FREE PULLOUT R/C PLAN WORTH £11.99

CUTLASS PROFILE CARRIER PLANE

www.rcmodelworld.com DECEMBER 2015

RC MODEL WORLD

TOP GUN 2015

Florida Scale Model-Fest

PLAN FEATURE!

LOADED DICE 30 EP

ELECTRIC UPDATE OF THE CLASSIC AEROBAT

TRAPLET PUBLICATIONS Issue 383 £4.50
9 770268 334162 12

The R/C Modeller's Magazine

Spektrum products are available from all good model shops. For details of your nearest dealer look on our website horizonhobby.co.uk, contact us by telephone: 44(0)1279 641097, or by email: sales@horizonhobby.co.uk.
© 2015 Horizon Hobby, LLC. DSMX, the DSMX logo, AirWare, Serious Fun 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 SD Logo is a trademark of SD-3C, LLC. 50733

GET CLOSER TO THE EDGE

The new FMS Edge 540 is without doubt one of the best planes to come out of the FMS factory.

It has lots of carbon spars moulded into the wing and fuselage to give this aircraft excellent levels of rigidity. The latest high torque digital metal gear servos are used throughout this aircraft to give new levels of control and crispness. Hovering, harriers, knife edge flight and outside loops can be performed with relative ease. With the addition of a strong landing gear and realistic scale tyres the Edge is forgiving should you not have a perfect landing. The receiver is located in its own compartment to help keep the inside of this aircraft clutter free and as usual the battery is easy to change with a velcro strap and strong magnetic hatch to keep everything in place.

Fullsize: The Zivko Edge 540 manufactured by Zivko Aeronautics is a highly aerobatic aircraft. Capable of a 420 degree per second roll rate and a 3,700 foot per minute climb rate, it has been flown to victory on the international Unlimited aerobatics circuit several times since the mid-1990s. A tandem-seat version is sold as the Edge 540T. The Zivko Edge 540 is the most common aircraft used in the Red Bull Air Race World Series – in fact all champions of the World Series have flown this aircraft

SPECIFICATIONS; HIGH SPEED:

- WINGSPAN: 1320MM (52IN)
- OVERALL LENGTH: 1270MM (50IN)
- FLYING WEIGHT: AROUND 1680G (3.7LB)
- MOTOR SIZE: 3948-KV760 POWERFUL OUT RUNNER BRUSHLESS MOTOR
- CG (CENTER OF GRAVITY): 80MM (FROM LEADING EDGE)
- PROP SIZE: 13X5 3BLADE PROPELLER WITH SPINNER
- RECOMMENDED BATTERY: LI-PO 14.8V 2,600MAH 25C

FMS ZIVKO EDGE 540

PART NO: FS0193 £174.99 RRP

Beautifully Crafted Foam ARTF Scale Models

Available from all good model shops.

E&OE.

CML PRODUCTS ARE AVAILABLE IN ALL GOOD MODEL & HOBBY SHOPS. CHECK OUR WEBSITE FOR FULL DETAILS

WWW.CMLDISTRIBUTION.CO.UK

CONTENTS

RC MODEL WORLD
DECEMBER 2015 • ISSUE #383

FRONT COVER

Top Gun is the premier scale model flying event held at Paradise Field in Lakeland Florida. It attracts some of the best scale modellers from all over the USA and other parts of the world, who fly their beautiful replicas from a dedicated R/C flying strip. Barry Vaught photographed many of the models in action and you can read his report starting on page 102

REGULARS

6 PRE FLIGHT
Introducing this issue

8 TAKE OFF
Latest R/C model flying news

12 SHOP WINDOW
A look at the latest R/C products

52 SILENT SCALE
This month Chris Williams dedicates most of his scale gliding column to the first flights of an amazing Zurivogel S10 biplane glider. The S10 has no ailerons, the upper wing being warped by mighty servos in the old fashioned way

66 LIGHT FLIGHT
John Stennard likes to drop packages from his small models, from toy parachutists to streamers. Anything will do, as long as it is soft and light (just in case the payload hits anything!) – even a B&Q Beach Bomb!

86 SOARERS' SLOT
Model gliders have a nasty habit of disappearing from view if you take your eye off them for a split second, especially when thermal soaring. Mike Proctor offers sound advice for keeping your valuable soarers in view at all times

112 THE SPORT CHANNEL
Gray writes on another selection of sport model topics

115 DIARY DATES
As the indoor season really gets going, here's a selection of undercover model flying events

REVIEWS

16 RACING AIRACOBRA
Josh Spiers gets racy after assembling a canary yellow Reno warbird from Roc Hobby

30 MAX-THRUST LIGHTNING
Aerobatic flying with a model glider can be a smooth and exhilarating experience, as we found out when putting this sleek moulded foam glider through its paces

56 UMX F-16
We air test the latest in E-flite's series of micro size EDF jets. Its 17 inches of flying fun!

90 SPARMAX AIRBRUSH SET
The Sparmax ARISM compressor and Sparmax MAX-4 airbrush make a perfect pairing for fine model detailing or touching up wear and tear areas on painted models

94 LASER 200
After a false start here's the second part of a short series on building and flying the 30 cc Laser 200 ARF QB kit from Aeroworks

98 DROMIDA VISTA
We've been enjoying lots of after hours flying sessions with this small and agile UAV quadcopter. And it doesn't matter that it's getting dark – just follow its bright lights!

FEATURES

24 2015 BRITISH SCALE NATIONALS
As a scale judge, Philip Kent gives us an inside view of the comings and goings on the scale flight line at the BMFA Power Nats

36 VICKERS SUPERMARINE WALRUS
Franco Bugada describes the build of a Vickers Supermarine Walrus, handmade by his Italian friend Ivano Busatto, which was flown at the Sesto Calende seaplane meeting. The

event was arranged for the centennial celebrations of the SIAI Marchetti company, which was created in 1915

42 LOADED DICE 30 EP
It has been some time since Terry Westrop offered a variant of his famous Loaded Dice aerobatic model, but now he has gone electric! Loaded Dice 30 EP has been designed especially for this fast growing area of aeromodelling and now you can fly like a champion with this 1200 mm wingspan aerobat

60 CUTLASS
This quick build, all Depron profile model of the Chance Vaught F7U-3 Cutlass, a US Navy fighter-bomber of the Cold War era, was designed by John Rutter. It spans 420 mm and requires three function R/C to fly with a 2S 300 mAh LiPo

70 ELECTRIC PYLON RACING TECHNOLOGY
Top pylon racer, Ben Jones reports on the latest technology being used by leading pilots at the BMFA Nationals to compete in the demanding electric classes of the high speed R/C aero sport

74 NEAT 2015
Bill and Micki Bowne join a multitude of electric modellers from the eastern US and Canada who attended the 2015 Northeastern Electric Aircraft Technology fair

80 SCALE DOCUMENTATION
When visiting an airfield or airport it pays to take a camera with you to take detailed pictures of any aeroplanes that catch your eye, so you have plenty of information for upcoming R/C scale projects. Peter Miller describes how he takes photographs for scale documentation purposes

102 TOP GUN 2015
Earlier this year, Frank Tiano and his associates hosted yet another gathering of top R/C scale models from around the world. Barry Vaught pointed his camera at some of the most eye-catching model aeroplanes on display

PRE-FLIGHT

Kevin Crozier
Editor | Radio Control Model World
Contact me either by post:
RCMW Editorial Office,
Traplet Publications Ltd
Willow End Park, Blackmore Park Rd,
Malvern, WR13 6NN. UK
or email: rcmw@traplet.com

Welcome to the December issue of RC Model World.

Although it should be the time to begin with festive salutations, the strange world of magazine schedules means that you'll be reading this with several weeks to go to the big day, so I'll save all that for the next issue, which will be on sale at a more appropriate time.

Instead my attention is diverted to some news about Traplet's group of modelling magazines, but it's also a time that opens up great opportunities for increasing the breadth and strengthening the content of RC Model World. I'll let you read our Take Off news pages for more information, but to cut a long story short it has been decided to close our sister titles Quiet & Electric Flight International and Model Helicopter World.

The closure of Q&EFI was not too much of a surprise to me as electric models have been a mainstream type model for some while now and there was an ever-increasing overlap in the coverage of electric powered models between RCMW and Q&EFI. So it made sense for content of the two titles to be merged at some point.

However, closing MHW did come as a complete surprise, but it is difficult to maintain a dedicated model helicopter publication when so much attention has been diverted to multicopters. In order to cater for this new and growing audience, Traplet recently launched a totally fresh and exciting magazine called 'RC Flight Camera Action' and this is the place to go if you want the latest news, views and reviews about this burgeoning area of R/C modelling.

Here at RC Model World it gives us an opportunity to really take the best aspects of Q&EFI, together with a pinch or two of the most interesting R/C helicopter features from MHW, and to use them to improve our coverage of the whole spectrum of R/C model flying.

So with that in mind let's see what exciting articles we have in store for you in this issue...

Our star Feature Plan is for the Loaded Dice 30 EP, which is the latest in a long line of pattern style aerobatic models designed by Terry Westrop. Up until now Terry's models have been glow powered, but like most of the rest of the F3A community he has now embraced electric power. Loaded Dice 30 EP is the result of his recent model developments.

Our free pull out plan is for a profile model of the carrier borne Chance Vought Cutlass. Designed by John Rutter, it replicates the distinctive twin-finned fighter bomber campaigned by the US Navy during the Cold War.

Other features describe the build of an impressive Vickers Supermarine Walrus seaplane, a look at top end electric technology used for pylon racing, and how to take photographs to start a scale documentation collection.

Out and about we have reports from the Scale flight-line at the BMFA Nationals, coverage of impressive electric models seen at the NEAT fair in the USA, and finishing with another group of outstanding scale models, this time those flown at the Top Gun invitational event in Florida.

We've lots of products being reviewed this month, from a racing Airacobra to a sleek moulded glider, the Max-Thrust Lightning, as well as testing a new range of airbrush products from Sparmax. We also resume our short series on building and flying the 30 cc Laser 200 ARF QB kit from Aeroworks. This time we show how to check the covering and apply some bespoke stickers

So there's a lot for you to sit down and enjoy. Until next time...

Happy flying!

Kevin

Have you seen our other modelling magazines?

Find out more at www.trapletshop.com

Digital Edition
Scan the code with your Smartphone to download your favourite magazine or go to www.pocketmags.com

CHECK OUT PAGE 14 FOR OUR LATEST SUBSCRIPTION DEALS

RC MODEL WORLD

Editor
Kevin Crozier rcmw@traplet.com

Contributors
Kevin Crozier, Vaughn Entwistle, Josh Spiers, Philip Kent, Franco Bugada, Terry Westrop, Neil Hutchinson, Chris Williams, John Rutter, John Stennard, Ben Jones, Bill & Micki Bowne, Peter Miller, Mike Proctor, James Crozier, Barry Vaught, Gray

Managing Director
Tony Stephenson
Operations Director
Tom Stephenson
Design and Production Manager
Nick Powell
Designer
Nick Powell
Advertising Sales
Angela Price Tel: 01684 588568
email: angela.price@traplet.com
Marketing
email: marketing@traplet.com
Advertising Copy Controller
Cindi Griffiths Tel: 01684 588517
email: adcopy@traplet.com
Trade Sales Executive
Angela Price Tel: 01684 588568
email: angela.price@traplet.com
Printer
Warners plc

Newsstand Distribution
Seymour Distribution Ltd. (020 7429 4000)
US Distribution
Traplet Distribution USA Ltd, 806 Parkland Ct, Champaign, IL 61821, USA.
Tel: (001) 217-355-2970
Email info@traplet.com
Australian Distribution
Traplet Publications & Hobbies
P.O. Box 501, Engadine,
NSW 2233, Australia.
Tel: (02) 9520 0933
Fax: (02) 9520 0032
email: sales@traplet.com.au
South African Distribution
Traplet Publications South Africa, PO Box 1067, Oudtshoorn, 6620, South Africa
Telephone: (044) 272 5978
Email: southafrica@traplet.com

Published by
Traplet Publications Limited,
Traplet House,
Willow End Park, Blackmore Park Road,
Malvern, WR13 6NN. UK
Tel: 01684 588599 Fax: 01684 578558
email: info@traplet.com

Subscription
Ally Alldritt email: ally.alldritt@traplet.com
1 Year subscription prices:
UK £54.00 W/Wide £77.40
USA & Canada US $163.32
Europe £77.16
2 Years subscription prices:
UK £108.00 W/Wide £154.80
USA & Canada US $326.64
Europe £154.32

BACK ISSUES
UK £4.30/US $9.99
Order Hotline: 01684 588599
Online Ordering: www.trapletshop.com

TRAPLET PUBLICATIONS

©2015 Traplet Publications Limited All rights reserved

This magazine is sold subject to the following conditions: that it shall not without written consent of the publishers be lent, resold or otherwise disposed of by way of trade in excess of the recommended maximum retail price. All rights strictly reserved. No part of this publication may be reproduced in any way without the prior agreement of the publisher. All letters must be accompanied by the sender's full name and address. The publisher cannot accept responsibility for unsolicited correspondence nor some of the opinions expressed. All material and artwork originated by Traplet Publications Ltd., photographs, drawings, plans used in this magazine become the publishers copyright under Copyright law. Some photographs may have been digitally re-mastered. The Company reserves the right to suspend or refuse any advertisements without giving reasons. Whilst every care is taken to avoid mistakes, Traplet Publications Ltd. cannot be liable in any way for errors or omissions. Nor can the Publisher accept any responsibility for the bona fides of advertisers.
© Traplet Publications Limited 2015 ISSN 0268-3342

electricwingman

NOW AVAILABLE

Edge 540 v3 SuperLITE Series

New for the indoor season, the v3 Edge 540 has optional side-to-side thrust vectoring and light-weight yet strong EPP construction. AuW approx. 150g

From £42.95

Crack Turbo BIG Beaver

The latest addition to the expert series from RC Factory and Twisted Hobbys is this 43" version of the popular Crack Turbo Beaver. Available in apache red/black scheme or the bold red as shown. 43" with optional leading edge flaps!

From £82.95

Zorro Flying Wing

The latest in the FUN series from RC Factory! The Zorry is a 35" flying wing for 3s and 2206 size motors.

From £36.95

NOW STOCKING

ImmersionRC Real Virtuality

FAT SHARK RC VISION SYSTEMS

www.electricwingman.com

01244 852 553

Q&EFI AND MHW MAGAZINES

During October it was announced that Traplet Publications would be closing two long running R/C flight magazines. The magazines affected are Quiet & Electric Flight International and Model Helicopter World.

Tom Stephenson, Traplet's Operations Director, said:

"Quiet and Electric Flight Magazine has remained a popular choice for aeromodelling enthusiasts engaged in electric flight and gliding. Particularly within the electric category, our larger publication, RC Model World, has gradually been increasing its coverage of electric models. This reflects the change in electric powered models as now being a mainstream topic rather than a specialist discipline. It is for this reason that we have taken the difficult decision to make the November issue of Q&EFI the last.

RC Model World offers the best value and top quality content, and we will be including even more electric and gliding news and reviews within its pages."

Regarding Model Helicopter World, Tom said:

"Although Model Helicopter World Magazine is a popular choice for enthusiasts who build and fly R/C Helicopters, the market has gone ever further towards Drones and Multi-Rotors. And it is for this reason that we have made the decision to not print another issue of Model Helicopter World.

RC Model World will be increasing its coverage of R/C helicopters, along with our new magazine RC Flight Camera Action, providing the very best in the huge growth area of Drones and Multi-Rotors."

Besides increasing the scope of RC Model World, earlier this year we launched The Hobby Hub website, which is designed to go hand in hand with our R/C model publications in offering our readers an additional option for checking out the latest product releases, news, reviews and show reports. Be sure to bookmark www.thehobbyhub.com for the latest and hottest news, views and reviews in R/C modelling.

GOFLYKITE UPDATE

Bruce Corfe writes with an update following GoFlyKite article in the October issue:

"Dear Kevin

My brief stay in Singapore went well, where I took in the F1 GP.

I took the opportunity to visit the Go Fly Kite outlet in Chinatown (address below) and we had a long chat with the very clued-up enthusiast running the workshop, Anthony Foo. You might be able to make out many club members' kites hanging up in the photo. Anthony showed us a fabulous illuminated Chinese Dragon head, which is actually a biplane kite with pusher prop and full R/C! It looks terrific in the club videos on Facebook.

As I mentioned in the article this is a really thriving community of flyers who are starting to perform all over the Far East with their R/C kites.

The other point that may be of interest is that until the end of the year there is a special deal on a 'DeLight' model kite airframe, very much like the model in the article, on special offer at $50 Singapore (£23) plus p&p. Fully equipped with LEDs, just add R/C.

