6. I also wanted a new power system.

The original Speed 400 setup was slightly lethargic and gave way to a small AXi outrunner motor and an improvised motor mount. I struggled a bit to get the center of gravity (CG) properly forward and despite replacing the original 600 mAh NiCd battery pack with a 2S 2000 mAh LiPo, it still feels tail-heavy!

Another old project finally saw the light of day at NEAT this past year: a Clancy Aviation Stagger Bee biplane. I had reviewed the kit when the company first released it in 2000, and soon after I framed up a second one with the idea of converting it to a Speed 400 trimotor. I quickly completed nearly all of the woodwork before that project was stalled by other distractions.

Late last summer, I decided the Stagger Bee frame had properly aged and unpacked it from our 2004 cross-country move. It took some scrounging, but I finally found three 7.2-volt Speed 400 motors, a brushed ESC to run them all, and a few Gunther propellers that were all the rage around the turn of the last century.

Much like the Wingo, my "new" Stagger Bee soon revealed at NEAT a need for some CG adjustment and a quick tuning session back home on the bench. I am happy to report that it handles just fine now though, and has finally earned a well-deserved spot in my flying rotation.

Until next time, keep me posted on your projects, and keep building! 

SOURCES:

Clancy Aviation
 (480) 498-0239
andyclancydesigns@gmail.com
www.andyclancydesigns.com

Flying Models Plans
thayer@flying-models.com
www.store.flying-models.com

Hitec RCD
 (858) 748-6948
www.hitecrfd.com

NEAT Fair
www.neatfair.org

HIGHEST QUALITY PRODUCTS COAST TO COAST



Viper XXL MK2



1/5th F-16 Falcon

ONLY STOCKING AMERICAN DEALER



Pilatus PC-21 Turboprop



BAE Hawk 100

Contact: jetshop@chiefaircraft.com

Skymaster Jets USA

More Details at
jets.chiefaircraft.com



XICOY
CG Meter

Weight, Balance & Angle Setup



Tx / Rx Batteries
 Duralite, Spektrum, Thunder Power



Jet-Tronics/Xicoy

Air Valves & Sequencers



All Models

DLE

- In Stock
- Electronic Ignition Included



Call for Pricing & Turbine Combos



Fixed Wing Gyros

iGyro & iGyro 3e
 iGyro 1e

Cortex
 3-Axis
 PRO Version



Grupp Modellbau
 In Stock

RV4

42% Size Only \$1,829.⁰⁰
 100-120cc Power



2 Schemes - Quick Build

Carbon Cub SS

40% Size Only \$2,450.⁰⁰
 100cc Power



16SZ

FASSTest



Duplex Radio Systems



iX20



Graupner

HITEC, MKS, SAVOX
 Lowest Prices - In Stock

Call for Multi-Servo Packages



PowerBox Systems



KRILL

ALL COMPOSITE CONSTRUCTION



EXTRA 330SC & LX MODELS
 31% TO 41% SIZES

38% 2.8m
 150-170cc

LASER Z-2300



AVANTI S FC Jet
 2.1m ARF



External Paint with
 Electron Landing Gear



Pilot

80-120cc Size
Laser 2.6m ARF



Predator Turbine Jet

New Schemes

1.8m & 2.2m
 Composite Jet

Available in Gear Only & Turbine Ready

PITTS Challenger ARF

Pilot-RC's first
 ever biplane



73" 50-70cc
 87" 100cc

RC SCALE

Al Kretz is shown testing his DLE-61-powered Miles Hawk Speed Six. He brought it to the 2019 RC Scale Nats, but unfortunately, the model was lost during practice.



MILES HAWK SPEED SIX

By Stan Alexander | onawing4602@att.net

AL KRETZ'S 1/3-SCALE Miles Hawk Speed Six was a model rarely seen in the US. Miles Aircraft Limited built a series of light utility and racing aircraft that were also used by the Royal Air Force as trainers. The full-scale aircraft still exists and is housed at the Shuttleworth Collection, in Bedfordshire, England.

Al went with the motto that bigger flies better, and it was certainly impressive. This was a scratch-built model—not from plans or from a kit—but Al took the three-view drawings, photos, and other documentation and made a set of building plans from that. The aircraft spanned 111 inches, weighed 42 pounds, was powered by a DLE-61 engine, painted with Klass Kote paint, and had completely scratch-built landing gear.

Unfortunately, Al lost the model during practice for the 2019 RC Scale Nats at the International Aeromodeling Center in Muncie, Indiana. It was a beautiful model, Al!

Scale Documentation

Documenting your Scale model can sometimes be as easy as looking up the airplane on the internet. Other times, it can take years to find enough information on an aircraft to build a model.

Having an aircraft that is different from everyone else's at the flying field is something to look at. If you take a stock ARF to the field, it might receive a once-over, but that's about it! Everyone has seen it before. But having something different is a great advantage sometimes.

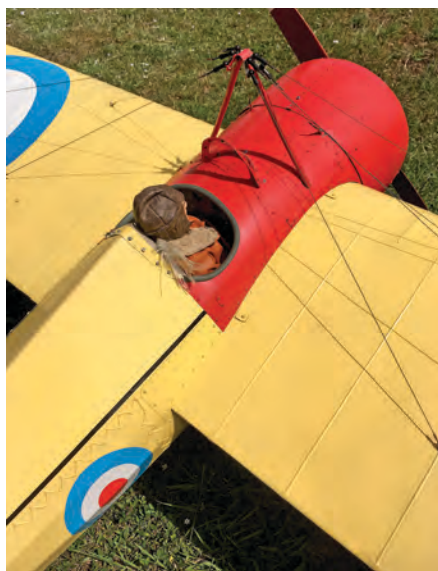
If you are in competition, having an unusual aircraft also helps because



Hangar One Kits offers more than 15 scale aircraft kits, including this Miles M.14 Magister, which features an 82-inch wingspan. It's built for a 1.20-size glow or gas engine.



Another Hangar One kit is the classic de Havilland Tiger Moth with a 70-inch wingspan. It's built for .90-size engines. All of the kits have laser-cut parts.



This photo shows the Morane-Saulnier's cockpit, as well as the fabric stitching on the fuselage side. These panels are removable to service the airframe.



This view of the Morane-Saulnier Type N shows the five-cylinder UMS radial engine. Walt stated that the engine, available from CH Ignitions, is reliable and powerful.

judges generally don't know a Henschel Hs 123 as well as they know a J-3 Cub. Your model of a J-3 might be different, but most are not.

If you plan to compete with the model, find out how many pages of documentation you are allowed. It differs between competitions. AMA Sport Scale allows eight pages for documentation.

Choose your photos wisely and show what you have done. If you are building a model just for yourself or to fly at a fun-fly, you might still want documentation because your thoughts could change after flying it a few times.

Aircraft Documentation Services is one of many documentation companies. David Houk probably has the largest collection on the planet for Scale modelers. FotoPaaks and 3-Views are available for just about any airplane you can imagine—anything from jets to pre-World War I aircraft are listed in the large online catalog. Many of these are from older 35 mm negatives that have been digitalized and upgraded.

There seem to be fewer options for building different types of models, unless you go with the tried-and-true basics. We've lost independent kit manufacturers such as Top Flite Models, Dynaflyte, Great Planes, and several others in the past few years, but other companies are now filling that void. (*Editor's note:* Some Top Flite Models, Dynaflyte, and Great Planes aircraft are still available through Horizon Hobby.)

Hangar One Kits

Hangar One Kits has a line of kits and short kits for Scale, Old-Timers, Soaring, and sport models. Some might ask what a short kit is. Generally, it provides all of the

RC SCALE

shaped parts such as formers, ribs, and others. The builder provides the sheets and sticks for the kit.

The company's line of scale kits includes 15 designs—mostly 1/5 to 1/4 scale—and is increasing. The great thing is that many of these aircraft are not available from other companies in this size. They could be used for RC and/or Control Line Scale models. Shipping the kit from New Zealand to the US won't cost you an arm and a leg.

Some of the kits in its line include the 108-inch Anderson Kingfisher, the 91-inch Spacewalker, the 58-inch Victa Airtourer, the 72-inch Cessna Bird Dog, the 72-inch Hanriot Dupont HD.1, and the 60-inch Cessna Agwagon. There are several other kits available, including WW I and World War II trainers, with other kits in the works.

Walt Moucha Models

Walt has a new WW I design, the

Morane-Saulnier Type N. Built to 1/3 scale, the model has a wingspan of 108 inches and a length of 75 inches. With a UMS 125cc radial engine, it comes in at 29-1/2 pounds. This is designed to be a scale model that is fun to fly, with a size that is small enough to fit in many minivans or SUVs with detachable wing panels.

Fair skies and tailwinds. 



Walt Moucha's Morane-Saulnier Type N has a 108-inch wingspan. The full-scale aircraft was the first to be used by the French Air Force in 1915. The model is fabric covered and painted with rattle can spray paint.

SOURCES:

Aircraft Documentation Services

(330) 335-0050
www.airdoc.biz

Hangar One Kits

info@hangaronekits.com
www.hangaronekits.com

Walt Moucha Models


(772) 460-6436
waltmoucha@yahoo.com

CH Ignitions (UMS Engines)


(561) 927-6171
www.ch-ignitions.com

National Association of Scale Aeromodelers (NASA)

www.nasascale.org




Getting Better Ideas Off The Ground...



Gold-N-Clevis

The World's Strongest Clevises

11 Step Manufacturing Process



Available in:
2-56, 4-40, 2mm & 3mm

Sullivan Products, 8950 Yellow Brick Rd, Baltimore, MD 21237

Join us on Facebook:
Facebook.com/SullivanProducts

WWW.SULLIVANPRODUCTS.COM

Simply Revolutionary!

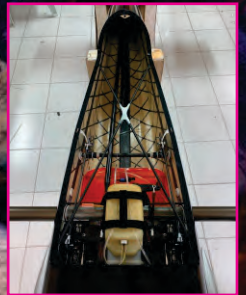
Extra 330LX

It's about time.

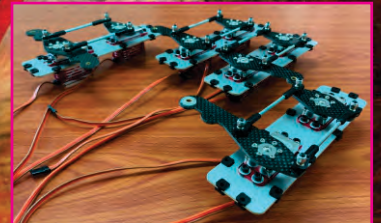
- fly a 40% with the agility of a 35%
- super light all composite construction
- never seen before torsional stiffness
- beveled control surfaces with extreme throws
- clamped single-piece carbon landing gear
- 4 sets of ganged servos right on the CG
- massive push rod elevator control
- confined structural muffler compartment
- adjustable motor dome for 2 & 4 cyl

The Best
of Two Worlds
Precision + 3D

Spencer Nordquist



Alexander Raff



Full Info
Here! ▶



Andy Kane
301-785-3022
Ray Labonte
207-329-7713
info@carf-models.com

CARF MODELS

Check it out. It will take your breath away:

www.carf-models.com

RC SOARING

Terry Koplan's 10 km Goal and Return team included (L-R) Terry, Bob Swett, and John Elias, the cross-country record holder.



2019 US F3J TEAM SELECTION CONTEST

By Gordon Buckland | gordon@gatorf3b.com

THE F3J TEAM SELECTION contest to choose the F3J US team pilots who will do battle July 31-August 8, 2020, in Slovakia, was held in Warrenton, Virginia, at the Horse Feathers Airport on October 5-7, 2019. Junior and Senior three-man teams were determined by the results from this three-day event.

Josh Glaab was a prominent participant in this year's event, and he wrote this report.

For this year's event, there were several new rules to contend with, including a minimum wing-loading requirement (20 grams per square decimeter). The goal was to decrease the cost of the sport and increase participation. This rule required many pilots to add ballast to make legal weight.

The reflight rule was also changed. In the past, if a pilot had a midair, he or she was entitled to a reflight. Some pilots abused this rule and now the fliers can only get a reflight for a midair if it happens within the first 60 seconds of the flight, resulting in zero reflights during the contest and more rounds being flown.

At an F3J contest, pilots earn points for time aloft (after separation from the launch line) and distance from the nose of the sailplane to a designated point on the ground at the end of the flight. The entire flight must be performed within the working time window (usually 10 or 15 minutes), and heavy penalties are assessed if the aircraft is still flying when the working time window closes. Pilots can launch more than once but are required to take their last flight score.

F3J features one of the most challenging maneuvers in model aviation:

the F3J landing task. It combines precision 4D trajectory with energy management and split-second reflexes to hit the target.

Saturday and Sunday were dedicated to 10-minute working windows, with 15 minutes on Monday. Every effort was made by the contest director and contestants to start flying early when lift was less prevalent. The idea was that the weak lift provided great discrimination of pilot skill.

The first flights on all three days were at approximately 8:15 a.m. Thirty pilots assembled for the pilots' meeting, conducted by Eastern Soaring League President Kerry Cochrell. He did an outstanding job as contest coordinator, and the club ran a tight ship, with pilots distributed across 8 x 20-meter launch/landing lanes.

In order to launch by 8:15 a.m., pilots had to be at the contest site by 6:30 a.m. This was roughly 30 minutes before civil twilight and required using car headlights to assemble aircraft and launch equipment. One ingenious team from Florida rented a large U-Haul truck to serve as a mobile aircraft hangar. This minimized setup time for them and their friends.

Lanes were randomly assigned and switched for each contest day. This required the teardown and setup of 16 winches (two per team) each day but provided a more even competition because prevailing weather conditions can affect lanes differently.

Throw-out rounds are provided depending on the number of 10-minute and 15-minute rounds that are completed. Throughout the competition, 17 rounds were flown (13 10-minute rounds and four 15-minute rounds), which resulted in one



The 2020 USA F3J World Championship team after the Team Selection event. (L-R): Skip Miller (alternate), Neal Huffman, Josh Glaab, Jeff DuVal, Brayden Chamberlain (Junior), Noah Myers (Junior), and Charleston Thomas (Junior).

throw-out flight for the event.

Weather conditions were good, but the overcast sky and wind made it challenging at times. Pack mentality was observed, but the top finishers were usually setting the pace and out in front. In the end, Jeff DuVal won the contest. In second place was Josh Glaab, with Neil Huffman rounding out the US team in third place.

Jeff and Josh took the hard road and

tanked their first flights but righted their aircraft and finished strong. Neil was strong throughout and forfeited his last flight to avoid potential safety penalties that could occur. Jeff and Neil are returning US F3J team pilots.

Skip Miller came in fourth and is the team alternate. Brayden Chamberlain won the Junior competition, followed closely by Noah Myers. Charleston Thomas also

JL Products

Make It a Flawless Flight with the RotoFlow Fuel System

New Design



- Brass rotary fuel pick-up uses centrifugal force to ensure constant and reliable contact with fuel
- Three year warranty
- Zero maintenance
- Harder-hitting throttle
- No internal hoses or connections to harden, or leak air or fuel
- Works with gas, glow fuel and smoke oil
- 9 sizes, 10 oz. (\$29.95) – 50 oz. (\$49.95)
- Improved design incorporates PTFE bearings

16 oz. 20 oz. 24 oz.

Get Off to a Perfect Start with the Quik Fire Fuel Balancer and Filter



- Holds 1/4 ounce of fuel at the engine for an instant start and a constant supply
- Smooths out fuel demand and irregular fuel surges from extreme flight
- Eliminates two fuel line connections
- 2 or 3 line designs, both \$24.95

Patents pending

To fuel tank

To fuel dot

See our full line at jlproducts.net • (262) 628-3506 • info@jlproducts.net

RC SOARING

Jeff DuVal prepares winches and lines under vehicle headlights before dawn at the Horse Feathers Airport for the 2019 US F3J Team Selection contest.



flew well and was third. Noah and Charleston are returning US F3J team pilots. Brayden previously represented the US at the F3K World Championship.

Thank you, Josh, for this excellent summary of the Team Selection event. The US F3J team members need your help to get them, their many winches, and aircraft to Slovakia in July 2020. Please visit the Team USA F3J webpage and purchase tickets for the giant raffle.

Terry Koplan's Quest for LSF Level V

Terry Koplan started his League of Silent Flight (LSF) Level V Soaring Accomplishment quest by recording his first Level V contest in October 1974, first Level V win in December 1974, and his 2-hour Thermal Duration flight in February 1975. His 8-hour Slope Duration flight was in June 1975 and witnessed by Chris Adams.

During that time, Terry was a member of the US F3B Soaring team at the world championship held in Belgium. He took first place at the 1976 Soaring Nats.

Finally, 44 years and 6 months later, Terry completed his 10 km Goal and Return task. On his second attempt, on April 25, 2019, he achieved this milestone in the California desert. This is his narrative of the adventure.

We arrived at approximately 8:30 a.m., and Bob Swett and I took a couple of flights to try out John Ellias' sailplane because we had never flown it. We waited roughly

an hour for lift, and because Bob only needed the Level IV distance, he went first and worked hard to get out in a light thermal. On the way to the road, we bumped the car as we got off in the dirt, disorienting Bob. He started looping but could not find the sailplane and ended up crashing.

We put the backup sailplane together and set it up for my turn. I reached 1,500 feet and we took off down the road. Lift was not great, but a slight crosswind was pushing my model toward the goal. We stopped several times to thermal, but at approximately 10 miles at 200 feet, we decided to land and try again.

The location was Avenue P in the Palmdale/Lancaster area, near Crystallaire. A security guard from General Atomics checked on us because it was reported that we were flying drones near the company's facility. When he learned the direction of our planned flights, he allowed us to continue.

The second (and successful) attempt started out promising with good lift, and we took off down the road soon after the launch. With the crosswind still pushing us toward the goal, we were often going 40 mph. Lift was good, and I only stopped once to gain altitude when I was at less than 1,000 feet. I thermaled again at the turnaround point. Then things got harder.

We were now flying slightly into the wind and stopped a couple of times to take advantage of good lift. I was concentrating so hard that I had no idea how far from the

finish we were. At one point, the sailplane was down to launch height with the air not so strong. It was a little scary.

We stopped the vehicle and looked for a landing spot while I searched for lift. Finally, I found a small puff and worked it to approximately 800 feet and they said, "Let's go." I wasn't comfortable about leaving yet, but 2 minutes later, they said I was home, and I circled while they bounced me over the dirt to our launching spot.

What a great feeling to finally get it done. This is the only time that I went out to try to get my Goal and Return, so I feel privileged to have made it—even with a 44-year delay.

Congratulations to Terry, LSF 496—Level V!

Go downwind and soar. 

SOURCES:

LSF

www.silentflight.org

RCGroups: 2019 US F3J Team Selection

<https://bit.ly/31h1w4w>

Team USA F3J

www.teamusaf3j.com

F3J US Championship: The J Tour

www.f3jusa.com

SoaringUSA

(626) 967-6660

www.soaringusa.com

F3XEvents.com

www.f3xevents.com

THE TRUSTED QUALITY, RELIABLE, SUPPORTED

RESOLUTION YOU WON'T BREAK



NEW YEAR | NEW YOU
START **2020** RIGHT | SWITCH TO **Futaba**



BRODAK MANUFACTURING AND DISTRIBUTING COMPANY, INC.

We Are the Largest Kit Manufacturer in the World -- and Growing!



OUR LATEST RELEASE

AERONCA CHAMP 60"
DA-581 \$99.95



TAYLORCRAFT BC-12
Wing Span 60"
DA-559 \$98.95



60" CURTISS JENNY
An old-school stick & tissue design
DA-568 \$129.95



PIPER CUB J-3
Wing Span 60.75"
DA-535 \$109.95



PBY CATALINA
Wing Span 44"
DA-542 \$103.95



NIEUPORT 17
Wing Span 68"
DA-402 \$249.95



56" MORANE-L
Originally free flight, now R/C
DA-403 \$109.95



CESSNA 150
Wing Span 60"
DA-562 \$99.95



AVRO LANCASTER
Wing Span 60"
DA-565 \$229.95



CURTISS ROBIN
Wing Span 40.375"
DA-503 \$82.95



DOUGLAS DC-6
Wing Span 60"
DA-554 \$224.95



TURBO BEAVER
Wing Span 60"
DA-567 \$99.95



SUPER CONSTELLATION
Wing Span 60"
DA-560 \$249.95



ERCOUPE
Wing Span 60"
DA-546 \$142.95

Great Finishes Start with Brodak Butyrate Products!
Visit our website for a full list of colors and products.

Brodak is your one-stop shop for the full line of the component power-parts for Dare planes, as recommended by the designers.
Brushless Motors ESCs Lipo Battery Packs Servos and more!

We have WW I Spoked Wheel Kits & Jigs (8 sizes), Dare Vintage Plastic Wheel kits, Vacuum-formed Radial Engines, Pilots, Armament (classic and modern), Rockets and more!

100 Park Avenue / Carmichaels, PA 15320 / www.brodak.com
(724) 966-2726 (voice) / (724) 966-5670 (fax) / email: flyin@brodak.com



The original owner of the Omen Pattern airplane, Jay Gerber (L), with the current owner, Bob Pollokoff, at the Sarasota RC Squadron flying field in Florida. Model aviation brings people together!

JAY GERBER'S OMEN

By Peter Vogel | vogel.peter@gmail.com

I WANT TO THANK Bob Pollokoff for sending me the story that makes up my column this month. Jay Gerber's Omen RC Aerobatics (Pattern) airplane was built and painted by another Pattern great, George Asteris. This is a story about two strangers who were brought together by a model airplane.

Bob's Story

I've been flying since 2001, when a visit to a local hobby store near Baltimore piqued my fascination. From there, my interest took off literally and figuratively. I now enjoy flying nearly all types and sizes of airplanes, from 12-inch wingspans to 9 feet. I have sport airplanes, scale airplanes, foamies, electric ducted-fan aircraft, aerobatic airplanes, and precision, Pattern-type airplanes.

There are not a lot of Pattern fliers in the Baltimore area, but I have an affinity for some late 1990s/early 2000s classic Pattern airplanes. The typical YS engines of that era provide great power without a lot of noise, especially when coupled with a good exhaust pipe. As is often noted, many of these airplanes really do fly like they are on rails, making them both challenging and fun to fly.

In the spring of 2018, I bought a two-meter Pattern aircraft that is a combination of a fiberglass fuselage with a balsa-covered foam wing and stabilizer, called the Omen. The airplane was built and painted by George Asteris, who is well known in the AMA Pattern community as a designer, builder, and competitor. This particular one had the name "Jay Gerber" painted under the cockpit and the marking of L-48, which I later learned is Jay's

AMA Life Member number.

The man from whom I purchased the airplane had bought it from Jay many years earlier. When I got the model, he gave me an article from an old AMA magazine that reported that Jay Gerber was an original producer with NFL Films. I wanted Jay to know that I had his old airplane and that it was still in great shape. With a little digging, I was able to track down his email address.

I first emailed Jay and he was delighted to hear from me and to know that the airplane was still in service. Throughout the course of the next few weeks and months, he provided me with more details about the aircraft, as well as some old photographs. He seemed to recall that George built it for him sometime around the late 1990s. He competed with it in several Pattern contests throughout the years, even taking the podium a few times.

Although Jay no longer flies because of medical issues, he loved hearing about and seeing photographs of the Omen and was happy to know that it was still flying. We tried to find a time when I could drive up to Pennsylvania to see him and fly it for him, but between our respective schedules and the wet summer weather, we never could connect.

Coincidentally, Jay spends winters in Sarasota, Florida, and my wife and I recently purchased a condominium nearby in southwest Florida. This past fall, we met and I flew the airplane for him at the Sarasota RC Squadron field.

There's no doubt that I brought joy to this senior AMA Model Aviation Hall of Fame statesman. The crosswind was a bit gusty, but I got a flight in and the airplane performed as promised. As is usually the case, we spent more time at the field talking about a lot of different things.

In addition to having been the senior vice president in charge of NFL Films

production, Jay filmed and produced many documentaries for AMA, some of which can be found on YouTube. A link to Jay's AMA History Project biography, which includes a full list of the films he produced for the AMA, is listed in "Sources."

I enjoy flying the airplane immensely, and I am glad I was able to share the joy with Jay as the original owner and such an accomplished AMA member.

Thank you for the article and the awesome picture, Bob! Pattern has always brought people together, and I know it has certainly created a lot of treasured friendships for me and others. It's great to see how even a Pattern airplane that one pilot "left behind" continues to bring people together. That's what this sport is really all about! 

SOURCES:

**The AMA History Project Presents:
Biography of Jay Gerber**

www.modelaircraft.org/sites/default/files/GerberJay.pdf

**National Society of Radio Controlled
Aerobatics (NSRCA)**

www.nsrca.us

Onboard Glow Plug Drivers Single and Multi Cylinder

\$39.95

Visit us and buy online at:
<http://craineng.net>

\$39.95



- Eliminate Flameouts at Idle
- Smoother Low Speed Idle
- Solves Access to glow plug problems
- On/Off control with throttle Set Point
- Works with NiCad/NiMh/Lipo/Life
- Auto 'Low battery' Shutoff
- Auto Adjusts to deliver constant power
- Remembers Set point and Reverse settings

RAVEN 450



2015 design by
Dave Platt

60" span 450 sq. in.

\$95.00

Double kit \$165.00
+ postage

BMJR

www.bmjrmmodels.com
321-537-1159

Ask for Free Catalog with over 112 models for FF, RC and CL
For modelers that like to build what they fly

Valley View RC

Factory Authorized
Distributor
DLE Engines



DLE 130cc



55RA



20cc



Visit us for all your gas engine
needs

Dealers Welcome

www.valleyviewrc.com
253-875-6890



A happy Gerry Kerr visited the author at the Nighthawks RC Club flying field in North Jackson OH for the first day of flying his new 2.2-meter Pilot Predator. It's a solid sport jet that is powered with a Jet Central Cheetah 160 SE.

ELECTRON RETRACTS LANDING GEAR

By Jim Hiller | jetmodeler@earthlink.net

I HAVE BEEN flying with an Electron Retracts electric landing gear setup in my Xtreme A.R.F. Vixen, which is a large, heavy sport jet. The Electron ER-50eVo landing gear is well-suited for larger jets with a rugged retract unit, trailing link struts, and electric brakes.

Along with the retract system, I have an Electron GS-200 electronic controller. This unit controls the retract operation, brakes, and nose gear steering and has some well-planned features that can simplify your life if properly set up.

The initial startup can be programmed to not retract the landing gear if the gear switch is in the up position. I have all of mine set up so that I have to cycle the landing gear retract switch to apply power to the landing gear. It sounds nice, and prevents me from accidentally powering the landing gear to retract up, but it's not easy. There is also no power to the brakes or the steering servo until I cycle the gear switch up then down.

If you don't cycle the retract switch when taking off, you won't have brakes or steering, and you'll want to develop new habits after the first time!

My favorite feature of the GS-200 electronic controller is the built-in gyro that can be applied to the nose gear steering and to differential braking. The Vixen is straight and true on the ground, but I have set the gyro gain at 20% for the nose gear steering. I don't notice a difference.

The best part is that I set the differential brake gyro at 70% on the Vixen. I can now apply full brakes and the airplane will accurately stop. This feature is sweet. If you are fighting a crosswind on the landing rollout, just pull full brakes and the airplane will track straight.

WARBIRDPILOTS

HIGHLY DETAILED SCALE PILOT FIGURES

FOR ORDERING & INFO
 WARBIRDPILOTS.COM
 203.528.4352
 DEALERS ALSO WELCOME

- 1/8, 1/7, 1/6, 1/5, 1/4, 1/3 SCALE FIGURES
- OVER 50 DIFFERENT PILOTS AVAILABLE
- POSSIBLE IN ANY POSITION
- FIT ALL MAJOR MANUFACTURERS
- FULLY REMOVABLE CLOTHING, EQUIPMENT, AND ACCESSORIES
- WEIGH ONLY 4-7 OZ.

1/3 SCALE FIGURES
 AVAILABLE NOW



WWI WWII USAAF U.S. NAVY PACIFIC USAAF TUSKEGEE BRITISH RAF RUSSIAN GERMAN LUFTWAFFE JAPANESE MODERN JET PILOTS HELICOPTER CIVILIAN PILOTS

How hard do I brake? I have been known to smoke tires, but the GS-200 handles it.

One negative is that the differential brakes might fight you when you are maneuvering around in the pits. A simple way to get around the brake gyro is to hold full rudder with the nose gear off of the ground when you are moving your jet with the power on. The gyro braking action will not fight you.

Another quick tip about electric brakes that is applicable to all brands is that if your model pulls in one direction when it's braking, check the air gap. The effectiveness of electric brakes depends upon the air gap between the wheel disc and the

caliper. Increase the distance and the braking will be less effective.

Manufacturers commonly have a spacer (or shim) between the caliper and the inner wheel bearing. This sets the critical air gap dimension. Check your airplane for equal air gap on both wheels. You can often tell the difference by looking to see if the fit of both calipers is the same on the left and right sides. They fit almost flush on many brands.

The problem that I have typically found on aircraft that have flown for a while and develop a pull under braking is that an axle is pulling out. This can be inspected by checking the free play in the wheel. Pull

the wheel away from the strut then back to the strut. You typically have little to no movement. Axles can slip out from the strut and allow the wheel to move out, increasing the brake air gap. This results in less braking power in the wheel.

I was amazed last summer at how often I found this axle movement on jets that were equipped with electric brakes. I don't understand why it happens, but I sure saw it often.

Pilot Predator

I flew a Pilot Predator for the first time as a test flight for my friend, Gerry Kerr, and all went well. The Predator is a large,



Cleveland Johnson, of Pontiac MI, went to the Michigan Jet Rally at the Monroe Custer Airport in Baldwin MI. He put on some impressive flights with his classic Yellow Aircraft F-15. It's proof that good, old jets just keep on flying.

RC JETS

composite sport jet. Gary's aircraft is powered with a Jet Central Cheetah 160 SE turbine engine.