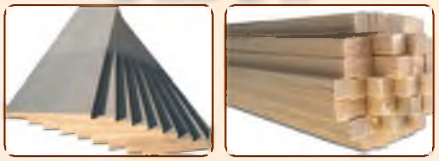
Did I buy one? Of course I did!"

www.GoFlyKite.com

335b Smith St, Chinatown, Singapore

'GoFlyKite' on Facebook

BALSA AT THE TRAPLET SHOP



We now have sheet and strip wood for sale at the Traplet on-line shop. Here are the URL's to bookmark if you want to buy sheet or strip wood to complete a Traplet plan built from one of our laser cut wood packs (which contain intricate shaped parts such as ribs and formers). Of course, it's great wood for building other sorts of models too!

http://gb.trapletshop.com/balsa-wood-strips?productId=30964

http://gb.trapletshop.com/balsa-wood-sheets?productId=30965

or telephone: +44(0) 1684 588599

ESTES RIPTIDE ROCKET WINNERS

Congratulations to the following readers, who entered our competition to win an Estes Riptide Launch Set, supplied courtesy of Estes' UK distributor Logic RC:

Clive Farrar, Cumbria
Kevin Binder, Nottingham
James Wilson, near Doncaster
Paul Tallett, Leicestershire
Eric Strefford, Southport
Levent Suberk, Bursa,Turkey

Have a blast flying your new rockets, guys!

The correct answer to 'How many ES2 launch sets does Logic RC stock?' is 20.

ANNIVERSARY YEAR FOR WINGS & WHEELS

Dates are confirmed as the 25th & 26th June, 2016 for the Wings & Wheels Model Spectacular, the popular model show that is held annually at North Weald Airfield, Essex, CM16 6AR.

2016 promises to be exciting year for the show as the airfield was built in 1916 during World War One. So the airfield will be celebrating its 100th Anniversary. And the model show, started by three enthusiastic modellers in 1986, also celebrates its 30th Anniversary!

The organisers, led by Show Director Jane Stephenson, are planning displays featuring models dating from 100 years ago right up until the present day. All the usual attractions will be present, including a large trade attendance, model boat pool and displays, hovercraft, Daleks, drones, tanks, trucks, helicopters, the famous Bring & Buy and lots more – not forgetting some great model aircraft displays!

Jane also says: *"If anyone has any new ideas for us we would like to hear from you!"*

All enquiries to: admin@wingsnwheels.net

Or visit the show website: www.wingsnwheels.net

MOTORS & ROTORS CLOCK UP 20 YEARS!

As this issue of RCMW is being prepared in October, leading R/C jet, petrol and helicopter specialists Motors & Rotors will be celebrating their 20th anniversary.

The company was started by Dave Wilshere as a model helicopter distribution outlet for the well known Miniature Aircraft USA and Graupner Heim ranges of helicopters. Being active in all aspects of the hobby and one of the most 'hands on' bosses in the business (we happily recommend Dave as he really knows his products!), he then guided the business into turbines and large petrol models. These specialised sectors of the hobby cannot be looked after without knowing what the customer needs. Dave is proof that flying and using the products you sell is the best way of endorsing them and proving their reliability.

Dave says:

"Over the years we have been approached by many companies to represent them in the UK, and have long relationships with companies like CARF-Models (Dave is one of CARF's biggest selling agents worldwide), JR Propo through MacGregor Industries, JetCat turbines (more than 500 turbines sold), DA engines, Zimmermann exhausts and PowerBox Systems."

Still preferring a personal service more than a web based 'box moving' business, Dave is known to answer emails seven days a week, early morning through to late at night. And he also answers the phone out of normal trading hours – even at the flying field!

Motors & Rotors operate out of a business unit close to Junction 20 of the M25 and Junction 6 of the M1, Monday to Friday. Weekends are spent at shows or flying with the local club:

Visit them at: Unit 11 Kingley Park, Station Road, Kings Langley, WD4 8GW

Call: (01923) 270405, Fax: (01923) 270129, Email: motrot@aol.com
www.motorsandrotors.com

If you have any news or special interest announcements to make, or even a recently completed RCMW plan design, then why not drop RCMW a line or email RCMW@traplet.com

Al's Hobbies alshobbies.com

World Class Quality Radio Control Products

hobbyzone GLASAIR SPORTSMAN S+ Ready To Fly with AutoLand Feature

£269.99

SAFE

Loaded with Hi-Tech Features

BNF Version £259.99

- AutoLand
- Holding Pattern
- Instant Flight Recovery
- Virtual Fence
- HD Camera Ready
- Full Range DX4e radio
- 1300mAh Li-Po
- Long Flight Times
- One Box Purchase

Learn at your own pace!

Take to the skies without hesitation and teach yourself to fly with the HobbyZone® Sportsman S+. The Sportsman S+ comes with everything you need to fly and SAFE Plus technology allowing anyone to take the sticks and learn to fly with confidence.

Futaba T18 SZ

18 Channel with R7008SB Rx

An incredibly sophisticated 18-channel marvel, the 18SZ is perfect for pro pilots and weekend wingers alike. It offers flights conditions, in addition, to many of the functions and features of top-of-the-line systems at an affordable price

£899.00

Airplane, Helicopter, Glider and Multicopter

FASSTest, FASST, T-FHSS, S-FHSS Radio System

J3 Piper Cub .40 ARF

- Accurate scale outline
- Authentic Cub colour scheme
- Aluminum undercarriage
- Scale "balloon" Cub wheels
- Bolt on "airfoil" wing struts
- Scale flying characteristics
- Two-piece wing for easy transport
- Bolt on rear stabilizer

HANGAR 9

£183.50

SPECIAL OFFERS

Limited Time Offers & Whilst Stocks Last

Hobbyzone Champ RTF £49.99

E-Flite UMX Yak 54 AS3X BNF £54.99

E-Flite Viking Model 12 BNF £124.99

E-Flite UMX Whipit DLG £64.99

Parkzone Night Vapor BNF £55.99

Parkzone Sukhoi SU29-MM £159.99 BNF Basic

E-Flite P-47D Thunderbolt BNF Basic £159.99

E-Flite Carbon-Z Yak 54 3C PNP £159.99

Hobbyzone F4U Corsair S RTF £184.99

Maxford USA

Maxford USA have put together a highly desirable selection of Almost ReadyTo Fly scale models

Rumpler Taube EP 64" £207.99

Curtiss Pusher 50" £175.99

1/5 Scale PT-17 Stearman £305.99

1/5 Albatros D.Va Electric 70" £269.99

Fieseler Fi-156C Storch 63" £159.99

Globe Swift EP 56" With Elec Retracts £154.99

Airco DH.2 1/6 50" £151.99

Nieuport 17 EP Electric 60" £169.99

Piper Cub J3 ARF V2 1/6 71" £124.99

PT-17 Stearman EP 50" £124.99

219 New North Road Hainault Essex IG6 3AG Tel: 0208 500 8884

28 Stratford Rd Wolverton Milton Keynes MK12 5LW Tel: 01908 313142

Every Effort is made to advertise correct prices. However they may be subject to change without notice.E & OE

YUNEEC ELECTRIC AVIATION TYPHOON Q500+

ST10+

Personal Ground Station

CG02+

3 Axis Gimbal Camera
16 Megapixels still photos & Full HD Video

New

Includes 1 battery charger,8GB SD Card and Carry Case

£864.00

Steadygrip

Carry Case

YUNEEC ELECTRIC AVIATION TYPHOON Q500 4K

CG03

3 Axis 4K Gimbal Camera

New

2x Batteries

£1049.00

Steadygrip

ST 10+

Personal Ground Station

Carry Case

PHANTOM 2+H4 3D

New Remote Controller

Flight Battery

GoPro® camera is NOT included

Your Phantom 3 Advanced fits into your life and makes flying remarkably intuitive and easy. From takeoff to landing, it is completely under your control

Zenmuse H4-3D gimbal

£599.00

For Go-Pro Hero 4 (black)

PHANTOM 3 Standard

HD Camera

3 Axis Gimbal

Full control is in your hands with a remote controller built specifically for the Phantom 3 Standard. Precise control sticks command flight, while a dial lets you tilt the camera to see more

12 Megapixel Photo Camera

£649.00

2.7k HD Video

PHANTOM 3 Advanced

Flight Battery included

1080P HD Camera

Your Phantom 3 Advanced fits into your life and makes flying remarkably intuitive and easy. From takeoff to landing, it is completely under your control

12 Megapixel Photo Camera

£899.00

Live HD View Dedicated Remote

PHANTOM 3 Professional

Flight Battery included

4K Camera

Imagine capturing content fit for the big screen, with crisp images, beautiful resolution, and vivid colors. Integrated, stabilized camera, brings your imagination to life

12 Megapixel Photo Camera

£1150.00

Live HD View Dedicated Remote

BLADE Chroma AP Combo

Follow Me Mode

SAFE

4K Camera

CG03

USB Programmer Cable included

Touch Screen Display

ST10

5400mAh Battery & Charger

Other Versions: With CGO2 £899.00
Go Pro Ready £729.00

£999.00

BLADE 350 QX3 RTF with CGO2

SAFE™ Technology Makes You Look Like a Pro

DX4 Radio

Includes Battery & Charger

Blade® CGO2 3-Axis Stabilized Camera

£549.00

BLADE 350 QX3 RTF with GoPro Ready Mount

DX4 Radio

SAFE™ Technology Makes You Look Like a Pro

SAFE

£299.00

GoPro® camera is NOT included

HANGAR 9 Extensive range of RTF and ARF Scale, Aerobatic, Trainer and Performance Models, Crafted to Exacting Standards

Hangar 9 Inverza 62 ARF

£589.00

¼-Scale PA-18 Super Cub PNP

£989.00

with 33Gx Petrol Eng

DHC-2 Beaver 30cc ARF

£499.00

Cirrus SR22T 30cc ARF

£539.00

ASW 20 4.7m ARF

£749.00

F4U-1D Corsair 60cc ARF

£779.00

Hangar 9 Valiant 30cc ARF

£399.00

Piper Pawnee .40 ARF

£239.00

P-51 Mustang S 8cc BNF

£379.00

P-51D Mustang 60cc ARF

£699.00

Each Evolution petrol engine is purpose-built for model airplanes with low operating costs

10GX	15GX2	20GX2	33GX	40GX	62GX	777 Radial	7160 Radial	7260 Radial
£149.99	£189.99	£209.99	£259.99	£259.99	£399.99	£915.99	£2160.00	£2295.00

We Accept PayPal and All Major Credit and Debit Cards

PayPal VISA MasterCard Maestro VISA Electron

Al's Hobbies Stores open Monday - Saturday 10am - 6pm. Closed Sundays. On-Line Shopping 24 hours at www.alshobbies.com

SHOP WINDOW

SYMA X5SC 2.4 GHZ QUAD WITH HD CAMERA

The Syma X5SC is a 2.4 GHz quadcopter with a built-in HD 720p camera, allowing you to film all of your flights as well as taking photos along the way. This quad comes with a 6-axis gyroscope and the 4-channel flight controls make it suitable for new pilots as well as the pros. It includes a head-less mode for beginners, allowing users to steer the quad based on setting a northern point, rather than the direction the quad is facing. With a range of approximately 30 metres, high stability and indoor and outdoor usage, the Syma X5SC Quadcopter with HD Camera is a great flying package. £69.99 RRP.

ETRONIX POWERPAL TOUCH DUO

Why have one, when you can have two? Coming soon is the Etronix PowerPal Duo Touch, providing two chargers directly from one AC/DC powered unit. This high performance charger features the latest in touch screen technology for ease of use. A full range of adjustable parameters are provided via the touch screen. You can use the supplied stylus for slick and quick operation. With input from either AC or DC power supplies, and a charge rate of up to 10 A , the PowerPal Duo Touch is suitable for most aeromodelling applications. RRP £119.99

ETRONIX POWERPAL EZ-4 50W LIPO 2-4S AC CHARGER

This new compact 2-4S LiPo balance charger is the ideal unit for the everyday hobbyist who is looking for a durable, solid unit for their charging needs. Measuring in at a portable, hand held size of 98 mm x 98 mm, the EZ-4 is well suited to any R/C category: car, boat, aircraft, heli or drone. Its 50 W rated, 4 amp charging power provides an ideal output for charging any small to medium capacity 2S-4S LiPo battery. Housed in a fan assisted aluminium case, the EZ-4 goes about its business quietly and efficiently. RRP £27.99

For more info visit www.cmldistribution.co.uk

SILVERLIT NANO FALCON XS HELICOPTER

Certified as 'The World's Smallest Remote Controlled Helicopter' by Guinness World Records, the remarkable Nano Falcon XS features contra rotating rotors, combined with a sophisticated electronic gyro, for superb directional stability. Suitable for both beginners and enthusiasts, the tiny Silverlit Nano Falcon XS is literally only 45 mm long, and measures just 56 mm including its rotors!

www.flyingtoys.com

STAUFENBIEL RED BULL F4U CORSAIR

This 1400 mm model is a semi-scale replica of the exquisitely maintained F4U-4 flown by the Flying Bulls of Hangar-7 at Salzburg Airport, Austria. Construction from Z-Foam material means that a high scale appearance has been executed, while a light wing loading and a remarkable level of durability are maintained. The work required at the bench is minor since every electronic component, including a 540 KV motor and a Spektrum AR636A receiver with built-in AS3X technology, are factory installed.

www.staufenbiel.co.uk

OPALE PARAMODELS TRIKE XL

Opale Paramodels have introduced the impressive and realistic Trike XL. Almost 1/2 scale, it is the biggest Trike for R/C paramotors and lets you take-off from the ground without requiring the intervention of the pilot. With the Trike XL you can perform touch and goes, rolling along the ground. And all other paragliding tricks can now take on a new dimension as they offer more pleasure and realism! The XL measures 77 x 60 x 65 cm and is made from steel/glass fibre with epoxy resin. Available as Trike XL Naked: €499, Trike XL €699 and Kit Trike XL €1499

www.opale-paramodels.com

Our pick of the latest R/C kits and accessories

HACKER MXS-804 VECTOR ARF

Available now from Hacker is this highly aerobatic model for extreme indoor and outdoor aerobatic flying – the MXS-804 Vector ARF. The model is produced on modern CNC machines from 'almost unbreakable' EPP material. Flying weight of the model is around 210 grams (when fitted with an M Force 2815CA-20 motor and 2S 450 mAh or 3S 350mAh battery. These items or similar, plus ESC and props etc, need to be sourced). Wingspan is 804 mm and length 860 mm. Vector is able to do loops from knife-edge flight and it can perform pretty much unlimited flying manoeuvres. The model shown is in green but it is also available in a range of colours.

49 Euros

www.zoomport.eu

NEAT FAIR 2015

NEAT Fair is held at the Peaceful Valley Campsite buried deep in the Catskills of New York. This year highlights included: Mike Greathouse's Yellow Aircraft Lockheed P-38 Lightning that's been converted to electric power and features counter-rotating variable-pitch props, some superb aerobatics with Dan Landis' new Extreme Flight 104"span Extra 300 and top quality 3-D flying by 15 year-old Chris Diamanti with his Goblin 770 helicopter.

The film also takes a look at a wide variety of electric flying, as well as covering the latest in electric R/C products at the Fair. Check out our full event report in this issue, starting on page 73. DVD: DVSKS180, £12.99 or £14.99 Blu-Ray

gb.trapletshop.com

SPARMAX ARISM MINI COMPRESSOR

This is the start of a new generation of reliable and versatile compressors designed to be easily portable for use within the workshop. Its compact size and weight is ideal for the modeller with limited space – 17.5 cm (L) x 9 cm (W) x 18.2 cm (H). Its working pressure is more powerful than other types of small compressors, which is from 0 psi to 28 psi. The low maintenance, oil-less, single piston compressor features a sturdy metal casing, manual on/off switch, 2 metre braded air hose, and a handle which has a built-in airbrush holder. RRP £95

SPARMAX MAX-4 AIRBRUSH

The MAX-4 provides exceptional performance with even the smallest compressors because it atomises well at low pressures. It has a 0.4 mm needle and nozzle combination, ideal when spraying thicker or heavier paints whilst still obtaining a fine level of detail. It is a dual-action airbrush but it can be easily converted to a single-action airbrush with the single-action air valve that is included. It also features a pre-set handle, which limits the colour flow to avoid over-shooting, plus a crown cap allowing you to get closer to your work and thus achieve finer detail, whilst still protecting the needle. See our full review, starting on page 90. RRP £45

For more info visit www.airbrushes.com

HOBBYZONE CONSCENDO

Earn your glider wings behind the sticks of the HobbyZone Conscendo S motor glider. Built from lightweight and durable Z-Foam material and equipped with a 1.5 m wing the Conscendo S makes achieving high altitudes for thermal soaring easy and fun. This intuitive trainer gives you the freedom of 4-channel control and SAFE technology. Whenever you fly, the brushless Conscendo 370-size motor makes it easy to gain height, while an extended range 2.4 GHz connection keeps the model in contact whilst searching for thermals. Available as RTF and BNF.

www.horizonhobby.co.uk

Yes! I want to subscribe to RC Model World magazine

ORDER TODAY

- ☐ Direct Debit (UK only) £10.50 every 3 months
- ☐ UK 1 year (12 issues) only £42.00 and Save 22%
- ☐ UK 2 years (24 issues) only £79.99 and Save 25%
- ☐ Add a binder for only £9.95 + p&p

Savings based on newsstand cover price.