After the test flight, Gerry put in a couple of flights then installed a gyro. In this case, it was a PowerBox Systems iGyro 3e, a popular and proven unit. He did a thorough setup of the iGyro 3e, including confirmation of the correct direction of travel and the gyro's direction for correction. To visually aid and check the gyro's correction direction, the gain must be set for heading hold. The surfaces will move to position and hold, making it easier to check the correction direction.

The gain was programmed on a rotary switch with the travel volume at 100% in the normal gain direction and set to 0% gain in the heading-hold direction so that the iGyro 3e could not accidentally be put in heading hold while in flight. It's also easy to turn off the gyro; just roll the rotary knob all the way into the off position.

The test flight with the gyro went well. We launched with it off, got up to a safe altitude, and rotated the knob for approximately 25% gain. From there, we pulsed each axis control and watched how the airplane reacted as it steadied out. We were trying to see how quickly it would stop moving with no gyro overtravel, resulting in overcompensation.

The ailerons were quickly rolled to full travel and abruptly released to center. The airplane stopped rolling without any return roll, so we increased the gain until we saw some over-roll from the gyro in the reverse direction—a sign of too much gain. All three axes were tested, resulting in a 40% gain and giving a positive axis lock-in when the controls were released.

You might wonder how the gyro improved this already precise jet. It made the Predator feel even more locked in when it flew. When the stick was released, the jet immediately went where it was pointed, precisely and without delay. Does a Predator need a gyro? Not at all, but a properly set up gyro can move it to the next level.

Landing on Pavement vs. Grass


Here is a recommendation for pilots who are seeking a turbine waiver. From my experience, the most difficult part of the waiver process is the landing. The problem is a lack of experience with flying nose gear-equipped airplanes on pavement.

Most experienced modelers fly tail-draggers on grass. The nicest landing with a warbird such as a P-51 Mustang or a P-47 Thunderbolt is a wheel landing. This requires a pilot to bring the airplane in with speed and, just inches off of the runway, release the elevator. The model usually sticks the landing nicely with the tail high.

Grass fields suck a model to the ground when it touches down. A nose gear-equipped airplane can be flown to touch-down at a high speed with the nose gear before the main gear. The grass will tend to pull it down and turn a high-speed pass into an acceptable landing.

These two landing techniques won't work on pavement with a nose gear-equipped jet, so a pilot must relearn how to land. When trying to turn a high-speed pass into a landing on pavement with a nose gear-equipped airplane, you get into a hop-skip-bounce that quickly becomes a breaking moment if the airplane is not immediately flown out of the bouncing with excess speed and some up-elevator. This happens to propeller-driven airplanes and jets.

My suggestion is to practice making "wheelie" landings with a simple, lightweight tricycle-gear airplane before flying your shiny, new jet. A wheelie landing is where you touch down with the nose gear high off the ground. The nose is pointed up by using a lot of up-elevator to slow the airplane down then maintaining up-elevator for a nice landing.

You will be rewarded with the nose gear still off the ground and the airplane rolling along on the main gear tires. Practice this and it will improve your elevator feel for that perfect landing flair. This skill will help you transition to your new jet. 

SOURCES:

Jet Pilots Organization (JPO)
www.jetpilots.org

Electron Retracts USA
info@electron-retractsusa.com
www.facebook.com/electronretractsusa
www.electron-retractsusa.com

Pilot USA
pilotrcusa@pilot-rc.com
www.pilotrcusa.com

ELECTRONICS FOR THE DISCERNING MODELER...

Worry-Free SIMPLICITY!!

EDR-102 OneClik Multi-Connex



- Tidy Up and Organize servo leads between fuselage and wing. No more guessing and mistakes when connecting multiple servos!
- Super-secure positive snap-lock housings prevent accidental disconnects in flight.
- Super Heavy-Duty 20AWG multi-strand super-flex cables increase 0-0-m-p-h to servos and deliver superior vibration resistance.
- Available for 3, 4 or 5 Servos.

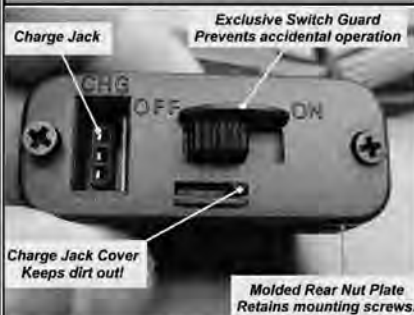
BETTER than NiCd/NiMH
BETTER than Li-Ion/Li-Po
NO HASSLES!



- ♦ A123's EVERYONE can enjoy
- ♦ Complete Battery, Switch & Charging systems - EZ as 1-2-3!

Call or Check out our website!

Heavy-Duty Ultra Switch II



 **ElectroDynamics**

Website: www.electrodynam.com

31091 Schoolcraft, Livonia, MI 48150

(734) 422-5420



PRO 4 60W 6A LIPO/LIHV & NIMH CHARGER

30C 2200 4S GRAPHENE POWER

THE PERFECT COMBINATION



We value our customers and their decisions to invest in our quality proven products. Our Limited Lifetime Warranty is second to none! If a problem occurs we've got your back! Experience good ol' fashion USA customer service the way it was meant to be.

WWW.VENOMPOWER.COM | (800) 705-0620



**LEADING
THE CHARGE**



Augie Haupt (L) worked hard the evening before the Ben Martin CAPS Classic Q-40 race, held August 24-25, 2019, at the International Aeromodeling Center in Muncie IN, by getting in his first Q-40 flight and more trim flights before the sun set. With his caller, Mark Zeal, Augie entered his first Q-40 race the next day in windy conditions.

Q-40 PROPELLER BALANCING AND TESTING

By **Tim Lampe** | tim.lampe@hotmail.com

THE APPEARANCE OF a few new Quarter 40 (Q-40) pilots on the circuit provided the inspiration for this month's column. For those who are unfamiliar with RC Pylon Racing, Q-40 is the fastest class in the AMA rule book, with speeds of up to 200 mph.

The speed, engine tuning, and level of competition in Q-40 make the leap from other classes quite a large one. Everything happens faster, and the margin for error is small. I applaud anyone who is getting into Pylon Racing, but in this month's column, I especially applaud the new Q-40 pilots.

The hardest part about entering Q-40 is getting good engine runs. Not getting a good run is like watching the other kids play outside while you're stuck inside with a cold. When you have a good engine run, you can work on more tangible issues such as airplane setup and your flying skills, which will improve with repetition. But first, you have to get into the air, up to speed, and in the game!

What helps me the most with getting good engine runs is knowing that the propellers I am using will work. The variation between propellers can cause one not to work optimally—or possibly even not work at all.

I talked with Robert Holik, president at APC Propellers. Robert told me that during the injection molding process, the carbon fibers enter the propeller molds in a random fashion (not aligned). On a microscopic level, no two propellers are exactly alike and this can contribute to the performance variations we see between propellers (similar to the performance variation between identical wooden propellers).

A practical way to test your propeller is to use a tachometer to measure a

Q-40 engine's peak rpm on a test stand. Each propeller can then be graded from "lightest" (least load/most rpm) to "heaviest" (most load/least rpm). I slightly hesitate to offer this advice because I still consider myself relatively new to Q-40, but I have spoken with enough experienced Pylon Racing pilots who perform this procedure to feel comfortable repeating it and it helped me so much.

You might balance and dress your propellers first. Some pilots lightly polish propellers with abrasive household cleaning pads. Robert didn't take a strong stance on balancing. He said samples from production runs are checked for balance, and added that a mispositioned, counterbalanced spinner backplate is more likely to contribute to an out-of-balance situation.

He also mentioned that if you choose to balance your propellers, you must center the cone on your balancing shaft in the plastic spacer that comes with the propeller, or in the metal spacers for Jett or Nelson engines that are set into the precision-molded hole in the back of the propeller. Clamp the propeller using the flat part of the cone on the front face of the hub.

When you are working on your propellers, keep these pertinent excerpts from the *AMA Radio Control Pylon Racing Rules and Regulations* in mind:

- One blade may be sanded on the top (front) side only for balancing.
- One side of the hub may be sanded for balancing.
- Edges and tips may be sanded, but only as much as necessary to remove sharp molding flash.

To check the peak rpm of your propellers, start the engine with the needle rich. Reading the rpm with your tachometer, lean the needle until the engine reaches peak, which should be the point when rpm no longer increases. Go beyond the peak rpm only as far as necessary to determine that you have reached peak, and don't hover there for more than a few seconds. I open the needle a turn or two before shutting the engine off.

Each propeller reading should take approximately the same amount of time that you take on the line to set the needle for a race—roughly a minute. Note the peak

21 AIRPLANE		Need Lites? 29 Choices!
ULTRA BRITE LEDs 4.8 to 12V		
RAM 121 - \$44.95 Super Set, 3 nav, 4 strobe, to 96"	RAM 122 - \$29.95 Strobe, 2, adj. rate, to 96"	3 HELICOPTER LED 4.8 to 12V
RAM 123 - \$29.95 Landing Lites, 2, servo cont.	RAM 124 - \$39.95 Big Nav, 3 nav, 1 strobe, to 168"	
RAM 125 - \$34.95 Nav, 3 nav, 1 strobe, to 96"	RAM 132 - \$24.95 Park Flyer, 3 nav, 1 strobe, to 48"	
RAM 161 - \$19.95 ARF Lites, 3 wireless, 3.7V	RAM 179 - \$24.95 3 D Lites, 18, 3 colors, 9V	
RAM 187 - \$29.95 Park Fly, 3 nav, 2 ldg, 1 str. to 54"	RAM 188 - \$14.95 3 Micro wireless, 3.7V	
RAM 195 - \$14.95 Micro Nav to 24", 3.7V	RAM 197 - \$14.95 Nano Nav to 16", 3.7V	5 MULTIROTOR LED
INCANDESCENT 9V		
RAM 01 - \$34.95 Flashing Nav, 3, to 96"	RAM 02 - \$24.95 Strobe, simulated, adj.	
RAM 03 - \$39.95 Landing lights, 2, 4, 8V	RAM 04 - \$24.95 Rotating Beacon, adj.	
RAM 06 - \$34.95 Sky Lights, 18, Nite Flyer	RAM 14 - \$29.95 Big Nav, 3, to 168"	
RAM 15 - \$19.95 Nav, 3, to 94"	RAM 16 - \$24.95 Econo Ldg. Lights, 2	RAM 174 - \$29.95 Micro Heli, 3 nav, 2 ldg, 1 strobe
RAM 186 - \$29.95 Gun Flash, 4, adj.		RAM 175 - \$29.95 Heli, 3 nav, 2 ldg, 1 strobe
		RAM 196 - \$14.95 Nano Heli nav, 3.7V
		RAM 190 - \$14.95 MQX etc. 4 lites, 3.7V
		RAM 191 - \$14.95 1SQ etc. 4 lites, 3.7V
		RAM 192 - \$14.95 QR1 etc. 4 lites, 3.7V
		RAM 193 - \$14.95 to 24" span 4 lites, 5V
		RAM 194 - \$14.95 Nano QX etc. 4 lites, 3.7V
		<i>Made in the USA since 1976</i>
		NEED MORE INFO?
		See your hobby retailer or send a #10 S.A.S.E. to 229 E. ROLLINS RD., ROUND LAKE BEACH, IL 60073 USA (847) 740-8726 FAX: (847) 740-8727
		Ram WWW.RAMRCandRAMTrack.com



With coaching from veteran pilots Terry Frazer (L) and Mike DeNeve (R), Daniel Troup has found himself near the top of the final standings.



Adam Osswald (L), with his caller, Santiago Panzardi, surprised everyone by finishing second in his first Q-40 race with a low time that was within a second of the winner.

RC PYLON

rpm directly on the propeller, or number the propeller first and note the rpm in a logbook. Be sure to wait between runs to allow the engine to cool—approximately 10 minutes in my experience. After doing the first couple, you'll get into a rhythm.

Robert added that after bench running, some pilots also use a pitch gauge to check the propeller pitch to help further predict the propeller's performance. Bench-testing is not the only step. When you find a propeller that performs well in the air (from practice runs and/or racing), be certain to note that also.

At this relatively early stage of my Q-40 "career," I find my engines easier to needle and seem to have the best runs with my lighter propellers. Conversations with more advanced Q-40 pilots confirm that this is often the case. Later, I'll work harder to match the propeller with the conditions and engine setup to shave even more time, but for now, I'm somewhat content to get good runs.

There are some pilots who use propellers right out of the bag, but they are likely veterans who already know that their engine setups, fuel tanks, glow plugs, etc., are in order. If their engines aren't going, they know it's the propeller and won't chase other problems that don't exist.

Other Helpful Tips

- Disregard the rpm reading of the first propeller because it will have been taken with the engine started cold. Redo that one at the end.
- Set aside one of the propellers from your




Brian Osman (L) teamed up with Jordan Peace to enter his first Q-40 race at the third annual Mike Tallman Legacy race, held in Goddard KS.

first testing session as a reference for the next time.

- Because nylon absorbs moisture, humidity can change the propeller's performance characteristics minutely, so some competitors add silica gel packets to their propeller box.

Be sure to visit the Technical Info page on the APC website listed in "Sources" for more information regarding propellers, especially Q-40 propellers.

There might be no single best way to conduct propeller testing, and not all pilots do it, so consider the advice of other Pylon Racing pilots with whom you hang out, and don't be afraid to ask questions while in the pits. 

SOURCES:

National Miniature Pylon Racing Association (NMPRA)
www.nmpira.net

APC Propellers
(530) 661-0399
www.apcprop.com



Quadra - Zenoah Parts & Service
Zenoah Sales
Spring Starters-Tanks-Mounts
Mufflers and Much More
Giant Scale Headquarters
WWW.BENNETTBUILT.COM



Danny Coe (L) is eager to assist and encourage all new pilots. Here, Danny helps Brian tune a new airplane.

STAY CONNECTED

& CONFIDENT

**OVER 1000 ITEMS
TO BUILD, REPAIR
OR UPGRADE
YOUR MODEL**

SAFETY LOCK KWIK-LINK

The Safety Lock Kwik-Link offers everything a modeler could want in a clevis and more.

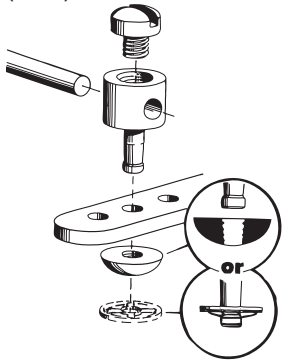
Features:

- Self tapping - leaving no slop on threads.
- Square shank, easy installation & adjustment.
- Brass plated stepped steel pin - no binding.
- Brass plated steel safety lock slides into groove for secure lock.
- 3 sizes available - 2MM, 2-56 and 4-40.
- Super strong, super tough, yet 10% lighter than steel clevis'.



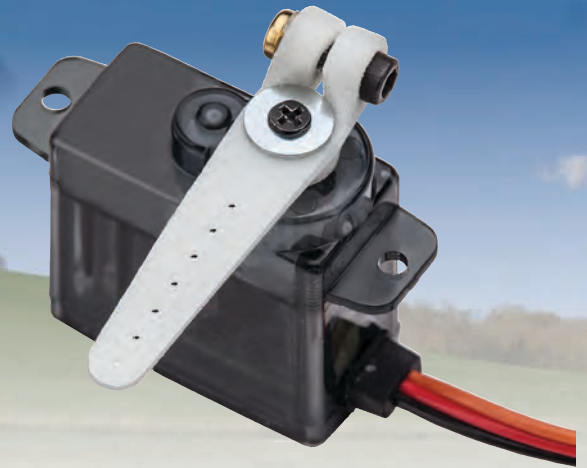
E/Z CONNECTORS

Makes setting up servos quick and easy. Need to make a small adjustment for better throw? No problem, just loosen the screw, make the adjustment and tighten. Accommodates 2MM, 2-56 (.072) and 4-40 (.093).



MICRO ADJUSTABLE SERVO ARM

Fits Micro Servos with output shaft diameters from 0.152" (3.88mm) - 0.185" (4.70mm). Four arms included (2 with small dia. hole and 2 with larger dia. hole). Complete with washers, bolts and nuts. Made from 100% virgin glass-filled nylon for strength and durability.



NICKEL PLATED DURA COLLARS

Great for securely holding wheels on axles as well as many other uses! Enough stock so that the threads will not strip and can be reworked for other uses.

Sizes:

1/16" (1.5mm) - 3/32" (2.3mm) - 1/8" (3mm) 5/32" (4mm) - 3/16" (4.7mm) - 7/32" (5.5mm) - 1/4" (6.3mm)



DU-BRO

AVAILABLE AT YOUR LOCAL
HOBBY SHOP

OR

SHOP ON-LINE & BUY DIRECT
www.DUBRO.com

CONTROL LINE AEROBATICS

The 2020 F2B team that will represent the US in Poland includes (top, L-R): Howard Rush, Orestes Hernandez, Joe Gilbert, and (kneeling) Steven Daly.



2020 FAI F2B TEAM TRIALS

By Joe Daly | stunt38060@gmail.com

THE 2020 US F2B TEAM has been selected! Congratulations to Orestes Hernandez, Joe Gilbert, Howard Rush, and Junior competitor Steven Daly for making the team. The FAI F2B Team Trials were held in beautiful Tulsa, Oklahoma, during Labor Day weekend 2019. The Tulsa Glue Dobbers held the event for the first time, and the club did a fantastic job!

An FAI contest is a different format from an AMA contest. Although the maneuvers are the same, the scoring is different, and some of the maneuvers have different descriptions on scoring. For example, you only have to do a minimum 1-1/2 laps between the hourglass and overhead eight, where in an AMA competition, it is 2-1/2 laps—these are some minor differences! In addition, the scoring is 0 to 10 for each maneuver, and the maneuvers have a K-factor, so a square eight becomes really important (times 18).

The flying site had three nice grass circles: two for official flights and one for practice flights. The grass was short and the Tulsa crew cut it at least once a day. I think that was one of Joe's favorite jobs!

Most pilots got to Tulsa on Wednesday and Thursday. My son, Steven, and I got there Wednesday afternoon and went straight to the field to check it out. Of course, we found Orestes practicing. (I know—shocking!)

I cannot say enough about the hospitality of the Tulsa Glue Dobbers. The club members really took care of the competitors, and I am now spoiled. This is how a contest should be run, so the group that hosts the next Team Trials has some high expectations to live up to!

Every day in the clubhouse, our hosts had coffee, cold drinks, fruit, snacks, and air conditioning—what a field! In addition, contest director (CD) Russell



Russell Honea (L) presented the Bob Baron High Point Award to Orestes. Photo by James Damerall.



Russell (L) congratulates Joe on his second-place finish and selection to the US F2B team. Damerall photo.



Russell (L) congratulates Howard on his third-place finish and selection to the US F2B team. Damerall photo.

Honea invited all of us to his house for a fish fry on Friday night. It was good!

By Thursday, many competitors were out practicing and getting used to the site conditions. The air was good in the morning. Toward the afternoon, the wind picked up and only a few were still practicing (Orestes, of course!). We took a break for lunch and went to a place called I Don't Care Bar and Grill. It became a little joke between a few of us. We would ask where everyone wanted to eat. Of course, someone would say, "I don't care." We would have a little chuckle then go eat.

On Friday morning, it rained but cleared up by approximately noon, so we got in some practice then we were off to processing and the pilots' meeting, which was within walking distance from the field. It went quickly and we drew for flight order.

Saturday started qualifying rounds with four flights, two on each circle. Each contestant's best flight from each circle was combined to determine qualifying. It was hot and humid, and the poor judges had to stand out there and watch us fly all day! When it was over, the top 10 pilots were set for Sunday.

Finals were run on one circle for both Seniors (Open) and Juniors (age 21 and under). Three flights were flown and the two best were added together to determine the team selection. In Senior, the top three made the team. The next two were team alternates, and the top finisher for Junior qualified.

The day started out hot and dead calm—and I mean really dead calm! It was a little challenging for the pilots to add to the light wind that would change direction in the middle of the flight. (Pilots always complain about the wind conditions!) After 42 flights, we had selected Team USA. The Bob Baron High Point Award went to Orestes!

We had 11 competitors in Senior and four in Junior. That is right: four in Junior! This is very promising for the future! What was interesting is that all four Juniors flew electric-powered models! In Senior, the breakdown of airplanes was 50/50—roughly the same mix that we see at the Nats.

It is time for a proud dad moment. I competed in the Team Trials as did my son, Steven. I enjoyed watching him fly. In the past, I would worry and set everything up for him. He did everything himself at this

CONTROL LINE AEROBATICS




Russell (L) congratulates Steven on his first-place finish and selection to the US F2B team as the Junior member. Damerall photo.

event, from putting the battery in, to making adjustments, and even practicing. I don't think I even launched for him all week. His flying buddy, Jose Modesto, did all of his launching!

I could not have been prouder of the way he conducted himself and how he handled the pressure of competition. This is another memory that will last a lifetime.

It was a great contest, held by wonderful people! All of the competitors had a really good experience. This would not have been possible without the efforts of those who volunteer their time to allow us to fly. Tremendous thanks and appreciation go to the judges, tabulators, pit bosses, score runners, field crew, the CD, and everyone else who pitched in to make this a great event. We couldn't have a contest without them!

Let's all support our 2020 US F2B World Championship team. Go get them in Poland! 

SOURCES:

Precision Aerobatics Model Pilots Association (PAMPA)
www.pampacl.org

FREE · FLIGHT · FUN

FLYING ACES

join the FlyingAcesClub.com

THE TOLEDO R/C EXPO

2020
April 3, 4 & 5th



SEAGATE CENTER

401 JEFFERSON AVENUE, TOLEDO, OHIO

This three day event showcases all types of R/C model Planes, Cars, and Boats. Along with the exhibitors, there will be speakers, swap shop, auctions, and much more.

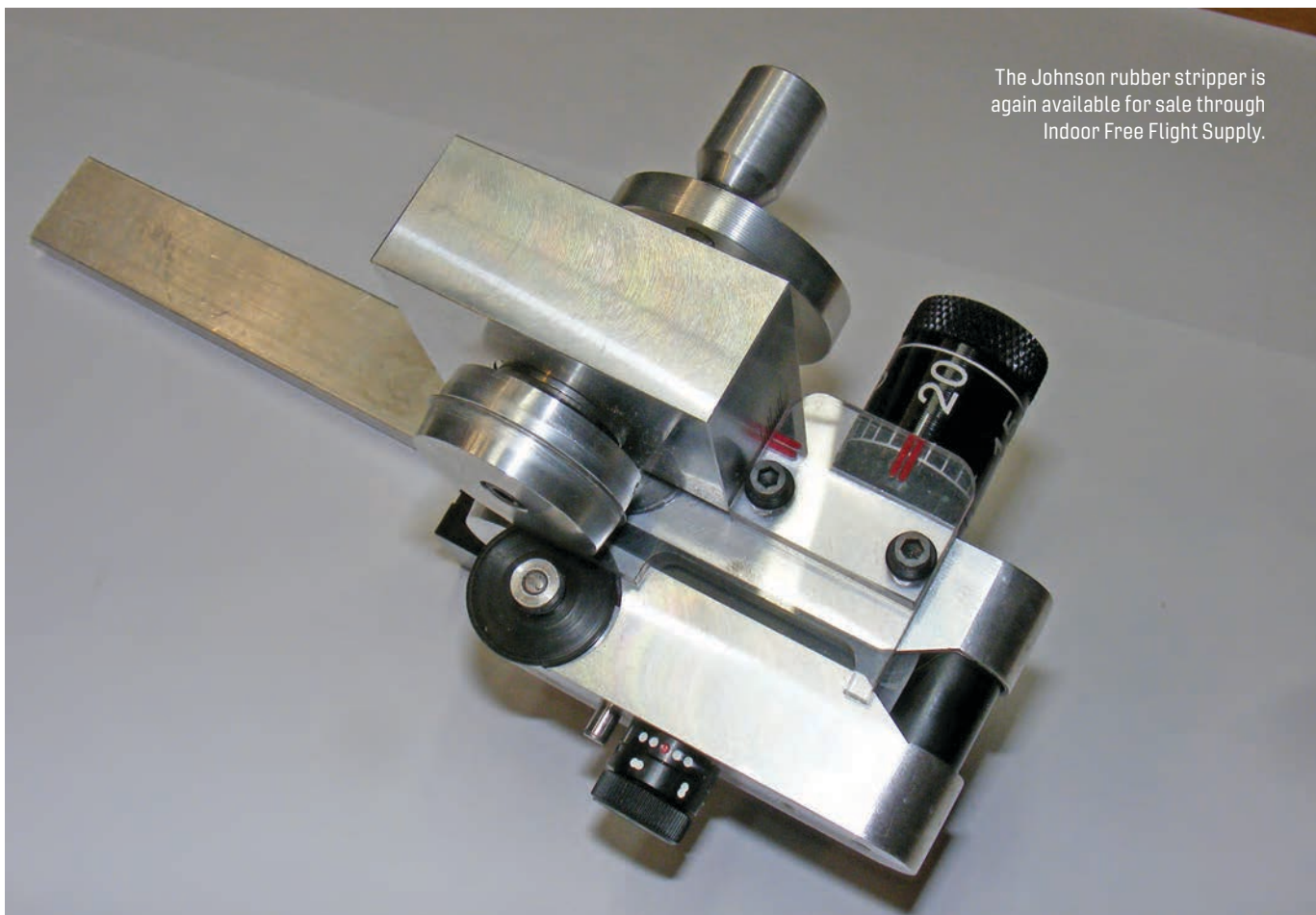
For all detail visit our website below

**\$10 THOUSAND
IN CASH PRIZES**



WWW.TOLEDOSHOW.COM

INDOOR FREE FLIGHT



The Johnson rubber stripper is again available for sale through Indoor Free Flight Supply.

NEW INDOOR FF SUPPLIER

By Don Slusarczyk | don@slusarczyk.com

WHEN I STARTED FLYING Indoor models in the 1980s, there were several places from which a person could buy his or her Indoor Free Flight (FF) supplies. Micro-X and Indoor Model Supply were the two main sources for everything that you would ever need for Indoor model flying. Both companies eventually disappeared and, for some time, the void made it difficult for those who wanted to get into Indoor modeling because supplies were difficult to find.

I am glad to report that a new Indoor supplier, Indoor Free Flight Supply, has recently come on the scene. It is owned by Dave Lindley, who started flying Indoor models in the 1970s as a kid in the Chicago area with his father, Don. After a hiatus of some years from model airplane activities, Dave has started flying Indoor FF again and has put some of his focus into starting a new website from which Indoor modelers can buy supplies.

The current offerings on the Indoor Free Flight Supply website include the basics, such as thrust bearings, music wire, and Teflon washers, all the way up to fiberglass propeller blocks, balsa strippers, blast shields, and other specialty tools. A limited amount of indoor-grade balsa is currently available, as well as pre-cut rubber in indoor sizes. I highly suggest visiting the website to see his latest offerings and to keep checking it because the list of items continues to grow.

Dave has a section on the website for products that have been obtained from various estates. The estate inventory changes often and is typically in limited quantities, so regularly check the website or the Indoor Free Flight Supply Facebook page.

I want to specifically mention the latest additions to the website. The winder and rubber stripper that were originally sold by Wayne Johnson of Geauga Precision some years ago are known worldwide. Until now, they have been difficult to come by because they have been out of production for so long. Dave has been able to get these long-sought items back into production. I have used Wayne's winder and rubber stripper for many years because I bought mine when they were originally offered for sale.

The winders that are currently being produced are 10:1 ratio and have a red-tipped dial indicator that goes around as you are winding to help keep track of the total winds. My favorite feature on the winder is the push-button locking mechanism on the output side of the winder, which allows you to lock the winder shaft when you get to your desired number of turns. If you need to back off of any turns, a little push inward on the winder handle will disengage the brake and you can then unwind or add more turns and lock the shaft again with a push of the button.

The rubber stripper is the most accurate one that I have used. I find it easy to duplicate rubber strips, and the cutter gives square-cut rubber, not a trapezoidal cut. The blades are skewed slightly so that they are self-sharpening. My blades have been going strong since the day I bought the tool some 15 years ago.

There is a micrometer built into the adjuster screw to help accurately set the rubber width. Some additional identification markings have now been added to the knob that controls the "fence" location (the part that pushes up next to the rubber strip when cutting). It also comes with an aluminum mounting bar that lets you mount the cutter to the table with a C-clamp, which makes cutting sessions much easier.

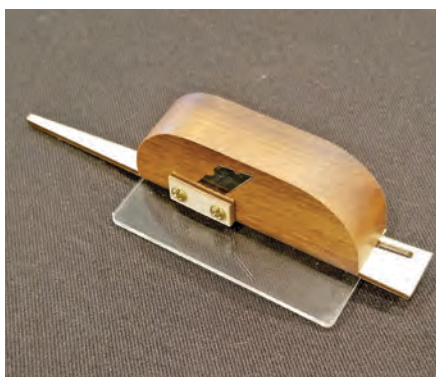
If you have wanted any of these products, now is the time to buy them while they are available.

Rules Proposals

I want to remind you that the deadline for new rules proposals is nearly upon us. All rules proposals for Indoor FF need to be submitted to AMA by March 15, 2020. Please note that the proposals can only be submitted online through the AMA website.



The winder face is marked in five-turn increments and includes a moving dial indicator. Photo by Dave Lindley.




The handheld "push through" style balsa stripper handles sheets up to .120-inch thick. Lindley photo.

Upcoming Contests

Here are a few of the key contests coming in 2020.