CODE: MW1215

For overseas prices see 'Not in the UK'

Region:	Price £/US$:

My details:

Title..... Forename .....

Surname..... Address .....

.....

Postcode ..... Country .....

Telephone incl. area code .....

E-mail.....

Traplet Publications Ltd may contact you with relevant information about other products and services related to your interests. Please tick this box if you DO NOT want to be contacted by Traplet Publications ☐. Traplet Publications will never sell your details to any third party.

I would like to send a gift subscription to:

Please also fill out 'My Details' section above. To give more than one gift subscription, please supply address details on a separate sheet.

Title..... Forename .....

Surname ..... Address .....

.....

Postcode ..... Country .....

Telephone incl. Std code .....

E-mail.....

I am using the following payment method:

☐ **CHEQUE** I enclose a cheque for _____ (made payable to Traplet Publications Ltd.)

☐ **CREDIT/DEBIT CARD** Please debit the amount of _____ from my:

☐ Visa ☐ Mastercard ☐ American Express ☐ Switch/Maestro

CARD NUMBER

EXPIRY DATE	VALID FROM	SEC. No (FROM BACK OF CARD)	ISSUE. No (SWITCH/ MAESTRO ONLY)

Signature _____ Date _____

☐ **I understand that £10.50 will be debited from my account every 3 months.**

Please complete the Direct Debit form below.

Instruction to your Bank or Building Society to pay by Direct Debit

For office use only – Service User No. 599211

Ref. No. _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

DIRECT Debit

Please fill in the form and send to Traplet Publications Ltd, Traplet House, Pendragon Close, Malvern, Worcestershire, WR14 1GA.

Name of Bank: _____

Address: _____

_____ Postcode: _____

Account Name: _____

Sort Code: | | | | | | | Account No: | | | | | | | | |

Please pay Traplet Publications Ltd., Direct Debits from the account detailed in this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this instruction may remain with Traplet Publications Ltd., and if so, details will be passed electronically to my Bank/Building Society

Signature _____ Date _____

The Direct Debit Guarantee (This guarantee should be detached and retained by the Payer)

- This Guarantee is offered by all banks and building societies that accept instructions to pay Direct Debits
- If there are any changes to the amount, date or frequency of your Direct Debit Traplet Publications Ltd. will notify you seven working days in advance of your account being debited or as otherwise agreed. If you request Traplet Publications Ltd. to collect a payment, confirmation of the amount and date will be given to you at the time of the request.
- If an error is made in the payment of your Direct Debit, by Traplet Publications Ltd. or your bank or building society, you are entitled to a full and immediate refund of the amount paid from your bank or building society
- If you receive a refund you are not entitled to, you must pay it back when Traplet Publications Ltd. asks you to
- You can cancel a Direct Debit at any time by simply contacting your bank or building society. Written confirmation may be required. Please also notify us.

Enjoy the benefits of a subscription:

- ☛ Spread the cost with Direct Debit
- ☛ Get all your inspiration hot off the press
- ☛ Every issue delivered straight to your door
- ☛ Get your issues before they hit the shops

Not in the UK?

Don't worry here's our overseas subscription rates

OVERSEAS SUBS RATES

Region	1 Year	2 Years
EU	£62.00	£119.00
USA & Canada	US$95.00	US$169.00
Worldwide	£63.00	£123.00

Overseas orders: please complete coupon and return to Traplet Publications Ltd., Willow End Park, Blackmore Park Road, Malvern, WR13 6NN

*based on a 2 year cover price

DIGITAL VERSIONS

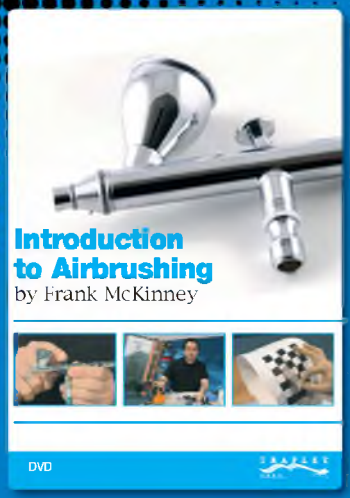
RC Model World is also available in digital format. To buy a digital edition, please visit www.pocketmags.com

SUBSCRIBE TODAY AND GET 2 FREE GIFTS!

Get An Introduction to Airbrushing on DVD + issue 1 of the popular Flight Camera Action magazine for FREE when you subscribe today!

2 FREE GIFTS

Introduction to Airbrushing



It's easy to add scale realism to your models. Using the easy to follow methods presented in this DVD you can discover how to use an airbrush and learn simple and effective airbrushing techniques to add artwork and stand out finishes to your models.

PRODUCT CODE: DV129

Flight Camera Action: Issue 1

Flight Camera Action is a brand new publication that aims to update and inform all users of multirotor aircraft. From Quads to Octocopters, FPV to DSLR, RC Flight Camera Action will keep enthusiasts informed about the latest trends and equipment in the world of multirotors and aerial filming.

PRODUCT CODE: FCASP

WORTH £17.98

SIGN UP TODAY AND SAVE UP TO £28.00*

www.trapletshop.com

Call 01684 588599

Call +44 1684 588599 from outside the UK

Send your form FREEPOST

FREEPOST RTRS-XEGS-CJET, Traplet Publications, Willow End Park, Blackmore Park Road, Malvern, WR13 6NN. (UK only)

Non-UK readers please send completed form to: RCMW Subscriptions, Traplet House, Willow End Park, Blackmore Park Road, Malvern, WR13 6NN, UK.

* Saving based on current cover price for a 2 year period. Please note this offer is valid until 16/12/15 and applies to subscriptions with a minimum 1 year subscription term. In the event of an early cancellation of the subscription, Traplet Publications Ltd reserve the right to request the return of any free gifts or where necessary, the value of any free gifts. The offer applies only to purchases made directly through Traplet Publications Ltd, and does not to apply to any purchases made through Agencies or third party sites. Any free gifts advertised are subject to availability and the offer is not to be used in conjunction with any other offer. Prices are correct at the time of going to press and may be subject to change without further notification. If you wish to cancel your subscription, please notify us to make arrangements. Direct Debit cancellations can be carried out, but no refund will be issued. For one-off payments, requests for a refund must be made in writing. Refunds will be made at the Publisher's discretion. An administration charge of 15% of the remaining credit may be deducted from the refund issued.

HSAD.RCMW_SUBS.DPS.NOV15

Josh Spiers heeds the need for speed as he takes a look at Roc Hobby's canary coloured P-39

RACING AIRACOBRA

She looks fast sitting still

The last model I had the pleasure to review from the CML catalogue was the T-28 Trojan, which was a super scale, user-friendly model. This latest one from Roc Hobby could not be more different. Whereas the Trojan was a smooth scale flyer, this 'Cobra' is a spine tingling, gut wrenching, all out scale racing machine. How so, I hear you politely ask? Well, stick with me and all will be revealed...

This particular model is based on the full size Reno racing machine that was campaigned after WW2. There were two or three others, mostly fitted with uprated engines from the P-63 and sporting special prototype blades from the Bell Aircraft factory. I don't know about you, but the thought of all that power being delivered through a propshaft that ran just under your backside and between your legs does funny things to my nether regions – these were brave men! Some might even say foolish, as at least two pilots were killed flying the P-39 at high speed.

Roc Hobby Rocket Ship

So on to the model, which is well packaged inside a colourful box in the excellent manner we come to expect from this manufacturer. As far as assembly goes, there is not a lot you can say as the EPO airframe is virtually finished out of the box. So having helped the foam cocoon open its contents onto my bench, a good gander was in order.

First impressions were of a super smooth painted yellow finish over an airframe that sports scale panel lines, scale exhaust stacks behind the cockpit, and all of the racing decals applied in the correct positions. The cockpit is also in place and houses a pilot that looks scale size, give or take a squint or two. Even the control horns are in place and awaiting connection, as were all the servos.

Last, but not least, electric tricycle retracts with scale legs and gear doors are also fitted. I was particularly interested in the scale-looking nose leg, as those familiar with the P-39 know how long these are. I wondered if it would take the rigours of less than perfect landings and airstrips? The flying site I use will soon be asking that very question, as it's as rough as a badger's bum in places!

So what makes this yellow and black racer go, so to speak? It is fitted with an outrunner motor with a KV of 770 and a 70 amp ESC driven by a 4S LiPo of 2200 mAh, or thereabouts. It also sports a scale-looking four-piece paddle blade prop of 10.5" x 8", which fits into a black custom fitted plastic spinner, the fit and finish of both being exemplary.

While we are on this subject, there is a very noticeable amount of right side and down thrust built in to the airframe, which

Airacobra comes in a big colourful box

Flap and aileron servos come pre-installed

Rudder and elevator servos are installed in the tail to reduce slop

suggests a great deal of torque being developed at full chat. This was confirmed when we got to the flying field.

There are some nice little touches built into the model which help to set it apart, like the scale air scoop set atop the fuselage and behind the canopy which helps to create a draw of air from the front of the airframe through the battery bay by way of the front retract well. Air then flows over the LiPo and out of the rear ventral holes in the fuselage. There are also two scale air scoops on the top of the nose that I carefully opened up with a hot wire to allow even more air in over the battery pack in flight.

Battery access is by way of the usual canopy hatch, which is held in place by a moulded foam tongue at the front and a couple of powerful magnets at the rear making sure it does not pop off this little rocket ship while at full chat. With the canopy removed you can see the 70 amp ESC sitting in the front compartment behind the front bulkhead. As the ESC was unattached, I secured it with a spot of glue to the side of the fuselage alongside the nose wheel steering servo.

The Build...What Little There Is

So now we come to the assembly, which involves… well, not a lot! The two tailplane halves slide on to a carbon spar and are then secured with two screws from underneath, close to the fuselage into the spar. As the servos and their arms are pre-fitted, it's just a case of connecting the elevator and rudder pushrods, which have a ball link on the surface horn and use a snap link on the servo arm. You will have, of course, already connected the servos to your chosen radio to centre the arms before connection.

Cockpit detail is minimal but adequate

Plenty of room for a large LiPo pack directly on the C of G

What a handsome aeroplane!

The long nose-wheel leg takes the bumps in our field in its stride

Tall nose gear is retractable and steerable

The wing is next on the agenda, and as it is a very stiff one-piece unit with all of the equipment installed, there are only the flap and aileron pushrods to connect as per the tail end. This I did with the wing unattached on the bench. I also cycled the two main legs to see if all was well, which it was, with the scale leg covers fitting perfectly into their moulded rebate.

Before I fitted the wing to the waiting fuselage I covered the servos and any open uncovered wire routes with some yellow adhesive trim for a more scale look and less drag.

The wing is held on by four screws into plastic blocks in the fuselage and only requires you to feed all of the servo wires up into the fuselage cavity as the wing is pushed in to place. Pop the four screws in, turn the P-39 over and connect all the wires as per the diagram in the manual. With that done, I set up all the control surface throws (which are clearly shown in the manual) and then cycled the gear, which worked beautifully, really showing off that stork-like front leg.

All of the above was done of course without the prop being fitted for obvious reasons, as nobody likes a blood and confetti shower in the workshop, do they? Yes I know it does happen, but let's be careful out there! With the paddle prop fitted it was outside to do some amps and watts tests to get an idea of what was to come at the field.

With a 4S Optipower 2650 LiPo fitted the Watt meter was reading 57 amps at 846 watts with a blast of air strong enough to not only remove rice pudding skin, but the whole bowl as well! As you can see from those figures both the motor and ESC are operating well within their limits, allowing for some experimentation should you be so inclined. Bear in mind though, should you go way outside of the manufacturer's recommendations, all warranties are null and void. Anyway, with an airframe weight of around 1360 grams that is a heck of a power to weight ratio straight out of the box.

On a fast, 'clean' fly-past

She looks and flies like a Reno air racer

Coming in 'dirty'. Airacobra slows to a crawl with flaps fully deployed and the undercarriage down

Inverted? No problem. She is an aerobat, as well as being fast

Shall We Fly?

A suitable day arrived, which found all three of us – me, the model and Roger Laskey, the lensman – ready to get the shots for this review. With all of the safety checks done and dusted, the yellow peril was placed on the flight line ready for the maiden, with the thought uppermost in my mind, 'I hope the U/C is going to stand up to this?'. Ha! That was a wasted concern...

Well, the P-39 was on the ground for all of ten feet and then it was disappearing skyward at a rapid rate. A quick flick of the retract switch got the legs away and into the circuit we went. A tad of trim here and there was all that was needed and so with the loud stick backed off a series of passes in various attitudes were flown for Roger to capture.

After five minutes I landed to restock the battery bay and check all was well. And then it was off again to explore the flight envelope when deploying the flaps, half and full. Really slow and stable flight can be achieved with half flap. Roger got a great shot of that on a crawl past. Full flap is akin to dropping anchor and keeping some power on is essential or you will be landing (or crashing) far sooner than expected.

Yes, yes, I hear you muttering, but how fast is it, mister? How to answer that is difficult without a radar gun but I would say it depends on what you are used to and what you regularly fly. Based on that observation the following comments would be applicable and have been heard during its flights:

'That's quite quick.' 'Very quick.' 'B####y hell!' 'S##t where is it?'

Seriously though, this P-39 grooves with the best and considering it is basically a warbird it cuts through the air very well and is totally unfazed with whatever the weather gods have served up on your chosen flying day. It will pull the most outrageous loops and flies inverted the same as upright. And if you have enough rudder it will fly high speed knife edge for as long as you have the amps – either side up.

Landing can be done with or without flaps. I don't bother on a windy day. On a less windy day, with full flap and the legs down,

Really slow and stable flight can be achieved with half flap

Full flap is very effective. It's very easy to get caught out and land short

there is lots of drag and a very short circuit can be flown with a very steep and slow descent into the flare with power on. As I said earlier full flap is very effective and it's very easy to get caught out and land short. Incidentally, there is no trim change on my model with the flaps deployed, although a practice approach from at least 100 feet up is highly recommended.

With this review model I have had more time before copy date to get some meaningful airtime under my belt, which has been very useful in assessing the durability of the retracts, especially the long nose leg, which I was worried about due to the relative roughness of the common from which I fly. Well, it has had about 25 flights to date. It's been taxied, taken off, tipped over and run into the gorse (I must learn to fly one day!) and to this date everything about the U/C is as good as when it came out of the box.

I did treat it to a dose of smooth tarmac when I went to Bob Partington's electric gathering at Colerne, which it enjoyed immensely, and it looked a lot more scale-like taxiing on the blacktop.

So on to the other interesting bit of the review, my performance figures, which are as follows:

4-blade 10.5" x 8" kit prop, 4S Optipower 2,650 mAh LiPo, 57 amps, 846 watts. This particular battery fits perfectly into the space and gives approximately a five-minute run time.

In the interests of experimentation some other props and LiPos were tried. As I said, the ESC is a 70 amp, so looking at the previous figures there is capacity to spare. Well, I happen to have some 5S 2,200 mAh batteries. Need I say more? I had to try one!

So 5A 2,200 mAh LiPo, kit prop gives 68 amps, 1118 watts and enough wind generated to earn a name from the hurricane office!

A new four blade APC 11" x 9", 4S provides 44 amps, 602 watts. And with the 5S there's less torque reaction but it's just as quick, with 68 amps and 1227 watts.

I have had about twelve flights with this last 5S set up and all is well. The only downside is if you take-off at full throttle with a 5S the main legs may not retract fully due to the excess air pressure. The trick is to whip it off at 50 feet, shut down, slow down, pop the gear and go. This works every time.

Final Thoughts

To sum up, the fit and finish of the Roc Hobby P-39 Racing Airacobra is up with the best. The equipment is well up to the job and the flying is something else. But best of all are its great looks, which are something different.

It is not a model for the faint-hearted and you need to be able to stay ahead of the curve because a trundler, it ain't! Concentration is the name of the game with this one. But bet it and you will be a better flyer. I love it!

RCMW

Josh Spiers is in love... And it shows!

MODEL WORLD DETAILS

MODEL INFORMATION

NAME:	P-39 Airacobra High Speed ARTF
MANUFACTURER:	Roc Hobby
DISTRIBUTOR:	CML
WEBSITE:	www.cmldistribution.co.uk
PRICE:	£199.00
MODEL TYPE:	ARTF Reno Racer
CONSTRUCTION:	Moulded Foam

R/C FUNCTIONS

1: Ailerons	**4:** Flaps
2: Elevator	**5:** Retracts
3: Rudder	**6:** Nose Gear Steering

MODEL SPECIFICATIONS

WINGSPAN:	980 mm (38.6")
LENGTH:	912 mm (36")
WEIGHT:	1360 g (48 oz)
WING AREA:	18.35 dm²
MOTOR:	Brushless 3648-KV770
ESC:	70A with 5A SBEC
PROPELLER:	10.5 x 8 four blade
SERVOS:	9 g x 7 digital metal gear

'Tony Nijhuis Designs'

TONY NIJHUIS designs

Buying direct from Tony Nijhuis Designs Ltd you can be assured of a quality service, backed-up by a knowledgeable team of passionate aero modellers.

www.TonyNijhuisDesigns.co.uk

Phone Orders- 07563 518159

Plans	£22.00
VAC Set	£33.00
CNC Pack	£75.00
Wood Pack	£60.00
Complete Pack	**£180.00**

62" Span Typhoon Electric or 0.65 IC

What's NEW

Our new 72" MOSQUITO designed for twin electric and 4S batteries. See web site for further details

Complete Pack –Plans, CNC Pack Wood Pack and VAC set	£259.00

Plans	£22.00
VAC Set	£31.00
CNC Pack	£73.00
Wood Pack	£75.00
Complete Pack	**£191.00**

72" Span Lancaster 4x 200w Electric

Plans	£22.00
VAC Set	£58.00
CNC Pack	£77.00
Wood Pack	£40.00
Complete Pack	**£187.00**

66" Span Lysander 0.52 IC or Electric

Plans	£20.00
VAC Set	£35.00
CNC Pack	£55.00
Wood Pack	£34.00
Complete Pack	**£139.00**

42" Span BAE Hawk 68-70mm Electric DF

Plans	£15.00
VAC Set	£10.00
CNC Pack	£75.00
Wood Pack	£38.00
Complete Pack	**£132.00**

46" Span MK9 Spitfire 0.25 IC or Electric

Plans	£45.00
VAC Set	£58.00
CNC Pack	£162.00
Wood Pack	£121.00
Complete Pack	**£371.00**

104" Span HP Halifax 4x.32-40 IC or Electric

Plans	£22.00
Canopy	£12.00
CNC Pack	£84.00
Wood Pack	£58.00
Complete Pack	**£169.00**

63" Span MK9 Spitfire 0.65 IC or Electric

Plans	£39.00
Nose cone	£16.00
CNC Pack	£154.00
Wood Pack	£67.00
Complete Pack	**£266.00**

86" RetroJet Turbine Trainer (80 size)

Plans	£22.00
VAC Set	£28.00
CNC Pack	£109.00
Wood Pack	£61.00
Complete Pack	**£210.00**

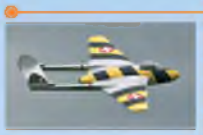
72" Span Avro York 4x 200w Electric

Plans	£55.00
VAC Set	£65.00
CNC Pack	£144.00
Wood Pack	£183.00
Complete Pack	**£427.00**

134" Span Lancaster Electric or 4x0.52IC

Plans	£28.00
VAC Set	£32.00
CNC Pack	£104.00
Wood Pack	£71.00
Complete Pack	**£225.00**

72" Span MK 5 Spitfire 1.20 IC or Electric



Plans	£50.00
VAC Set	£30.00
CNC Pack	£175.00
Wood Pack	£97.00
Complete Pack	**£342.00**

78" Span Turbine Vampire (80 size)

Plans	£52.00
Can. / cowl	£80.00
CNC Pack	£157.00
Wood Pack	£149.00
Complete Pack	**£428.00**

103" Span Hurricane 62cc Petrol

Plans	£22.00
VAC Set	£33.00
CNC Pack	£77.00
Wood Pack	£62.00
Complete Pack	**£184.00**

72" Span Boeing B-17 4x 200w Electric

Plans	£25.00
VAC Set	£42.00
CNC Pack	£73.00
Wood Pack	£57.00
Complete Pack	**£187.00**

60" Span FW-190A Electric or 0.75 IC

Plans	£69.00
VAC sel	£95.00
CNC Pack	£200.00
Wood Pack	£200.00
Complete Pack	**£544.00**

98" Span Turbine Vulcan (80-120 size)

Plans	£22.00
VAC Set	£32.00
CNC Pack	£75.00
Wood Pack	£47.00
Complete Pack	**£166.00**

57" Miles Aerovan 2x 400w Electric

Plans	£25.00
VAC Set	£29.00
CNC Pack	£76.00
Wood Pack	£91.00
Complete Pack	**£211.00**

72" Span Sunderland 4x 200w Electric

Plans	£22.00
Canopy	£13.00
CNC Pack	£75.00
Wood Pack	£80.00
Complete Pack	**£180.00**

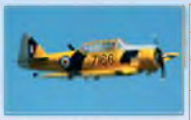
62" Span Hurricane Electric or 0.65 IC

Plans	£22.00
VAC Set	£37.00
CNC Pack	£71.00
Wood Pack	£58.00
Complete Pack	**£178.00**

72" Span DC3 Dakota 2x 600w Electric

Plans	£28.00
VAC Set	£43.00
CNC Pack	£94.00
Wood Pack	£76.00
Complete Pack	**£231.00**

76" Span A400M 4x 500w Electric



Plans	£22.00
VAC Set	£32.00
CNC Pack	£76.00
Wood Pack	£61.00
Complete Pack	**£181.00**

66" Span Harvard 0.65 IC or Electric

Plans	£22.00
VAC set	£32.00
CNC Pack	£72.00
Wood Pack	£61.00
Complete Pack	**£177.00**

61" Span P-51B & D 900w Electric

Other Models In Our Range

	Plan Price		Plan Price
40" BAC Hawk	£13.00	40" Cosmic Wind	£13.00
40" Vampire	£13.00	30" Fokker D7	£13.00
58"Aerovan	£15.00	32" Corsair	£13.00
38" Mosquito	£13.00	32" Mitsubishi Zero	£13.00
38" Moskito TA154	£13.00	40" Cosmic Wind	£13.00
47" Mosquito	£15.00	40" Midget Mustang	£13.00
46" Spitfire	£15.00	24" EE Lightning	£13.00
30" SE5a	£13.00	24" MiG 25 Fox Bat	£13.00

Plans	£22.00
VAC Set	£29.00
CNC Pack	£79.00
Wood Pack	£54.00
Complete Pack	**£174.00**

49" Span Vulcan DF or pusher

New 'ACE' range of half-bodied pilots for WW2 British, German, US and modern Jet style, ranging from 1/10th to 1/5th Scale

All major Debit &Credit Cards accepted

Building your very own model from plan is one of the most satisfying achievement any modeller can experience..... so go on, give it a try and don't miss out on this wonderfully therapeutic side to this great hobby... Tony Nijhuis

For more information on all our products, including free down-loads of build articles and construction photos, please visit our web site- **www.tonynijhuisdesigns.co.uk**

Tony Nijhuis Designs Ltd
47 Baldslow Down, St Leonards, TN37 7NJ
Email- **Sales@TonyNijhuisDesigns.co.uk**

Philip Kent reports from the Scale flight-line at the BMFA Nationals

Flair Tiger Moth built by John Thomas

2015 BRITISH SCALE NATIONALS

Jeff Hartnoll poses with the Tachikawa Ki-9

This nose shot shows great detail on the engine cowling and paint weathering

The British Model Flying Association National Championships for R/C (radio controlled models), C/L (control line models) and Scale events (that included Free Flight, Control Line and Radio Control), took place over the August Bank Holiday weekend of the 29th-31st of August, 2015.

Weather is always a key factor at model flying events and it was with high hopes for good flying conditions that competitors and spectators made their way to RAF Barkston Heath for the biggest model-flying event of the year. The forecast had been mixed, with updated changes being a regular feature in the latter days of the week. On Saturday the weather looked promising, with some sunny periods and not too much wind forecast.

Flying on the R/C scale line was in progress when I arrived at about 9.15 am and my first action was to have a quick look at the models that were on display for the spectators benefit, in what could be described as the 'pit' area. After a couple of years when new models have been rare, I was hoping for better things for 2015. It was then off to get on with my official duties as a scale judge before I could make any further observations.

Scale Classes

There are three classes flown at the Nationals: Flying Only, Stand Off Scale and the F4C International Class. The Flying Only Class is for model aircraft that fit within the general model aircraft rules of size and weight. This is a class that does not require the competitor to have built the model but the flying schedule is the same as the other two classes. The judges will be looking for accurate shapes and correct positioning of the manoeuvres during the flying schedule.

The Stand Off Scale class has two elements to it: the previously mentioned flying part, and a part that looks at the

accuracy of the model when compared to photographs and scale drawings, the static element. This class was introduced to give modellers the chance to have the models judged for the static element without having to build a super scale F4C model. It also enables competitors to enter models that have not been built completely by them from scratch. This does, however, mean fewer points available from the static judging element if a model is part built or considerably prefabricated. For a top static score the model does need to have been designed and built by the entrant and it does need to be accurate when compared to the submitted documentation.

The prestigious F4C is the International class and this, too, has the flying element and a much more demanding static element.

This year there were ten entries in the Flying Only class, six in the Stand Off event, and eleven in the F4C class. Entries were down in the Flying Only and in Stand Off events, but F4C did have one more model than last year.

New Models

On a brighter note, there were several new models attending the Nationals for the first time. In Stand Off Scale, Martin Fardell had entered his new electric powered Ryan Brougham. In Flying Only there was an outstanding new model from Jeff Hartnell: a Japanese Tachikawa Ki-9 biplane. And John Elkington had brought along a very nice 30% scale Cessna 150F.

Dave Fisher had changed his mind just before the event and brought a brand new Hangar 9 ARTF Cirrus SR 22 T instead of his Topfite Stinson Reliant. Dave Osborne had a reworked YT International twin electric powered Rockwell OV 10 Bronco. The model was big and heavy, coming in at 32 pounds empty, or 38 pounds when fitted with its 10-cell batteries.

John Thomas had built a quarter scale Tiger Moth and had completed it in the same eye-catching colour scheme of the full size aircraft in the Shuttleworth Collection. The model is fitted with a NGH 38 cc petrol four-stroke engine.

Ryan Brougham

I was familiar with the Ryan Brougham as I had acquired a Paul Matt Historical Aviation Album, 'Ryan Broughams and their Builders', by William Wagner some years ago. This was my type of aircraft and I had looked at building a model of it myself.

The immortal 'Tiggy', a familiar site in British skies

SIG 1/3rd scale Spacewalker, second in Stand Off Scale, built by Jim McCall

Great cockpit and pilot

Cessna 150F flown by John Elkington (standing) and built by Ben Elkington (kneeling)

The famous Spirit of St Louis, the aircraft that Lindbergh crossed the Atlantic in, was based on a very early version of the Brougham that was being built at the Ryan factory in 1927. Work stopped on the Brougham B1 and the plant worked at a feverish pace to complete the Spirit of St Louis in just sixty days.

Martin's quarter scale replica of the Brougham is based on the excellent drawings by Paul Matt, which are featured in the William Wagner book. This is a big model but with the electric motor and big battery pack it flew effortlessly.

Cessna 150F

John Elkington's Cessna 150F had been built by his son, Ben. It was built from the 30% Wendell Hostetler drawings and was powered by a Zenoah 45 petrol engine. An interesting fact about the subject aircraft is that fellow competitor in Flying Only, Mike Sollitt, owns a full size machine. Mike had also changed models, using a ready-to-fly P51-D rather than his Ryan PT20.

Tachikawa Ki-9

The Tachikawa Ki-9 built by Jeff Hartnoll was a superb model and one that I thought should have been taking part in the Stand Off or even the F4C event. As can be seen from the photographs the Tachikawa has a working aircraft look to it and some fine detail work. I was particularly impressed with the rib tapes and stitching and the dirtying up of the model. This 1:4.5 scale model is powered by a Laser 300 Vee Twin and is covered in Sig Koverall.

The full size aircraft (code named 'Spruce' by the allies) was designed in 1934. It went into service as a medium grade trainer and served with the Japanese Army throughout the Sino-Japanese conflict and the Pacific War. Although it is a little known aircraft in UK scale modelling circles, over 2500 were built between 1935 and 1945.

Judging Time

After the early quick appraisal of the entries it was into the marquee to start the static judging of the Stand Off Scale models, along with ex-BMFA Chairman, Robin Gowler. There is no builder of the model rule in this class and the marking system takes into account how much of the work on the model is done by the competitor.

The first model to be judged was the Westland Wyvern entered by Peter Fullard. Peter had flown a similar model last year

Real or model?

Cirrus SR 22 T, third in Flying Only, piloted by Dave Fisher (Vaughn Entwistle photo)

Close-up of Cirrus

Brian Wood working on his Mustang problems

The YT Bronco, flown into second place in Flying Only by Dave Osborne

but this time, in an effort to gain more static points, he had almost completely re-finished the ARTF model. The paint scheme was new, as was the retractable undercarriage. Due to the model not having been built by Peter the model scored a disappointing 1230 points.

The Ryan Brougham fared better but some inaccuracies in the colour scheme and outline reduced its score to 1460 points. It was hard to fault the Sig Spacewalker built by Jim McCall from Scotland, but the model was built from a kit using several prefabricated items that reduced its score. The Typhoon by Steve Fish was built from the Brian Taylor drawings and managed to come in third place in the static scores.

Andy Bowman had a Tiger Moth built from the Flair kit. This kit builds into a fine model but there were several inaccurate areas that spoiled the static score. The top scoring model in the Stand Off class was the Mosquito built by Tim Ruck from the Brian Taylor drawing.

The first round of the Flying Only class had taken place during the time that I was static judging. I did, however, catch a glimpse of the Bronco during its flight and also the very realistic but underpowered Tiger Moth being flown by John Thomas. The highest scoring flight of the first round was by last year's winner of the class, Dave Charles. Dave Osborne with the Bronco was in second place, with Mike Sollitt in third place with the Mustang.

F4C

The F4C class was the next to go and first away was the bright red Comper Swift, being flown by John Carpenter. John had a good scoring flight in weather conditions that were improving by the hour. Richard Crapp, with his magnificent Westland Wessex, did not fare so well, with his flight ending prematurely after an engine failure. Mick Henderson made a steady if not spectacular flight with the lumbering DH 9a, and Steve Jackson had now mastered his Avro 504K and made a very competent flight.

Jim Reeves put the electric powered Bristol M1C through its paces, making another good scoring flight. Dave Knott, flying his well-known Hurricane, put in a first rate performance and made the highest score thus far in the class. There was then a slight hiccup as Terry Manley (Blackburn Sprat) and Dave Toyer (Miles Messenger) both had problems during take-off, causing them to abandon their flights.

John Carpenter's Comper Swift in F4C

The little known Ryan Brougham, electric powered by Martin Fardell

Own designed Avro 504 flown in F4C by Steve Jackson

Westland Wessex by Richard Crapp

Jim Reeves and daughter with the Bristol M1C

Mick Reeves made a good flight with the Sopwith 1½ Strutter but it was Dave Womersley who made the highest scoring flight in the round with 1694 points. Brian Wood, who won the Stand Off event last year, had moved into the F4C class. Unfortunately he had trouble with his electric powered Mustang and was unable to make a flight in the competition.

Stand Off Scale

The Stand Off Scale class completed the flying for the day. There were good flights from Andy Bowman and Peter Fullard, but it was Steve Fish who made the best scoring flight. This was around 150 points better and put Steve in a strong position. Tim Ruck was unfortunate in having an engine problem and was not able to fly in the first round.

Scale On Sunday

On Sunday it was overcast but the wind was lighter. Dave Charles was first to go in the Flying Only class but technical trouble resulted in his second flight scoring almost 200 points less than his first. Jim Currie and his Tiger Moth also failed to improve on his first round score. John Elkington and Dave Fisher both made improved flights but Alan Glover scored fewer than on his first flight. Jeff Hartnoll had a much better flight with the Tachikawa Ki-9 but Scot, Colin Murray had a problem and landed his small Tiger Moth early.

Dave Osborne made another spectacular flight with the Bronco but it was Mike Sollitt who proved to be the top scorer of the round with his Mustang. John Thomas had struggled for power during his first flight with his Tiger Moth. In the second round the model was obviously struggling again and the flight was cut short.

F4C, Second Round

John Carpenter made the first flight of the second round in F4C. The flight was not one of John's best and it scored fewer than the flight on the previous day. Richard Crapp had been struggling to find a solution to his engine problem on the tri-motor Wessex. After re-programming the failsafe, things were looking more promising and this proved to be the answer as the model performed faultlessly on its second round flight.

Mick Henderson had a better flight with the DH 9a, but Steve Jackson didn't score as well in his second flight. Jim Reeves had a disaster in that the battery hatch came off his Bristol M1 during his motor run. It

Well-known Hurricane by David Knott, second in F4C

Winner of the Flying Only class was this ARTF Mustang flown by Mike Sollitt

Tachikawa Ki-9 in flight

Blackburn Sprat by Terry Manley, F4C

proved impossible to fix and Jim was forced to abandon the flight.

Dave Knott made a slight improvement to his score and both Terry Manley and Dave Toyer managed to get in qualifying flights in the second round. Mick Reeves made an excellent take-off with the 1½ Strutter but after the climb out the motor cut, leaving a very disappointed pilot. Dave Womersley made the last flight of the round and scored a magnificent 1739 points, putting him in a commanding position with just the final round to fly.

Stand Off Scale, Round 3

In Stand Off Scale, Andy Bowman, Martin Fardell, Jim McCall and Steve Fish all made higher scoring flights in the second round. Peter Fullard made the best flight of the round, scoring a terrific 1723.5 points. Tim Ruck also got on the score sheet but once again engine problems spoiled his effort.