- February 21-23: EAA Family Flight Fest in Oshkosh, Wisconsin. Contact H.G. Frautschy, hgfrautschy@gmail.com.
- March 28-29: West Baden Indoor Contest in West Baden, Indiana. Contact Dave Lindley, dhl_1965@outlook.com.
- May 3: Indoor Fling in Pontiac, Michigan. Contact Mike Welshans, mbwelshans@aol.com.
- June 24-28: Kibbie Dome Annual in Moscow, Idaho. Contact Jake Palmer, 82.jake@gmail.com.

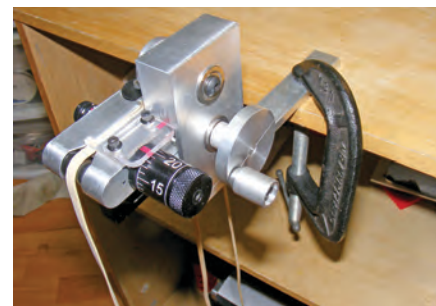
For more Indoor FF contests and dates, please check the AMA Sanctioned Event Calendar, as well as the master Free Flight calendar on the National Free Flight Society (NFFS) website. 



Teflon thrust washers are available in small, medium, and large sizes. Lindley photo.



The torque meter is available with either a light (.012-inch) or heavy (.016-inch) wire element. Lindley photo.



An aluminum mount allows the cutter to be clamped down for easy cutting.

SOURCES:

Indoor Free Flight Supply
indoorffsupply@outlook.com
www.indoorffsupply.com

AMA Rules Proposals
www.modelaircraft.org/competition-resources/rules-regulations/rules-proposals

AMA Sanctioned Event Calendar
www.modelaircraft.org/event-calendar

NFFS
www.freeflight.org

New Website, Old Favorites!

 **Peck-Polymers**
and
GOLDEN AGE REPRODUCTIONS

ZZZ : LQG ,W 8S FRP

E-flite®



“OUTSTANDING PLANE!”

[Our] favorite warbird yet...the power is unbelievable. 🗨️

– BIGALANDSON, HorizonHobby.com customer review



NEW

P-39 Airacobra 1.2m

E-flite® warbirds deliver an outstanding scale flying experience flight after flight. From intricate surface details including panel lines, rivets and more, to authentic trim schemes and functional features including flaps and retracts, they not only look great — they fly great too. Plus many are available in Bind-N-Fly® Basic versions that include the advantages of exclusive Spektrum™ AS3X® and SAFE® Select technologies so they fly like they're on rails while also being easier to fly than other warbird models.



BACK AGAIN

Carbon-Z T-28 2.0m



T-28 Trojan 1.2m



P-51D Mustang 1.2m



P-47 Razorback 1.2m



F4U-4 Corsair 1.2m



Spitfire Mk XIV 1.2m



FIND A DEALER
www.HorizonHobby.com

**BEST
BRANDS
IN RC**

HORIZON®
H O B B Y

© 2019 Horizon Hobby, LLC. E-flite, AS3X, SAFE, and the Horizon Hobby logo are registered trademarks of Horizon Hobby, LLC. The Spektrum trademark is used with permission of Bachmann Industries, Inc. All other trademarks, service marks, or logos are property of their respective owners. 62783

DONATIONS

Listed are people and organizations that donated \$10 or more in October 2019. These donations are earmarked for AMA's programs, the National Model Aviation Museum, and the International Aeromodeling Center. If your name is not listed, or if you have any questions, contact AMA Foundation at donations@modelaircraft.org or (800) 435-9262, extension 277.

\$1,000 UP TO \$4,999.99:

Daniel R. Bott Sr. - AZ, \$500: Matching Gift for Sun Valley Flyers National Model Aviation Day/Fly-A-Thon efforts and \$500 to support the Friends of the Foundation Fun Fly

Justin D. Edmonds - IL, \$1,000: Lifetime Patron donation

Newport News Park R.C. - VA, \$1,764: AMA Foundation Club Challenge. Visit amafoundation.modelaircraft.org to learn more

Ralph P. Warner - IL, \$1,000, Dewey O. Broberg Memorial Scholarship donation in memory of Dewey Broberg

\$500 UP TO 999.99:

Alfred R. Cuykendall - MT - \$500

Kenneth Frantz - VA - \$500

Hardin County R/C Modelers - KY - \$500

M.L. Mosbrooker - WA - \$600

Jim Nikodem - IL - \$500

Rodney Sharp III - DE - \$500

\$100 UP TO \$499.99:

Alain C. Adam - MI

Mel Allen - FL

Carl P. Anderson - NH

Ralph B. Anderson - AZ

Arthur A. Arro - NY

Gerald W. Barnes - CO

John E. Bartel - CA

K.G. Bauske - TX

George W. Becker - NY

Michael S. Beguelin - CA

Craig A. Benson - AZ

Rafeek J. Besheer - IN

Robert A. Betzler - NY

Herbert L. Bone - WA

Martin Booth - OR

Christopher L. Bott - TX

James G. Branaum - TX

Edward F. Brimo - NC

Larry Brinser - MI

William R. Brown - GA

Welland D. Burnside - WV

Howard S. Burr - CA

Paul Busse - MO

Samuel J. Carkhuff - KS

James G. Chaconas - MD

John L. Churnetski - PA

Jack L. Clooney - IL

James M. Coffin - VA

Jimmy D. Corcoran - CA

James E. Corry - FL

James F. Costa - NJ

David S. Crew - GA

Barry L. Croucher - VA

Dennis P. Dalton - CA

David J. Davies - NC

Daviess-Martin RC Club - IN

Donald J. Degidio - PA

Tobie Devoe - ME

Anthony L. Dilluvio - NY

C.L. Dodge - OH

George N. Dzahristos - MI

Kim Eiseman - SC

Thorsten A. Fjellstedt - NC

Mark R. Fleming - AZ

Sam Foote - AZ

Bob Gautreaux - MO

Eugene Gavin - NY

Jon K. Gerber - FL

Timothy E. Gillow - NC

Eugene A. Graber - PA

James B. Grant - GA

James W. Grant - MI

William H. Grube III - PA

Robert I. Handler - NC

Richard D. Hanson - AZ

Robert I. Hanson - TN

Arthur W. Harreden - CA

Eric W. Harris Jr. - SC

James R. Heidtke - HI

Jim Herbert - OH

Ron Hesskamp - MO

James E. Hoff Jr. - CO

Glen E. Holley - TX

James H. Husband - WA

Indiana Lure Courings Club - MI

Richard J. Jennings - CA

James W. Johnson - LA

Stanley K. Johnson - MT

Wilbert Jones - CA

Stan D. Keeney - OH

Larry T. Kennedy - SC

Stanley J. Kulesa - CT

Todd K. Lawrence - NV

Donald J. Lehr - TN

Hugh Leighty - NC

Ronald E. Leone Ph.D. - CA

Charles W. Leymaster - OH

Thomas S. Lightfoot - FL

Henry J. Lochhead - FL

Joe R. Macias - CA

Robert A. Main - CO

Randall S. Mainquist - KS

John A. Marsh III - NC

Michael J. Marshall - TN

David R. Maudlin - IN

William D. McCullough - TX

William C. Mead - AZ

John W. Moll - SC

Gilbert J. Mussat - FL

Kenneth D. Myers - MI

Robert E. Nelson - IA

Donald P. Oppliger - KS

Frank Osborne - AR

Alese O. Pechter - FL

Rick Pellicciotti - TN

C.C. Phelan - IL

Daniel T. Phillips - OR

Robert H. Poe - AZ

James A. Quinn - NY

David A. Ramsey - NJ

Mitch J. Rein - NM

Jack W. Richardson - FL

Donations to the "Donut Foundation"

Steve A. Ring - KY

Lawrence J. Roberts - CT

Jose E. Rodriguez M.D. - TX

Paul Romak Jr. - CA

Robert Ross - AZ

Gilbert V. Ruiz - AZ

Michael J. Rush - NH

James L. Russell - PA

Richard D. Schneider - GA

Kevin J. Sherman - MA

Herschel B. Smartt - ID

Rick E. Smith Jr. - TX

Robert T. Smith - NH

John A. Snow Jr. - IL

George P. Steiner - CA

Walter P. Stinson - ME

Sun Valley Fliers - AZ

William R. Sutton - SC

John C. Underwood - TX

Henry Velez M.D. - NJ

James R. Vornholt - IN

William A. Vorpahl Jr. - NY

Carl E. Wick - MD

Terry L. Wiggers - KS

Laurence D. Willard - NM

Roy E. Wilson - NJ

Robert Wolfe - FL

Paul Y. Yee - WI

Thomas Zwack - AZ

\$25 UP TO \$99.99:

George E. Aandahl - MN

Emil C. Abend - MO

Russell E. Adams - CA

Joseph C. Ahn - NJ

James Alexander - CA

Viktar Aliakseyeu - CA

Eduardo J. Almdarez Jr. - LA

Arnold Alpert - AZ

Ronald Ames - WA

Darrell L. Anderson - MT

Richard C. Anderson - MI

Richard S. Anderson - WI

H. Applegate - NY

James D. Arnold - SC

James F. Arnold - IL

Jack B. Atkinson - TX

Wayne A. Aymar - CA



William (Bill) Fitzharris wins ride of a lifetime

THANK YOU for participating in the AMA Foundation for the Future Sweepstakes. We would like to congratulate William (Bill) Fitzharris on being the lucky winner of the ride.

When asked about hearing he had won Bill stated, "Being known as 'Mr. Never Has Won Anything,' excited is not a strong enough word to describe how happy I am. This one is for the books!"

Congratulations again Bill! Thank you to Dr. Kendall Wager for providing the riding in Lady Alice and to Gordy Truax who has been kind enough to assist with scheduling the ride.

To learn more, visit the AMA Foundation website.

DONATIONS

- Kermit R. Baer - FL
 David G. Bailey - VA
 Arthur Baize - NY
 Eric L. Baker - NC
 Edward J. Banke - GA
 Edward Barili - NY
 Joseph Barland - ND
 Larry R. Barnes - CO
 Joseph P. Bartek - IL
 Frank Battat - CA
 Kurt J. Bauske - TX
 Jeff R. Bazen - SC
 Henry M. Beaudoin - AZ
 Ronald F. Becker - DE
 Delane E. Behr - IA
 Hamza A. Benaggoun - OR
 Brian W. Benson - NH
 Richard Bereman - KS
 Anton Berezhnyi - NC
 Ronald B. Berger - OH
 Joseph A. Bergeron Jr. - RI
 Joe Black - AZ
 Robert L. Blakeslee - FL
 Wade T. Bledsoe - GA
 Daniel L. Boarman - SC
 Terry L. Bohl - AZ
 John Bolts - NY
 Michael B. Bolger - CA
 Gennaro Borriello - NY
 Lynn W. Bortner Jr. - PA
 Ronald E. Brewer - MI
 Earl E. Brockmeier - IL
 Alan C. Brown - CA
 Chris W. Brown - MO
 Christopher Brown - NY
 Randall H. Brown - TX
 Edward P. Brucker - MO
 David R. Bruner - CA
 Julian D. Bryant - NC
 James R. Bryliski - OR
 Douglas E. Buck - MI
 Dietmar B. Burkhardt Jr. - CA
 Kenneth S. Burnett - VA
 John E. Burns - CT
 Dennis L. Buswell - MN
 Robert A. Butsch - IN
 Richard A. Buyers - TX
 Oreste F. Caforio - MA
 Paul R. Caisse - NH
- James T. Caldwell - PA
 Alex Cameron - GA
 Kenneth N. Carlisle - OK
 David N. Carnahan - TN
 Paul F. Catanzaro - CO
 Charles D. Cawthon - TX
 Gregory Ceresko - NY
 William P. Cessna - FL
 Bronson F. Cheeks - FL
 Francis S. Chinen - HI
 William Chrietzberg - NJ
 Don A. Christiansen - UT
 Michael D. Cirigliano M.D. - PA
 William Coalsou - MO
 Gilbert M. Cofer - NC
 Joseph A. Colacci - NJ
 Donald J. Colbert - GA
 Robert A. Cole - CA
 Bill Collins - IL
 Kenneth Collins - VA
 Richard W. Conslman - FL
 Ron D. Cook - WA
 Stefano Costantini - TX
 David W. Cowan - WA
 Jerry Cowan - PA
 John E. Craig - FL
 William J. Cripps - GA
 Don Crockett - IN
 William M. Cronin - VA
 Larry G. Crowder - AL
 D.R. Cummings - MN
 Gene E. Curry - MI
 Parviz Daftari - NJ
 Fred Damm - CO
 Timothy J. Dannels - CO
 Michael J. Dascoli - MA
 Leo F. Davids - MN
 Jerry W. Davidson - CA
 Robert H. Davis - WA
 Timothy F. Dawson - CA
 Angus H. Day - CO
 Dennis B. De Zonia - CA
 Robert R. Dean Jr. - CA
 Michael H. Debes - PA
 Glen P. Defeverre - CA
 Stephen J. Deminco - MD
 Bruce A. Denney - AR
 Robert Dersovitz - NY
 Daniel R. Devillers - MI
- Gordon Dey - FL
 William B. Deysher - FL
 Fred Dimaria - CT
 Erin Dobbs - IN
 Bernhard P. Doerenbecher - AZ
 John R. Donnelly - NJ
 Frank Donofrio - NY
 Richard D. Doolittle - VA
 Scotty Dossett - IL
 Albert L. Doucette - CA
 Bernard Drier - MN
 Douglas M. Dringoli - CT
 John W. Driver - FL
 William Duncan Jr. - NC
 Edward J. Dutton Jr. - TX
 Robert Eiben - OH
 David F. Elliott - FL
 Ernest L. Emery - CA
 John J. Ennis - RI
 Harold P. Epps - CA
 Thomas C. Ersted - OH
 Richard R. Estes - CA
 James M. Estey - IL
 David M. Evans - MO
 Walter K. Everly - OH
 Kingsley R. Fairchild - WA
 Peter P. Fara - WI
 Harry Farnham - CA
 Giuseppe Fascione - VA
 Steven G. Fattor - NM
 David R. Faust - IN
 James P. Fennell - WA
 Gary M. Ferrari - MA
 Villy Ferreira - NY
 Glenn P. Fetsch - CA
 Daniel R. Fetterly - CA
 Carl W. Fetty - OR
 William S. Fields - OH
 Thomas J. Finner - SC
 P. Fiorentino - NY
 Joel T. Fisch - IA
 John B. Flanders - TX
 Benjamin Flesher - IN
 Patrick F. Flynn - TX
 Tibor Folding - IN
 Gary L. Forte - MI
 Ronald N. Forthman - VA
 Mort Fowler - MO
 William T. Frantz - WA
 Stanford R. Freeman Sr. - FL
 Richard L. Frisbie - MO
 Hugo Fruehauf - CA
 Francis A. Fussenegger - CO
 Arthur S. Gambino - AZ
 Robert C. Gamble M.D. - CA
 Michael J. Ganster - IL
 Dixon B. Garner - FL
 Michael Garofolo - GA
 William A. Gast - TX
 David L. Gatling - AL
 David A. Gell - WA
 Jack Gershfeld - CA
 Peter Gilson - MA
 Charles A. Goodman - CA
 George Gore - MA
- Michael B. Gosson - NY
 Michael J. Graham - NJ
 Keith R. Gramke - AL
 Claude Graves III - TX
 Ronald J. Gray Jr. - MA
 Robert W. Greaves - NM
 Herbert G. Greiner - CA
 Jack C. Guiso - CA
 Peter L. Gunn - PA
 Thomas W. Gurbach - OH
 Gregory P. Gutsell - NH
 John L. Hackert - NY
 Thomas J. Harper - FL
 Gary R. Harris - OR
 Minnie E. Harris - NC
 Bruce L. Harshe - MI
 Wm. Pitt Hartzell - PA
 Thomas C. Hastings Jr. - AL
 Arthur J. Haug - FL
 Robert Heil - WI
 Oliver Heinen - AZ
 Bob Henderson - IA
 Jerry A. Henry - AZ
 Kenneth Hess Jr. - AZ
 Lee R. Hines - CA
 Robert L. Hines - OR
 Lloyd D. Hinkley - NE
 David D. Hoffman - CT
 Geoffrey A. Holmes - WA
 John S. Holmgren - FL
 Kregg A. Hoover - WA
 Raymond A. Horn Jr. - IN
 Donald W. Hornick - MD
 Keith J. Howard - NE
 Richard L. Huftalen - FL
 Roger A. Humphrey - TX
 Ronald J. Humphrey - NM
 Austin P. Hunsche - IN
 Richard A. Hupp - CA
 Kenneth F. Irwin - IL
 Paul G. Ivey Jr. - CT
 John M. Jaugilas - CO
 Edward L. Jennings - FL
 Mark Jesse - IN
 D.L. Johnson - TX
 Michael S. Johnston - FL
 Michael S. Johnstone - NC
 Peter J. Jones - AZ
 Erich D. Jost - WY
 Michael J. Joubnan - MI
 Thomas F. Jozwiak - TX
 Dennis T. Kanemura - GA
 Jack L. Karn - OH
 Glenn A. Kauffman - TX
 David J. Kaufman - FL
 Arthur F. Kelly - OR
 Kent J. Kelso - AL
 Howard J. Kennedy - AZ
 Wayne A. Kercovich - PA
 Ryan M. Kerick - NH
 Matthew L. Keskeny - MI
 Basil Keys Jr. - VA
 James C. Kilgore Jr. - FL
 Christopher K. Kimball - NC
 Alex Kindwall - CA
- David J. Kinsinger - GA
 Timothy Kinner - TX
 Steven P. Kiser - WI
 Robert M. Kistler - IN
 Paul D. Kling - CO
 Armand D. Klinger Sr. - SC
 Richard E. Knapp - CA
 Ken K. Koch - MO
 Robert Koehn - WI
 William F. Korn - CA
 Stephen E. Kostiew - WA
 Benjamin J. Kraus - NY
 Michael Krot - PA
 David A. Krutel - OH
 Brian R. Kueker - IL
 William M. Kuhl - MN
 Robert Kummer Jr. - WI
 William J. Kunkle Jr. - IL
 Jack D. Lafferty Jr. - FL
 John C. Laggan - WV
 Paul H. Lange - TX
 Hanford G. Langstroth - MA
 David Laporte - MI
 Brien E. Larsen - NV
 Richard T. Lasalle - TX
 David Laude - CO
 Michael C. Lavoro - NJ
 Paul A. Laya - FL
 Morty Lebedun - FL
 Arlin W. Leder - MN
 Brian Legerlotz - NY
 Robert E. Lehr - MD
 David Lentz - CA
 Robert F. Light - MI
 Gene Lindsay - MO
 Jerome Lindsay - NY
 Daniel M. Littler Jr. - PA
 Marcos Liu - CA
 Brian Loeppky - TX
 Jay H. Long - MD
 David A. Lovett - FL
 Thomas Ludeke - OH
 Thomas F. Mabry III - GA
 Theodore Madison - WA
 Chris J. Maikisch - PA
 Ilona S. Maine - IN
 Michael M. Malec - LA
 Branda Manns - IN
 Tad P. Manske - NY
 Lawrence H. Markey - MI
 Dave Marsden - TN
 Clifford M. Martin - VT
 John S. Masters - MI
 Howard L. Mathis - NC
 Reynard K. McClusky - FL
 Barent N. McCool - TX
 Joseph T. McCormack - FL
 Gregory N. McCullough - AK
 John D. McDiIl - IN
 Robert B. McGregor - CA
 Eugene T. McIlvaine - FL
 Frank D. McMillan - TX
 Lester S. McWilliams - KY
 Michael J. Mehalick - CA
 David A. Menzimer - WA

In honor and in memory of ...

Kim Eiseman - SC - \$100.00 - Foundation Scholarship
 In memory of Mike Blair

Walk of Fame bricks

George N. Dzahristos - MI
 Hardin County R/C Modelers - KY, In memory of Mike Blair
 M.L. Mosbrooker - WA, In honor of Walt Gerfen, 313162, master builder

Raymond A. Meyer - NY
Karen Mienheartt - IN
Ronald J. Mienheartt - OH
Mandee Mikulski - IN
Jim Miller - OH
George A. Mixter - OH
Lois A. Mock - IN
Gordon O. Moe - MD
James Mohan - AZ
Steve T. Moorman - VA
G. Allen Morris - GA
James B. Moxon - NY
Val Moyer - ND
Michael L. Moyers - HI
Mike Muehr - TX
Jamison D. Mueller - IL
Jerry B. Murphy - CO
Thomas K. Murphy - GA
Michael T. Muzzy - VT
Reese Nelson - UT
David G. Nickell - MI
Charles E. Nienhouse - AZ
Daniel Nipkow - NV
Marvin N. Nolte - CA
Keven O'Connor - TX
Steve K. O'Connor - MI
Michael D. Okane - CA
Robert D. Oldach - VA
John R. Olsen - WA
Robert Oneal - IL
Larry V. Ossenkop - ID
George D. Owens Sr. - WV
Robert J. Oxford - NY
Lawrence J. Pace - NY
Joseph N. Parisie - CA
Lawrence O. Parker - AZ
Robert T. Parker - WA
George W. Parmelee - OH
Joseph Passaretti - RI
Robert Patukonis - MA
Stephen Paul - CO
Chrystal L. Pearson - IN
Donald G. Peele - NC
Steffen Peters - CA
Dennis W. Phelan - CT
Lonnie Phipps - NY
Frank E. Pink - MI
Thomas R. Pisciotta - NJ
Barry Pitchfork - WA
Ron Plamondon - MI
Raymond E. Poe - OK
Stephen T. Pollock - NM
Barry A. Ponticelli - MD
John S. Ponzetti - IL
Leonard Porche - CA
Richard J. Primo - WA
Anthony L. Quist - AZ
Mark A. Radcliff - WV
Harold W. Radke - FL
Lawrence F. Rakunas - IL
Gary L. Rauckman - KS
Patrick T. Redig - MN
Anthony E. Reed - CA
David F. Register - OK
Greg A. Reiger - IN

Robert F. Reinoehl - FL
John W. Renker - TX
Tom Rentzios - CO
Juan R. Requena - PR
Wayne D. Richardson - FL
Conrad J. Ricker - IL
Richard Riddle - MA
David Riggs - CA
F. Randall Ringner - KY
Eugene P. Rizzardi Jr. - TX
Mark D. Roberts - TX
Shane M. Roberts - CA
David G. Robinson - OK
David J. Robinson - TN
Lawrence Rodgers - MI
Porfirio S. Rodriguez - TX
Stan B. Roeske - NM
Lance M. Rogers - VA
David S. Romanko - OR
Joel B. Rosenzweig - MA
Steven Ross - AZ
Wallace W. Ross - UT
Jack Rothenberg - FL
Walter J. Rucki Jr. - FL
Daniel R. Russo - NY
Roger A. Russo - VA
Oliver B. Sand - NY
Richard W. Sarpolus - NJ
Robert C. Savage - MN
Albert P. Sawyer Jr. - SC
Michael J. Schaefer - FL
Carey M. Scheberle - CO
Bill L. Scheels - WI
Gordon L. Schimmel - MA
Harvey G. Schneider - MI
Philip C. Schneider - AZ
Robert F. Schroeder - FL
Gerd Schroff - SZ
Frank J. Schuler Jr. - KY
Paul D. Schwartz - NY
Steven L. Scott - CA
William A. Scott - NJ
Dennis Sedlock - OH
Anthony Senzatimone - NY
Jose M. Serrano - PR
Arne Severson - MN
David B. Shafer - MI
Jerry D. Shankland - CA
John L. Shea - MA
Richard C. Shearer - NY
Michael J. Shonk - NY
Bruce E. Skelly - CA
Jim R. Slocum - NJ
Emil J. Smith - OK
Henry A. Smith III - CA
Randall C. Smith - AZ
Ron Smith - OH
T. Paul Smith - NJ
George A. Smojver - MI
Samuel E. Snead - NC
Sue Snyder - WA
Stephen Sobel - NY
Paul Sonye - OH
Tim B. Sowder - NH
Chris S. Speckman - OH

Brian R. Sperry - CA
Daniel A. Stein - CA
John Stein - CA

Rudolph Steiner - FL
Laurence C. Stenhouse - NC
Kerry J. Sterner - PA

Tony B. Stillman - IN
Gary Stinson - CO
Kenneth Stoltz - PA

National Model Aviation Museum patrons

George E. Aandahl - MN
Carl P. Anderson - NH
H. Applegate - NY
James D. Arnold - SC
Edward J. Banke - GA
Edward Barili - NY
Joseph Bartland - ND
K.G. Bauske - TX
George W. Becker - NY
Michael S. Beguelin - CA
Robert L. Blakeslee - FL
Herbert L. Bone - WA
Lynn W. Bortner Jr. - PA
Christopher L. Bott - TX
Larry Brinser - MI
Earl E. Brockmeier - IL
William R. Brown - GA
Edward P. Brucker - MO
Julian D. Bruner - CA
Julian D. Bryant - NC
Douglas E. Buck - MI
John E. Burns - CT
Howard S. Burr - CA
Paul Busse - MO
Robert A. Butsch - IN
Oreste F. Caforio - MA
Samuel J. Carkhuff - KS
Kenneth N. Carlisle - OK
Gregory Ceresko - NY
James G. Chaconas - MD
Jack L. Clooney - IL
James M. Coffin - VA
Donald J. Colbert - GA
James F. Costa - NJ
Barry L. Croucher - VA
Timothy J. Dannels - CO
David J. Davies - NC
Timothy F. Dawson - CA
Robert R. Dean Jr. - CA
Bruce A. Denney - AR
Anthony L. Dilluvio - NY
C.L. Dodge - OH
Robert G. Dodgson - WA
John R. Donnelly - NJ
Richard D. Doolittle - VA
John W. Driver - FL
William Duncan Jr. - NC
Edward J. Dutton Jr. - TX
Justin D. Edmonds - IL
Richard R. Estes - CA
David R. Faust - IN
Daniel R. Fetterly - CA
William S. Fields - OH
Joel T. Fisch - IA
Tibor Folding - IN

Ronald N. Forthman - VA
Michael J. Ganster - IL
David L. Gatling - AL
Eugene Gavin - NY
David A. Gell - WA
Michael B. Gosson - NY
Robert W. Greaves - NM
Thomas W. Gurbach - OH
Gregory P. Gutsell - NH
John L. Hackert - NY
Thomas J. Harper - FL
Wm. Pitt Hartzell - PA
Thomas C. Hastings Jr. - AL
James R. Heidtke - HI
Kenneth Hess Jr. - AZ
Ron Hesskamp - MO
Lee R. Hines - CA
David D. Hoffman - CT
John S. Holmgren - FL
Raymond A. Horn Jr. - IN
Donald W. Hornick - MD
Richard J. Jennings - CA
James W. Johnson - LA
Erich D. Jost - WY
Thomas F. Jozwiak - TX
Jack L. Karn - OH
Glenn A. Kauffman - TX
David J. Kaufman - FL
Larry T. Kennedy - SC
Wayne A. Kercovich - PA
Basil Keys Jr. - VA
Timothy Kirner - TX
William J. Kunkle Jr. - IL
Gene Lindsay - MO
Henry J. Lochhead - FL
Joe R. Macias - CA
Theodore Madison - WA
Chris J. Maikisch - PA
Robert A. Main - CO
Michael M. Malec - LA
Tad P. Manske - NY
Lawrence H. Markey - MI
John A. Marsh III - NC
Howard L. Mathis - NC
Barent N. McCool - TX
John D. McDill - IN
Frank D. McMillan - TX
Karen Mienheartt - IN
George A. Mixter - OH
John W. Moll - SC
Steve T. Moorman - VA
James B. Moxon - NY
Jerry B. Murphy - CO
Thomas K. Murphy - GA
Robert E. Nelson - IA

David G. Nickell - MI
Charles E. Nienhouse - AZ
Keven O'Connor - TX
John R. Olsen - WA
Donald P. Oppliger - KS
Frank Osborne - AR
Lawrence J. Pace - NY
Robert T. Parker - WA
Stephen Paul - CO
C.C. Phelan - IL
Dennis W. Phelan - CT
Lonnie Phipps - NY
Frank E. Pink - MI
James A. Quinn - NY
Mark A. Radcliff - WV
Gary L. Rauckman - KS
David F. Register - OK
Juan R. Requena - PR
Conrad J. Ricker - IL
Eugene P. Rizzardi Jr. - TX
Lawrence J. Roberts - CT
Jose E. Rodriguez M.D. - TX
Steven Ross - AZ
Wallace W. Ross - UT
Gilbert V. Ruiz - AZ
James L. Russell - PA
Carey M. Scheberle - CO
Bill L. Scheels - WI
Philip C. Schneider - AZ
Richard D. Schneider - GA
Paul D. Schwartz - NY
David B. Shafer - MI
Robert T. Smith - NH
Walter P. Stinson - ME
George J. Suter - CA
William R. Sutton - SC
Terrence R. Till - VA
Timothy Toutant - MI
Tom E. Traeger - CA
Bruce R. Trevino - TX
Keith Trostle - CO
George W. Ulrich - IL
John C. Underwood - TX
Abram Van Dover - VA
Henry Velez M.D. - NJ
Terrell R. Webb - CO
Carl Weizenecker - CA
Jay D. Whitney - MO
Carl E. Wick - MD
Terry L. Wiggers - KS
Roy E. Wilson - NJ
Robert Wolfe - FL
Thomas A. Yeaman - NV
Robert C. Zimmerline - IA

DONATIONS

Craig F. Stone - IL
 James G. Stover - IL
 Jeffery J. Struthers - CA
 Ramon Suarez - FL
 George J. Suter - CA
 James L. Swanson - CA
 Jerold L. Sweeney - WY
 Robert B. Tate - FL
 Eliot G. Teagle - VA
 Hassan Tehrani - WA
 Richard J. Tejada - CA
 Ron Terzini - NJ
 Ivor Thomas - WA
 Terrence R. Till - VA
 Michael J. Tils - NJ
 Henry Tisdale - MD
 Leonel Toribio - FL
 Timothy Toutant - MI
 Tom E. Traeger - CA
 Gene R. Trevino - TX
 Keith Trostle - CO
 Wen-Feng A. Tseng - CA
 Hadrian A. Tucker - NY
 Michael S. Tuomey - VA
 Kevin Turner - TN
 Roger Tyrrell - MN
 Gene C. Ulm - VA
 George W. Ulrich - IL
 William J. Vadatalabene - IL
 Joe I. Valdez - CA
 Roy G. Van Gulder - NV
 Mark W. Vancil - TN
 Abram Van Dover - VA
 Robert T. Vaught Jr. - AZ
 David C. Ventura - FL
 Paul B. Voss - MA
 Larry L. Waggenerman - CA
 Aaron Walker - KY
 Dale C. Walker - MI
 Kelsie Walker - IN
 Roger L. Walther - TX
 James D. Walton - TX
 Ryan Ward - AZ
 Albert J. Wargo - CA
 Gary L. Warner - IA
 Terrell R. Webb - CO
 Robert H. Weissenburger - NJ
 Carl Weizenecker - CA
 James White Jr. - NC
 Jay D. Whitney - MD
 Eric M. Williams - NE
 Henry A. Williams - MN
 Howard A. Williams - TX
 Purnell A. Williams - NY
 Warren P. Williamson IV - MA
 Gerald E. Wolff - TX
 Charles F. Wright - AZ
 Max E. Wright - NY
 David Wulkan - FL
 Robert G. Wyman - NY
 Kenneth R. Yeager - CO
 Kevin Yeager - CO
 Thomas A. Yeaman - NV
 Todd Yoak - OH
 Wade C. Zimbardo - VA

Robert C. Zimmerline - IA
\$10 UP TO \$24.99:
 Phillip Addison - MI
 Mark E. Aeling - WI
 Delbert L. Antle - KS
 Kenneth L. Asman - OR
 Thomas L. Atkins - VA
 Theodore D. Atmore - WA
 William H. Badstubner - CA
 Kenneth M. Bagdon - NJ
 John C. Bagnatori - CA
 Maura J. Barch - MI
 Claud A. Baskin - TN
 Dan Basovitch - NY
 Charles L. Baube - GA
 Joseph F. Beck - SC
 Gerald B. Becker - WA
 Gregory A. Beggs - IA
 Kenneth W. Bell Sr. - FL
 Francis W. Blackwell Jr. - TX
 John C. Blake Haskins - FL
 John S. Blehm Jr. - OK
 Sol Blocker - TX
 Henry P. Bocchino - PA
 Vicente "Vince" Bortone - KS
 Lee H. Boutwell - LA
 Andy Bowen - FL
 Frank R. Braden - FL
 Joseph L. Brodman - AZ
 William C. Brown - MI
 Lawrence J. Bruno - NY
 Charles Buchheit - NV
 James E. Burnett - PA
 William G. Carter - SC
 Russ R. Chanice - NY
 Richard H. Chevalley - TX
 Herman A. Cholewinski - FL
 Darrell E. Cline - CO
 H. David Cole - AR
 James B. Collins - TN
 David L. Conrad - IN
 Lamar L. Cooley - LA
 Phillip G. Costa - WA
 Dennis M. Creery - GA
 Charles E. Crookshanks - VA
 Willard V. Cullum - NJ
 Salvatore Curiale - PA
 Dale L. Custer - FL
 Robert D. Dailly - WA
 Rafael A. Delgado - NY
 John A. Deluca - MD
 Joseph A. Dimino - NJ
 Roger E. Dionne - MA
 David Dissmeyer - CA
 Robert G. Dodgson - WA
 John C. Doucette - MA
 Anthony E. Durrah Sr. - NC
 John H. Eckel - NJ
 Oliver L. Edwards Jr. - AZ
 John Eggert - OH
 Kevin Emery - PA
 Rolly Erdman - MN
 Henry J. Ernst - NY
 Bert D. Erwin - WA

George Esparza - IL
 Walter J. Farrell - VA
 Richard L. Feldman - NE
 William Fetting - CA
 John Filman - FL
 Matthew E. Finley - MI
 David O. Fiore - NJ
 Albert W. Fischer Jr. - NH
 Newnham H. Fleming - FL
 Horace E. French III - GA
 Ron Funk - OH
 Pavel Gabler - IL
 David E. Gaston D.D.S. - NJ
 Reginald L. Gilmore - IL
 Craig B. Gimbel - NJ
 Edward J. Glembocki - PA
 Carmen J. Gonsoulin - LA
 Byron E. Gorman - MN
 William G. Gove - PA
 Joseph F. Goyette - CT
 Daniel W. Grassley - MI
 Carl S. Gubkin - NJ
 John D. Gundros - CA
 James D. Hall - CA
 Ronald P. Hampel Sr. - AL
 Coleman Hanna - TN
 J. Steven Harner - PA
 David A. Harsanyi - IN
 Robert J. Hendrle - NE
 Mark L. Henrie - MA
 Alan Henry - FL
 Richard A. Hinz - FL
 William Hofmann - NY
 David E. Hoglund - WA
 Robert D. Holland - GA
 Louis E. Hudson - NC
 Robert C. Hughes - PA
 Johnny R. Hunt - TX
 Kerry T. Hunt - TX
 Zaellocka I - FL
 Randy E. Irwin - AZ
 Kyle J. Jaracz - IN
 Kael L. Jaspersen - WY
 Robert J. Jaworski - NC
 Charles T. Jessell - OR
 Hans D. Kadner - IL
 Albert J. Kanter - OH
 Ronald K. Kawakami - HI
 Paul J. Keller - PA
 Anthony E. Kelley - OH
 Deanna L. Kelly - IL
 Curtis L. Kendall - WA
 Gene A. Kent - TX
 John A. Kessler - NY
 R. Thomas Kintzi - WA
 Ward W. Knockemus Ph.D. - AL
 Kylan J. Koehn - AR
 Edward J. Kotzur - TX
 Michael A. Krapp - PA
 Sanford P. Landers Jr. - NM
 Robert Langelius - NY
 Bob P. Lawrence - TN
 Robert H. Lawrence - NY
 Chris M. Lebaugh - WA
 Jeffrey R. Lee - FL

Sean S. Lee - CA
 Francis D. Leining - MN
 Anthony F. Leonardo - NY
 Kenneth J. Lexie - PA
 W.A. Loomis - CT
 Raymond Luchetti - IL
 Thomas Luper - NC
 Roger A. Luther - PA
 Donald M. Thompson - OH
 Donald MacDonald - NY
 Gilbert L. Macon - CA
 Henry B. Maddox - GA
 Peter A. Magoun - NH
 John A. Majikas - PA
 Nicholas J. Marando - FL
 James A. Martin - OH
 Dean Massery - OH
 John Luc Phu Massey - RI
 George S. Masters Jr. - FL
 Robert E. Mattes - MO
 George J. Mayer - NY
 Paul M. McGinnis - CA
 Michael J. McKee - FL
 James P. McManus - NC
 Edward J. McQuaid III - PA
 Curtis Mees - GA
 Andrew Meier III - CA
 Thomas B. Mekis - PA
 Al Metz - NY
 Robert E. Milam Sr. - WA
 Forrest M. Mims III - TX
 Walter D. Moore - WV
 Keith L. Moser - WA
 Wilbur E. Mower Jr. - NV
 Edward C. Mundy - VA
 James J. Murdocco - RI
 R.L. Murphy - FL
 Gary E. Nelson - MN
 Cindy A. Niebel - NM
 Ralph J. Niebel Jr. - NM
 Sterling C. Oliver - MS
 Charlene E. Osborne - MD
 Thomas R. Overeinder - TX
 Domingo Pacheco - FL
 Richard Palmer - CA
 Noel A. Patil - VA
 Gerald J. Peck Sr. - PA
 Lloyd G. Peterson - IN
 William S. Piggins - MI
 John W. Powell - MD
 Paul G. Purinton - GA
 Robert F. Putrich - FL
 Gene Rakovshik - OH
 Harold J. Redelsperger - IL
 Peter B. Reichert - OR
 Emil W. Richter - IN
 Erik K. Riivald - NJ
 Thomas Rocheleau - CT
 Robert J. Rolfson - MD
 Nicholas B. Roselli - MA
 Bill Roy - CT
 Leonard W. Rozamus - VA
 Joe C. Ruh - KY
 Sam F. Rutigliano - CA
 Charles H. Ryan - FL

Daryl J. Saldauskas - NV
 Greg Salmons - MN
 Karl J. Schaefer - WA
 Ronald J. Schenkenberger - AZ
 Junior O. Schlight - KS
 Michael L. Schneider - WI
 Paul P. Schnepf - CA
 Peter Schroeder - MN
 Michael J. Shackelford - OH
 Casey L. Shearer - PA
 Martin L. Sherman - OR
 Lawrence M. Sickler - FL
 James E. Sigurdson - DE
 William C. Simpson - TX
 Arthur D. Sizemore - NC
 Don R. Smith - CA
 Tony D. Smith - NC
 Socorro Solis - CA
 Roger B. Somerville - GA
 Clifford G. Spackman - NJ
 Thomas F. Spenader - FL
 Tim A. Stadler - WI
 William Stamm - NY
 Robert E. Steffensen - AZ
 Lynn Stephens - ID
 John F. Stone - PA
 Anthony N. Stout - FL
 Jeff P. Stover - CA
 Allan W. Strout - NM
 Carter P. Swenson - VA
 Karl H. Swope - CA
 Charles Teixeira - TX
 Wayne A. Thomas - FL
 Jack Tisinai - WI
 Angel Torres - FL
 Jose A. Torres - CT
 William O. Tucker - TN
 C.J. "Skip" Udell - WA
 Steven G. Ukropen - IL
 William D. Unghire - CT
 N.L. Ventura - ME
 Melvin C. Wasse Miller - MI
 Robert E. Waters - PA
 Lloyd Weida - MA
 Martin J. Weiner - NY
 David M. Weir - WI
 Joseph E. Weitzel - OH
 Danny Whitt - MN
 Maurice J. Whittemore - IN
 Everett Wilkins - IL
 James Wilson - CA
 James L. Wolfe - CA
 Bill Zarevich - CA
 Robert F. Ziotkowski - NY

Donor levels represent only individual donations made in October 2019. Some donors may qualify for the next donor contribution level based on cumulative giving.





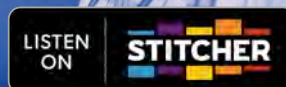
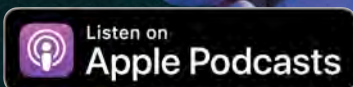
AMA[®]

PODCAST

MODELAIRCRAFT.ORG/PODCAST

⇒ *JOIN THE
CONVERSATION*

*A WEEKLY PODCAST HOSTED BY
AMA'S MATT RUDDICK*



AMA EXECUTIVE COUNCIL MEETING MOTIONS

NOVEMBER 9, 2019, MUNCIE INDIANA

The motions and acclamations are part of the unofficial minutes of the meeting. Minutes from a given meeting are not official until they are approved at the following quarterly Executive Council meeting. Questions or comments concerning the motions should be addressed to your district vice president.

Motion to approve consent agenda passed by acclamation.

Motion I: Moved by Randy Cameron (EVP), seconded by Tim Jesky (District VII), to appoint Phil Tallman to replace Bryan Wood as the District XI Vice President to the AMA Executive Council.

Motion passed. One abstention (District XI).

Motion II: Moved by Lawrence Tougas (District X), seconded by Gary Himes (District VI), to engage with Akin Gump as outlined in its November 4, 2019, engagement proposal.

Motion passed. One abstention (NAA).

Motion III: Moved by Gary Himes (District VI), seconded by Randy Cameron (EVP) to accept the 2020 AMA budget as presented by CFO Keith Sessions.

Motion passed unanimously.

Motion IV: Motion made by Lawrence Tougas (District X) and seconded by Lawrence Harville (VIII), to add a service fee for manual membership renewals outside of auto-renew.

Motion withdrawn.

Motion V: Moved by Lawrence Tougas (District X), seconded by Randy Cameron (EVP), to ask the marketing committee to review membership service fees for manual membership renewals that could be avoided by using auto pay.

Motion passed unanimously.

Motion VI: Moved by Tim Jesky (District VII), seconded by Jay Marsh (District IV), to approve bid submittal for the space modeling rocketry (FAI S) world championship with the National Association of Rocketry in 2022 in Texas.

Motion passed. 12 yes, 1 abstain (NAA).

Motion VII: Moved by Mark Radcliff (District III), seconded by Lawrence Tougas (District X), to accept the AMA Nats schedule as presented and the proposed plan to host an AMA national fun-fly at the International Aeromodeling Center on July 24-26, 2020.

Motion passed unanimously.

Motion VIII: Moved by Randy Cameron (EVP), seconded by Gary Himes (District VI), to accept the Executive Council 2020 schedule with a membership meeting as noted below:

- January 25, 2020 (virtual)
- April 25, 2020
- Membership meeting July 25 (Saturday)
- July 26, 2020 (Sunday)
- October 24, 2020

Motion passed unanimously. 🇺🇸

ELECTION RESULTS

AMA elections for the positions of AMA president and vice presidents in Districts I, V, and IX took place last fall. Following are the results of the vote. AMA would like to congratulate our elected president and district vice presidents and thank the candidates and members who participated in this year's election.

PRESIDENT

Rich Hanson	6,437
Randy Cameron	3,298
Eric Williams	2,576
Other	457

DISTRICT I

Andy Argenio	659
Other	11

DISTRICT V

Andrew Griffith	1,187
Robert "Bob" Brogdon	834
Other	10

DISTRICT IX

Jim Tiller	575
Other	11



⇒ Money Matters

THE 2020 BUDGET

By Keith Sessions, Chief Financial Officer | keithsessions@hotmail.com

When I went to write this quarter's column, I pulled up the fourth-quarter review from last year. Many of the issues we faced in 2018 were true in 2019. After many discussions and a lot of planning, we have decreased the 2020 budget by roughly 20%. Some of this comes from cuts and some from new revenue streams. In all, a lot of hard decisions had to be made for the long-term fiscal viability of the AMA.

As a review, I will provide a little background on our current situation. Membership numbers have dropped from the peak. When you take out Youth memberships, we have approximately 110,000 paying members. This is down roughly 5,000 members from 2018, but has leveled off and started to rise slightly as we went through 2019.

Additionally, going to a 12-month membership has hurt dues revenue because the AMA does not receive any income when a member forgets to renew for a month or two. Non-dues revenue is also down. We have all seen magazines shrink considerably or go away completely. *Model Aviation* faces the same struggles. Print media used to be the premier form of advertising. Today, most advertising is done via digital streams.

On the expense side, we have seen increased expenses in several areas. Public relations and government relations were not even a part of our budget 10 years ago. Today, they are a large annual expense. In 2018, we had unusually large expenses because of lobbying efforts.

Although that has decreased, we still spend a lot to work with government agencies and to put model aviation in a good light with the public.

We held AMA Expo East and West in 2019. As I have mentioned in previous columns, these took up tremendous resources. Although they are meant as member benefits, the AMA can not sustain the significant losses associated with these events going forward.

Our plan for 2020 involves decreasing expenses and increasing non-dues revenue, both of which will impact members. Decreasing expenses is always the hardest because it usually means that you are cutting something out. Although many things were


reduced, members will feel the impact from a few. The magazine will lose a few pages. The National Model Aviation Museum will be open full time in the summer, but will be closed during the off season. Printing and engraving awards and banners will no longer be available.

Members will also feel some of the impact of lack of non-dues revenue. New fees for records will help to offset—but not cover—the cost of maintaining those records. New fees for the use of the International Aeromodeling Center (IAC) will help to offset the costs to host and maintain those events while still providing services at below-market rates. There will be additional acreage put under crops at the IAC for 2020.

We have committed to these things and will reevaluate in April or May if more cuts need to be added. This reduces the maintenance costs while provided a reliable stream of non-dues revenue. I hope you have noticed the one thing we have not touched. Dues will continue to stay at \$75 per year. The last increase came after 13

“Our plan for 2020 involves decreasing expenses and increasing non-dues revenue, both of which will impact members. Decreasing expenses is always the hardest because it usually means that you are cutting something out. Although many things were reduced, members will feel the impact from a few.”

years of keeping them at the same level and even then, was only adjusted for inflation.

The next few years will be challenging. Proper planning and making hard decisions is imperative for AMA's success. This year's budget process was the hardest I have been through since joining the board in 2013. I want to thank everyone who helped in the process and especially all of our employees at AMA Headquarters. 



I

Andy Argenio

Vice President
brandshobby@gmail.com
3 Sheila Ln., Smithfield, RI 02917
(401) 231-6901
www.amadistrict-i.org



ASSOCIATE VICE PRESIDENTS

Steve Brehm, Jamestown RI; (401) 423-1085; stbrehm@yahoo.com

Andrew Figlar, Shelton CT; (203) 513-8546; figlar335@att.net

James Gilliatt, Concord MA; (978) 369-9796; jegilliatt@cs.com

Steve Goler, Salem MA; (617) 373-0884; njpmuck2@comcast.net

Daren Hudson, Greenland NH; (603) 674-5809; dth7@comcast.net

Ray LaBonte, Standish ME; (207) 892-7994; rplabonte@aol.com

Tom Lavoie, N. Smithfield RI; (401) 824-6134; d2tw4all@yahoo.com

Joan Liska, Middletown CT; (860) 347-0257; jliska9000@sbcglobal.net

Mark Montella, Falmouth, MA; (508) 457-4984; montellamj@comcast.net

Thomas J. Puma Jr., North Clarendon VT; (802) 558-4439; usakingcat1@aol.com

Tom Rocheleau, Wethersfield CT; (860) 280-1701; trocheleau@cox.net

William Unghire, Newinton CT; (860) 978-5353; n1cnv@icloud.com

Ted Wojcik, Fremont NH; (603) 479-3799; tedwojcik@comcast.net

TECHNOLOGY AND SAFETY OFFICER

John Yassemedis, 5 Quarry Rd., Nashua NH 03062; (603) 321-8442; jyassemedis@comcast.net

EVENT SANCTION COORDINATOR

David Surwell, 24 Norwich Rd., Nashua NH 03062; (603) 888-2020; davidsurwell@comcast.net

District I

Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

District I Associate Vice President Joan Liska submitted the following Connecticut reports from this past summer's events that she and her husband Ron attended.

The Northern Connecticut Radio Control Club (NCRCC) held its annual one-day Warbirds Over Ellington event on Saturday, September 7, 2019. All sizes of warbirds were welcome and the selection of aircraft spanned the century of flight, from Ron Liska's colorful and sizeable World War I Nieuport 28, to James and Jesse Russell's World War II fighters, to jets. It was a windy day, but that did not discourage the fliers. Lots of good flying took place.

NCRCC is known for its impressive array of raffle items and the club did not disappoint this year. The airfield has a close-clipped grass runway that is impeccably maintained by the proud owners of the field, the NCRCC club. This is one of the few fields that is owned by a flying



Ron Liska flew his Giant Scale WW I Newport 28.



The Wintonbury Flying Club's annual Giant Scale Event is held during Labor Day weekend.


club. The members have built a pavilion that provides shade and are considering adding solar charging stations.

Posters for the 2020 event will be displayed on the District I website at www.amadistrict-i.org or the club website at www.ncrcc.com.

The Wintonbury Flying Club in Bloomfield, Connecticut, continues to sponsor its annual Giant Scale Event on Labor Day weekend. This gathering has been the club's mainstay fundraiser for many years. Tom Rocheleau, club president and the event's contest director, is the spark who keeps this event fun and relaxing.

Kudos to the club for maintaining and improving this grass field each year. It is truly one of the best flying sites in the state. More than 30 pilots turned out for the two-day event. Good food and nice raffle items are always a highlight.

Mark this event on your calendar for next year. Information can be viewed on the District I website or at <https://flywfc.org>.

Thank you, Joan, for providing us with these photos and reports. The AMA District I officer team wishes everyone a wonderful New Year! 



Both events often offered a great raffle selection.



Jesse and James Russell flew their WW II aircraft at the NCRCC event.

District II

New Jersey, New York, Europe

The future of model aviation resides in younger generations. Although it often seems that inspiring youth to discover model aircraft is an uphill battle, our younger fliers can be the best advocates for our hobby.

Several years ago, I had the honor of meeting Tony Devergillo and his son, Robbie, who has flown since the age of 7. It was obvious that Robbie was exceptionally interested in aviation. Throughout the years, he has proven himself to be a strong promoter of our hobby and a great example of how model aviation shapes young adults.

Standing for Head, Heart, Hands, and Health, 4-H is a youth-development program for young people ages 5 to 19. It made sense that, with his enthusiasm, Robbie would serve as president of the 4-H-based Broken Props model airplane club in Somerset County, New Jersey. And Robbie has proven to be a strong leader.



Robbie Devergillo displays his solo certificate.

Robbie and his club members have worked hard to promote model aviation to youth and to the general public at large. At the Somerset County Fair, Broken Props members participated

in numerous competitive modeling categories. Robbie has also appeared in several local publications.

Robbie's efforts in model aviation at such a young age have played no small part in a recent, significant achievement he received. Robbie was awarded the EAA Ray Aviation Scholarship for deserving youth to help with their flight training expenses. The \$10,000 award assisted Robbie in obtaining his private pilot's license.

Robbie was among 100 young adults from across the country who were nominated by local EAA chapters to receive the scholarship. Congratulations to Robbie for soloing in a Piper Cherokee out of Somerset Airport on Sunday September 29, 2019.

Does your club have a Robbie Devergillo? With the right encouragement, I'm sure you will find him or her.

The National Association of Scale Aeromodelers (NASA) Northeast Scale Qualifier was held July 20 and 21, 2019, at the Black Dirt Squadron field in Goshen, New York. Three contestants went on to compete at the NASA Classic in DeLand, Florida, this past October. At the DeLand event, two District II members earned awards.




Danny Carozza in DeLand FL.



Gerry Garing at the NASA Classic.

Danny Carozza received Best Aerobatic and second place in Fun Scale with his 40% Laser. Gerry Garing's 36% Piper Vagabond achieved the High Static score in Team Scale and second place in Team Scale with pilot Jack Buckley. Jack, from AMA District I, qualified at Goshen and was awarded first place in RC Designer Scale, High Static score, second place in Expert, and second place in Team Scale in DeLand.

Experts and novices are encouraged to attend the 2020 Northeast NASA Qualifier in July in Goshen. Contest director Danny Carozza puts on a first-class event with an emphasis on helping new competitors. Fun Scale Novice entrants can compete with scale ARFs. Top Gun flight judges Richie Roberts and Jim Martin willingly assist novices with instruction and mentoring before, during, and after the contest. Spectators are encouraged to attend the Goshen qualifier too. 



II

Eric Williams

Vice President
ropilot@nycap.rr.com
4242 Amanda Ln., Schenectady NY 12303
(518) 356-2057
www.amadistrict-ii.org
www.facebook.com/DistrictIIAMA



ASSOCIATE VICE PRESIDENTS

- Dennis Andreas**, Freeport NY; (516) 379-0135; danandreasdhqsd@juno.com
 - Fred Backhaus**, Medford NY; (631) 289-6964; motoderf@optonline.net
 - Frank Costello**, Somerset NJ; teams3fpv@gmail.com
 - Chuck Davis**, Sayville NY; (631) 589-7690; cjdavis60@verizon.net
 - Gary Fitch**, Delevan NY; gmfitc@hotmail.com
 - Gene Gavin**, Staten Island NY; (718) 967-0598; Gavin1957@aol.com
 - Jon Gerber**, Staten Island NY; (718) 984-5013; taxman846@aol.com
 - Frank Granelli**, Rockaway NJ; (973) 625-4995; granellif@aol.com
 - Bill Hauth**, Hamburg NY; (716) 649-8582; toolmkr2000@msn.com
 - Tony Jensen**, Binghamton NY; (607) 644-6873; tjravenpilot@gmail.com
 - Ron McGrath**, North Chili, NY; ronmcgrath@rochester.rr.com
 - Thomas Murray**, Basking Ridge NJ; (908) 766-5656
 - Anthony Rossi**, Somerset NJ; (917) 320-2665; p510851@gmail.com
 - Leonard Max Smart**, Morrisville NY; (518) 563-6878; hotrodsmymax@charter.net
 - Alexander Szemere**, Kendall Park NJ; (732) 821-5644; drszemere@aol.com
 - Michael Wong**, Mahwah NJ; kingmeow@verizon.net
 - Herb Ziegler**, Baldwinville NY; (315) 857-6266; herbz1957@yahoo.com
- RC EVENT SANCTION COORDINATORS**
- Tony and Trish Jensen**, Binghamton NY; (607) 644-6873; tjravenpilot@gmail.com
- CL/FF EVENT SANCTION COORDINATOR**
- AMA Headquarters**, Competitions Department; (800) 435-9262, Ext. 252; opierce@modelaircraft.org



Mark Radcliff

Vice President
 mradcliff@suddenlink.net
 199 Heron Dr., St. Marys WV 26170
 (304) 684-2133
www.amadistrict-iii.org
www.facebook.com/ama.district.iii



ASSOCIATE VICE PRESIDENTS

Randy Adams, Fairfield OH; (513) 484-3318 ; r1rcpilot@aol.com

Mike Barbee, Delaware OH; (740) 362-5545; mabarbee@aol.com

Jeff Black, New Oxford PA; (717) 965-5634; jrblack1964@gmail.com

Dave Brown, Hamilton OH; (513) 738-3249; dbrown@dbproducts.com

Dave Chisholm, Valencia PA; (724) 898-3386; dave@satcomdn.com

Nelson Gould, Macungie PA; (484) 515-7888; at6snj@ptd.net

Tony Husak, Harts Grove OH; (440) 283-7447; thusak1@windstream.net

Dan Luchaco, Sayre PA; (570) 888-1856; pafflyer23@gmail.com

Jim Martin, Franklin OH; (937) 260-0143; hooitelovesremy@yahoo.com

Al Myers, Canfield OH; (330) 506-6194; ajm486@hotmail.com

Joseph Vislay, Monclova OH; (419) 878-8843; jvistay@embarqmail.com

John Zoldak, Ravenna OH; (330) 554-9455; jzoldak@neo.rr.com

Lisa Zoldak, Ravenna OH; (330) 348-4543; lzoldak@neo.rr.com

CL/FF/RC EVENT SANCTION COORDINATORS

Nelson Gould (PA), 1340 Oak Dr., Macungie PA 18062; (484) 515-7888; at6snj@ptd.net

Sheila Nitsch (OH, WV), 5650 Boyd Rd., Grove City OH 43123; (614) 877-3453; tnitsch@columbus.rr.com

WEBMASTER

Roger Luther, Johnstown PA; (814) 266-2630; raluther@atlanticbb.net

District III

Ohio, Pennsylvania, West Virginia

Happy New Year District III! I trust that everyone is looking forward to the 2020 building and flying season.

I attended many events last year in the district which were all important. I will continue reporting on events that I attended in 2019.

On Friday July 12, 2019, I attended Flite Fest in Malvern, Ohio. This event is one of the largest model aviation events not only in the US, but in the world! It is held on a private full-scale airstrip (50H9) and is a beautiful facility.

Significant overnight rain made the parking and pit areas very muddy; however, despite the inconvenience, there was a huge pilot and spectator turnout. There was plenty of flying on the runway and the large circus tents were filled with modelers young and old, building models with their family and friends.



These two young modelers proudly display their DC-3 and C-47 models they built and flew at Flite Fest.



A few of the young modelers building aircraft at Flite Fest 2019.

There was good food and a nice turnout of vendors, and all were very busy. If you think that young people and their families are not building and flying models, I urge you to go to www.flitetest.com to learn more about the great things these people are doing to advance model aviation.

After attending Flite Fest, I was excited to get to the Top of Ohio Radio Control Squadron (TORCS) event on Saturday July 13, 2019, in Quincy, Ohio. This event is held at the club field, another full-scale private airstrip (10H1).



Upon arrival, I was greeted by several club members and invited to set up my AMA District III canopy. The TORCS club was very active with several pattern events in the 1980s, which I recall flying in. This is the second year the club has hosted a noncompetitive fun-fly and attendance is picking up according to CD Matt Finley.



A view of down the flightline of some of the aircraft flown at the TORCS event.

The runway is long and the grass is cut very short to accommodate our models. The laid-back event allowed plenty of flying by all types of models. If you are looking to attend a new event at an excellent flying field, I highly recommend this one.

To conclude, I want to emphasize to all members to please log in to www.modelaircraft.org at least once a month. The hobby is changing significantly daily with new federal regulations and changes with AMA programs that will affect all of us.

The best way to stay current with these changes is to subscribe to emails from AMA and to log in to the AMA website.

Until next month, fly safely, fly AMA.

District IV

Delaware, District of Columbia, Maryland, North Carolina, Virginia

Want more participants at your events? First, you have to attend other events, and next you have to advertise.

I want to make sure everyone knows that District IV has a Facebook page for what's happening now. You have a direct connection to our page by following it and posting or sending what you want posted to social@ama-d4.org. It's a great way to see and advertise your events.

The 2019 Wings Over Springs Charity Electric Fly-In event manager, Douglas LeRoy, contributed the following:

The Holly Springs Skyhawks Radio Control Group hosted its third annual charity event, Wings Over Springs Electric Fly In, on Saturday, August 31, 2019, to benefit Meg's Smile Foundation (www.megsmile.org).



Pilots arrived earlier than anticipated, but plenty of volunteers were on hand to direct them and get everything in order on the event field in Holly Springs, North Carolina. The pilots' briefing was held promptly at 9 a.m., and the flightline was opened for general flying.