By now the weather was worsening and a light rain was falling. Further complicating matters, the forecast for Monday was appalling, with heavy rain expected for most of the day. It was decided that there was still time to run the final round of the Stand Off Scale class before the free flight competition and so competitors were asked to ready their models.

Andy Bowman had another good flight but Martin Fardell disappointed with his lowest scoring flight. Steve Fish made his highest scoring flight of the weekend, putting him in an excellent position. Peter Fullard kept up the pressure with another high scoring flight and Jim McCall did his chances no harm with another 1600 plus scoring flight. After leading in the static element, Tim Ruck had a disastrous time and did not manage a flight in round three.

With the best two flights and the static score counting the positions were as follows:

Stand Off Scale

First place	Steve Fish	Hawker Typhoon	4950.5 points
Second place	Jim McCall	Spacewalker	4843 points
Third place	Peter Fullard	Westland Wyvern	4663.5 points

Miles Messenger by Dave Toyer, F4C

The Sopwith 1½ Strutter flown by Mick Reeves

There were three Flair Tiger Moths competing. This one is by Andy Bowman in Stand Off

Ryan Brougham in flight

The Typhoon flown by Steve Fish was the top model in Stand Off

Rainy Days And Mondays

For once the weather forecast for Monday was accurate. It was raining hard when flying should have started at 9 am and it was decided to make a decision about the final rounds of Flying Only and F4C at 1 pm. However, 1 pm came and rain was still falling and so flying was abandoned.

In the F4C class the average of the flying score for two rounds, plus the static score give the finishing order in normal circumstances. But with only two flights taking place it was the best flight plus static that determined the positions. In the Flying Only class the scores from the two flown rounds were the ones that counted.

It was a bit of an anti-climax to the end of the competition and it was not long before the results were calculated and posted - see table.

This was a disappointing end to what had been a good Scale Nationals. There were some interesting new models to look at and one or two hard luck stories. The event ran without hitches and thanks for that are due to Chris Allen and his team of helpers.

RCMW

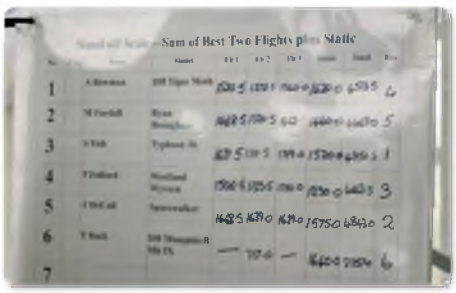
Flying Only			
First place	Mike Sollitt	Mustang	3309.5 points
Second place	Dave Osborne	Bronco	3283 points
Third place	Dave Fisher	Cirrus	3261.5 points
F4C			
First place	Dave Womersley	Chipmunk	3551 points
Second place	David Knott	Hurricane	3470 points
Third place	Mick Henderson	DH 9a	3370 points

What a pity Peter Fullard hadn't built the Wyvern. Third in Stand Off

F4C winning Chipmunk by Dave Womersley

Top static model in Stand Off. The Mosquito by Tim Ruck

The Bronco



The final score sheets

hobbyzone
Dream. Explore. Fly.™

This Plane Can LAND ITSELF

THE HOBBYZONE® SPORTSMAN S+

ENGINEERED WITH SAFE®+

You know the cliché, "the hardest part of learning to fly is landing". Not anymore. The Sportsman S+ is rewriting the book on RC piloting with SAFE™ Plus technology. Flying the Sportsman S+ feels just like learning with an instructor thanks to enhanced features that give assistance when pilots need it most. When activated, Autoland will return the Sportsman S+ to its takeoff location and land the aircraft using GPS-enabled spatial recognition. You'll still be able to influence the Sportsman S+ controls to avoid obstacles and to counter the effects of wind while SAFE plus takes care of the rest.

- AutoLand actively assists with landing with minimal to no pilot input
- Holding Pattern returns aircraft to a fixed point and flies in a pattern
- Virtual Fence keeps aircraft within a comfortable flying range and eliminates fly-aways
- Instant flight recovery with Panic Recovery Mode
- AS3X™ automatically counters the effect of turbulence
- Beginner, Intermediate, and Experienced modes make learning to fly easy
- Compatible with the EFC™-720p HD video camera (EFLA801)

Available in:
Ready-To-Fly (HBZ8400UK)
Bind-N-Fly (HBZ8480UK)
(Transmitter not included)

Wingspan:	1390 mm (54.6 inch)
Length:	908 mm (35.8 inch)
Flying Weight:	950g (33.5 oz)
Motor:	480 Brushless
Battery:	3S 1300mAh
Charger:	DC Powered 3S Balancing with AC Adapter

HORIZON HOBBY.UK | horizonhobby.co.uk | Find Your Local Store Online at horizonhobby.co.uk/shopfinder | SERIOUS FUN.™

HobbyZone products are available from all good model shops. For details of your nearest dealer look on our website horizonhobby.co.uk, contact us by telephone: 44(0)1279 641097, or by email: sales@horizonhobby.co.uk.
©2015 Horizon Hobby, LLC. HobbyZone, the HobbyZone logo, SAFE, the SAFE logo, AS3X, EFC, Dream. Explore. Fly., Serious Fun and the Horizon Hobby logo are trademarks or registered trademarks of Horizon Hobby, LLC. The Spektrum trademark is used with permission of Bachman industries, Inc. Glasair, Sportsman, the Glasair logo and the aircraft body designs are trademarks or registered trademarks of Glasair Aviation USA, LLC and are used with permission by Horizon Hobby, LLC. All other trademarks, service marks and logos are property of their respective owners. 48716

MAX-THRUST LIGHTNING

Kevin Crozier shrugs off a stressful week in the editorial office with a brace of flights from a truly Ready To Fly aerobatic electric glider

KC gives an idea of the Lightning's size

Designed by Mark Tilbury, the proprietor of Century UK, the Kent based R/C model distributor, the Max-Thrust 'Lightning' electric powered glider is the result of two years of design and testing. Mark says, *"We knew what we wanted and set out with the basic criteria of a 1.5 metre wingspan using a three cell 2200 mAh pack, and able to get the model into your car easily. And we wanted it to perform. We have worked hard and feel that we have succeeded."*

Well having just returned after my first flying session with Mark's sleek, all-moulded glider design, I have to concur – this model is a great success. Century say that the Lightning offers high-speed stability both under power and also on the glide – tick that box. It is constructed from Max-Thrust's new super-smooth EPOFLEXY, with carbon spars in the wings and fuselage, giving a very strong airframe – tick that box too. The model features 9 gram high-speed servos throughout and even has a metal geared one on the all-moving tail to give a very precise and accurate elevator response – another big tick from me.

Mark goes on to say, *"Although we call the Lightning a glider, really it is far more and should appeal to anyone like us who loves to fly. Its sleek, elegant lines enable this model to perform precision aerobatics like an F3A model but also soar in the warm air thermals, or a 30 mph wind on the slope, and reward you with a big smile every time you fly."* Again, I have no argument with any of that – the Lightning is highly aerobatic, the glider based design rewarding you the most when you guide her through large, smooth, energy conserving manoeuvres. Best of all, it certainly put a smile back on my face after a particularly stressful week in the office. I haven't had the chance to try flying this sleek soarer from a slope on the Malvern Hills yet, but I have no doubts that it will perform well in windy conditions (motor off, of course), which would be a bit bumpy if flying under power from a flat field flying site. A good all-rounder, then.

A Closer Look

The hard work that Mark refers to is obviously not just restricted to the airframe. The packaging is pretty clever too, the box doubling up as a good way of transporting and storing the glider. Rather than lifting off in the normal way the lid consists of what would normally be the top, bottom and three sides of a conventional box. So with the box resting on the remaining edge, the top slides off what is in effect a thin carry case.

Inside is a complete Ready To Fly airframe, with the fuselage sitting in thick foam 'cushions' at the bottom of the box, and the two thin wings resting above and held vertically by another set of foam cushions. The wings and fuselage are protected by long bubble wrap bags, which are worth retaining even if you do dispose of the outer box. The all-moving-tail (AMT) halves are bagged and taped to the wall of the box, as is the simple but concise eight page black and white manual. Alongside the fuselage sits another long bag containing the square carbon wing and tail spars.

The box looks conventional...

...Until you realise that the top comes off side on! The components are well packed and the box is well worth keeping as a storage case

A true 'Ready To Fly'. All graphics are neatly applied at the Max-Thrust factory

As an indication of the thought that has gone into packaging the model so that it can best survive its long trip from the Max-Thrust factory in China unscathed, one of the wing bags has blocks of the cushioning foam taped to it. So when both wings are placed back in the box the aileron pushrods, horns and servo shrouds are prevented from digging into the other wing – simple but effective.

With all the parts extracted from the box and packaging they were laid out on a grey sheet of card for photography. As you can see, this kit is fairly typical of a modern moulded foam design and the pre-finished parts just need plugging together and four screws tightening up for it to be ready to fly.

If you hate applying large stickers then you will be pleased to learn that Max-Thrust have done all the fiddly work for you and the Lightning comes adorned with some suitably 'forked' decals to match its name.

Four Screws

This sums up the amount of work required to assemble the model. It's certainly a quick build!

The tail goes on first, with the square carbon spar being inserted through the all-moving-tail (AMT) mechanism that is built into the lower fin. The tailplane halves are then plugged in either side and retained by nipping up a small screw in a clamp style moulding recessed into the underside of each surface.

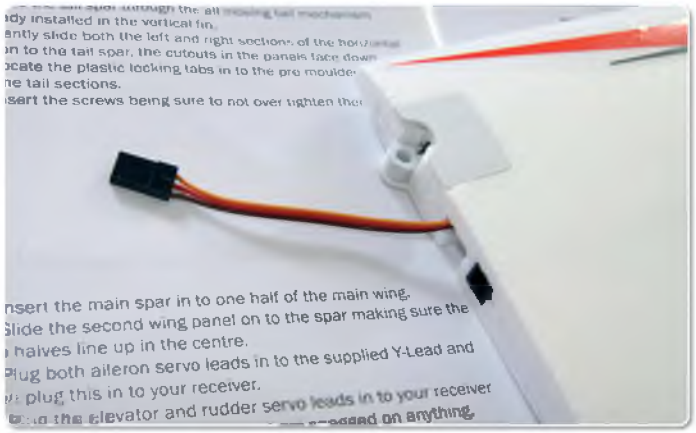
The wing halves are fully finished, complete with 9 g aileron servos, and they slide onto a long, square profile carbon spar. The roots are fitted with moulded wing bolt spreader plates. These plates overlap, effectively jig-sawing the wing roots together and aligning them at the same time. The wings are retained using two M3 x 30 countersunk wing bolts, which screw down just below the wing surface for a smooth finish.

Talking of smooth finishes, I have to congratulate Max-Thrust on the final appearance of this model. Rather than the raised circles and pimples we have become accustomed to as a by-product of conventional foam moulding, this model has a smooth, almost-lacquer like finish. I have seen this used on foam models before but only rarely, so I can only conclude that it is a more costly way of doing things. But it pays dividends in this instance and definitely makes you feel that you are flying something a little bit more special than a typical foam glider. It must help the performance too as this is quite a slippery aeroplane when soaring through the sky!

Fit Your Own

As with the wings the fuselage is fully finished and just requires fitting out with a small four channel (minimum) receiver and a 3S 2250 mAh LiPo. I don't have any packs of exactly that size, so I used a variety of Horizon (2200) and Top Fuel (2400) packs

Tighten the tailplane retaining screws and the model is half built!

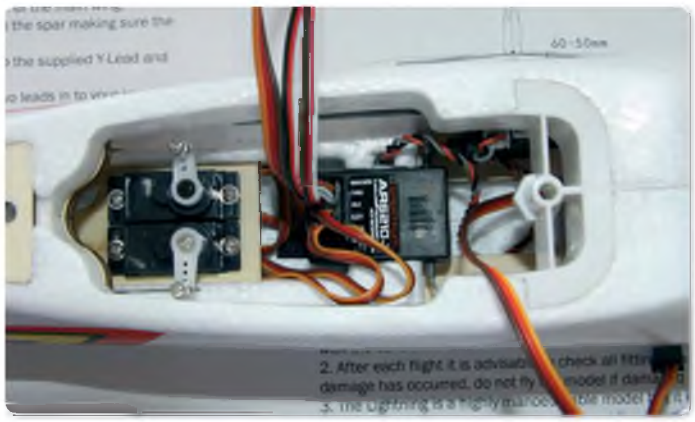


Wing root showing the forward wing bolt spreader plate and aileron servo lead. Just below is the hole for the carbon spar

The clever design of the wing bolt plates enables the wing halves to jigsaw together

Aileron servos are covered by neat shrouds. Note also the carbon reinforcement in the aileron itself

Wingtip skids will help prevent damage when flown from hard, sun-baked grass



The tail servos are fully rigged and were well set up. There was plenty of room for a Spektrum receiver

to fly this model. This is arguably the most common size of LiPo, so Mark and his team are to be congratulated on making the Lightning suitable for the type of battery pack that most of us will have in our battery collections.

During manufacture a long plywood battery tray is clamped between the two sides of the fuselage mouldings. This not only serves to add strength to the fuselage (in addition to the carbon rods that run down each side), but also gives a firm base on which to mount your battery pack. A hook and loop strap is provided to hold the LiPo in flight, but I also added a few strips of Velcro hooks to the tray to provide some additional grip, as all my packs are fitted with loop (fuzzy) Velcro on one side.

The Centre of Gravity is shown as 50 to 60 mm back from the Leading Edge of the wing at the root. With a 3S-2400 pack fitted and pushed as far forward as it can go the Lightning balanced perfectly at the forward balance point, which is ideal for test flying. The forward limit of the battery pack is defined by two wedge shaped mouldings on either side, which stops it from moving forward in a hard landing and hitting the rear of the motor – a nice touch. There is plenty of room to move the LiPo slowly backwards if you wish to experiment with a more rearward Centre of Gravity location.

At the rear of the wing bay are the two pre-installed tail servos. The thin wire pushrods are secured using screw-lock connectors. Some care must have been taken when setting up the servos at the factory as they were found to be very well centred when they were powered up to set up the transmitter. The servos fitted to this model are 9 g mini types; plastic gear versions are fitted to the ailerons and rudder, with a metal geared unit being used to operate the all-moving-tail. This is another thoughtful touch and a worthwhile upgrade.

Just forward of the servos is a space that is just the right size to mount a Spektrum AR6210 receiver. The fuselage mouldings close up again at this point but after cutting away a slice of foam from each side I was able to mount the Rx snugly in the gap provided. The satellite receiver was Velcro'd to the fuselage side, adjacent to the forward wing mount.

A Y-lead is provided to connect the two aileron servos to the receiver and as I wanted to fly the model straight away I used this for a fast and easy installation.

With a 3S pack in the nose the Lightning balanced perfectly at the forward balance point. Note the wedges of foam which prevent the LiPo from moving forwards too far

The skid plate is of a generous size

The canopy is secured with a twist latch. Cooling air can pass through the vented spinner to flow over the ESC and battery pack

Setting up the flight controls using a 4-cell battery box plugged in to the throttle channel instead of the ESC

Lightning poses for a picture before her maiden flight

However, since I have fitted a six channel Rx it would be a doddle to replace the Y-lead with two short extension leads and to use a fifth channel to operate the ailerons using separate functions. This would permit a finer set-up of each aileron, and will also enable me to mix in some up aileron when landing to give a spoiler effect. The Max-Thrust Lightning comes in low and fast, so this simple form of braking would be a worthwhile addition.

Setting Up

Although the Lightning could easily be put together by someone without any prior experience, flying wise it is not a beginner's kit. So it is perhaps understandable that the instructions do not give any recommendations for control surface movements. It is probably fair to say that if you feel that you need advice on suitable control deflections you are probably not going to have enough experience to enjoy flying this model safely anyway.

At this point I will just say that I programmed in three flight modes on my DX6, starting at 70% Dual Rates, with slightly more movement available in each of the subsequent Flight Modes. Coupled with the forward Centre of Gravity, the first Flight Mode provided very pleasing flight characteristics throughout the majority of the test flights, although by the end I have to admit that I was happily switching in full rates to see what she could really do!

The only set up advice given in the manual, apart from the Centre of Gravity, is the neutral setting for the all-moving-tail. This needs to be set so that it is aligned with a moulding line where the two fuselage sides meet at about one third of the way up the fin.

Lightning is fitted with a C2415-1150KV outrunner motor and a 40 A ESC. Up front is a 9" x 6" folding propeller, equipped with a vented spinner to provide some cooling airflow to the inside of the model. Air vents are provided underneath the ESC and there is also a round air exit hole on the underside of the fuselage, just aft of the servos. Ground tests using a watt meter showed a maximum draw of close to 28 A, which is well within safety margins for the ESC provided – and it provided a healthy draft too!

While looking at the underside of the model; other points to note are the long, broad plastic nose skid, which will help deflect many of the bumps and scrapes normally associated with belly landing a model glider. And it's also worth pointing out the neat servo covers and pushrod shrouds that do an equally effective job of protecting the servos fitted to the underneath of each wing panel.

Lightning Strike!