In all, a final tally of 80 pilots attended and spent an enjoyable day relaxing, flying, and shooting the breeze with other pilots from across North Carolina.



Hosts Michael Mohn, Jay Neely, and AK Mike Barsalou of the Parkflyer Podcast traveled from across the country to attend the event. They flew

and spent a lot of time interviewing and recording podcast material for upcoming shows. It was really cool to see these guys live and spend some time with them. Many who attended the event were unaware of their podcast (or podcasts in general), so they certainly picked up a few new listeners.



Noon demos opened with an impressive full-scale flyover by the Bandit Flight Team. Smoke-on formation passes got the crowd pumped. Noon demonstrations also featured plenty of electric-powered action with several electric ducted fans, 3D helicopters, and warbird formation flying. Noon demos concluded with the selection of a grand prize raffle winner who won a beautiful Ohio Model Products Yak 55M. Congratulations to Jon Youngblood from the Johnson County Aeromodeling Club!

The event also featured MultiGP drone racing! The course for 2019 was a technical course with elements such as a dive gate, ladder, corkscrew, and several other tight sections, which allowed the pilots to really test their skills. Congratulations to the winners and to Hangar 18 Hobbies for providing the cool plaques! FattyEL took first place, followed by Baymax in second, and That_Kyle_Guy in third. They were top of the class of the 11-pilot field.

Flying continued at Wings Over Springs until 5 p.m. and all of the departing pilots were pleased with the day. The buzz and the hope is that everyone (and all their friends) will return next year!

Go fly and have fun safely!



IV

Jay Marsh

Vice President

jaymarsh@ama-d4.org
3227 Pine Needles Rd.,
High Point NC 27265
(336) 687-0973

www.amadistrict-iv.org
www.facebook.com/amadistrictIV



ASSOCIATE VICE PRESIDENTS

John Kirchstein, DE; (302)731-2831;
john@kirchstein.net

Mark Weiss, DE; (302)547-4917;
markw@ama-d4.org

Rick Cawley, NC; (919) 630-1649;
rachgc2@yahoo.com

Mark Smith, NC; (704) 798-2776;
mark@ama-d4.org

David Trogdon, NC; (910)654-1220;
dtrogdon4967@gmail.com

Richard "Rick" Moreland, MD; (301) 261-7366; rmoreland1@verizon.net

Nic Burhans, VA; (540) 219-9646;
nic@ama-d4.org

Rusty Kennedy, VA; (757) 812-2812;
rusty@ama-d4.org

Terry Terrenoire, VA; (412)760-4593;
terry@ama-d4.org

Bob Burnett, Washington, D.C. SFRA;
(703) 742-9682; bob@ama-d4.org

EVENT SANCTION COORDINATORS

CL AVP: Jack Rosemere; Box 1264,
Cambridge MD 21613; (410) 330-4663;
jrosemere@verizon.net

FF AVP: Bob Sowder, 84 Misty Hills
Ln., Troutville VA 24175; (540) 525-
7086; bsowder@rbnet.com

RC: Andy Kane, 305 Natick Ct., Silver
Spring MD 20905; (301) 785-3022;
andykane01@gmail.com

GOVERNMENT RELATIONS AVP

Ray Stinchcomb, (443) 618-8998;
govrelations@ama-d4.org

WEBMASTER

Jack Upchurch, webmaster@ama-d4.org

SOCIAL MEDIA ADMINISTRATOR

Douglas LeRoy, social@ama-d4.org



V

Bob Brogdon

Vice President

r.a.brogdon@comcast.net
5251 Hermitage Dr.,
Powder Springs GA 30127
(770) 421-8838
www.amadistrict-v.org



ASSOCIATE VICE PRESIDENTS

Mickey Avery, AL; 334-247-5103;
Avery.mickey@gmail.com

Rick Grim, AL; (256) 656-0859;
uavpilot@bellsouth.net

Chuck Foreman, FL; (352) 347-4745;
timeout1932@hotmail.com

Andrew Griffith, FL; (904) 993-4956;
barracadahoockey@aol.com

Keith Hall, FL; (813) 928-3861;
wingman@verizon.net

Jose Melendez, FL; (321) 412-3078;
rcjets12@hotmail.com

Andre Smith, FL; (561) 701-2010;
fpvpalmbeach@gmail.com

Bill Barbee, GA; (912) 660-2155;
awbarbee@hotmail.com

Bob Dixon, GA; (478) 960-5200;
rldixon3@cox.net

Nick Ray, GA; (865) 368-3820;
lasray@gmail.com

Darrell Sprayberry, GA; (706) 280-
5848; darrelluh1b@optilink.us

Dave Wenzel, GA; (912) 754-9619;
davevfrguy@hotmail.com

Paul Verger, MS; (228) 826-4892;
cpaulverger@yahoo.com

Edwin Medina, Puerto Rico; (787) 525-
7768; captmedina@gmail.com

Don Wise, SC; (803) 534-8164;
d7wise@cs.com

Scott Anderson, TN; rcofoamy@
hotmail.com

Dick Tonan, TN; (615) 995-6291;
dtonan@mac.com

Charles Anderson, TN; (423) 892-
3998; canderson9898@comcast.net

**SAFETY COORDINATOR: Red
Scholefield,** Johns Island SC; (843)
494-5225; redscho3@gmail.com

**RC AND FF EVENT SANCTION
COORDINATOR:** Dick Tonan

CL EVENT SANCTION

COORDINATOR: Dave Wenzel

WEBMASTER: Glenn Bond,
d5amaweb@gmail.com

District V

Alabama, Florida, Georgia, Mississippi, Puerto Rico, South Carolina, Tennessee, US Virgin Islands

Hello everyone, and a very Happy New Year to one and all! I hope 2020 will be a great year in everything you do in your business life, your personal life, your modeling life, and all areas in between.

I look forward to sunny skies and the wind straight down the runway, with many enjoyable hours of flying. May an abundance of those flights be with friends and family. I also hope to see many more of you at events in District V this year as we show all that District V rocks!

I am pleased to announce that we have seven new contest directors (CDs) and one new event manager. CDs include Thomas Boyd of St. Augustine, Florida; John Kennedy of Palatka, Florida; Randy Forbes of Ocala, Florida; Mark Armbrust of Westin, Florida; Warren Bio of Jacksonville, Florida; Patrick Morris of Sarasota, Florida; and John Bradley of Athens, Georgia. Tyce Newberry of York, South Carolina, is our new event manager. My thanks to all of you for supporting our enjoyment of the hobby.

Last month, I mentioned that I intended to feature some feel-good stories in my monthly articles. As a reminder, feel-good stories are ones that make me feel good about our hobby, our members, and our contributions to the community.

My thanks to Stephen Philbin of Largo, Florida, for the following story:

I am a member of the Largo Flying Club and a board member on the club's board of directors. For the past several years, Larry Tittle and 12 or so members have volunteered to spend a week teaching youth, ages 8 to 11, how to fly small helicopters and quadcopters. The classes are conducted at the Largo Community Center with the blessing of the Largo Parks Department.

The students start the week knowing little about flying the models, and it is remarkable how they progress in just five days. On the last day we put on an air show for parents and family. This year the "Summer Camp," as we call it, was held July 29, 2019, through August 2, 2019. It was a great time for all of the participants and families.

Thanks to Mike Diesu of the Bay City Flyers in Land O' Lakes, Florida, for providing the following story:

I would like to make you aware of a program called Fun Fly for Kids, developed by club members Fred and Barbara Mulholland. The following is an excerpt from our club newsletter:

"Fred and Barbara are educating young children about the world of aeronautics. They provide a free Fun Fly for Kids program at all of our sanctioned events and at local grade schools. The fun-fly involves assembling small gliders and competing within the child's age group. They also learn to control the surfaces of a model with a radio transmitter. Candy and other awards are presented—everyone wins!



"This past July, they visited the Primrose School in Land O' Lakes to present the program to the students in grades one through five. Because of the large number of students involved, the Primrose teachers pitched in to help. It was another successful Fun Fly for Kids by Fred and Barbara! The Bay City Flyers Club is proud of the Mulholland's efforts to introduce our youth to flight."

That's it for this month. Join me next month to see what I have planned for you.

Meanwhile, get out and fly, or if you can't make it to the flying field, get to the shop and build something; you will be happy you did.

District VI

Kentucky, Illinois, Indiana, Missouri

Happy New Year! It is the start of building season once again. I cannot believe we are into the new year already. It is time now to sit around the fire and enjoy the following stories from when it was still warm outside!

The first submission is from Rene G. Manta:

Shortly after I joined the Hardin County RC Modelers club in Elizabethtown, Kentucky, I met Mike Blair, the club's secretary. It was clear to me that he had a natural ability to introduce new members to the club. During the next four years, Mike and I became very good friends. Mike's helpful nature became even more evident when, while we were flying, another pilot lost visual contact with his airplane and Mike looked away from his airplane to look for the other pilot's aircraft. Thankfully everyone landed safely.

Unfortunately, Mike had been battling a serious medical condition for many years. Surrounded by his family, he passed away peacefully on July 31, 2019, at the age of 53. Our club lost not only an excellent secretary, but also a great friend.



September 29, 2019, was the Memorial Fly-in at our field. The event had excellent attendance. Twelve members of Mike's family and friends came to the event. His daughter and husband drove from Huntsville, Alabama. Thanks to the generous donations by many club members, we had a free raffle. As part of this event we collected donations to purchase a memorial brick on AMA's Walk of Fame.

This was submitted by John Earlywine:

The Fort Wayne Flying Circuits enjoyed perfect early October weather for the club's third annual Circuits at Night event organized by Shane Reinhart. Activities consisted of late afternoon flying followed by chili and hot dogs. As daylight faded, aircraft began showing up on the flightline with many creative custom LED lighting schemes and some friendly competition for the most spectacular designs.



There was a break for a professional fireworks display, then more flying and a campfire until after midnight. Shane's goal was to create something interesting for members' and spectators' families and kids. It has been a huge success and has grown every year. We had nearly 100 cars in the parking lot and consumed 4 gallons of chili, along with 100 hot dogs this year!

The last submission is from Tom DeVincentis:


On October 5, 2019, the Mid-Missouri Radio Control Association (MMRCA) hosted our annual Chili Dog Fun Fly. Despite a weather prediction of constant rain, there was an excellent turnout of more than 40 pilots and guests. The rain held off for most of the day and it was a great time.

Of course, a Chili Dog Fun Fly isn't complete without a lunch of chili and hot dogs. Members brought their chili recipes to combine with grilled hot dogs, snacks, and desserts.

Although this is an annual event for MMRCA, this Chili Dog Fun Fly was special because the club recognized Dan Adams for his decades of service to the club and to the hobby.



Dan was a founding member of the club. He helped train many new pilots who are now seasoned pilots themselves. It was also Dan's 90th birthday, so for dessert we enjoyed a birthday cake with him. What's better than a birthday celebration with some RC fun thrown in?

If you want to see your club mentioned in the magazine, send me a submission about an event from this past year! Email me at amadistrictvi@modelaircraft.org with the word "magazine" in the subject line and attach a few high-quality digital pictures! Also, please take the time to introduce someone else to model aviation! 



VI

Gary Himes

Vice President

AMADistrictVI@modelaircraft.org
5204 N. Smalley Ave., Kansas City MO 64119
(816) 550-1205

www.amadistrict-vi.org
www.facebook.com/AMADistrictVI



ASSOCIATE VICE PRESIDENTS

Dale Arvin, Jefferson IN; (812) 284-0162; darvin8094@aol.com

Gary Bussell, Muncie IN; (765) 288-3541; cgbussell@comcast.net

Craig Greening, Mahomet IL; 872-203-0377; servoframes@gmail.com

Mike Mueller, Hoffman Estates IL; (847) 507-4373; mike@f3auntlimited.com

Leo Rodriguez, South Bend IN; (724) 396-2700; lrodriguez44@verizon.net

Keith Sessions, Burlington KY; (859) 801-8182; keithksessions@hotmail.com

Bob Underwood, St. Charles MO; (636) 939-3394; bobrae53@sbcglobal.net

Donald Way, Hobart IN; (219) 614-6218; bolar36@hotmail.com

EVENT SANCTION COORDINATORS

RC/CL Steve Ort, 140 Whit Ln., Reidsville, NC 27320; (812) 498-8353; steve.ortcc@gmail.com

FF Charles Markos, 655 Carlisle Ave., Deerfield IL 60015

SAFETY COORDINATOR

Walter Voyt, Joliet IL; (815) 725-4677

FREQUENCY COORDINATOR

Mel Ziska, Naperville IL; (630) 357-7350

WEBMASTER

Donald Way, bolar36@hotmail.com



ADDITIONAL PHOTOS CAN BE SEEN ONLINE.



VII

Tim Jesky

Vice President
 timjesky@charter.net
 2886 E. Country Ln., Monroe MI 48162
 (734) 384-6085
www.amadistrict-vii.org



ASSOCIATE VICE PRESIDENTS

Bruce Baier, Oshkosh WI; (920) 233-1127; buzssr@gmail.com

Lee Frederickson, Ada MI; L1520@comcast.net

David George, Riverview MI; (734) 284-9017; indiancity5129@yahoo.com

Randall Gibson, Lansing MI; (317) 698-4346; rgibson@mrmrcha.org

Bud Gorman, Knife River MN; (218) 834-5797; bgorman@frontiernet.net

Bob Johnson, Fond du Lac WI; (920) 922-6705; bobj54935@yahoo.com

Mark Robotti, Lindstrom MN; (651) 257-6792; mgrobotti@frontier.com

Len Todd, Baldwin MI; (231) 745-9241; lentodd@att.net

Dell Shannon, Osceola IA (641) 342-4278; dell.t.shannon@gmail.com

Marc "Doc" Shelstrom, Lancaster WI; (608) 732-4077; shelstrm@uwplatt.edu

Peter G. Van Heusden, Bloomfield Hills MI; (248) 515-1071; petervh@malibutech.com

Kent Woods, Ames IA; (515) 232-8180; woods229@msn.com

EVENT SANCTION COORDINATORS

Michael J. Haller (RC), Fond du Lac WI; (920) 979-9452; mike.haller60@gmail.com

Marc Warwashana (CL), Whitmore Lake WI; (734) 449-7355; whellieman@gmail.com

AMA Headquarters (FF), (800) 435-9262; competition@modelaircraft.org

FREQUENCY COORDINATORS

Al Schwartz, Roseville MN; (651) 633-2286; alberts@comcast.net

Pete Waters, Northville MI; (248) 924-0223; petewaters@charter.net

District VII

Iowa, Michigan, Minnesota, Wisconsin

Thanks to Associate Vice President Randy Gibson for providing this month's article.

One of the greatest things about this hobby is the diversity of aeromodelling opportunities. This past summer, I attended and became involved in a new aspect of the hobby: RC turbines.

I was given the opportunity to attend a couple of events. The first was a gathering in Baldwin, Michigan, held by the Lake County Modelers & Flyers Association. The turbine pilots who attended are the epitome of modelers. They were welcoming and ready to provide a helping hand and explain the nuances of their aircraft.



The Baldwin flying site as seen from the air.



The Lake County Modelers & Flyers Association holds several such events each season.

The club holds several formal and informal gatherings throughout the summer. Not only do the members fly their own aircraft, they also provide the opportunity for those entering this aspect of the hobby to participate by training and assisting with obtaining the required AMA Turbine Waiver.

The club members take newcomers all the

way through the process from inspecting one's aircraft and buddy-box flying, to testing and signing off on the waiver. This group is ready to help, and the airplanes are impressive!

A few weeks later, I went to southeast Michigan to a jet fun-fly held in Monroe, Michigan, at Custer Airport. This event, hosted by the South East Michigan RC Club, featured many of the attendees displaying their beautiful airplanes. I spoke with the participants and it is quite interesting to see how this aspect of the hobby is expanding.



A scene at the South East Michigan RC Club's jet fun-fly. Turbine jets have become more popular in recent years as cost has decreased and reliability has increased.

It was explained to me that turbine jets were once difficult to operate and priced out of the range of many modelers. Today though, the cost has decreased, making it more accessible to modelers, and technology has brought a high level of reliability to these models.

AMA and EAA have partnered to provide hands-on opportunities for young people to build and fly RC aircraft.

By the time you read this article, the cold weather will be here. We might even have snow that will curtail our outdoor flying. This would be a great time for clubs to reach out to a local EAA chapter and see if your club can partner with the organization on the EAA's Build and Fly Program.

EAA chapters will be looking to partner with AMA clubs on this program, providing great opportunities for both groups. It is an excellent way to introduce young people to aviation.

Have a wonderful holiday season and see you at the field!

Take a kid flying!

District VIII

Arkansas, Louisiana, New Mexico, Oklahoma, Texas

District VIII Associate Vice President (AVP) Jim Marshall, from the Rio Grande Valley, is stepping down. He has represented us well. Tell him thanks!



Albuquerque, New Mexico, teens, will represent the US in at the Indoor Duration World Championships in Romania in March. The team is made up of coach Chuck Andraka, with team alternate Monet Ramacciotti (15), and US Junior team members Josiah Rose (17), and Anjulie Sorbello (15). The teens learned their flying skills through the Science Olympiad high school competition. In 2019, they placed first in the Science Olympiad National Tournament, held at Cornell University.



Keith Moody and his Decathlon.

The River City RC club in San Antonio, Texas, is preparing for its Spring Float Fly April 17-19, 2020, on a 30-acre lake, along with two runways



AVP Gary Strickland shared a photo of the East Texas Aero Modelers at the club's Longview Fun-Fly. Arlyn Stewart is the club's president; Bob Smith is the vice president and editor; and Mike Mansfield is the safety officer.


of rolled grass. The club's metal-roofed pavilion has a barbecue grill, tables, and a 7,000-watt generator. Come check it out.



One of the Baton Rouge RC Club's founding members, who helped acquire the flying field, is George Sexton (L). Now 93, he is shown with club president, Lester May.



Shreveport Area Radio Kontrol Society President David Scoggins and his wife Ruth are helping out.

A fun-fly was put on by the Texas Unlimited Fun Flyers in October. Shown below with the club banner are Stewart Garrett, Harold Smith, Kohn Alder, and John Skinner. 



VIII

Lawrence Harville

Vice President

lawharv@yahoo.com
932 Calloway St., Hurst TX 76053
(817) 781-9615
www.amadistrict8.org



ASSOCIATE VICE PRESIDENTS

Benny Behrens, Pearland TX; (832) 499-2043; cbbahrens@comcast.net

Amanda Coke, Dalhart TX; (806) 282-4227; amanda_coke@yahoo.com

Tom Holmsley, El Paso TX; (915) 588-8735; dholmsley@elp.rr.com

Johnny Hunt, Godley TX; (817) 905-8124; huntsranch@aol.com

Stan Kopreski, Sherwood AR, (501) 539-3656; skopreski@msn.com

Stew Moore, Jefferson TX; (903) 665-7501; mooremas1@netscape.com

Brian Regan, Albuquerque NM; (505) 508-6693; brain23@centurylink.net

Clay Ricks, Duncan OK; (870) 853-7499; clayricks172@hotmail.com

Randy Ritch, Magnolia TX; (281) 701-3121; randyritch.dist8@yahoo.com

Gary Strickland, Hooks TX; (903) 278-5703; garystric@gmail.com

Jerry Walters, Maurice LA; (337) 298-7755; jeromelw@bellsouth.net

AVP-SAFETY

Tony Breyen; Wichita Falls TX; (940) 733-2803; awb1056@sbcglobal.net

RC EVENT SANCTION COORDINATOR

Amanda Coke, Dalhart TX; (806) 282-4227; amanda_coke@yahoo.com

FF/CL EVENT SANCTION COORDINATOR

Lawrence Harville, Hurst TX; (817) 781-9615; lawharv@yahoo.com



IX

Jim Tiller

Vice President
jtiller@hotmail.com
Box 828, Custer SD 577307
(605) 390-3878



ASSOCIATE VICE PRESIDENTS

Brian Blois, Winter Park CO; (720) 333-2720; @brian.blois@outlook.com

Tyler Brown, Lincoln NE; (402) 617-0444; tylerx9@yahoo.com

Steve Graham, Denver CO; (303) 883-0205; steve.graham1@comcast.net

Brandon Koch, Mandan ND; (701) 471-9575; kochbrandon471@gmail.com

Rick McCaskill, Frederick CO; (303) 682-0440; rickm1947@aol.com

Josh Nelson, Casper WY; (307) 277-3110; huntwyo@gmail.com

Zachary Roller, Rapid City SD; (605) 519-0815; zroller28@gmail.com

Arend Schuurman, Elkton SD; (605) 695-2122; arend.schuurman@gmail.com

EVENT SANCTION COORDINATOR

Troy Hamm, Gardner KS; (913) 744-5745; funflyr@juno.com

District IX

Colorado, Kansas, Nebraska, North Dakota, South Dakota, Wyoming

Welcome 2020. May it bring lots of good weather and clear skies for flying.

A frequent topic of discussion when I sit down at events is how to find new members, and after we get them, how do we keep them? Here's a story from Paul Mantey and LoveAir RC in northern Colorado, that you might want to bring up at your next club meeting.

Like many clubs, LoveAir's membership had declined from 180 to only 90 a few years back. In 2019, we saw 27 new members push our roster to more than 110 members, many of whom are new to the hobby.

We attribute this significant, double-digit membership growth to three factors: our "Old Farts community," an investment-minded board, and a renewed focus on flight instruction.

One that might be the most interesting is the Old Farts. In 2017, one of our members expressed frustration at the closed attitude of the club. He asked if he could create a group of regulars who would get together weekly to fly, burn burgers, share ideas, and tell tall tales.

What began with roughly 30 "Old Farts" hosting designated weekly flying sessions for a handful of fliers, grew to nearly 80 with 20 or more pilots coming together each week for lots of fun and low-key activities. The Old Farts, now formally known as the Prop Twisters, changed the culture and feel of our club and is the primary driver of our recent growth. This group drives many of the club's get-togethers and activities.

The second factor is our board that made bold decisions. The members stabilized dues, while



The Beresford Area Radio Flyers, in Beresford SD, received a plaque recognizing its 20th year as an AMA Gold Leader Club. Pictured are Brad Jensen, the club's vice president; Don Van Voorst, secretary; and John Messano, president. Congratulations! There are more Leader Clubs in District IX. If your club is not one, download Document 208 from the AMA website, confirm the requirements, and send it in. Leader Clubs have some advantages when applying for AMA programs.

simultaneously creating aggressive capital improvements, including a solar charging station, setup tables, and a phone/web-accessible local weather station. The board now actively encourages members to be open to all kinds of flying from warbirds, jet turbines, and 3D aerobatic airplanes to helicopters, drones, foamies, and gliders.

The third factor is a renewed focus on flight instruction. This has proven to be a tough, but crucial, task for club growth. It requires balancing and coordinating instructors' and new members' schedules. If we don't help them succeed, they will not be sustaining members.

Our flight instruction program is still in its infancy, but it received a significant boost in late

July 2019 when we hosted 15 Civil Air Patrol Cadets of the local Civil Air Patrol. Several of these young cadets have joined the club as Junior members.

We intend to continue with these initiatives while adding a Balsa Basher community—a group of members building the Alien Aircraft Pinwheel 60—and expanding our outreach to include the local communities. There's never been a better time to be a member of the AMA or LoveAir RC.



Biplane day with the LoveAir RC Old Farts—beautiful airplanes and a terrific group of pilots.

District X

Arizona, California, Guam, Hawaii, Nevada, Utah

Happy New Year! My father had a saying: “If you fly on New Year’s Day, you’ll fly all year.”

I’m going to get out and fly January 1 come rain or shine, and I look forward to another great year of flying and friendship that this great sport provides us. I hope you do too.

The Flying Aces Club (FAC; www.flyingacesclub.com) had its 2019 Western Championship (WESTFAC; www.westernfac.com) in Buckeye, Arizona, in October. WESTFAC is the largest Free Flight (FF) event west of the Mississippi. It is one of the four major events that the FAC sanctions. The contest is flown in Buckeye in odd years. The models in this contest are stick-and-tissue Scale Duration models, with most built from plans. All are rubber powered.



John Hutchison with his beautiful T-28.



Dave Haught triumphed in Peanut Scale.

The Buckeye field is 600 acres of alfalfa, so hard landings have a great cushion. The event is not possible without the generous support of the individuals sponsoring it. Each sponsor

receives recognition in the way of a poster. The theme for 2019 was carrier aviation and the theme model was a T-28. John Hutchison’s T-28 was the Beauty Contest winner and placed third in the theme model Duration event.

Dave Haught won the Peanut Scale class for models with a maximum wingspan of 13 inches. He was awarded the Walt Mooney Perpetual trophy. Dave flew a Santos-Dumont 14bis.




WESTFAC Commander Air Group Tom Arnold (L) with grand champion Wally Farrell (R).



Roger Willis with his “fan club” of aircraft retrievers.

Points are awarded for first, second, and third place in each event. Wally Farrell accumulated the highest total score and was awarded grand champion. Wally and his wife traveled from Virginia to compete in the event.

Because FF requires you to chase your model and some contestants are not as sure footed as they used to be, Rod Persons invited his granddaughter, who attends Grand Canyon University in Phoenix, and her fellow students, to help retrieve models. AMA District X Associate Vice President Roger Willis enjoyed their participation. My thanks to Roger for his contribution to this month’s column.

Until next month, I wish you all happy landings. 



X

Lawrence Tougas

Vice President
ama.district10@gmail.com
Box 276, Fairfield CA 94533
(707) 480-2053
www.ama10.org



ASSOCIATE VICE PRESIDENTS

Tim Attaway, Chula Vista CA; (619) 427-6392; trattaway@cox.net

Forrest Barton, Woodland CA; (530) 383-9019; cbarton328@aol.com

Jim Bonnardel, San Diego CA; (858) 292-5518; nitroblast@hotmail.com

Richard Bonnardel, Kailua HI, (808) 261-7046; rebbfb@hawaii.rr.com

Kurtis Chandler, Phoenix AZ; (602) 647-8342; kurtisc-ama@cox.net

Alan Friedman, Eloy AZ; (520) 876-0232; pooralan@aol.com

Dan Johnson, Preston ID; (435) 619-3112; dksajohnson@gmail.com

Kevin Houser, Oro Valley AZ; (520) 490-7657; khouser@rocketfarmers.com

Tim Johnson, Rancho Santa Margarita, CA; (562) 965-4288; timothy@johnson.us.com

Mike Lee, Redlands CA; (909) 792-8424; mlee8249@msn.com

Scott Malta, Merced CA; (209) 723-4202; scottmalta@comcast.net

Barry Mattison, Las Vegas NV; (702) 530-0900; lrvav8tr@gmail.com

Dave Meriwether, Laguna Beach CA; (949) 350-4075; meriwed@comline.com

Jim Mohan, Phoenix AZ; (623) 434-1351; jmohan351@cox.net

Gil Terzo, Las Vegas NV; (702) 523-9897; gterzo@aol.com

Peter Vogel, Santa Clara CA; (408) 569-7067; vogel.peter@gmail.com

Roger Willis, Murrieta CA; (951) 249-9688; willisasoc@aol.com

EVENT SANCTION COORDINATORS

Tim Attaway (CA south of Bakersfield), Chula Vista CA; (619) 427-6392; trattaway@cox.net

Forrest Barton (CA north of Bakersfield), Woodland CA; (530) 383-9019; cbarton328@aol.com

Kurtis Chandler (AZ, UT) Peoria AZ; (602) 647-3842; azpm@cox.net



XI

Phil Tallman

Vice President
 AMADistrictXI@modelaircraft.org
 28910 W. Hallett Rd., Medical Lake WA
 99022; (509) 220-6513



ASSOCIATE VICE PRESIDENTS

David Agar, Battle Ground WA; (360) 721-1963; kamanhusky@aol.com

Rick Crow, Garrison MT; (406) 559-6662; rwcrowjr@gmail.com

Michael Ingram, Wenatchee WA; (509) 699-3034; firercer@cs.com

Joe Miller, Dallas OR; (503) 798-7241; dragonriders54@yahoo.com

Chris Rankin, Bend OR; (541) 330-5692; oregonraven@earthlink.net

Jay Schoening, Lynden WA; (360) 220-0407; jjschoening@msn.com

Robert Stephens, Anchorage AK; (907) 440-0478; rfstephens@hotmail.com

Jay Strickland, Central Point OR; (541) 830-7976; strickdog@g.com

Bryan Wood, Meridian ID; (208) 412-3254; bw5493@yahoo.com

FF/CL EVENT SANCTION COORDINATOR

Mike Hazel, P.O. Box 505, Lyons OR 97358; zzclspeed@aol.com

RC EVENT SANCTION COORDINATOR

Michael Ingram, Wenatchee WA 98802; (509) 699-3034; firercer@cs.com

District XI

Alaska, Idaho, Montana, Oregon, Washington

Hi all. I promised to start building so I've pulled out a Balsa USA Der Jager kit and I'll be working on that. There is too much good stuff to share any pictures of my project ... maybe next month.

I just returned from AMA Expo West. I had a great time and met many people. AMA has decided not to continue holding this show and will instead promote more activities such as the AMA Northwest Jamboree.

I have sanctioned our jamboree for June 5, 6, and 7, 2020, in Wenatchee, Washington! Watch this column for more details or visit www.amanw-jamboree.com. The event was well attended last year and all who were there had a great time. Please plan to attend.

Associate Vice President Dave Agar provided this submission:

Sunday, June 3, saw the Clark County Radio Control Society hold its 11th annual Support the Troops Fly-In. The weather was nearly perfect and there were many flights logged with warbirds from all conflicts in the air.

This event raises money to purchase hard candy and mail it around the world to our men and women in the military. The 2019 event raised \$450 to buy and send candy this year. The event concluded with a huge raffle and pilot prizes for those who flew. Thanks to all who donated prizes for the event and for everyone who attended.

Here are some pictures.



June 1, 2019. It was very successful.

This event was patterned after one developed by the Flying Electronics club of Menomonee Falls, Wisconsin. Seventeen middle school students came to the field. Each student was allowed to bring a guest and most guests were parents.

Two of the objectives were to introduce students to model aviation so that they might choose to become active modelers, and to demonstrate how STEM principles apply to model aviation so that students could choose a technical curriculum through middle school, high school, and higher education that can lead to rewarding careers.

The morning and afternoon programs consisted of ground school, using a RealFlight flight simulator, and flying a trainer model airplane with an instructor using a buddy box. The club's ground school explained how airplanes fly using STEM principles and mathematical calculations.

In the afternoon ground school covered the hardware required to fly an RC model airplane. Free lunch was served and several MAR/C pilots entertained with 3D flights. The event concluded with a drawing for a free Apprentice electric model airplane that one lucky student took home. Planning has already begun for next year's event.

It is great to hear about clubs working with our youth. If you have examples, please send them to me and I'll try to include them.



You should be reading this shortly before the 2020 Northwest Model Hobby Expo, set for January 25-26 in Monroe, Washington. I plan to attend, so if you see me, say hi. I'm a swapper at heart, so look for me in the swap meet area.

That's it for this month. Please keep building, flying, and helping others learn. That's all for this month.

SIGNING UP ONLINE IS EASY, VISIT WWW.MODELAIRCRAFT.ORG/JOINAMA TODAY!

1. Contact Information

First Name & Initial		Last Name	
Mailing Address			Apt. #
City	State	Zip Code	Phone
Date of Birth:	Email:	<input type="checkbox"/> New Member <input type="checkbox"/> Renewal	AMA # (Renewals only - leave blank if unknown)

2. Select Membership Type

		One-Year	Two-Year	
Adult	• Adults 19 or over as of July 1, 2019. • Includes subscription to <i>Model Aviation</i> magazine.	<input type="checkbox"/> Adult \$75.00	<input type="checkbox"/> Adult \$140.00	Membership option amt:
Senior	• Adults 65 or over as of July 1, 2019. • Includes subscription to <i>Model Aviation</i> magazine.	<input type="checkbox"/> Senior \$65.00	<input type="checkbox"/> Senior \$120.00	
Park Pilot	• Adults 19 or over as of July 1, 2019. • Includes subscription to <i>Park Pilot</i> magazine. <small>Park Pilot membership is for aircraft 2 pounds or less that fly below 60 mph and does not include voting rights or competitive privileges. Park Pilot membership insurance benefits are limited to \$500,000 of liability coverage.</small>	<input type="checkbox"/> Park Pilot \$38.00	<input type="checkbox"/> Park Pilot \$70.00	Membership option amt:
Youth	• For anyone under 19 as of July 1, 2019.	<input type="checkbox"/> Choose Youth (free)	<input type="checkbox"/> Include 1 year <i>MA</i> magazine (Youth price \$15.00)	Youth amt:

Support the AMA Foundation

General Fund	AMA Site Development	Club Support	Scholarship Fund	Museum Patron Program	Donation Total:
<input type="checkbox"/> \$25 <input type="checkbox"/> \$50 <input type="checkbox"/> \$100 <input type="checkbox"/> \$500	<input type="checkbox"/> \$25 <input type="checkbox"/> \$50 <input type="checkbox"/> \$100 <input type="checkbox"/> \$500	<input type="checkbox"/> \$25 <input type="checkbox"/> \$50 <input type="checkbox"/> \$100 <input type="checkbox"/> \$500	<input type="checkbox"/> \$25 <input type="checkbox"/> \$50 <input type="checkbox"/> \$100 <input type="checkbox"/> \$500	<input type="checkbox"/> \$25/Patron <input type="checkbox"/> \$100/Supporting <input type="checkbox"/> \$1,000 / Life	
<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____		

3. Payment

Check Visa Mastercard Discover Card No. _____ - _____ - _____ - _____ Exp: _____

All membership benefits begin on the day a properly completed form and correct dues payment is received at AMA Headquarters. If a magazine is included with the membership, it begins with the first issue available for the year after a correct current form and payment are received. Membership rates and insurance limits are those in effect at the time of printing. Actual cost of dues and amount of insurance coverage are subject to change. Any such changes will be noted at the time of membership processing so they may be accepted or not. If I am involved in any claim or suit I will not sue the AMA, Inc. I understand that this does not affect my liability insurance coverage. "I agree to comply with the AMA Safety Programming."

Mail completed form to:
AMA 5161 E. Memorial Dr. Muncie IN 47302

Signature: _____

Total:
\$ _____
Application Source: P

SIGN 3 FLY FREE	Recruited by: _____	AMA# _____
------------------------	---------------------	------------

ACADEMY OF MODEL AERONAUTICS NATIONAL MODEL AIRCRAFT SAFETY CODE

Effective January 1, 2018

A model aircraft is a non-human-carrying device capable of sustained flight within visual line of sight of the pilot or spotter(s). It may not exceed limitations of this code and is intended exclusively for sport, recreation, education and/or competition. All model flights must be conducted in accordance with this safety code and related AMA guidelines, any additional rules specific to the flying site, as well as all applicable laws and regulations.

As an AMA member I agree:

- I will not fly a model aircraft in a careless or reckless manner.
- I will not interfere with and will yield the right of way to all human-carrying aircraft using AMA's See and Avoid Guidance and a spotter when appropriate.
- I will not operate any model aircraft while I am under the influence of alcohol or any drug that could adversely affect my ability to safely control the model.
- I will avoid flying directly over unprotected people, moving vehicles, and occupied structures.
- I will fly Free Flight (FF) and Control Line (CL) models in compliance with AMA's safety programming.
- I will maintain visual contact of an RC model aircraft without enhancement other than corrective lenses prescribed to me. When using an advanced flight system, such as an autopilot, or flying First-Person View (FPV), I will comply with AMA's Advanced Flight System programming.
- I will only fly models weighing more than 55 pounds, including fuel, if certified through AMA's Large Model Airplane Program.
- I will only fly a turbine-powered model aircraft in compliance with AMA's Gas Turbine Program.
- I will not fly a powered model outdoors closer than 25 feet to any individual, except for myself or my helper(s) located at the flightline, unless I am taking off and landing, or as otherwise provided in AMA's Competition Regulation.
- I will use an established safety line to separate all model aircraft operations from spectators and bystanders.

For a complete copy of AMA's safety programming handbook, please visit: www.modelaircraft.org/files/100.pdf.



⇒ Education Through Aviation

THE PATH FORWARD

By Kyle Jaracz, Education Director | kylej@modelaircraft.org

This magazine should find its way to your mailbox Christmas week. As such, allow me to wish happy holidays to you and yours! May you find opportunities to be good and do good for those around you both during this season and throughout the coming year.

As I write this in early November, AMA Expo is still fresh in my mind. It will be sad to say goodbye to this event. It was a pleasure to meet AMA members there, many of whom I've only conversed with digitally in the past.

While at AMA Expo, I was able to help individuals and families build Delta Darts, FPG-9's, AMA Alphas, and Guillow's gliders. I watched attendees crowd the flightline to observe demonstration flights, enjoyed the RC car tracks and boat pond, and watched FPV and Control Line flight operations both indoors and outdoors.

Vendors showcased new, exciting products and many deals were found in the booths and the swap shop. Everyone I spoke with had a great time at this year's event! I enjoyed catching up and discussing some of the ways that AMA members engage with their local communities. Having the opportunity to hold these conversations face-to-face is what makes meeting and conversing at events so rewarding.

"None of the how-tos and lesson plans in the world can be effective without those who gladly and genuinely share their passion for aviation with whomever they meet."


As we look at the future without AMA Expo, part of the AMA Headquarters staff's mission is to be more accessible to each district. As the districts organize flying events, our goal is to be more present and engaged for our general members, AMA Leader Members, and associate vice presidents. This will ensure that we are meeting

the needs of students, local clubs, and individual members, as well as developing relationships across the country.

I plan to engage in discussions with members with multiple goals in mind. These include continuing to develop and modify strategies that effectively communicate AMA programs, informing members of existing educational methods that have worked in other areas, and answering some of the frequently asked questions from members.

My goal at these events is to disseminate information about the programs AMA offers that support our members, clubs, schools, and the overall hobby/sport of model aviation. Ultimately, my intent is to develop this training into print and video content that is easily viewed at a club meeting or in your own home.

Of course, these lesson plans and strategies are being developed to assist those who already have a passion for education through aeromodeling! The AMA's greatest asset in developing interest in model (and full-scale) aviation is our members who cheerfully volunteer to help educate others at the flying field and/or in the classroom.

None of the how-tos and lesson plans in the world can be effective without those who gladly and genuinely share their passion for aviation with whomever they meet. If this describes you, please reach out. The AMA Education team is here to help support your enthusiasm for model aviation! We're only a telephone call or email away. 

FULL-SIZE PLANS SERVICE/SUBMISSION GUIDELINES

- No. 1118: *Infield Engineering TBD-1 Devastator: Paul Kohlmann's 60-inch wingspan warbird is powered by a 650 Kv brushless motor and 4S 3,700 mAh LiPo battery. \$27.00*
- No. 1117: *Constellation: Designed by Keith Sparks, this electric, 68-inch wingspan Connie is built from sheet foam and balsa. \$19.00*
- No. 1116: *SkySpringer: Clark Salisbury's 40-1/2-inch wingspan electric beginner airplane uses a 1,080 Kv brushless motor and three-cell 1,300 mAh LiPo. \$14.00*
- No. 1115: *Turn-E-Cat: Mike Hausner's 39-inch wingspan electric Pylon racer is constructed using MPF foam. \$8.00*
- No. 1114: *Fidget: Al Clark's aircraft is specifically designed for the Galloping Ghost radio control system. \$10.00*
- No. 1113: *Curtiss SB2C Helldiver: Pat Trittle's 48-inch wingspan warbird is guided by four channels and powered by an outrunner motor and 2S LiPo battery. \$18.00*

Full-size plans list available. A complete listing of all plans previously published in this magazine through no. 1118 may be obtained for \$2.00 from the AMA Plans Service, 5151 E. Memorial Dr., Muncie IN 47302; ph: (800) 435-9262, ext. 507; email: planservice@modelaircraft.org. Plans listings, photos, and printable order forms are also available online at www.modelaircraft.org/plans.aspx.

Fill in the blanks below with the number(s) of the plans you want to order. **Add a second copy of each plan for half of the original plans cost (limit 1). Please do not include requests or payment for other service with your plans order. Allow one to three weeks for delivery—longer for overseas. NO CODs, please. Prices and Shipping/Handling charges may be subject to change.

Plan # _____ Plan # _____ Plan # _____ Plan # _____

By Mail: Check or money orders (in U.S. funds drawn on a U.S. bank) are payable to: AMA
5151 E. Memorial Dr.
Muncie IN 47302

By Email: planservice@modelaircraft.org
By Phone: (800) 435-9262
By Fax: (765) 281-7904

Plan(s) total	\$ _____
**AMA Members: subtract 10% from total above subtotal.	(-\$ _____)
U.S./Foreign Shipping	\$ _____
Total Order	\$ _____

Check Money Order MasterCard Visa AMA #: _____

CARD NO. _____ EXP. DATE _____ / _____ / _____

CARDHOLDER'S SIGNATURE (if faxing or mailing) _____

NAME _____ PH# _____

STREET _____

CITY _____ STATE _____ ZIP _____

Domestic Shipping and Handling Charges*

(All domestic orders are shipped in tubes)

Order	Shipping
\$2.00 to \$9.99	add \$5.00
\$10.00 to \$29.99	add \$6.00
\$30.00 to \$39.99	add \$9.00
\$40.00 to \$59.99	add \$12.00
\$60.00 to \$89.99.....	add \$15.00
\$90.00 to \$120.00	add \$18.00
\$120.00 to No Limit	add \$21.00

Foreign Orders

Contact the Plans Service for shipping charges.

Phone: (800) 435-9262

Fax: (765) 281-7904

Email: planservice@modelaircraft.org

NO REFUNDS OR EXCHANGES ON PLANS.

Model Aviation (ISSN 0744-5059, USPS 087-930 Publications Agreement No. 40688541) is owned exclusively by The Academy of Model Aeronautics, Inc., a nonprofit organization, and published monthly at 5161 East Memorial Drive, Muncie IN 47302. Copyright Academy of Model Aeronautics, 2006. Model Aviation and the AMA and Wings & Torch logo are registered trademarks of the Academy of Model Aeronautics. All rights reserved. When membership in the Academy of Model Aeronautics includes subscription to Model Aviation, \$18.00 of the dues are for the subscription. Membership is open to all who are interested in model aviation.

Non-AMA-Member Subscription Rates: At U.S. addresses, \$36.00 for 12 months; elsewhere (including Canada), \$60.00 a year; payable in advance. Schools (U.S.), \$16.00 per year. Libraries (U.S.), \$16.00 per year. Youth (U.S.) under age 19 as of July 1, \$15.00 per year. Send subscription orders/ payments and changes of address to the attention of AMA Membership Department. Six weeks are required for change of address; give new and old addresses as printed on latest label. Back issues, \$7.00 (including postage).

Editorial Offices: Model Aviation, 5161 East Memorial Drive, Muncie IN 47302.

Advertising Offices: Airborne Media, 7414 Burton Dr., Liberty Township OH 45044. (For general AMA business, memberships, AMA-member and non-member subscriptions, Sanctioned Events Calendar, etc., contact AMA Headquarters.)

Model Aviation and/or the Academy of Model Aeronautics should not be considered to endorse any advertised products or messages pertaining thereto. Content of all articles, model designs, special features, and columns of this magazine is the opinion of the author and does not necessarily represent the official position of the Academy of Model Aeronautics. We cannot accept responsibility for unsolicited articles or artwork. Any material submitted must include return postage. Periodical rate postage paid at Muncie IN and at additional mailing offices.

Postmaster: Send address changes to Academy of Model Aeronautics, 5161 East Memorial Drive, Muncie IN 47302, Attn: Membership Department

Submission Information and Guidelines

About Us

If you or your organization would like to be a part of the "About Us" program, contact MA Executive Editor Jay Smith at (765) 287-1256, extension 225, or by email at jays@modelaircraft.org.

Aero Mail

If you have a letter to the editor, please submit it to MA Executive Editor Jay Smith at 5161 E. Memorial Dr., Muncie IN 47302, or email jays@modelaircraft.org. We also encourage you to submit letters to the editor online at www.ModelAviation.com/editor.

Product Spotlight: Worth a Closer Look

We have found some of these items on our own, but many have been brought to our attention by outside sources. If you have a product or service that you feel might be "worth a closer look," contact MA Executive Editor Jay Smith by email at jays@modelaircraft.org.

Product Spotlight: Modeler's Mail

Manufacturers and distributors should include their mailing address, telephone number or email, a website address, and the purchase/retail price of the product for the consumer.

Product releases and photos should be sent to MA Executive Editor Jay Smith at jays@modelaircraft.org, or by postal mail at 5161 E. Memorial Dr., Muncie IN 47302, Attn: Modeler's Mail.

Focal Point

Submissions may be made by email (with photo as an attachment, not embedded within the body of the email) or by postal mail. All submissions should be sent to Associate Editor Jennifer Alderman at 5161 E. Memorial Dr., Muncie IN 47302, Attn: Focal Point, or emailed to jennifer@modelaircraft.org.

If you have questions about how to prepare your submission for publication, please contact Jenni Alderman at the above email address or Executive Editor Jay Smith at jays@modelaircraft.org.

Viewfinder

Submissions may be made by email (with photo as an attachment, not embedded within the body of the email) or by postal mail on a disk or as a hard copy. All submissions should be sent to Associate Editor Jennifer Alderman at 5161 E. Memorial Dr., Muncie IN 47302, Attn: Viewfinder, or emailed to jennifer@modelaircraft.org.

For more information and author guidelines, go to www.ModelAviation.com/authorguidelines.

SANCTIONED EVENT CALENDAR

FLYING

January

ARIZONA

01/11/2020 - 01/12/2020 - Apache Junction, AZ (AA) SUPERSTITION CHALLENGE. Site: Superstition Field. Mr Alexander R Dreiling CD/EM PH: (775)434-3538. Email: alexdreiling@gmail.com. Visit: www.eastvalleyaviators.org. Sanction #9153. Come join us for the seasons first IMAC contest of the year! Sponsor: EAST VALLEY AVIATORS INC.

01/18/2020 - 01/19/2020 - Casa Grande, AZ (A) SOUTHWEST REGIONALS. Site: 18600 Overfield Rd PMAC Webster West. Mr Robert C Angus CD/EM PH: (520)299-9034. Email: bangus1928@comcast.net. Sanction #9150. Sponsor: PHOENIX MODEL AIRPLANE CLUB.

01/18/2020 - 01/20/2020 - Eloy, AZ (AA) 2020 FAI FF SOUTHWEST REGIONALS CHAMPIONSHIP. Site: Overfield Rd. Mr K Peter Brocks CD/EM PH: (480)614-6183. Email: brocksarizona@cox.net. Sanction #9394. Fly with us in warm Arizona! Visit website swregionals.org for further details. Sponsor: SOUTHWEST REGIONALS MODELERS ASSOCIATION INC.

01/24/2020 - 01/26/2020 - Cave Creek, AZ (C) WINTER WARBIRDS. Site: 26600 N Cave Creek Rd. Mr Anthony L Quist CD/EM PH: (623)261-1297. Email: quist23@cox.net. Visit: sunvalleyfliers.com. Sanction #9396. Warbirds of all eras in military schemes will be flown. WW1 to modern jets, static & performance awards for all eras. Sponsor: SUN VALLEY FLIERS.

01/25/2020 - 01/26/2020 - Tucson, AZ (AAA) SOUTHWEST REGIONALS. Site: 4600 N Silverbell Rd Christopher Columbus Park. Mr John C Callentine CD/EM PH: (520)743-7835. Email: johncallentine@gmail.com. Sanction #9352. Sponsor: CHOLLA CHOPPERS MAC.

CALIFORNIA

01/18/2020 - 01/19/2020 - Thermal, CA (C) 8TH ANNUAL DESERT WARBIRDS. Site: 89452 54th Ave Canal Regional Park. Alan

E Williamson M.D. CD/EM PH: (760)220-8239. Email: awilliamson@emc.org. Visit: cvrcclub.com. Sanction #9216. Two days of fun, flying & fellowship! Glow, gas, electric & turbine warbirds and Golden Age aircraft, ARFs to giant scale, are all welcome. Awards Saturday (weather permitting), open flying Sunday. Pilot fee \$30, includes lunches. RV/camping, no hookups. Sponsor: COACHELLA VALLEY RC CLUB.

**Prizes!
Food!
Join the fun!**

Coachella Valley RC Club presents

**8th Annual
Desert Warbirds Fun Fly**

**January 18-19, 2020
Canal Regional Park, Thermal, CA
Benefits our Wounded Veterans**

**WWW.CVRCCLUB.com
CD: Alan Williamson
760-220-8239
awilliamson@emc.org**

FLORIDA

01/4/2020 - 01/5/2020 - Apopka, FL (DEMO) RCACF 2020 AIRSHOW. Site: 203 W Keene Rd Tangerine Field. Mr David W Sirak CD/EM PH: (407)448-3473. Email: davesirak@gmail.com. Visit: www.rcacr.com. Sanction #9250. Remote control air show featuring all types of RC aircraft flow by Florida friendliest pilots. Parking \$5 a car load. Sponsor: REMOTE CONTROL ASSN CENTRAL FLORIDA.

01/7/2020 - 01/8/2020 - Palm Bay, FL (AA) FMA WINTER CONTEST. Site: Sopadilla Road. Mr Duncan McBride CD/EM PH: (239)437-0065. Email: n319dm@gmail.com. Sanction #9288. Includes SAM, FAC events Sponsor: FLORIDA MODELERS ASSOCIATION.

01/18/2020 - 01/19/2020 - Cape Coral, FL (AA) CAPE CORAL NASA SCALE CLASSIC FIRST ANNUAL. Site: 1030 Northwest 28th St Seahawks Air Park. Mr Michael A Barbee CD/EM PH: (614)-206-5589. Email: mabarbee@aol.com. Visit: www.rseahawks.org. Sanction #8937. Sponsor: CAPE CORAL R/SEA HAWKS.

01/18/2020 - Lake Placid, FL (C) LAKE

PLACID AEROMODELERS WARBIRD AND CLASSICS FLY IN. Site: Riley Field. Mr Larry L Kauffman CD/EM PH: (863)659-1460. Email: lkauffma@aol.com. Visit: lpa.club. Sanction #8993. 3rd annual Warbird and Classics fly in. Excellent grass field, plenty of shade and parking, no power at the field, so bring your own. Primitive camping available. Lunch will be available at the field. Trophies for pilots choice and spectator choice. Sponsor: LAKE PLACID AEROMODELERS.

01/24/2020 - 01/25/2020 - Geneva, FL (C) THE BLUE MAX. Site: 2750 Florida 46. Mr Phillip Spain CD/EM PH: (407)474-3522. Email: pespain@att.net. Visit: thebluemaxrc.com. Sanction #9370. A WWI fun fly event. Dawn Patrol style for planes of early aviation. Limited to aircraft from 1903-1919. Unlimited flying all days. \$20 per pilot. On-site camping, no hookups. Concessions available. Numerous awards for static & flying. Saturday evening awards banquet. Pilots welcome to stay and fly on Sunday. Sponsor: AKA DBA SAM'S.

GEORGIA

01/18/2020 - Dunwoody, GA (A) JANUARY INDOOR. Site: 1978 Mt Vernon Rd Saint Luke's Presbyterian Church. Mr Joshua W Finn CD/EM PH: (843)509-6692. Email: joshuawfinn@gmail.com. Visit: www.thermalthumbers.com. Sanction #8717. FAC Dime scale, Peanut, Phantom Flash, NoCal. Hangar Rat Sponsor: THERMAL THUMBERS OF METRO ATLANTA.

ILLINOIS

01/5/2020 - Elk Grove Village, IL (A) FROZEN FINGERS FLYING FESTIVAL. Site: 20101 Busse Woods Ned Brown Model Flying Field - 1392. Mr Chris Gay CD/EM PH: (630)836-9854. Email: windjmmr40@aol.com. Sanction #9375. Speed Limit Combat Sponsor: CHICAGOLAND CIRCLE CUTTERS.

INDIANA

01/1/2020 - Madison, IN (C) NUMB THUMBS. Site: 1500 West JPG Ordnance Drive Jefferson County Proving Grounds. Mr Charles E Hatchel CD/EM PH: 812-493-5608. Email: broken_wing_rc@yahoo.com. Sanction #9140. Start the New Year off right! If the roads are open, come and

fly with us. Starts at 1pm. Chili, coffee, and great fellowship. Sponsor: BROKEN WINGS RC CLUB.

NORTH CAROLINA

01/18/2020 - Sanford, NC (C) FREEZE YOUR TAILFEATHERS. Site: 4500 Jefferson Davis Hwy. Mr Mark N Cline CD/EM PH: (919)776-9504. Email: clinesfly@windstream.net. Visit: facebook/sanfordmac. Sanction #8687. 600' runway, food on site, raffle day of event. Any size, any type of plane. \$5 landing fee. Sponsor: SANFORD MODEL AIRPLANE CLUB.

OREGON

01/11/2020 - 01/12/2020 - Tillamook, OR (AMA) TILLAMOOK AIR MUSEUM TIME TRIAL. Site: 6030 Hangar Rd Tillamook Air Museum. Mr Jake A Palmer CD/EM PH: (360)545-3113. Email: 82.jake@gmail.com. Sanction #9367.

VIRGINIA

01/25/2020 - Lorton, VA (C) NVRC ANNUAL SNOW-FLY. Site: Lorton/Burnett Field Furnace Rd. Dr Harold A Chadsey CD/EM PH: (703)278-0119. Email: fly.bear@verizon.net. Visit: www.lnvrc.com. Sanction #8939. Events include taxi, loops, rolls, a special event, and precise landing. Postponement of the Fun-fly will be announced the day before the event on the web site. See web site for contest details and directions to new flying site location. Sponsor: NORTHERN VA RC CLUB INC.

WASHINGTON

01/24/2020 - 01/26/2020 - Monroe, WA (C) NW MODEL HOBBY EXPO. Site: 14405 179th Ave SE Evergreen Motocross Park. Ron Swift CD/EM PH: 425-788-6045. Email: ronswift@cablespeed.com. Visit: nwmhe.com. Sanction #7734. Largest RC show in the PNW. Drone racing, indoor flying, drift cars, carpet racing, RC boats, combat robotics, makers, rock crawlers and excavators, food vendors and more! Huge swap area, scale competition, flying demo's, Club & SIG booths Sponsor: BARNYARD BUZZARDS MODEL AIRPLANE CLUB.

February

ARIZONA

02/17/2020 - 02/19/2020 - Mesa, AZ (C) 16TH ANNUAL ARIZONA ELECTRIC FESTIVAL.

Site: Superstition Airpark Meridian Rd & Levee Dr. Mr Shannon L Gallagher CD/EM PH: (602)510-3074. Email: greenlion69@yahoo.com. Visit: azelectricfestival.com. Sanction #9141. Fr-Sa 9am to 5pm, Su-9a-2p. Noon show on Saturday. \$40 participant for all three days includes raffle/pizza Sat night, \$20 per day-no raffle. \$6 spectator per carload. Food and Hobby vendors on site. Night fly Saturday night. Sponsor: ARIZONA MODEL AVIATORS.

02/22/2020 - Yuma, AZ (C) YUMA AIRSHOW. Site: Rifle Range Rd. Mr Tanner S Curtis CD/EM PH: 619-947-9041. Email: xpresscs@yahoo.com. Sanction #9354. Sponsor: YUMA AEROMODELERS.

02/29/2020 - 03/1/2020 - Apache Junction, AZ (AAA) 7TH ANNUAL DESERT PATTERN CHALLENGE. Site: N Ironwood Rd Superstition Field. Mr John L Bentley CD/EM PH: (480)349-0303. Email: j.bentley@usa.net. Visit: www.eastvalleyaviators.org. Sanction #9310. Events; 401-404, 406 (JSO) 7th Annual Desert Pattern Challenge. All AMA pattern classes as well as Silver(P21). FAI will fly both P21 and F21. We will fly an EDF class. Pilots meeting at 8:30 am wheels up at 9:00am. Lunch is included for pilots both days. Sponsor: EAST VALLEY AVIATORS INC.

CALIFORNIA

02/17/2020 - 02/11/2020 - Lost Hills, CA (AAA) ISACCSON WINTER CLASSIC & KIWI WORLD CUP. Site: Lost Hills Model Airfield Lost Hills Model Airfield. Mr Roger M Morrell CD/EM PH: (310)483-8779. Email: r_morrell@yahoo.com. Visit: sen.fairflight.org. Sanction #9262. 2020 Feb February Contest at Lost Hills.

02/10/2020 - 02/24/2020 - Thermal, CA (C) COACHELLA JET JAM. Site: Canal Regional Park Coachella Valley RC. Mr Daniel R Metz CD/EM PH: (760)831-6045. Email: jetmandan43@yahoo.com. Visit: www.cvrclub.com. Sanction #9336. Help our Vets at the Coachella Jet Jam. Great Pilots drawing and raffle. Pilots fee is \$50,

includes lunch Friday and Saturday. Free RV Camping, no hookups, no fires. Visit website for directions. Sponsor: COACHELLA VALLEY RC CLUB.

02/14/2020 - 02/17/2020 - San Diego, CA (C) CHILI AT CHOLLAS. Site: 5997 College Grove Dr. Austin Heilman CD/EM PH: (619)890-9423. Email: austinheilman@gmail.com. Visit: www.chollasrcflyers.com. Sanction #9280. President's weekend fun fly at Chollas RC Flyers. Camping allowed on site Friday, Saturday and Sunday night. \$20 pilot registration fee. All aircraft types okay. Chili contest on Sunday the 16th. \$100 to winner of best chili and \$50 for best cornbread. Sponsor: CHOLLAS RC FLYERS.

FLORIDA

02/16/2020 - 02/19/2020 - Mulberry, FL (C) FLORIDA EJET FEST INTERNATIONAL. Site: 4288 Florida 60. Mr Gerald P Mcghee CD/EM PH: (757)645-8555. Email: mcghee66@gmail.com. Visit: imperialrcclub.com. Sanction #9091. Electric ducted fan jet aircraft fly-in. 600' x 30' paved runway. Prizes/trophies include; Fastest Jet, Pilot's choice, Best Craftsmanship. Camping available (no services) No turbines or props. More info on website; Facebook: Imperial RC Sponsor: IMPERIAL RC CLUB INC.

02/18/2020 - 02/19/2020 - Lake Placid, FL (AA) LAKE PLACID 2020 PATTERN WINTER/SUN OPENER. Site: Placid Lakes Blvd Riley Field. Mr Larry L Kauffman CD/EM PH: (863)659-1460. Email: lkauffma@aol.com. Visit: www.lpa.club. Sanction #9333. Overnight Parking allowed, No power. Grass Landing strip- Excellent condition, Wide open. Lunch available on site. Enjoy a warm weekend of Pattern Flying in the new year. Hotels and restaurants available in Lake Placid. This is a unrestricted field site Sponsor: LAKE PLACID AEROMODELERS.