With barely any time needed to assemble and set up this model, I was soon at the point when the Lightning was ready for her maiden flight. With my colleague, Barry Atkinson all set up and ready to go with his Canon camera, the model was given a firm hand launch. She pulled away with authority, although I did note a slight dip in the flight-path immediately after launch, which was cured with a quick dab of up elevator.

At low throttle settings she is still a slippery sort. Well done to Baz for capturing this pic!

Photos done, the Lightning powers away for another series of smooth and graceful aerobatics

Apart from this the Lightning seemed to be very well trimmed and at higher power settings the initial AMT setting seemed just about right, needing no elevator trim. In fact I was so pleased with her that I immediately started to explore her aerobatic potential and I was soon enjoying putting together a series of graceful loops, rolls and stall turns.

Barry, however, wanted to get on with his photos so I chopped the power and brought the Lightning down for some low level shots. It was soon obvious that the recommended AMT setting, whilst perfect for power on aerobatics, is not so good for slowing the model down and stretching the glide.

The sleek ship still wanted to slink around at quite high speed, resulting in quite a high rate of sink. It was also bringing forth some choice words from my esteemed workmate, who was having some difficulty in acquiring focus lock as the slippery white arrow whistled past his lens!

The natural reaction, if you are a glider guider, is to start dialling in some up trim, but not so much that the model starts to climb when under large amounts of power. A bit of up trim will also help minimise that post launch dip that I noticed each time Barry gave her a lob, and I'm hopeful that it will make solo hand launching easier during follow up flying sessions.

For the sake of this review I dedicated the majority of one battery to exploring the effects of adding more and more up trim, until the available movement ran out, plus additional amounts of up elevator using the main stick in an attempt to really maximise the glide angle. And to her credit the Lightning put up with all my abuse until she reached the stall, at which point she merely dipped a wing, before waiting for me to catch up and carry on with my quest.

But it was all in vain really, as I soon came to realise that the Lightning is not really designed to be a thermal soarer, but is best thought of as an aerobatic slope soarer that happens to be fitted with a decent electric motor, which allows her to be flown through graceful aerobatics from flat field flying sites.

So, to be honest I am tempted to leave her well alone and just enjoy her very pleasing flight characteristics as supplied straight out of the box. I have other powered gliders that I can use to catch thermals, but none that match the Max-Thrust Lightning for giving me a taste of slope style aerobatics without having to climb to the top of the nearest big hill! Having said that, I am sure that in strong thermal conditions she will be able to catch the rising air with no trouble at all; the trick will be to slow her down enough to spot a rising wing!

Add in the ability to break her down quickly into manageable sized parts for putting in the back of the car alongside one or two other models and I have to conclude that Mark Tilbury has more than achieved his aim of producing a 1.5 metre span aerobatic glider that runs on readily available 3S packs and is easy to transport.

Congratulations, Mark and please pass on my compliments to the rest of the Max-Thrust team.

RCMW

Simple underside stripes aid orientation. Prop braking is quite aggressive, but it makes sure that the blades fold smartly away on the glide

MODEL WORLD DETAILS

MODEL INFORMATION

NAME:	Lightning
MANUFACTURER:	Max-Thrust
DISTRIBUTOR:	Century UK
WEBSITE:	www.centuryuk.com/RC-Planes/Gliders/Lightning-1500
PRICE:	Airframe Kit £79.99, Plug And Play Kit £129.95 (reviewed)
MODEL TYPE:	Aerobatic glider
CONSTRUCTION:	Moulded EPOFLEXY foam with carbon spars
PARTS SUPPLIED:	Airframe, C2415-1150 KV brushless motor, ESC, folding prop, servos (3 x 9 g, 1 x 9 g digital)
PARTS REQUIRED:	Receiver, 3S LiPo

R/C FUNCTIONS

1: Throttle	**3:** Elevator
2: Ailerons	**4:** Rudder

MODEL SPECIFICATIONS

WINGSPAN:	1500 mm (59")
LENGTH:	1020 mm (40")
FLYING WEIGHT:	1045 g (37 oz)

DISLIKES

Slight twist in tail

LIKES

Graceful aerobatic performance • Fast assembly – a true Ready To Fly • Smooth finish • High quality moulded parts

THE UK DRONE SHOW

IS LANDING AT THE NEC ON THE 5TH AND 6TH DECEMBER 2015

The UK Drone Show 2015 – the only public exhibition in the UK for both the consumer and the commercial operators of unmanned aerial vehicles (UAVs) or drones and dedicated to the safe use of drone and UAV technology taking place on the 5th and 6th of December at Birmingham's National Exhibition Centre (NEC).

Supported by the CAA & appealing to the hobbyist & the commercial users of UAV/drones the show includes a number of influential guest speakers and the following:

- Flight training companies including; UAV Academy, EuroUSC,
- Manufacturers including; DJI and Parrot
- Insurance companies; Insurance for Drones, Besso and Coverdrone
- Commercial companies; Altitude Angel, Eye Sky Group, EuroUSC
- Flying & agility demonstrations, plus try and fly a drone yourself
- The regulators; The CAA, Ofcom and NATS
- The RC flight media and clubs; Flight Camera Action and the BMFA

To get your tickets for the show and to see a full speaker list, go to

WWW.UKDRONESHOW.COM

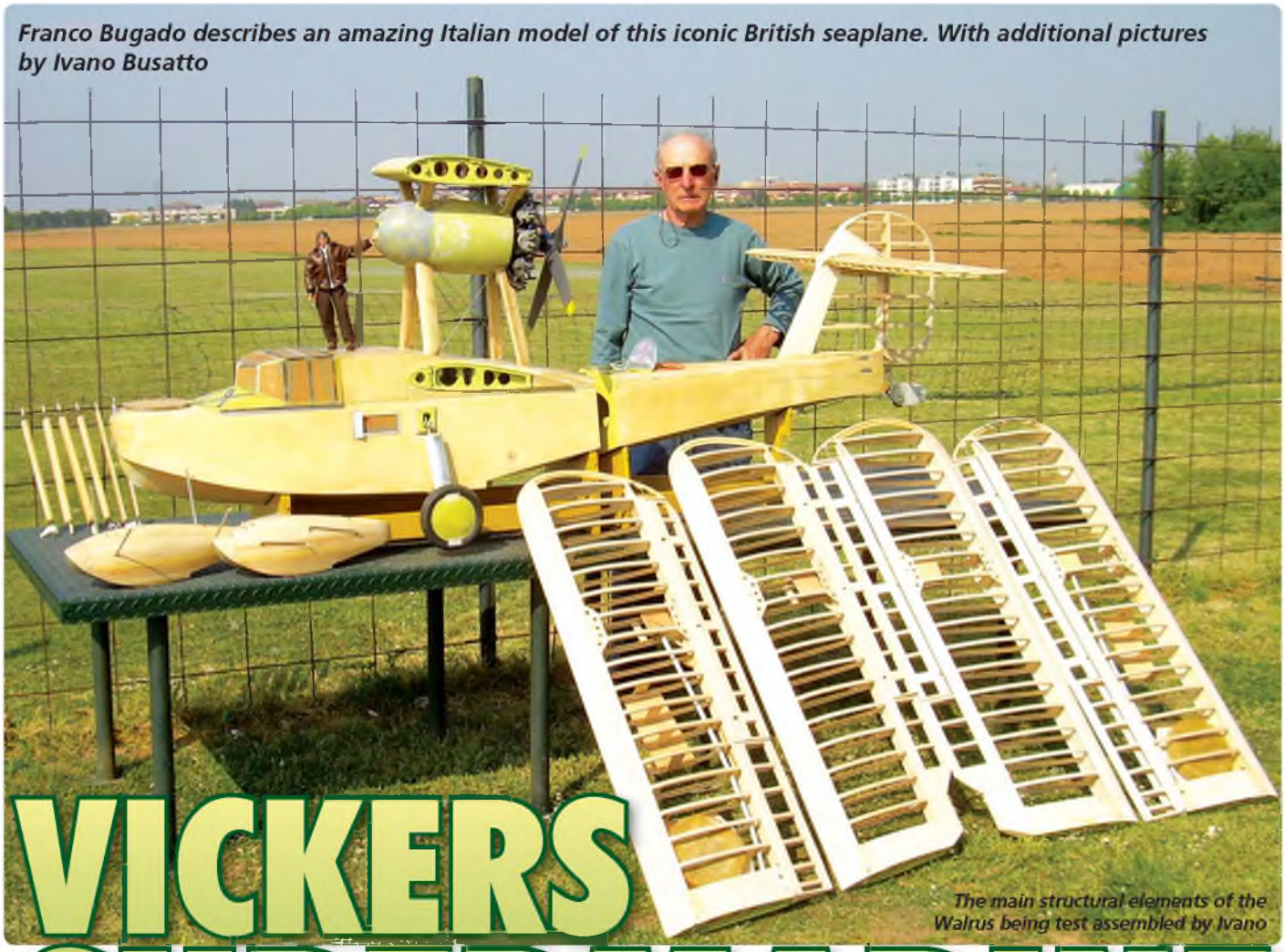
or for more information and exhibitor information contact info@ukdroneshow.com.

DRONE SHOW UK

UKDRONESHOW 5-6TH DECEMBER 2015 NEC BIRMINGHAM

www.ukdroneshow.com

Franco Bugado describes an amazing Italian model of this iconic British seaplane. With additional pictures by Ivano Busatto



The main structural elements of the Walrus being test assembled by Ivano

VICKERS SUPERMARINE WALRUS

It is very impressive to see a model aeroplane coming out of the water and going up on a slipway without any help from an R/C pilot or assistant, just by using a small motor rpm adjustment. Also remarkable is seeing the perfect movement of the landing gear as the model enters the lake, retracting when the water reaches the 'open' position of the wheels.

This model of a Vickers Supermarine Walrus, built by our Italian friend, Ivano Busatto, who lives close to Milan, is a beautiful and much appreciated scale model at model meetings, like the one held last June on Sesto Calende. This seaplane meeting was arranged for the centennial celebrations of the SIAI Marchetti company, created in 1915 and now the property of Alenia Aermacchi.

The Varese region is very well known in Italy because the aircraft companies of Caproni, SIAI and Macchi are all located within a few square kilometres. Also, the Volandia Air Museum is housed in the old Caproni buildings. So this area is rich in the history of aircraft engineering and manufacturing.

The flight of the Vickers Supermarine Walrus is impressively scale like thanks to the noise of its nine cylinder engine. This motor is quite similar to the Bristol Pegasus Mk. I 635 hp or Mk.II 775 hp and its visual impact on the model is remarkable. The motor is a 96 cc Model 996 glow engine made by Seidel. After initial testing, Ivano inclined the engine axis so that it was parallel to the horizontal tail.

Ivano still uses his 40 MHz Graupner MC 24 radio but he carefully checks the equipment of the other flyers before flight to prevent accidents with people using the same frequency. He told us that he has seen some accidents with 2.4 GHz and for this reason he had a prolonged debate with himself, wondering whether to buy a new transmitter? Finally, he decided to continue with his old 40 MHz radio.

The Walrus replica is constructed to 1:5 scale, giving a span of 2.80 metres, a length of 2.35 metres and a total weight of 20 kg. The full-scale aircraft had a span of 45 ft 10 in, a length of 38 ft, with a total weight of 8050 lb (3620 kg).

Construction Of The Walrus

Ivano spent a little less than one year collecting information, documents and drawings of the full scale aircraft from magazines and the Internet. The basic data and info were taken from the March 2005 issue of Flying Scale Models, but the main help came from various pictures and shots taken by friends who visited the RAF Museum, Hendon.

He had his friend Angelo Fontana produce 1:1 computer scale drawings of the model in order to produce all the necessary pieces for laser cutting (more than 200 pieces) and another friend, Carlo Odescalchi (owner of the ATT factory of Nebbiuno) cut the pieces. The stainless steel parts were cut with a water jet machine owned by another friend, Marco Boniardi.

Cockpit being framed up

A naked pilot enjoys the alfresco cockpit prior to it being covered

The cockpit with the undercarriage installed. This picture also shows the wing mounting points

Close-up of the instrument panel and control wheel

A view of the aft fuselage, complete with the four-bladed prop formed by bolting two conventional props back-to-back. It works surprisingly well!

Scale is very important when you manufacture a seaplane. Many people calculate the estimated weight by adding the engine, fuel and all the electrical equipment to the model structure and then compare it to the volume of the hull. Normally the submerged hull volume (in cubic centimetres) has to be 1.75 times the weight (in grams). Or, if you prefer the volume in cubic inches, it has to be three times the weight in ounces.

But you have to take into consideration scale effects. In practice this means the wave height. Even on a small lake the wind can generate high waves, which can be dangerous for a model. Hence, the model cannot be too small. Generally speaking we would suggest a practical scale of 1:4 to 1:6. Our experience with Ivano's model has shown that 1:5 scale is a good choice. The floatation height is correct and take-offs and landings are realistic. The surface load is 80 grams/sq. dm.

We do not recommend operating such a model on the open sea because of the electrolytic action caused by saltwater and the high degree of corrosion suffered by the electric components.

The construction of Ivano's model is traditional, using balsa (a few parts) and plywood, with poplar and some birch in areas subject to major loads. It follows as much as possible the full scale structure. Nine servos are installed and fifteen metres of silver Solartex were used. Ivano replicated the livery of the Walrus used on HMS Birmingham of the Fourth Cruiser Squadron, East Indies China Station during the 1938-40 period.

The four blade 26" x 10" propeller was made by Ivano using an old technique, also used on many full scale aircraft (typically Dornier), of bolting the hubs of two 2-blade propellers at 90° to each other. It was not easy to obtain suitable propellers given the necessity of obtaining more than 4,000 rpm, so the propellers were homemade. Eventually Ivano achieved 4,300 rpm and 12 kg of thrust, resulting in a take-off speed of 70 km/h. With one two-blade propeller the engine produces 5,300 rpm.

The model breaks into separate parts for transport and storage: two left wings, two right wings, tail, two side floats and the sub-assembly engine nacelle/front fuselage/central part of the upper wing. This sub-assembly is the key piece. It connects to the upper left and right wing halves using eight metal bolts.

The wing leading edges comprise a strong anti-torque box with plywood spars and

Construction details, showing the left wings and engine pod under construction

The swoopy hull being built. It took a lot of clothes peg clamps!

The completed Walrus, ready for its maiden flight

Firing up the motor

balsa covering. A second spar runs along the rear of the wing and supports the aileron hinges. The ribs are plywood with laser cut outs to reduce weight. The hull/fuselage is made of plywood covered with glass fibre.

All the bracing wires are 1.5 mm dia. stainless steel, multi-strand wire with adjusting screws. These were also homemade by Ivano, who prefers to avoid the commercial wires used for boat modelling.

The main struts between the wings, and between the fuselage and the motor nacelle are 13 mm diameter stainless steel tubes with balsa streamlining. The engine nacelle is carved polystyrene foam, covered in glass fibre. The internal fuel tank has an 800 cc capacity.

The undercarriage legs are connected to a strong internal frame to withstand hard landings. The main legs are retracted electrically. The construction is very similar to the full scale.

The tailwheel is covered and combined with a rudder system to allow for steering while on the water. Last, but not least, as with the full-scale aircraft the model has the possibility of folding the left and right wings backwards thanks to two hinges located on the second spar. In this way the overall size of the model can be reduced.

Full Scale Walrus

The first flight of the full size prototype took place on June 21, 1933. This amphibian aircraft was called the Supermarine 236 'Seagull V' and it was equipped with a four-bladed wooden propeller and a 635 hp Bristol Pegasus II M2 engine. Some problems were caused by reaction torque and it was necessary to adjust the motor axis several degrees to starboard. Aircraft construction was very strong in order to withstand the stresses resulting from catapulting the aircraft from warships. The full fuselage was metal.

The original project resulted from a request from the Royal Australian Air

It floats! Walrus leaving the beach at the Sesto Calenda meeting

Ivano gets that funny feeling in the pit of your stomach when you know you're committed to the first flight

Walrus flies! What a stunning model

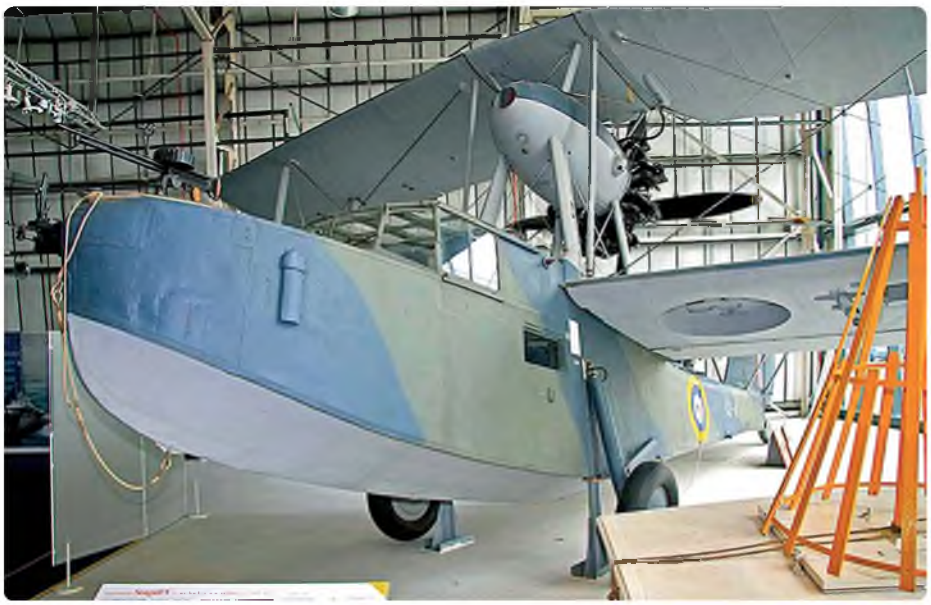
Coming home in one piece after a successful maiden flight

Force for an amphibian aircraft with four hours endurance and a three man crew, which was suitable for catapult launching. The aircraft's planned roles included reconnaissance, survey and communications. The first order for this plane came from the RAAF. Later it was ordered by the Royal Navy and its name was changed from 'Seagull' (maintained by the Australians) to 'Walrus'.

The prototype was built in 1930 and in 1934 the aircraft was submitted to a long test program, including a 30 knot wind landing and 1.8 metre wave heights. The performance in the water was superior to the other land planes converted in this period.

In 1936 the aircraft entered service with the Fleet Air Arm. By 1940 it equipped all the Navy's catapults. For easy stocking on warships the wings were foldable around the second spar hinge. All the struts remained in position. Two machine guns were installed, the forward one in front of the windshield and the second one on top of the hull after the lower wing trailing edge.

More than two hundred and eighty Walrus's were manufactured before production was diverted to Saunders Roe, who built more than four hundred and fifty machines. The main difference was the use of a wooden hull instead of the original aluminium construction used by Vickers Supermarine.



The Vickers Supermarine Walrus on display at RAF Hendon (Giorgio Apostolo collection)

The aircraft provided a valuable service during the war. It flew with eleven squadrons as a rescue aircraft that was capable of operating in difficult weather conditions.

The Future Of Ivano's Model

If you pay a visit to Ivano's workshop you will be impressed by the number of aircraft models hanging on the walls and on every flat surface. He also has two machine tools and two work tables! There are many types of aircraft models but he needs to reduce the quantity since he would like to continue aeromodelling but needs more space.

We asked him, 'What about your beautiful Walrus?' He had no answer, but we have seen that he is working on a new project and the Walrus takes up a lot of space, even when disassembled... So we shall see! **RCMW**

LEGENDARY MIGHT IN MINIATURE

ULTRA MICRO WARBIRDS
THAT FLY LIKE FULL-SCALE

When it comes to delivering spectacular realism and flight performance on a small scale, E-flite® UMX™ and ParkZone® Ultra Micro Series warbirds rule the skies. All come out of the box with authentic paint schemes and an astonishing level of scale detail. Exclusive 2.4GHz DSM2™/DSMX® technology allows them to fly circles around everything else in their class. But the real ammunition they pack is delivered by the added stability revolutionary AS3X™ (Artificial Stabilisation - 3-aXis) technology provides. No matter which warbird you choose, you'll enjoy the convenience of small spaces with a model that has the guts to make you feel like you're at the command of the real thing.

Give your ultra micro fleet the boost it deserves.

Horizon Hobby products are available from all good model shops. For details of your nearest dealer look on our website horizonhobby.co.uk, contact us by telephone: 44(0)1279 641097, or by email: sales@horizonhobby.co.uk.
©2015 Horizon Hobby, LLC. E-flite, ParkZone, UMX, AS3X, Serious Fun and the Horizon Hobby logo are trademarks or registered trademarks of Horizon Hobby, LLC. All other trademarks, service marks and logos are property of their respective owners. 47199

E-flite
ADVANCING ELECTRIC FLIGHT

parkzone

660mm (26.0 in) Wingspan

E-FLITE UMX B-17G FLYING FORTRESS

Respect for the scale outline of the original B-17G Flying Fortress makes this fully-assembled 1/48-scale ultra micro airplane a thrill to fly. Plus, its three-blade propellers complement its authentic "Man O War II" trim scheme.

BNF (EFLU5380)

405mm (15.9 in) Wingspan

E-FLITE UMX F4U CORSAIR

An authentic paint scheme, clear canopy and moulded panel lines make this ultra micro easy to appreciate. Decals are provided to finish your model as either the ace Corsair flown by Gregory "Pappy" Boyington or Ira "Ike" Kepford.

RTF/BNF (EFLU2600/EFLU2680)

410mm (16.2 in) Wingspan

PARKZONE UMS P-51D MUSTANG

Moulded panel lines, clear canopy, gun and exhaust details, pilot figure, instrument panel details, 4-bladed prop—you get it all. Even the trim scheme is that of a full-scale Mustang that flew with the 334th Fighter Squadron during World War II.

RTF/BNF (PKZU2400/PKZU2480)

HORIZON HOBBY.UK | horizonhobby.co.uk | Find Your Local Store Online at horizonhobby.co.uk/shopfinder | SERIOUS FUN.™

A renowned devotee of F3A aerobatics, Terry Westrop won nine UK Championships, including four BMFA Nationals, four UK (GP) Champ's and one UK Masters between 1986 and 1997. He retired from F3A soon after to further the growing interest in Freestyle Aerobatics. Five 'Loaded Dice' designs were previously published both here in the UK and in the USA.

Terry Westrop with his latest Loaded Dice design, exclusive to RC Model World

A Perfect Combination

It has been some time since the last Loaded Dice was 'released', ether in plan or kit form and EP (electric power) was the motivation to produce this, the smallest and least expensive version. Loaded Dice 30 EP has been designed especially for this fast growing area of aeromodelling. This version of Loaded Dice has obvious similarities to its predecessors, incorporating many design characteristics gleaned from all those years designing and developing my Loaded Dice competition R/C aerobatic aircraft during the 1990s.

One of the major factors in governing flight quality, the wing aerofoil, was further developed for use with this model. I resisted the temptation to stretch the fuselage to enhance smooth aeros and decided upon a square format (similar wingspan to fuselage length). This is a compromise to allow the model the capability of 3-D flying as well as F3A style aeros. Together with the large flying surfaces it worked out extremely well. Despite its small size this 'little looker' is amazingly precise, smooth and easy to fly.

First priority on the fuselage was to provide better cooling, just in case. The nose has been redesigned and is now more akin to a full size 'Lycoming' powered aircraft, allowing air to flow more freely through the cowling and LiPo bay. Improved cooling is particularly important if the model is used for 3-D. The prototype has been used now for just over two years. Three different motors have been installed and no overheating has been experienced.

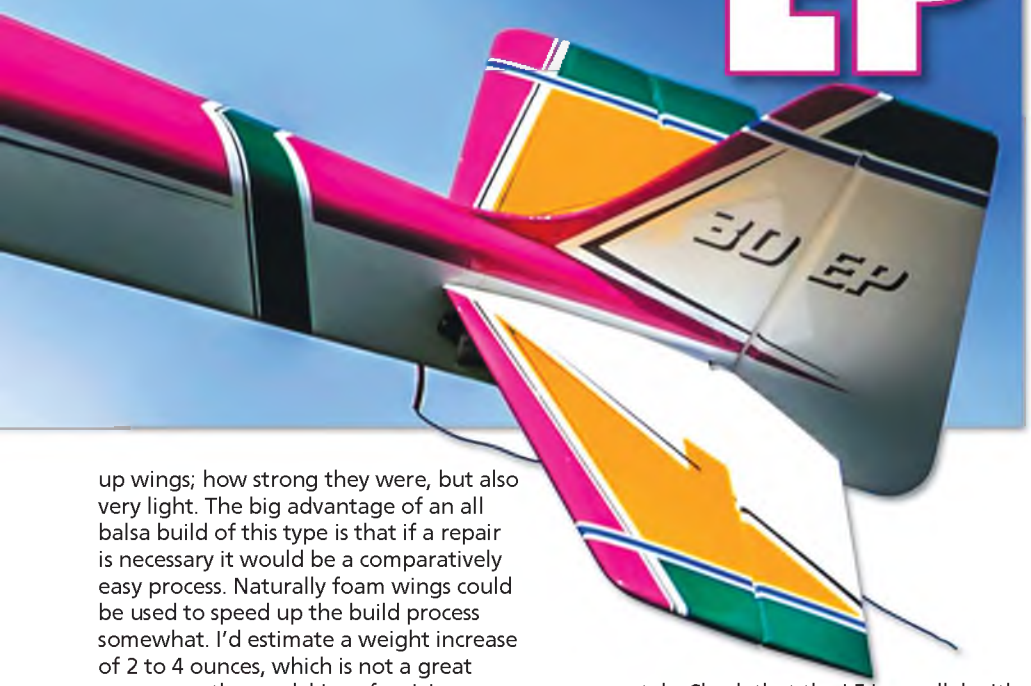
I embarked on the project unaware of the potential of brushless outrunners so, initially, a 3536 motor was driven by a 3S 2200 LiPo. The performance was 'nice'. This combination would be perfect for those who simply wish to fly a competent, decent looking model in a relaxed manner, but also in the knowledge that should they wish to be more adventurous the model is capable of doing so. I used 6 mm 'stand off' plastic bushes with the 3536, just in case the 3542 would be needed. Alternatively 1/4" ply or hardwood could be used to pack out the motor mount.

However, my desire persisted to fly unlimited aeros and in time the motor was replaced with a 3542, plus a 3S 3000 LiPo, resulting in my perfect combination. Fellow MFC club member, Brian Ball went a step further when constructing his Loaded Dice 30 and fitted a 3548 plus 4S!

The all balsa build is very light, very durable and I'd say it would be difficult to produce a heavy model. I still recall my first competition designs that used built

LOADED DICE 30 EP

Fly like a Champion with this 1200 mm span, 30 size electric powered version of Terry Westrop's well developed pattern plane. Flying session pictures by Neil Hutchinson



up wings; how strong they were, but also very light. The big advantage of an all balsa build of this type is that if a repair is necessary it would be a comparatively easy process. Naturally foam wings could be used to speed up the build process somewhat. I'd estimate a weight increase of 2 to 4 ounces, which is not a great concern as the model is so forgiving.

Construction

The built up wing is made first. (A laser cut Wood Pack of intricate shaped parts only is being developed by Traplet – see Plan Details at the end of the article for more info.) It is tempting to build the fuselage first but the wing will be required beforehand. I generally use PVA wood glue unless a procedure requires cyano or epoxy.

Produce the ribs (they can be 1/16" medium or 3/32" soft), remembering the holes for servo leads, along with the spars. Cut the TE and LE 1/16" sheet a little oversize at the tips to allow easier tip rib alignment. There are two obvious methods, both making one panel at a time:

a) Pin all ribs over the plan using balsa support strips at the TE and LE, adjusting to ensure it is straight. Place the TE support around 1" from the actual TE, adjusting so that it lines up with the LE centre line.

b) Pin the TE bottom sheet down and fix all ribs in place, ensuring the LE strip locates accurately. Check that the LE is parallel with the TE.

For the former method (where it is possibly easier to ensure a straight panel) add the top 1/8" x 1/4" hard spar, plus TE sheet and LE strip. Repeat for the other panel. When dry, remove and replace onto your support strips, adjusting again to maintain a straight panel. Add the spar and aileron sub ribs, plus soft balsa infill for the horns and wing bolt blocks. Mark the positions for the ailerons to allow accurate cutting with a razor saw later.

Remember to make one left panel and one right!

Saw slots for the U/C bearers and install, along with all reinforcements. This installation has proved extremely durable, although some may prefer the composite type of undercarriage mounted off the fuselage.

Fit an extension lead (or pull-cord) through the servo lead holes for ease of access later. LE and TE sheets can now be fitted, again checking alignment as once dry the wing will not move.

Drill for the piano wire U/C and mark the position of the wire on the sheet. Make up the wing dowel sandwich, ensuring that the dowel is a snug fit. Sand the panels when dry and add the tip blocks, avoiding glue at the ailerons. Construct the servo boxes. Sand the roots to give the required dihedral and make the brace. File a notch in the LE for the dowel and install the wing dowel assembly in one side - halfway, of course. Shape the tip blocks, then pin one panel flat and offer up the second panel, sanding until the required dihedral appears under one wingtip and ensuring good alignment of both panels (no warps). Remove the dowel to avoid gluing it, as this is left removable (in the event of future damage).

The ailerons can now be carefully cut from the panels, sanded and faced with medium balsa. Hinge them using Mylar, testing the fit to ensure that the ailerons are 'in section' prior to chamfering the LE. The remaining 1/16" sheet can now be applied.

Fuselage Construction

Cut the fuselage sides (full length, including cowl) from 3/16" sheet, marking all former positions on the insides. It is also useful to lightly draw a datum line, through the thrust-line, down the length of the outside of the fuselage sides for incidence reference later. Cut servo slots. On a flat surface pin down the sides, add the doublers and longerons (use right angle balsa). Make up the formers. Bulkhead position is dependent upon motor length, i.e. 36, 42 or 48. Or, as I did, fit spacers to suit your initial choice of motor, providing for a possible future changeover.

Fit F2 (wing dowel former) and F3 to one side. Offer up the second side, sanding the formers to allow good alignment. With the motor installed on F1 offer the assembly into the fuselage, clamping to hold it in place. When satisfied that the side and down thrust are correct cyano in place, then add reinforcements.

Sand the longerons at the rear end to allow the sides to be brought together. On a straight line or using pins accurately placed in the top centre of the three formers, clamp the tail end, sighting down to another pin placed in the tail joint. Cyano can also be applied here. Servo lead extensions can be introduced if preferred. Sand the top and bottom fuselage faces ready for the sheet balsa and mark the cut line for the cowl.

Fit only the top decks, plus front lower decking, ensuring that the LiPo bay hatch/cooling duct is correct.

When all sheets are dry sand the front faces to fit the nose-ring. I compromised the side thrust offset on the nose-ring for appearances sake. Add nose-ring reinforcements/fillets. Razor plane and sand the fuselage profiles. The decks can stand vigorous balsa removal to acquire a good shape, resulting in less weight. Sand the cockpit area and add the facings.

To check the wing dowel offer up the wing onto the fuselage to confirm that the dowel hole is correct. F2 can be filed slightly for alignment if the wing does not

Basic wing frame with ribs and spars in place

Undercarriage leg support block from 1/8" plywood with 1/2" triangular fillets

The wing is sheeted with 1/16" balsa. Note the servo lead holes in the ribs (left), and the grooves for the undercarriage wires (right)

Underside aileron servo bay is lined with 1/16" balsa sheet

Fuselage is sheet sided with doublers and 1/2" triangular corner section. Note motor sidethrust

Top of fuselage with decks fitted and before final sanding

seat on the fuselage. Fit the wing, pinning it to the fuselage. Ensure the wing is square and drill for the bolts. Either thread the hardwood blocks or use captive nuts. Check the incidence is around 1/8" positive (i.e. 1/8" lower at the TE than the LE, ref. the datum line). If this is a little out it can be adjusted 'relative to the tailplane' when it is fitted later. Bolt it up and fit the rear lower sheet up to the wing TE.

If the wing seating is not up to the standard required lightly draw the fuselage outline on the wing. Remove and place 1" Sellotape along the mark. Use filler, two pack epoxy or polyester (I use Bondaglass SL), along the fuselage side and quickly bolt the wing back in place and secure. Sand and you will have a perfect wing seating.

The fuselage should have a final sanding prior to careful removal of the cowl. The same filler can be used to repair/face the cowl seating if necessary.

Tail Parts

Making the tailplane is by comparison a very straightforward process. It is made from warp free sheet balsa, planed and sanded to an aerofoil section. Med-soft sheet is used and, depending upon your colour scheme, balsa can be removed from the centre of the tailplane, particularly if you are using harder balsa from your existing stock. Elevators are joined prior to sanding. To help with centring, lay the cut tailplane on a flat surface. Hold a felt tip or similar firmly on that surface and rotate the sheet around the pen. Hinge the elevators to the tailplane, ensuring that they do not misalign. The fin and rudder are produced in the same way. Mylar is my preferred hinge material.

Fit the tailplane, again ensuring it is square in both planes using the fuselage and wing as reference. Now the incidence can be checked relative to the wing. If you have a wing incidence gauge, set it to 1/3 degree positive. Or, using a straight piece of wood placed parallel with the tailplane, the wing should register 1/8" more at the TE than the LE.

Check the fin next and employ the same method of checking alignment as with the tailplane (but from both sides of the fin), referencing it with a pin or pencil mark at the centre of the top deck at the rear of the cockpit.

Mark all control horn positions with 'indents' ready for self-tap screws, then harden the contact area with cyano.

Finishing

Solarfilm for covering and Solartrim for decor is used to produce the original 'classic' Loaded Dice colour scheme. If you wish to apply a scheme that is similarly complex it is helpful to lightly draw the guidelines onto the balsa before filming.