02/18/2020 - Deland, FL (C) DELAND GOLDEN HAWKS WINTER AIR-FEST. Site: 1000 R/C Club Rd. Mr Michael Setteducati CD/EM PH: (845)596-0924. Email: byronboy1954@gmail.com. Visit: www.delandgoldenhawks.com. Sanction #9332. Deland Golden Hawks Winter RC Air-Fest, All aircraft all era's, all scales welcome, giant scale electric,

EDF, rotary, Drone (sorry no turbines) Noontime Demos, Swap meet welcome your table, Pilot awards, no fees, entrance %5 donation, Food Bar open all day Sponsor: DELAND RC CLUB.



02/11/2020 - 02/12/2020 - Palm Bay, FL (AMA) FMA FEBRUARY RECORD TRIALS. Site: Sopadilla Road. Mr Duncan McBride CD/EM PH: (239)437-0065. Email: n319dm@gmail.com. Sanction #9289. Sponsor: FLORIDA MODELERS ASSOCIATION.

02/15/2020 - Polk City, FL (C) FUN FLY AND SWAP MEET. Site: 2375 Barfield Rd. Mr James R Mahoney CD/EM PH: (863)712-6790. Email: jrmaahoney36@aol.com. Visit: mid-florida r/c club.com. Sanction #8530. Annual fun fly & swap meet. 8 am til 1pm Sauturday \$10 per space. 1 mile East of Kermit Weeks Fantasy of Flight Museum. Come & bring your used airplane stuff. Bring an airplane to fly and enjoy the fun. Sponsor: MID-FLORIDA R/C CLUB, INC.

02/22/2020 - 02/23/2020 - Miami, FL (A) AMPS IMAC CHALLENGE. Site: AMPS Silver Field. Mr Vicar F Hernandez CD/EM PH: (305)505-7607. Email: vicarh@bellsouth.net. Visit: www.amps-rc.org or www.fb.com/amps.imac. Sanction #8980. All classes flown. Freestyle on Sunday. Registration \$40 - 1st time Novice & Basic FREE. Pilots diner on Saturday evening. Primitive camping facilities. Early pilot arrival welcome. Spectator parking \$5 per car. Food and drinks available. Sponsor: AERO MODELERS OF PERRINE INC.

02/22/2020 - Ocala, FL (C) OCALA ELECTRIC FLY IN. Site: OFMC Field 110th St. Mr Gary R Doeren CD/EM PH: 920-737-

4852. Email: grdoeren@aol.com. Visit: ocalaflayingmodelclub.com. Sanction #8663. 40 x 600' Paved runway, 100 x 1500' grass. Food and drink on site, primitive camping, no hookups. Many fun events throughout the day. Sponsor: OCALA FLYING MODEL CLUB.

MISSOURI

02/23/2020 - Fenton, MO (AAA) ICE-O-LATED CL STUNT & SPEED. Site: 215 Valley Park Rd Buder Park. Mr Frederick S Cronenwett CD/EM PH: (316)680-1515. Email: clscale7@gmail.com. Visit: https://lafayetteesquadrielle.wordpress.com. Sanction #9386. CL Stunt with Basic Flight, Profile Stunt, PAMPA events (Beginner, Intermediate, Advanced, Expert). Perky and Fox 35 Speed with club rules. We know it's cold but you have to fly! Profile Stunt gets 10 point bonus for non-flapped models. Sponsor: LAFAYETTE ESQUADRILLE.

NORTH DAKOTA

02/18/2020 - Grand Forks, ND (C) THE INTERNATIONAL INDOOR FUN FLY. Site: 2419 2nd Ave N University of North Dakota Athletics High Performance Center. Mr Brian D Dorff CD/EM PH: (701)317-6816. Email: bluebaronbrian@gmail.com. Visit: www.redriverflyers.com. Sanction #9261. Biggest indoor RC funfly in the Upper Midwest for US and Canada Pilots. 3d, micros, helis, quad racing, AMA or MAAC req'd. Indoor football field & tall 60' ceiling. Weight limit 12oz/340g for planes and helis, Quad racing for 3" and tiny whoops. 10am-4pm Sponsor: RED RIVER RC FLYERS.

OHIO

02/23/2020 - Wapakoneta, OH (C) LIMA AREA RADIO KONTROL SOCIETY 12TH ANNUAL ELECTRIC INDOOR FLY. Site: 1 Redskin Trail Wapakoneta High School. Mr



SANCTIONED EVENT CALENDAR

Rodney C Metz CD/EM PH: (567)356-7453. Email: dts@bright.net. Sanction #9339. Registration Fee \$10. Sponsor: LARKS.

OREGON

02/15/2020 - 02/16/2020 - Tillamook, OR (AMA) TILLAMOOK AIR MUSEUM TIME TRIAL. Site: 6030 Hangar Rd Tillamook Air Museum. Mr Jake A Palmer CD/EM PH: (360)545-3113. Email: 82.jake@gmail.com. Sanction #9368.

March

ARIZONA

03/6/2020 - 03/8/2020 - Tucson, AZ (AA) TUCSON IMAC. Site: Club Field. Mr Kevin Garland CD/EM PH: (770)715-6263. Email: garlandk89@gmail.com. Visit: www.tucsonradiocontrolclub.com. Sanction #9190. Saturday Pilots Meeting: 7:30 am Wheels Up: 8:00 am Classes: Novice, Basic, Sportsman, Intermediate, Advanced, Unlimited, Freestyle. Title Sponsor: JR Propo. \$1000 Cash Prize! Free Chick-Fil-A Lunch for Pilots! Sponsor: TUCSON RADIO CONTROL CLUB INC.

03/10/2020 - 03/14/2020 - Tucson, AZ (C) VINTAGE STUNT CHAMPIONSHIPS XXXII. Site: 4600 N Silverbell Rd Christopher Columbus Park. Mr James Hoffman CD/EM PH: 480-329-3316. Email: windswept4@cox.net. Visit: azucontrol.org. Sanction #9037. Old Time Stunt, Classic & Super 70s Stunt, Ringmaster Stunt, IGN Stunt. Sponsor: CHOLLA CHOPPERS MAC and CENTRAL ARIZONA CL CLUB.

03/13/2020 - 03/15/2020 - Mesa, AZ (C) GUNSMOKE 2020. Site: Superstition Air Park. Mr Paul J Goldsmith CD/EM PH: 602-323-7753. Email: pt19nut@aol.com. Sanction #8985. This is a Scale Masters Qualifier. Scale Masters rules will be in effect. Overnight parking is available, call 602-323-7753 for reservations. Trailers can be left at site. Security will be provided. All five classes will be judged. \$40 entry fee. Sponsor: ONE EIGHTH AIR FORCE.

03/20/2020 - 03/22/2020 - Tucson, AZ (AA) TOP GUN F2D. Site: 4600 N Silverbell Rd Christopher Columbus Park. Mr Steve O Stewart CD/EM PH: (520) 220-9322. Email: clcombat@yahoo.com. Sanction

#9121. Top Gun F2D full rules Saturday and Sunday. Outlaw F2D Fast Friday. For more information Call CCMAC Pres. Steve Mills @ 520 248-4316 or CD. Sponsor: CHOLLA CHOPPERS MAC.

03/21/2020 - 03/22/2020 - Apache Junction, AZ (C) CACTUS CLASSIC. Site: N Ironwood Rd Superstition Field. Mr Randall W Wegner CD/EM PH: 520-954-0021. Email: thesuperweg@aol.com. Visit: www.eastvalleyaviators.org. Sanction #9251. Sponsor: EAST VALLEY AVIATORS INC.

03/27/2020 - 03/29/2020 - Mesa, AZ (C) WINGS OVER ARIZONA. Site: Levee Dr Superstition Airpark. Mr Noel Hunt CD/EM PH: (586)747-3001. Email: rcstrutter@gmail.com. Visit: http://azmodelaviators.com. Sanction #8903. Great winter opportunity to fly Giant Scale aircraft (80" mono; 60" multi wing; 140" L+WS jets; or 1/4 scale). Superior RC field with ample shade. \$30 pilot fee. Dry RV sites available Thu - Sat nights upon request, at no additional charge. Sponsor: ARIZONA MODEL AVIATORS.

03/28/2020 - 03/29/2020 - Tucson, AZ (C) WATTS UP ELECTRIC FLY-IN. Site: Tucson Radio Control Club. Mr Kevin Garland CD/EM PH: (770)715-6263. Email: garlandk89@gmail.com. Visit: www.tucsonradiocontrolclub.com. Sanction #9227. WATTS UP Electric Event is back! The event will be held March 28-29th at the Tucson Radio Control Club. Power at the field for charging batteries! Sponsor: TUCSON RADIO CONTROL CLUB INC.

FLORIDA

03/11/2020 - 03/14/2020 - Lakeland, FL (C) FLORIDA JETS. Site: 4999 Air Show Rd Paradise Field. Mr Frank Tiano CD/EM PH: (863)607-6611. Email: frank@franktiano.com. Visit: franktiano.com. Sanction #9213. Three hundred Jets, Demos, Manufacturer area. 6 Flight lines, awards and one of the most AWESOME flying sites on the planet! Dozens of Hobby Vendors and Food Court on site. Sponsor: IMPERIAL RC CLUB INC.

03/21/2020 - 03/22/2020 - Ocala, FL (AA) 2020 OCALA FLYING MODEL CLUB IMAC CONTEST. Site: 1020 SE 110th St.

Mr Edward J Baker CD/EM PH: (207)318-3524. Email: ejbaker14@gmail.com. Visit: ocalaflyingmodelclub.com. Sanction #8945. Sponsor: OCALA FLYING MODEL CLUB.

03/21/2020 - 03/22/2020 - Cape Coral, FL (C) 26th GATHER OF THE GIANTS. Site: 1030 NW 28th St Seahawks Air Park. Mr Randy L Butz CD/EM PH: 239-223-3994. Email: randybutz@embarqmail.com. Visit: rseahawks.org. Sanction #8988. \$10 registration (includes one lunch plus eligibility for many prizes and awards). BIG BIRD RULES: 2 meter mono, 60" multi win Sponsor: CAPE CORAL R/SEA HAWKS.

03/28/2020 - 03/29/2020 - Nokomis, FL (C) 21th ANNUAL WINGS OVER VENICE. Site: 4000 Knights Trail Rd Memorial Field. Mr Jim Hullhorst CD/EM PH: 941.441.6379. Email: oldrcflier@aol.com. Sanction #9390. Giant Scale Fly-In (80" mono - 60" bips) Beautiful open site, 450' paved + grass runways. Welcome all propulsions, including turbines. Great food and noon time demos. Rustic overnight camping starting on 03/27/20. Landing fee \$20. Sponsor: R/C FLIERS OF VENICE INC.

INDIANA

03/28/2020 - 03/29/2020 - W Baden Sprgs, IN (A) 2020 JIM RICHMOND OPEN. Site: 8538 W Baden Ave West Baden Springs Hotel. Mr Reynold A Mazzocco CD/EM PH: (812)455-0838. Email: aprivpilot@aol.com. Sanction #8697. Sponsor: BONG EAGLES.

LOUISIANA

03/20/2020 - 03/21/2020 - Rayne, LA (C) CAJUN FELI FEST. Site: Don Habetz Memorial Field 1059 Tower Rd. Mr Jon R Martin CD/EM PH: (337)783-2759. Email: marfly3@bellsouth.net. Visit: www.ramsrcflyers.com. Sanction #9032. Location: 1.7 Miles North of I-10, exit 82 (E. Crowley, LA exit). Heli fishing. All types of helicopters welcome. \$40 landing fee, includes Saturday dinner. RV and trailers welcome, no hook ups. AMA required. Sponsor: RICE AREA MODELERS SOCIETY.

NORTH CAROLINA

03/19/2020 - 03/21/2020 - Spencer, NC (DEMO) WIND AND WINGS THE SCIENCE

OF FLIGHT. Site: 411 S Salisbury Ave NC Transportation Museum. Mr Michael F Goodman CD/EM PH: (704)982-0537. Email: mfgoodman@ctc.net. Visit: nctrans.org/events/wings.aspx. Sanction #9303. Indoor Demonstration Flying and Static Displays at the NC transportation Museum in Spencer For more info go to www.nctrans.org/events/wings.aspx, cabarrusflyers.com, or statesvillermodeflyers.org. Local schools on March 19 & 20; Public Admission on March 21 Sponsor: CABARRUS RC FLIERS and STATESVILLE FLIERS RC CLUB INC.

TEXAS

03/27/2020 - 03/29/2020 - Monaville, TX (C) HOUSTON JET RALLY. Site: Bomber Field. Mr Woody B Lee CD/EM PH: (832)794-3370. Email: woody.lee123@gmail.com. Visit: bomberfieldusa.com. Sanction #9314. All sizes and types of jets welcome, turbine and EDF. Concessions available on site. Spectators welcome. RV hookups available for \$15 per night. Pilot entry fee \$35. Covered tables and power in pilot pit area. Sponsor: BOMBER FIELD USA.

NON-FLYING

January

INDIANA

01/25/2020 - Charlestown, IN (E) SKYLINERS 2020 SWAP MEET. Site: 9608 Highway 62 Clark County 4-H Community Building. Mr Michael Stinson CD/EM PH: (502)386-4446. Email: dc8driver@hotmail.com. Sanction #9338. Location: Clark Co 4H. RC & CL PLANES, ENGINES, TRAINS, BOATS & ETC. 50/50 raffle. 9:30am until 2pm. \$5 Admission. Tables will be limited for space. Dealers admitted at 8:30am. 1st 8' table-\$12 w/1 admission, addt tables \$7 w/o addt admission. 1st 6' table-\$10 w/1 admission, addt tables \$5 w/o addt admission. Sponsor: SKYLINERS.

MICHIGAN

01/26/2020 - Warren, MI (E) RCCD SWAP MEET. Site: 23695 Mound Rd Knights of Columbus. Mr Paul E Newby CD/EM PH: (586)747-7675. Email: paul.newby51@gmail.com. Visit: rccd.org. Sanction #9274. Open 9am - 12pm. General admission; \$5,

children under 12; \$1, under 5; free. Free parking. Vendor tables \$20 ea. Includes 1 admission per table. Door prizes, 50/50 drawings, special raffles. Breakfast 9-11am \$3. Contact CD to reserve tables. Sponsor: RC CLUB OF DETROIT.

NEW HAMPSHIRE

01/18/2020 - Bow, NH (E) CENTRAL NH R/C SWAP MEET. Site: 3 Bow Center Rd Bow Parks & Recreation Community Center. Mr Daniel F Weed CD/EM PH: (603)228-3188. Email: weedfamily@comcast.net. Sanction #9358. Doors open for sellers at 8am, all others at 9am. \$5 Admission Fee, Seller tables \$25.00, and include one admission Sponsor: CONCORD SKYHAWKS and CONCORD AEROGUIDANCE SOCIETY.

NEW YORK

01/26/2020 - Hicksville, NY (E) NASSAU FLYERS FLEA MARKET. Site: 201 Levittown Pkwy Levittown Hall. Mr Stuart A Silverman CD/EM PH: (516)476-3194. Email: docstu5@msn.com. Visit: nassauflyersrc.com. Sanction #9257. Nassau Flyers 34th annual flea market Levittown Hall Hicksville NY. Free admission, donations at the door. 35 vendor tables and complete Planes, Boats, Helis, & Cars for sale on stage. Prizes raffle, 50-50 drawing. Refreshments. call Archie 516-510-7378 for info. Sponsor: NASSAU FLYERS/L.I. CONDORS RC CLUB INC.

OHIO

01/5/2020 - Celina, OH (E) CELINA FLYING SPORTSMAN SWAP MEET. Site: 715 Wayne St Celina High School. Mr Timothy M Moorman CD/EM PH: (419)678-3222. Email: timbob@bright.net. Sanction #9296. 33rd Annual RC Swap meet. 8am to 1pm. 7:30am Vendor set-up. Table rent; \$12 reserved, \$15 at the door. Reserved tables MUST be paid in advance. Reserved tables held until 8:30 day of show. 50/50 drawing. Planes, boats & cars welcome. Sponsor: CELINA FLYING SPORTSMEN.

01/11/2020 - Louisville, OH (E) NCRCHAWKS SWAP MEET. Site: 1520 California Ave Louisville Church of Christ. Mr Thomas L Erb CD/EM PH: (330)352-3389. Email: terb0@aol.com. Visit: ncrchawks.com. Sanction #8943. Vendor set-up @ 9am, doors open @ 10am. Tables are \$10 each. Admission \$5,

kids under 12-Free. Food & drink available Sponsor: NORTH CANTON RC CLUB INC.

OKLAHOMA

01/25/2020 - Shawnee, OK (E) ANNUAL RC SWAP. Site: 2600 Airport Dr Gordon Cooper Aviation Center. Mr Philip Marrs CD/EM Email: tekboy46@aol.com. Sanction #9275. Swap meet at Gordon Cooper Aviation Center at Shawnee Airport in heated hangars. \$10 per vendor: MUST BRING YOUR OWN TABLES & CHAIRS. Follow signs for parking. Set-up at 7am. Sponsor: SHAWNEE THUNDERBIRDS.

WISCONSIN

01/19/2020 - Denmark, WI (E) SWAP MEET. Site: Depere Rd Gatherings 43. Mr Steve Doubek CD/EM PH: (920)606-3248. Email: stevedoubek@yahoo.com. Sanction #9391. 8 am to 12 Noon. Admission \$5, 12 & under-free. No table fee. Nice raffle prizes. New location! Gatherings 43 (S of Green Bay on I-43) Exit 171 to Denmark. Turn right at the roundabout after Kwik Trip. Go one block then turn left on the left. (This is a new building so there is no address yet) Sponsor: GREEN BAY MODEL AIRPLANE CLUB.

Green Bay Model Airplane Club
Swap Meet
Sunday, January 19th 2020
8:00 - 12:00
Admission \$5.00
12 and under free
No table fee
Nice raffle prizes

New location!
"Gatherings 43", Denmark, WI
(Just south of Green Bay on I-43)
Take exit 171 towards Denmark.
Turn right at the roundabout after Kwik Trip.
Go one block then turn left.
"Gatherings 43" is on the left.
(This is a new building so there is no address yet)

Contact: Steve Doubek
920-606-3248
stevedoubek@yahoo.com



01/26/2020 - West Bend, WI (E) R/C AUCTION & SWAP. Site: 3000 Pleasant Valley Rd Washington County Fair Park & Conference Center. Mr Scott D Jones CD/EM PH: (414)315-7229. Email: onehobby@happyhobby.com. Sanction #9255. 9am to 2pm. \$5 entry, all tables \$20 each. For table reservations call Laurie @ 414-315-7229. Sponsor: MILWAUKEE ASSOCIATION OF R/C CLUBS.

RC 42nd ANNUAL AUCTION & SWAP SHOP
January 26, 2020
Sponsored by:
Milwaukee R/C Association
9AM - 2PM \$5.00 entry
All Tables \$20 Each
For Table Reservations Call:
Laurie 414-315-7229
Washington County Fair Park Pavilion, West Bend

February

ARKANSAS

02/1/2020 - El Dorado, AR (E) MASA 20TH ANNUAL SWAP SMEET. Site: 1000 N Mosby Ave. Mr Jason W Cunningham CD/EM PH: (870)226-6509. Email: jcunningham50@hotmail.com. Sanction #9350. Admission \$5, women & children-Free. Tables \$12 each (table & chairs furnished). Set-up @ 8am. Raffle prizes, concessions, non-smoking facility. Open to sell new/used RC products. Dealers/Hobby Shops & public welcome. If lost and need directions call Jason at 870-814-6005. Sponsor: MODEL AVIATORS OF S. ARKANSAS.

FLORIDA

02/9/2020 - Delray Beach, FL (E) SWAP MEET. Site: 16700 S Jog Rd South County Civic Center. Mr Jerome Rodman CD/EM PH: (561)706-1135. Email: jerry.rodman2@gmail.com. Sanction #9362. Doors open @ 9am. Admission \$3. Tables \$10 in advance, \$15 at the door! Sponsor: PALM BEACH R/C ASSOCIATION.

The Palm Beach Radio Control Association
SWAP MEET
Sunday, Feb. 09, 2020
Doors Open at 9:00 a.m.
Admission \$3.00
Tables \$10.00 in advance,
\$15.00 at the door!
South County Civic Center
16700 Jog Road
Delray Beach, FL 33446
Contact: Jerry Rodman
jerry.rodman2@gmail.com

02/22/2020 - Ocala, FL (E) TAILGATE SWAP. Site: 1020 SE 110th St. Mr Edward Wingerter CD/EM PH: (352)351-0357. Email: skyhawk60s@msn.com. Visit: ocalaflyingmodelclub.com. Sanction #8688. This swap is the same day as our electric fly, with set-up alongside the pit fence. Bring your own tables. Entry fee \$5 for the swap, \$10 for the swap and fly-in. Sponsor: OCALA FLYING MODEL CLUB.

ILLINOIS

02/15/2020 - St Charles, IL (E) 15TH ANNUAL SWAP MEET. Site: 525 S Randall Rd Kane County Fairgrounds. Mr John M Turner CD/EM PH: (630)215-6110. Email: jtgrassroots@yahoo.com. Visit: foxvalleyaero.com. Sanction #9172. Table set-up @ 8am, doors open from 9am-1pm. Table rental; 1 table-\$23, 2 or more-\$21 each. After 2/1/20 all tables \$25 each. Entry \$5 per person, kids under 12-free. Food & Beverages available. visit website for details Sponsor: FOX VALLEY AERO CLUB.

Fox Valley Aero Club
15th Annual SWAP MEET
Kane County Fairgrounds
525 Randall Rd, St. Charles, IL
February 15th, 2020
Table set up 8:00 am
Doors open 9:00 - 1:00 pm
Indoor Foamy Fly 1:00 - 4:00 pm.
Table Rental:
1 table: \$23, 2 or more tables: \$21 each
After 2/1/2020 all tables: \$25
\$5 per person entry, kids under 12 free
Food & Beverages available.
Check payable to Fox Valley Aero Club,
PO Box 837, St Charles, IL 60174
John Turner Ph: 630 443 7807
email: jtgrassroots1@yahoo.com
For details go to: foxvalleyaero.com

INDIANA

02/29/2020 - Bloomington, IN (E) MONROE COUNTY RC CLUB SWAP MEET. Site: 5700 W Airport Rd Monroe County Fairgrounds. Mr Timothy A Mellott CD/EM PH: (812)829-8821. Email: warbird142@gmail.com. Visit: monroecountyrclub.org. Sanction #9414. Vendor Set-up at 8am, shop 9am to 1pm. Admission \$5, children 12 & Under-Free. Advance Sale Tables Still Just \$12. Any available tables will be \$15 day of show. Follow SR45 West from SR37 I-69 for 1.8 miles. Turn right on Airport Rd. for 0.7 mi. to Fairgrounds on right. Sponsor: MONROE COUNTY RC CLUB.

SANCTIONED EVENT CALENDAR

IOWA

02/1/2020 - Coralville, IA (E) SWAP MEET. Site: 300 E 9th St Coralville Marriott Hotel & Conference Center. Mr Lance J Meyer CD/EM PH: (563)529-1581. Email: lmeyer2@msn.com. Visit: iowacityaerohawks.com. Sanction #9254. 200+ tables available. ASK ABOUT SOECIAL LARGER VIP AREAS. Set-up @ 8am, sales @ 9am. Easy parking and unloading. Admission; \$6, 12 & under-FREE. 8 ft tables \$15 (includes 1 admission) Addt'l tables \$12. HUGE 30,000 sq ft venue. Vendors welcome. Tables must be pre-reserved & prepaid. Book Now! Sponsor: IOWA CITY AEROHAWKS INC.

Coralville Convention Center
Iowa City Aerohawks

Swap Meet

17th Annual

February 1st, 2020

SATURDAY

\$6 Admission Email: Lmeyer2@msn.com
Kids 12 & Under FREE! or call @ 563.529.1581

\$15 for 8 Foot Table w/ chair
(includes 1 Admission)
Additional Tables \$12

VIP Spots: Contact Lance
Setup @ 8AM / Doors Open @ 9
Flyer & Map at:
iowacityaerohawks.com

30000 SQ/Ft Venu

1-80 to Exit 242, East on 9th,
Right on Quarry Road to the
Coralville Convention Center

KANSAS

02/8/2020 - Wichita, KS (E) 59TH AIR CAPITAL R/C & MODEL AUCTION. Site: 2744 S George Washington Blvd Cessna Activity Center. Mr William F Roberts II CD/EM PH: (316)258-1858. Email: info@aircapitalauction.com. Visit: aircapitalauction.com. Sanction #9284. 9am start. Check-in Feb 7th @ 4-10pm & Feb 8th @ 7am. Concessions on site. Additional contact Ken Chadwick 316-440-5945 Sponsor: DERBY RADIO CONTROL CLUB and WICHITA RADIO CONTROL CLUB.

AIR CAPITAL

R/C & MODEL AUCTION



59TH ANNUAL
Formerly the Wichita R/C Club Auction

February 8, 2020 - 9 AM start
Check-in Feb 7th at 4-10pm and 8th 7am

Cessna Activity Center
2744 George Washington Blvd., Wichita, KS
Concessions on site.

Contact Bill Roberts: 316-258-1858
or Ken Chadwick: 316-440-5945
info@aircapitalauction.com

WWW.AIRCAPITALAUCTION.COM

MARYLAND

02/8/2020 - Westminster, MD (E) ANNUAL FLEA MARKET. Site: 519 Poole Rd VFW Post #467. Mr Steven J Rothschild CD/EM PH: (410)493-8490. Email: steven_rothschild@premierinc.com. Visit: flywam.org. Sanction #9269. 9am to 1pm. Tables; \$20. Admission \$5. Concessions available. Tables rented on a first-come, first-served basis. Sponsor: WESTMINSTER AERO MODELERS INC.

MASSACHUSETTS

02/9/2020 - Burlington, MA (E) AUCTION. Site: 162 Winn St American Legion Post 273. Mr Thomas A Dentremont CD/EM PH: (781)231-2198. Email: tom.dentremont@comcast.net. Visit: 107thrc.com. Sanction #9357. Doors open at 10am, auction starts at 12 Noon. Admission \$2, adult-children 12 or under - Free. No table fees. a 10% commission of sales paid to the 107th R/C Flyers Club. Food & beverages available. Raffle prize. Sponsor: 107TH R/C FLYERS INC.

MICHIGAN

02/1/2020 - Whitmore Lake, MI (E) SUPER SWAP 2020. Site: 1077 Barker Rd Whitmore Lake Elementary. Mr Thomas L Blaszak CD/EM PH: (313)585-3351. Visit: hamburgflyers.org. Sanction #9171. Admission; \$5, under 15 years & Active Military-free. 8 ft table \$20, 8ft Wall table \$25, 6 ft table \$15. Set-up @ 8am, Public @ 9am - Noon. Coffee, Dealers OK. Contact hamburgflyers@gmail.com Ph #734-436-1359. Sponsor: HAMBURG FLYERS R/C CLUB INC.

02/9/2020 - New Lothrop, MI (E) RC SWAP MEET. Site: New Lothrop Elementary School. Mr James A Breidenstein CD/EM PH:

RC SWAP MEET

Chesaning Area Model Flying Club

Sunday, February 9, 2020

9 AM to 2 PM

New Lothrop Elementary School

9387 Genesee St.

New Lothrop, MI 48460

Tables: \$20; Admission: \$5

Marshall 810-348-6390

**marshall-
emmendorfer@hotmail.com**

810-247-7793. Email: chopel@centurytel.net. Visit: <https://chesaningmodelflyi.wixsite.com/chesaningrcclub>. Sanction #9226. Adults \$5 12 under Free Tables \$20 additional \$15 ea. plus admission at the door. Vendor setup 7am, doors open 9am Contact: Marshall Emmendorfer (810) 348-6390. email: marshallemmendorfer@hotmail.com No Guns, Knives or Weapons of any kind allowed. Sponsor: CHESANING AREA MODEL FLYING CLUB INC.

MISSOURI

02/1/2020 - Lees Summit, MO (E) KCRC SWAP N SHOP. Site: 520 NW Murray Rd The Pavilion at John Knox Village. Mr Duane R Hulén CD/EM PH: (816)516-4526. Email: drhulen@sbcglobal.net. Visit: kcradiocontrol.com. Sanction #9365. All are welcome, come early, desirable items sell out quickly. Sponsor: KANSAS CITY RC ASSN.

NEW JERSEY

02/1/2020 - Hillsborough Township, NJ (E) ATOMS RC SWAP MEET. Site: 379 S Branch Rd Hillsborough Library. Mr Barry S Wilbur CD/EM PH: (908)526-7361. Email: bwilbur1@optonline.net. Visit: atomscrcers.net. Sanction #9356. 8am set-up time, doors open to the public at 9am. 70 table available. Tables still just \$10. \$5 admission. Food & beverages available. Buy tables early, tables sell out FAST! for table rental, contact Barry Sponsor: ATOMS RCERS.

Annual Swap Meet

FEB 1, 2020

ATOMS RCERS

8AM setup/Public 9AM to 3PM

70 Tables Available

Hillsborough Municipal Complex
Hillsborough, NJ 08844
Wider Aisles / Free Parking

FOOD/BEVERAGES

\$10 per table - \$5 admission

MAJOR VENDORS!

Barry Wilbur (908) 526-7361
bwilbur1@optonline.net

*Event will be held regardless of weather
Check Web Site for Important Details
www.atomscrcers.net

OHIO

02/1/2020 - Newark, OH (E) LCRC ANNUAL SWAP SHOP & AUCTION. Site: 469 Forry St VFW Post 1060. Mr Robert L Grashel CD/EM PH: (740)587-1854. Email:

bobandjeanetteg@hotmail.com. Visit: lcrcocohio.com. Sanction #9297. Location: VFW Hall Forry St. Open 8:30am to 1pm. Vendor set-up @ 7:30 am. Auction at Noon. Tables available in advance; \$10 each. Visit website for info. Sponsor: LICKING COUNTY RADIO CONTROL CLUB.

02/15/2020 - Wooster, OH (E) MULTI CLUB SWAP MEET. Site: 4599 Burbank Rd Grace Church. Mr Robert E Draman CD/EM PH: (234)804-6764. Email: oldtownvalley@outlook.com. Visit: sites.google.com/site/waynecountync. Sanction #9298. Ample parking. Open 9:30am to 1:00pm. Admission \$5, spouse and children under 12-free. Food & drink available. E-mail Bob for table reservations form. \$10; 8ft table, includes one admission. Vendor set-up 8:30-9:30am. Sponsor: WAYNE COUNTY RC CLUB.

02/23/2020 - Wapakoneta, OH (E) LIMA AREA RADIO KONTROL SOCIETY 12TH ANNUAL SWAP SHOP. Site: 1 Redskin Trl Wapakoneta High School. Mr Rodney C Metz CD/EM PH: (419)738-2007. Email: dts@bright.net. Sanction #9341. Location; 1 Redskin Trail. Registration 8am for Vendors, doors open from 9am to 1pm. Admission \$3 (children under 12 free with adult). Swap Pre-registration fee \$10, \$12 day of the event, includes one admission. Sponsor: LARKS.

LIMA AREA RADIO KONTROL SOCIETY
LARKS 13th ANNUAL SWAP SHOP
FEBRUARY 23, 2020

REGISTRATION: 8:00 A.M. For Vendors
Doors open to the public 9:00 a.m. - 2:00 P.M.

Registration Donation Fee: \$10.00 SWAP TABLE (Pre-req'd)
\$12.00 (Day of Event)
Registration Fee includes \$3.00 admission fee!

LOCATION: WAPAKONETA HIGH SCHOOL 1 W. Redskin Trail
Reserve Early Limited Space.

ADMISSION: \$3.00 (children under 12 free with adult)

INFO: GARY WILLIAMS 419-916-3198 or
ROD METZ 419-738-2007

TEXAS

02/28/2020 - 02/29/2020 - Garden Ridge, TX (E) TRI CITY FLYERS 2020 ANNUAL SWAP MEET. Site: 9400 Municipal Pkwy Jay F Feibelman Garden Ridge Community Center. Mr Frank L George CD/EM PH: (805)478-3037. Email: tvrcm@att.net. Visit: tricityflyers.com. Sanction #9243. Friday; 4pm to 9pm, Saturday; 9am to 2pm. Admission \$5/day. Food & drinks on site. TABLE RESERVATIONS \$10/day. Sponsor: TRI CITY FLYERS INC.

VIRGINIA

02/15/2020 - Newport News, VA (E)
NEWPORT NEWS PARK RADIO CONTROL CLUB SWAP MEET. Site: Immanuel Baptist Church. Mr Bruce E Thompson CD/EM PH: (757)599-6811. Email: bethomp@verizon.net. Visit: www.newportnews.org. Sanction #9125. Set-up at 8:00am. Swap Meet hours: 9am to NOON. General Admission: \$5.00, tables are \$12.00 each. Contact Todd Smith @ rctreetopflyer@gmail.com or call 757-817-0387. Food and drink by the Church Youth Group. Door Prizes and Raffle. Sponsor: NEWPORT NEWS PARK R.C.

March

FLORIDA

03/21/2020 - Sebring, FL (E) HIGHLANDS RC CLUB ANNUAL SWAP MEET. Site: 12700 Arbuckle Creek Rd. Dr Kevin M Strathy CD/EM PH: (863)991-0600. Email: kevinstrathy@gmail.com. Visit: highlandradiocontrol.com. Sanction #9415. Opens at 8am for Vendors, 8:30 for public. \$5 admission, \$5 for Vendors. Limited Tables \$5. Come see out 50 acre (no trees) flying site. Sponsor: HIGHLANDS RADIO CONTROL CLUB INC.

03/21/2020 - Land O Lakes, FL (E) SWAP MEET. Site: 22500 State Rd 52 BCF Area 52 Flying Field @ Conner Preserve. Mr Michael Diesu CD/EM PH: (813)995-0545. Email: mdiesu@tampabay.rr.com. Visit: baycityflyers.org. Sanction #9081. Sponsor: BAY CITY FLYERS, INC.

ILLINOIS

03/7/2020 - Swansea, IL (E) 16TH ANNUAL SWAP MEET. Site: 2425 N Illinois St Belleville/Swansea Moose Lodge 1221. Mr Daniel R Arens CD/EM PH: (618)444-8063. Email: rcflyerdan@hotmail.com. Visit: bellevillercflyers.com. Sanction #9253. Vendors enter @ 7:30am, tables \$10 each. General Admission @ 8am \$5 entrance fee. Model RC aircraft raffle. Additional contact Darwin @ 618-205-3340. Sponsor: BELLEVILLE RC FLYERS.

INDIANA

03/28/2020 - Franklin, IN (E) JCRC-FLYERS SWAP MEET. Site: Johnson County Fairground Scott Hall Bldg. Mr James W

Craig CD/EM PH: (317)439-6378. Email: craig_j@att.net. Visit: jrcrf.net. Sanction #9242. New Location, Larger Facility, Raffle Item, Hangar 9 Ultra Stick 30cc 81" Vendor set-up at 7am, open to public 8am - 12pm. 50/50 raffle. Tables: \$12 in advance, \$15 at the door. General adm. \$5 Food and drinks available. Contact James, reserve early. Sponsor: JOHNSON COUNTY FLYERS R/C.

Johnson County R/C Flyers
2020 R/C SWAP MEET
New Location, Larger Facility
Saturday, March 28th 2020
8:00am to 12:00pm
Johnson County Fairgrounds
250 Fairgrounds Street (Scott Hall)
Franklin, Indiana 46131
Vendor set-up starts at 7:00am
Doors open to public 8:00am to 12:00pm
General admission \$5
Tables are \$12 in advance/\$15 at door
To reserve tables, Contact James Craig at
317-439-6378 or craig_j@att.net
RAFFLE ITEMS:
HANGAR 9 ULTRA STICK 30CC 81"
50/50 RAFFLE TICKETS
Don't stop for breakfast!
LONGS DONUTS
Kitchen will be open for Breakfast and Lunch
Please keep in mind we will have 3 events later this year.
Warbird Fly-In, Model Aviation Day and the Hoarman Fly-In
You're welcome to fly at our field after swap meet.
Facebook group JCRCF or jrcrf.net

MICHIGAN

03/8/2020 - Linden, MI (E) 29TH ANNUAL FLINT'S RC ANNUAL SWAP MEET. Site: 4070 Lahring Rd Lake Fenton High School. Mr William C Gerald CD/EM PH: (810)845-3007. Email: impalass6565@comcast.net. Visit: rcflyingaces.com. Sanction #9361. Tables \$15 in advance, additional tables \$12. Admission \$5, active military and women admitted FREE, 17 and under \$1. Open to Vendors @ 8am, public @ 9am. Wide screen RC videos. Sponsor: THE FLYING ACES R.C. CLUB INC.

03/28/2020 - Kalamazoo, MI (E)

THUNDERBIRDS RC CLUB SWAP MEET. Site: 2900 Lake St Kalamazoo County EXPO Center. Mr Luis Espinel CD/EM PH: (269)373-1196. Email: espinel@ameritech.net. Sanction #9381. Our 27th Annual R/C Model & Hobby show. 9am to 2pm. Admission \$5 Sponsor: THUNDERBIRDS R/C CLUB.

NORTH CAROLINA

03/21/2020 - Lexington, NC (E) 22ND ANNUAL SWAP MEET. Site: 100 Fairground Rd Davidson County Fairgrounds Exhibition Center. Mr Mark B Fansler CD/EM PH: (336)479-8900. Email: mfanster@triadaero.org. Visit: triadaero.org. Sanction

#9285. Location; Davidson County Fair Expo Center, 100 Fairground Rd. 8am - 1pm. \$5 admission, ladies and children free. Prizes & Raffles. Biscuits, burgers, dogs & drinks available for purchase. Tables: \$15-Floor, \$20-Wall, includes 1 admission. Set-up Friday 5:30pm to 9pm & Saturday @ 6:45am. Contact Mark for table rental. Sponsor: TRIAD AEROMODELERS, INC.

OHIO

03/11/2020 - Ravenna, OH (E) 31ST ANNUAL SWAP SHOP. Site: 7075 State Rd 88 Maplewood Career Center. Mr Michael P Ryan CD/EM PH: (330)296-3633. Email: mryan@littlekeg.com. Visit: ravennathunderbirds.com. Sanction #9273. 10 am to 1 pm. Admission \$4, wives & children free. Door prizes & raffles. Food & drink available. For reservations or info contact Mike Ryan. Sponsor: RAVENNA THUNDERBIRDS RC CLUB INC.

Licking County Radio Control Club
SWAP SHOP & AUCTION
SAT FEB 1, 2020 8:30AM
VFW HALL
NEWARK OHIO
Tables available in advance.
Tables \$10.00 ea. 8ft.
Admission \$5.00 (under 12 Free)
Bob Grashel (740) 587-1854
18 Wesleyan Circle S.W.
Granville, Ohio 43023
www.lcrccohio.com

03/14/2020 - Columbus, OH (E) 50TH ANNUAL MODEL SHOW AND SWAP SHOP. Site: 4411 Tamarack Blvd Northland Performing Arts Center. Mr Paul C Krumm

WESTERVILLE MODEL AERONAUTICS ASSN
50th ANNUAL MODEL SHOW and SWAP SHOP
34 Trophies in 11 categories
100 SWAP SHOP Tables
MARCH 14, 2020
8:30am - 1 pm
Northland Performing Arts Center
4411 Tamarack Blvd
Columbus, OH 43229
SHOW INFO: (614) 891-6999
TABLE RSVN: (614) 582-9131
WWW.WMAA-WAGS.ORG

Jr. CD/EM PH: (614)891-6999. Email: pckrumm@aol.com. Visit: wmaa-wags.org. Sanction #9359. 8:30 am to 1 pm. 34 Trophies in 11 categories, 100 SWAP SHOP Tables. Contact Paul for Show information, or Dave Dumond at 614-582-9131 or david.dumon@att.net for table reservations. Sponsor: WESTERVILLE MODEL AERO ASSN.

03/21/2020 - Urbana, OH (E) SWAP MEET. Site: 1652 N Main St Champaign Aviation Museum. Mr David Marenberg CD/EM PH: (937)207-4105. Email: dmaren1987@gmail.com. Visit: flyurbana.com. Sanction #9366. Tables \$15 at the Door, visit website for reservations Sponsor: MAD RIVER FLYING ASSOC.

Swap Meet
Champaign Aviation Museum
Grimes Field, North of Urbana
OH, on US Rt. 68
March 21st 2019
Tables \$15 at the Door
go to www.flyurbana.com
to reserve tables

03/28/2020 - Lancaster, OH (E) 2020 ANNUAL LANCASTER HOBBY EXPO AND SWAP MEET. Site: 125 E Fair Ave Fairfield Fairgrounds. Mr Tony R Scott CD/EM PH: (740)687-5038. Email: tonyscott40@sbcglobal.net. Visit: flying-forks.com. Sanction #9403. Early reservations recommended. The Flying FORKS & the Smoke Stack Hobby Shop bring you 2 large buildings of model airplanes, trains, boats, cars, trucks and plastic models. \$5 admission gets you into both shows! Women & Children FREE!! Vendor tables \$10 ea for either venue. The airplanes and r/c swap shop are in the same AAA building. Bring your winter aircraft project for our r/c model judging. Sponsor: FAIRFIELD OHIO RADIO KONTROL F.O.R.K.S.

PENNSYLVANIA

03/28/2020 - Hamburg, PA (E) 27TH ANNUAL SWAP MEET. Site: 501 Pine St. Mr Jack D Hilbert Jr. CD/EM PH: (610)657-5286. Email: pchilbert@gmail.com. Visit: tcws.org. Sanction #9363. Radio Control Planes/ Cars/Trucks/Boats. 240 Vendor Spaces with Ample Free Parking. Doors Open for the Public at 8am. General Admission \$5,

SANCTIONED EVENT CALENDAR

Table Rentals: Wall-\$12; Aisle-\$7. Breakfast available at 7am, also serving lunch, beverages and snacks. Take I-78 to Exit 30, follow N 4th St, which will change to S 4th St, proceed 1/2 blocks to the Field House entrance on the right. Sponsor: TRI COUNTY WING SNAPPERS INC.



Hamburg RC Swap Meet
March 28, 2020, Hamburg Field House, 501 Pine St., Hamburg, Pa. 19526 Located near Cabela's I-78 & Rt. 61. Info at www.TCWS.org. 610-657-5286
Over 240 tables, 16,000 Sq. Ft. of floor space. Free Parking.
Food available. Doors Open 8:00 AM. Adm. \$5.00, Aisle Tables \$7.00, Wall Tables \$12.00

TEXAS

03/20/2020 - 03/21/2020 - Weatherford, TX (E) WAMS ANNUAL SWAP MEET & AUCTION. Site: 2121 Bethel Rd Weatherford High School. Mr Verne B Bell CD/EM PH: (817)629-1909. Email: vernebell@gmail.com. Sanction #9256. Largest Swap Meet/Auction in SW, bigger & better. \$7/day admission, \$12 tables., Swap Friday 5-9pm, Saturday 8-12. Auction 12-5. Reserved tables \$17 in advance, contact CD prior to March 1. Sponsor: WEATHERFORD AERO MODELING SOCIETY.

WAMS SWAP MEET & AUCTION!

Fri., March 20, 2020
• Swap Meet: 5 p.m. 'til 9 p.m.

Sat., March 21, 2020
• Swap Meet: 8 a.m. 'til Noon
• Auction: Noon 'til 5 pm

Admission \$7.00 Each Day
Table Rental \$12.00 Each Day

Weatherford High School
2121 Bethel Rd. • Weatherford, TX
Exit 406 East on Service Road
Exit 408 West on Service Road

For Info, Call Verne 817-629-1909
vernebell@gmail.com

Sanctioned Event Calendar Listing and Ad Information

Event Sanction Requests: Sanction requests can be submitted online using our "Contest Coordinator" portal or via the U.S. Postal Service. A guide for creating an online sanction may be found on the AMA website (www.modelaircraft.org/files/cdhelp.pdf). Mailed applications MUST GO DIRECTLY to the District Contest Coordinator for the District in which the event will take place. The exceptions are class "D" events, FAI and National Record attempts, which are to be sent directly to AMA Headquarters, Attn: Competition Dept. A current listing of all Contest Coordinators can be found on the AMA website at modelaircraft.org/events/competition-resources/sanctioned-event-coordinators.

Normal Calendar Listing: When an AMA sanction is issued for an event, the event will be listed automatically in the Sanctioned Event Calendar section if received in time. Sanction forms and sanction listing forms should be mailed to your Contest Coordinator (except demos). The listing will give the date, place, and name of the event—plus competition events, flying site, and Contest Director name and address. Use of supplementary (paid) ad space is suggested for the description of unusual or special events, deviations from AMA rules, or significant aspects of a meet. Paid ads can also be helpful in promoting fun-fly-type meets or to give directions to the flying site. Applications are available from AMA Headquarters, Competitions Department. Mail this application directly to AMA Headquarters. For more details, check our website: www.modelaircraft.org.

Supplementary Print Ads: Display ads can be inserted in the Sanctioned Event Calendar by paying a fee. These ads are accepted for AMA-sanctioned events or AMA club-sponsored non-fly events only. Ad sizes are 1-5/8 inch wide and either 1-1/2 or 2-1/4 inches high. Only

these sizes will be accepted. Fees are based on ad size.

Ad Preparation: No ad can be larger than 1-5/8 inch wide by 2-1/4 inches high. Artwork and ad text must be black on a white background. Tints or screens of black (grays) do not reproduce well. Photographs cannot be used in Supplementary Ads. Please send original pdf or jpeg files. If sending a printed copy, good-quality paper is recommended, however even good-quality photocopies do not reproduce well.

Every effort will be made to place the Supplementary Ad next to the text listing, however, placement is not guaranteed. (We reserve the right to charge extra for ads not of reproducible quality and/or ads that do not meet our size requirements.)

SUBMITTAL DEADLINE: There is normally a two-month lead time required for inserting a Supplementary Ad in *Model Aviation*. The same deadline will apply to sanctioned events listings. Every effort will be made to include Supplementary Ads received by the 14th of the month in the issue reaching readers approximately the fourth week of the following month. However, this cannot be guaranteed because ads are published on a space-available basis only!

Price and frequency changes: Beginning with the February 2020 issue, the length, frequency, and prices for the "Sanctioned Event Calendar" will change. All Sanctioned Event listings printed in this magazine will be pared down to only dates, title, location, and contact information. These events will be published in two issues of the magazine instead of three. Also, the following fees will increase as listed: sanctioning fee, \$35; non-flying event, \$20; and black and white advertisement, \$50. An option for a full-color ad will be available for \$75.

Questions about either Sanctioned Events listings or Supplementary Ads should be directed to AMA's Competition Department at (765) 287-1256, ext. 252. Send ads to: AMA Headquarters, Attn: Competition Dept., 5161 E. Memorial Dr., Muncie IN 47302 or via email to: competition@modelaircraft.org.

MA MARKETPLACE

Advertising opportunities are now available for display ads in the MA Marketplace. Visit www.ModelAviation.com/advertise for information and pricing.

AEROSCOFF MODEL ENGINE SERVICE

Since 1989, 2- and 4-cycle, gas and glow, complete service. Custom machining and fabrication services.

10820 Central Ave., Ontario, Calif 91762

909-562-7106

aeroscott89@gmail.com

AeroScott.com

WANTED:

Engines from the 1940's-1970's, prefer .010-.19 c.i. glow and diesel

Michael Diamond (805) 551-0962,

E-mail: mddgem@gmail.com

Carbon Fiber and EPP Foam:

www.windcatcherrc.com

Laser Cut Exhaust Gaskets

for OVER 650 2-Stroke RC Engines. Many Crankcase and Head Gaskets also. All High-Grade Material

ICBIMProducts.com

LEE CUSTOM ENGINES:

Custom K&B 61s assembled by designer Clarence Lee with PDP (Perry Directional Porting) \$165.00 plus \$12.50 shipping. Your K&B 61 Customized including PDP \$28.50 plus \$12.50 shipping. Stripped glowplug threads repaired. 2-stroke heads \$17.50. 4-stroke \$22.50 postpaid. 4-stroke exhaust ports repaired. \$28.50 postpaid. Include header pipe when sending head or cylinder. Add \$15.00 if sending complete engine for either repair.

Lee Custom Engines, 10112 Woodward Ave., Sunland, CA 91040 (818)352-3766



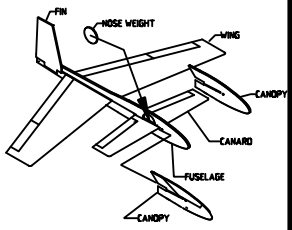
SONIC-TRONICS INC.

Performance, Reliability & 3800 MA of POWER

Made in USA

www.SonicTronics.com

WE PUT THE 'FLY' IN SCIENCE



NOT AS BORING AS HOMEWORK

This Model Magazine is NOT For Everyone!

If you like BUILDING & Flying Model Airplanes - You will like RCMW

FULL SIZE PLANS & Construction Articles in EVERY Issue

Classic and Old Time Models
Free Books, Magazines & Plans

Go To www.fullsizeplans.com

For a FREE Copy of the Current Issue

New! Super Economy Electric Gas Can

8RP S0MM0 6HD0IG
31FNKS) LQMU
1 R + R0M LQ & RCM0LGHU
0 \$ + %DMMU
) DWY XH0U
+ LK 4 XD0V 3XP S
%D0D0D 30UV
IRU&KDU LQ



\$10995 SAVE + **price breakthrough!**

0 D0LVR0&RP SRC:QW ,CF 0 HMD \$=
www.qualityreproducts.com

How to Advertise Your Items in MA Marketplace

Display Marketplace ads are available in one size only (2-1/4" wide x 2-3/8" high). Please refer to www.ModelAviation.com/advertise for information on preferred file formats accepted. If you need help in creating artwork, it is available for a modest fee - contact our sales representative at www.ModelAviation.com/advertise for details.

Up to 15 display Marketplace positions are available, one ad space per advertiser, placed randomly, for a length of up to 6 consecutive issues.

When a scheduled campaign is completed, that advertiser may advertise again, asking to be added to the rotation list. Once other advertisers have had the opportunity to run, a new campaign can start.

For Text Marketplace, please refer to www.ModelAviation.com/advertise. All Text Marketplace ads may run for more than one month at a time.

No frequency or other discounts are applicable on any Marketplace ads. Visit www.ModelAviation.com/advertise for payment details.

Illegible ads and/or ads received without the proper payment amount will be discarded. Ad and payment must be received by the 15th, and there is a 2-month leadtime. For example: April 15 for the June issue.

Ads will be printed on a first-come, first-served basis, as space permits. Responsibility for content rests solely with the advertiser. Model Aviation retains the right to reject unsuitable advertising. The Academy of Model Aeronautics does not endorse products/services advertised.

No proofs or tear sheets will be sent.

INDEX OF ADVERTISERS

INTERESTED IN ADVERTISING IN *MODEL AVIATION*?

Visit www.ModelAviation.com /advertise for more information!

Advertising Account Executive

Jonathan McGraw (410) 316-9863

PLEASE NOTE: Responsibility for content and suitability of advertisements in this magazine rests with the advertiser. Advertisers are responsible for product quality and delivery timeliness. *Model Aviation* retains the right to reject unsuitable advertising. The Academy of Model Aeronautics does not endorse products advertised.

A

AJ Aircraft www.aj-aircraft.com	17
AMA Shop Online www.modelaircraft.org/shopama	C3
AMA Podcast www.modelaircraft.org/podcast	105

B

B&B Specialties www.bennettbuilt.com	92
Balsa USA www.balsausa.com	59
BetaFPV https://betafpv.com	5
BMJR Models Inc. www.bmjrmmodels.com	85
Brodak Manufacturing & Distributing Company www.brodak.com	83

C

CARF Models Ltd. www.carf-models.com	79
Chief Aircraft www.chiefaircraft.com	75
Crain Engineering www.craineng.net	85

D

Dave Brown Products www.dbproducts.com	65
Desert Aircraft www.desertaircraft.com	7
Diamond Hobby LLC www.diamondhobby.com	63
Du-Bro Products www.dubro.com	93

E

E-flite www.horizonhobby.com	100
ElectroDynamics www.electrodynam.com	88
Ernst Manufacturing Inc www.ernstrc.com	66
Esprit Model www.espritmodel.com	67
Extreme Flight R/C www.extremeflightrc.com	10-11

F

Fab Comp Models www.fabcompmodels.com	74
Flex Innovations www.flexinnovations.com	71
Flying Aces Club www.flyingacesclub.com	96
Futaba Corporation of America www.futabausa.com	83

G

Graves RC Hobbies www.gravesrc.com	69
--	----

H

Harbor Freight Tools www.harborfreight.com	50-51
Hextronik Limited www.hobbyking.com/modelaviation	24-27
Hitec RCD, Inc. www.hitecrd.com	49

J

J & L Power Products www.jlproducts.net	81
---	----

M

Mile High RC www.milehighrc.com	61
---	----

O

Ohio Superstar Products www.ohio-superstar.com	70
Old School Model Works www.oldschoolmodels.com	57
On Top of the World www.ontopoftheworld.com	36

R

Ram www.ramrcandramtrack.com	91
RealFlight www.realflight.com	C2
Retro RC LLC www.retrorc.us.com	58
RTL Fasteners www.rtlfasteners.com	58

S

Spektrum Radios www.spektrumrc.com	C4
Sullivan www.sullivanproducts.com	78

T

Toledo Weak Signals R/C Expo www.toledoshow.com	97
Tower Hobbies www.towerhobbies.com	1

V

Valley View RC www.valleyviewrc.com	85
Venom Group www.venom-group.com	89

W

Warbird Pilots www.warbirdpilots.com	87
Wind-it-up Enterprises (owners of Peck-Polymers and Golden Age Reproductions) www.wind-it-up.com	99

Model Aviation (ISSN 0744-5099, USPS 087-930, Publications Agreement No. 40688541) is owned exclusively by the Academy of Model Aeronautics, Inc., a nonprofit organization, and published monthly at 5161 E. Memorial Dr., Muncie IN 47302. Periodical rate postage paid at Muncie IN and at additional mailing offices. POSTMASTER: Send address changes to Academy of Model Aeronautics, 5161 E. Memorial Dr., Muncie IN 47302 Attn: Membership Department. For non-member subscription rates, go to www.modelaircraft.org/publications/subscribe.aspx or call 1-800-1-FLY-AMA (1-800-435-9262). When membership in the AMA includes a subscription to *Model Aviation*, \$18 of the dues are for the magazine subscription.




FIRST FLOATPLANE FLIGHT

CHRIS WILLIAMS sent a photo of his Durafly Tundra on a pond near Port Huron, Michigan. It was captured with his son Kyle's iPhone 8 cellphone. "[It] was my first float flight ever. Glad to report it was successful!

"I've been flying various sport and scale models, both glow and electric, for about 8 years, and this plane has turned into my 'go-to' [because] it's so versatile.

"I am a member of the St. Clair County

R/C Probusters [in Goodells, Michigan]. Like most people, work and family matters don't allow for much time with the club. I can't say enough good things about the folks I've met and [the] lessons learned through being involved in this hobby. Thanks, AMA, for the great publication and organization." 



SHARE YOUR STORY

Do you have a high-quality/high-resolution airplane, helicopter, or multirotor photo that you are proud of, or a model aviation-related photo with a great story behind it? Email your "Viewfinder" photo and a description about it to jennifer@modelaircraft.org.



WALT MOUCHA

Model aircraft designer and builder

By Jay Smith | jays@modelaircraft.org

Jay Smith: How did you get involved with model aviation?

Walt Moucha: When I was age 4, my dad would buy me a 25¢ Jimmy Walker rubber model every Sunday. [I] would spend hours in the park chasing the model around. As I got older, he got me hooked on Free Flight then Control Line then finally RC in 1961.

My first RC model was a single-channel Goldberg Falcon 56 when I was 14, and I joined the AMA in 1966.

JS: How has model aviation impacted your life and/or career?

WM: My main interest is flying and building Scale models. [I] flew in my first Nats in 1969 and came in third. This allowed me, at age 19, to be a US team member at the 1970 Scale World Championships in Cranfield, England. I was, and still am, the youngest modeler to compete in this event. I still have the Fly Baby model I flew 50 years later.

This opened up numerous doors for me to represent various companies, selling and advertising their products, and working for 11 years in charge of design and manufacturing for a major model company. I have developed lifelong friendships around the world. No matter where I go, it's nice to see old friends and develop new relationships.

JS: What disciplines of modeling do you currently participate in?

WM: At age 15, I got involved building Scale models. As I got older, I began designing my own Scale models. The first was my 1/4-scale Fly Baby. [I] have been hooked on Scale models since—the larger the better.

JS: What other hobbies do you have?

WM: I've loved fishing since I was age 7—both fresh and salt water. I grew up in a boating family on Long Island. My dad built many boats for us. I also enjoy baseball and traveling to various stadiums—seven different ones throughout the years.

JS: What advice would you give someone who is interested in building?

WM: Whether you are young or older, start with a model that requires simple and basic building skills. As your skills grow, so will the types of models you build. It's great for the mind, always pushing yourself to do what you [think] you cannot do. Put your skills and mind to work. The sky's the limit. ✈️

SHOP AMA

MODELAIRCRAFT.ORG/SPECIALOFFER

Bringing Modelers Together

*Limited time offer. Check website for details.

AMA ALPHA \$10

SPECIAL PRICE
(THROUGH JANUARY 2020 ONLY!)

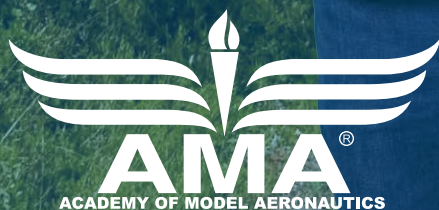


**SIDELINE
LONG SLEEVE**

STARTS AT **\$29.99**

**WOMEN'S
LACE V-NECK**

STARTS AT **\$12.99**



THE ACADEMY OF MODEL AERONAUTICS

MODELAIRCRAFT.ORG/SHOP

AMA GEAR | HATS & CAPS | APPAREL | WOMEN | MEN | KIDS | BOOKS & MEDIA



SPEKTRUM®



NEXT GENERATION INNOVATION



Say hello to the future of RC — a future of unlimited possibilities, thanks to the innovative Spektrum™ iX20 radio. It's ready now to meet the current and future needs of pilots seeking top-class features, easy programmability, next-level connectivity and everything required to fly high-performance aircraft. The iX20 also supports Spektrum Smart batteries, ESCs and receivers to deliver the full advantages of Smart all-in-one telemetry.

- ▶ Giant 5" Android color touchscreen
- ▶ Voice recognition and custom voice alerts
- ▶ Hall-effect sensor, quad bearing gimbals
- ▶ Capacitive Touch functions and alerts
- ▶ Next generation of Spektrum AirWare™

For complete details on the most advanced intelligent transmitter available, visit spektrumrc.com today.

FIND A DEALER
www.HorizonHobby.com

© 2019 Horizon Hobby, LLC. DSMX, AirWare, the Smart Technology logo and the Horizon Hobby logo are trademarks or registered trademarks of Horizon Hobby, LLC. The Spektrum trademark is used with permission of Bachmann Industries, Inc. All other trademarks, service marks and logos are the property of their respective owners. 20699

**BEST
BRANDS
IN RC**

HORIZON
H O B B Y