Viewed from the underside. Note the curved cowl chin and battery hatch cut out

Wing seat with doublers and 1/2" hardwood wing bolt fixing blocks in place

Tail surfaces are cut from sheet balsa

Tail fitted and faired in

Cowl removed, showing the motor stand-offs

Ready to cover

This is the lightest method of producing a good-looking model and as no fuel residue is present it is perfectly durable.

The cockpit can be finished as desired. The canopy can be trimmed to full size (as per my original), or as a slim low profile (as per Brian Ball's example). The canopy can be attached with glue or screws. I used a 1 mm x 6 mm alloy strip with three screws each side to fix mine in place. The look is novel and it allows the canopy to be removed/replaced easily if necessary. (See 'Plan Details' for the purchase of an optional Clear Canopy.)

The main U/C is secured with a 1 mm x 6 mm ABS plastic strip. Standard U/C clamps can be used.

Hardware

A decent vice, along with a wire bender, makes for easy forming of the main U/C. If you only have a vice and mallet be careful to allow a little radius on each bend or the piano wire may fracture. The U/C form may appear to be more complex than necessary but it assists with those heavier landings, equalising forces (it was devised for retracts on competition models), but it's not essential. Trial fit each leg in the wing, bending until both are at the correct angle.

The tail gear is formed using large pliers and may seem rather long. This higher than usual stance provides a lower angle of attack and will certainly make your landing and take-offs seem effortless. Some soldering is needed, of course. A standard 'off the shelf' tail gear can also be utilised.

R/C And Power Train

Well, as I'm old fashioned I still use 35 MHz. But the new generation of servos are excellent and a huge choice is available in today's marketplace. The tiny New Power XL-9 servos I used on all surfaces appear fine, although the metal gear version might be worthy of consideration as the standard plastic gears are quite delicate. BEC was used on the prototype but there is plenty of space for any type of hardware.

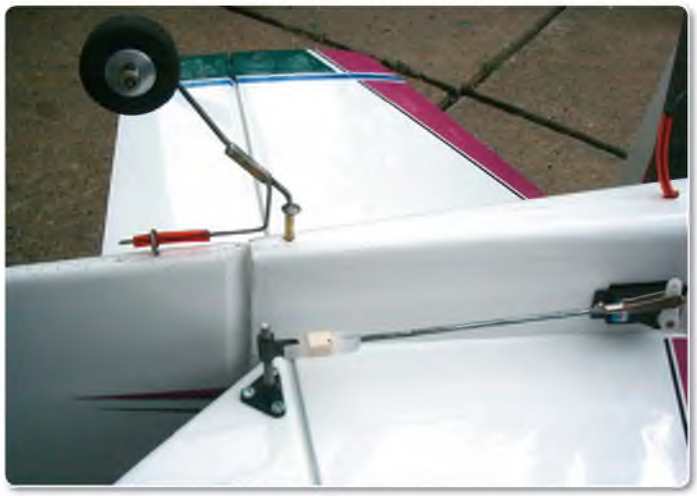
As already indicated earlier in this article any number of brushless outrunner motors can be used. As is the norm, choose a motor/ESC/LiPo to suit your 'initial' requirements. If you have allowed for flexibility during motor installation the combination can be upgraded whenever you need.

My set up is a 3542 plus 60 A ESC, 3300 3S LiPo and a 12" x 6" APC-E prop. This is perfect for my requirements.

The 3536 used a 60 A ESC, a 2200 3S LiPo and a 11" x 5.5" APC-E.

The 3548 used by fellow MFC member, Brian Ball in his Loaded Dice 30 employed a 4S 3300 LiPo and a 12" x 8" APC-E. Brian likes the combination, but it can be ballistic!

Elevator and rudder servos are offset to avoid touching inside the fuselage



Elevator linkage and steerable tailwheel

At rest. The painted prop adds a bit of style

Flying

As you can imagine, using the smaller motor/LiPo combination results in a more rearward C of G. Fitting the larger motor/LiPo (which is not inconsiderable in this case) made no noticeable difference. The Loaded Dice concept remains user friendly!

In contrast to the competition versions this Loaded Dice has much larger flying surfaces, so do take note of the control throws. Those who are adept at 3-D will have already decided on their preference. Those 'starting out' on a model of this type could reduce throws a little further, or put rates in place, just in case:

Aileron:	3/8" (9 mm) up; 5/16" (8 mm) down
Elevator:	7/16" (11 mm) up; 9/16" (14 mm) down
Rudder:	2" (50 mm) each way

Most pilots will be very content to fly this Loaded Dice 'out of the box' and that's perfectly fine. For those who wish to 'fettle' the model and enhance performance still further the following may be of interest. This of course can be applied to any other model you may have.

Flight Trimming

Flight trimming is far less intense than it needs to be for precision aeros. Bearing in mind that the majority of R/C transmitters now have programmable mixing, these are my mix combinations for your reference.

If you have been slightly inaccurate with dihedral and the model rolls with or against rudder application, we can eliminate this problem. Using rudder as priority (master), set aileron as the slave. Insufficient dihedral encourages the model to roll against rudder. So here we mix in, say, 5% aileron the same way as the rudder, i.e. right rudder with right aileron mix. Adjust till correct.

Solarfilm covering and Solartrim decor is used to produce the 'classic' Loaded Dice colour scheme

Cutting down the canopy dramatically alters the look of the aeroplane, as shown on Brian Hall's model

Smooth aerobatics are what the Loaded Dice 30 EP is made for

Nice and stable in knife-edge flight

Knife-edge flight will provide the best indicator. If the model has too much dihedral it will roll with rudder, so opposite aileron is required.

Again in knife-edge flight, if the model pitches down (most models do), up elevator can be mixed in. So, rudder again is priority, and elevator slave. If the model pitches down on both left and right rudder, apply 5% up elevator. You may find that left rudder needs more mixing than right. The further rearwards the C of G, the more mix is required.

Now we can deal with, dare I mention, wing warps! But also wing weight differences, as even slight variations will require attention if you desire to go further with your trimming. Use elevator as priority and aileron as slave, but in contrast to the values that are 'acceptable' with rudder mixes, these values need to be quite small. Pull numerous loops to see if a wing drops, noting which aileron correction is needed. Mix in a little aileron to iron out the trim change. Then carry out similar checks for outside loops.

Conclusions

There is something very satisfying, not only to actually construct a model in the traditional way, but also to fly that model – it feels great! In the course of time, after a few familiarising flights, you may wish to try a little 'electronic' trimming. If that is your desire, you will be rewarded even more with a nice looking model aircraft that tracks through maneouvres precisely as you direct it on the sticks. When you exit maneouvres, you realise that the wings are level and the model is pointing in the correct direction. This is an ingredient that makes aerobatic flying seem so much easier and it gives that little bit of motivation to encourage us to be better pilots. **RCMW**

Neil's sharp landing shot shows the aileron and elevator linkages, and the torsion bar undercarriage

Terry Westrop (right) with fellow club member Brian Ball show off their models

RC MODEL WORLD DETAILS

MODEL INFORMATION

NAME:	Loaded Dice 30 EP
MODEL TYPE:	Aerobatic, F3A or 3-D
WINGSPAN:	47.25" (1200 mm)
LENGTH:	50.4" (1280 mm)
WEIGHT:	3 lb (1350 g), less LiPo
CONSTRUCTION:	Built up balsa and ply
SERVOS:	4 x New Power XL-9 9 g/1.9 kg (or similar metal gear types)
CONTROL THROWS:	
Aileron:	3/8" (9 mm) up; 5/16" (8 mm) down
Elevator:	7/16" (11 mm) up; 9/16" (14 mm) down
Rudder:	2" (50 mm) each way

ELECTRIC POWER

MOTOR:	Aeolin C3542 1450 KV 850W brushless outrunner
PROP:	12" x 6" APC-E prop
ESC:	60 Amp BEC
BATTERY:	3S 3300 mAh LiPo

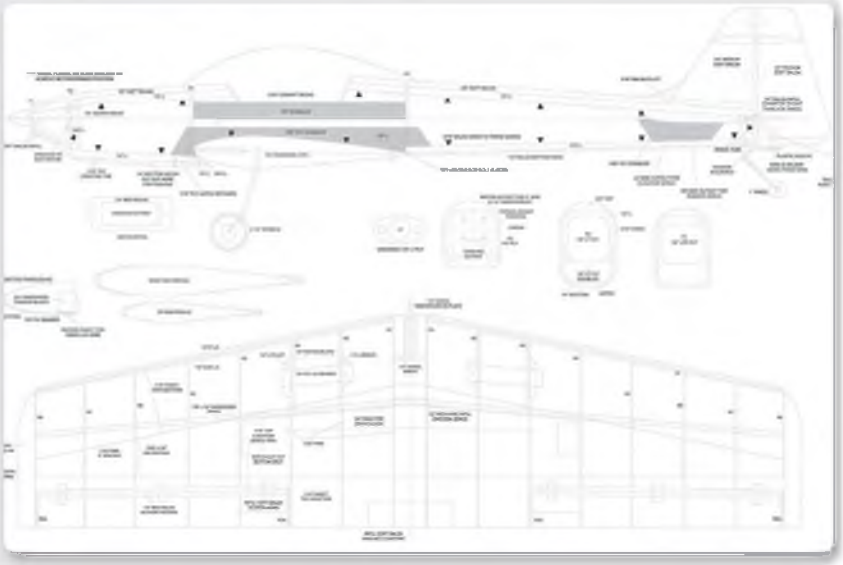
R/C FUNCTIONS

1 Throttle
2 Ailerons
3 Elevator
4 Rudder

PLAN DETAILS

NAME:	Loaded Dice
BUILD CATEGORY:	Intermediate
PLAN NUMBER:	MW3763
PLAN PRICE:	£14.99 ($25.99)
CANOPY NO.:	CA3763CY
CANOPY PRICE:	£9.99 ($16.99)
LASER WOOD PACK NO.:	WP3763
LASER WOOD PACK:	P.O.A.

Plans and parts (if available) are subject to Postage and Packing charges at standard rates.
Copies of plan number MW3763 are available from RC Model World (Plans Service), Traplet Publications Limited, Traplet House, Willow End Park, Blackmore Park Road, Welland, WR13 6NN, England, Telephone: + 44 (0) 1684 588599, Fax: + 44 (0) 1684 578558, Email: orders@traplet.com or order online at www.tapletshop.com
For more information on the Traplet Publications Plans Service see our advertisement in this issue.
*NOTE: All Laser Wood Packs are intricate shaped parts only. No strip wood or sheet wood is included.



Weston UK/ 84-88 London Road Teynham, Sittingbourne,
Kent ME9 9QH Tel +44(0)1795 521030 Tel/Fax +44(0)1795 522020

westonuk
www.westonuk.co.uk

CAPICHE 50CC
£510.60

OBSESSION
£245.10

MINI HYPE 3D
£134.78

HYPE 3D
£194.99

CAPICHE 52
£239.99

DEPRON PLANES
AVAILABLE IN 3MM OR 6MM
WING SECTION £20.38

COUGAR 2000
£124.95

MINI VELOCITY
25-36 size £91.88

VELOCITY
50 SIZE OR ELECTRIC
£119.95

MAGNUMR
£119.95

MINI MAGNUM
.30 SIZE OR ELECTRIC
£102.09

PARK SHARK WITH 6MM WING
SECTION £20.38

NEW

C/F FB ATOM 500
£412.39
C/F FBL ATOM 500
£412.39

WARP 360
MOTOR+BLADES £292.57
WARP 360
AIRFRAME ONLY £247.99

NEW

ATOM 550 ULT+BLADES
£469.99
ATOM 550 ULT+MOTOR+BLADES
£569.99

6HV ULT+BLADES
£469.99
6HV ULT+BLADES+MOTOR
£569.99

7HV ULT AIRFRAME
ONLY (NO ESC,NO MOTOR)
£599.08

3D + FBL
£427.71
3D + FB
£427.71

ODIN 90 SIZE
£559.95
G10

WEST 25 + GENESIS MINI PIPE £127.63
WEST 36T2 + GENESIS PIPE £158.27
WEST 36 T2R + GENESIS PIPE £183.81
WEST 36V1 + GENESIS TUNED PIPE £194.03
WEST 52T1 + GENESIS PIPE £188.92
WEST 52V1 + GENESIS TUNED PIPE £183.81

WEST 61 F/S £178.68
WEST 70 F/S £193.99
WEST 91 F/S £226.68
WEST 120 F/S £276.72
WEST 180 F/S £347.19

LIQUID GOLD/PROSYNTH 2000 FUEL RANGE

AVAILABLE ON YOUR DOOR NEXT DAY

RCV SP RANGE

SP 60 £203.27
SP 90 £254.34
SP 120 £295.20

SP ENGINES HAVE A 2:1 GEAR RATIO ALLOWING YOU TO TURN LARGE SCALE PROPS.

RCV®

CD ENGINES HAVE AN ADVANTAGE OVER NORMAL 4 STROKE ENGINES BEING MORE COMPACT, LESS MOVING PARTS AND A GREATER FUEL EFFICIENCY

RCV CD RANGE

58 CD £152.20
91 CD £193.06
130 CD £254.34
NEW 130 CD

FOR ALL YOUR SCALE NEEDS

ALL IT TAKES IS A SIMPLE PHONE CALL AND WE CAN MAKE A TAILOR MADE PIPE FOR YOUR PROJECT

MAKING PIPES FOR OVER 36 YEARS

FOR, PLANES, HELI`S, BOATS, CARS, UAV`S

AERO MANIFOLDS

STAINLESS PETROL HEADERS

HELI ONE PIECE PIPES

GENESIS FOUR STROKE SYSTEM WITH VIBRATION FLEX JOINTS

AERO ONE PIECE PIPES

INCREASE YOUR FOUR STROKE PERFORMANCE

40-63 F/S £40.81
70-90F/S £46.94
120-150 F/S £51.02
180 F/S £55.82

MARINE WATER COOLED PIPES AND MANIFOLDS

30CC £51.03

GENESIS PETROL CANS

80CC £122.53

50CC £91.88

RCV

NEW INCOWL SILENCER FOR THE SP RANGE WITH REDUCED NOISE LEVELS AND AN AVERAGE 0F 300 RPM MORE AT THE PROP

60SP £71.45
90SP £81.66
120SP £91.88

THE GREAT WAR NEVER FLEW SO GOOD

1/4 SCALE JUNKERS D-1 Kit No. 422*

The worlds first operational all metal fighter. With a top speed of 140mph and a service ceiling limit of just under 20,000 feet, the D-1 was decades ahead of its wood and fabric counter parts. Now faithfully available to you in a 1/4 scale tried true typical Balsa USA Kit!

Kit Features: 3-piece wing allows you to leave the landing gear and wing center section on the fuselage for transportation. Wing center section is removable for easy access to the radio equipment. Removable scale top cowl to access the engine and fuel system. Scale Dummy Engine is Included! Removable ABS tail cone for included Rudder Pull-Pull System.

KIT SPECIFICATIONS:

Wing Span: 88.5 inches
Wing Area: 1500 sq. in.
Wing Loading: 35-43 oz./sq. ft.
Flying Weight: 23-28lbs.
Fuselage Length: 63.75 inches
Engine Size: 35-62cc Gasoline
1.8-2.4 4-Stroke

BALSA USA
Build Your Dream Into a Reality!
www.balsausa.com

Please visit **Pegasus Models**
your main supplier for a complete line of **Award Winning Balsa USA Products**

Mon., Wed., Thur. & Fri. 09:30 - 18:00
Tues. Late Night 09:30 - 20:00
Sat. 09:30 - 17:00 Sun. CLOSED

Mail Order Hotline
www.pegasusmodels.co.uk 01603 419515
Fax 01603 484466

Pegasus Models
AUTHORIZED BALSA USA DEALER
88 Catton Grove Road, Norwich, Norfolk, NR3 3AA

Ideal Xmas Gift

LX F-4U Corsair 1.2m

NEW!!

World's first F-4U with working scale mechanical folding wings!

RTF (READY TO FLY) £388.00
ARF (ALMOST READY TO FLY) £322.00

Features:

- Large High Scale Model 1.2m wingspan
- Radio Controlled 2.4GHz 8 Channel Warbird (Aileron, Elevator, Rudder, Throttle, Flaps, Retracts with Doors, Folding Wings)
- First F-4U with Mechanical Folding Wings
- Scale 90-degree Rotating Servoless Metal Retracts with Doors and Retractable Tail wheel with Doors
- Constructed of EPO Flex Foam for excellent impact resistance
- Working Scale Navigation Lights
- Working 2-stage Flaps
- High Simulation Bombs

Available from your local model shop or you can order direct, Free delivery within UK Mainland.

Tel: 01276 857107 Email: sales@surreymodels.co.uk Check out our High Scale Jets and Warbirds at our New Website: www.surreymodels.com

SURREY MODELS, Unit 8, Bourneside Industrial Estate, Station Road, Chobham, Woking, Surrey, GU24 8AS UK.
SURREY MODELS UK Sole Distributor for LX Models

Earlier this season Chris Williams visited the Ghost Squadron Fly-In at Cheddar

In the air at last! Dave Pullinger's mighty Zurivogel takes to the skies

SILENT SCALE

It's traditional for the Ghost Squadron, a cadre of the LMA, to hold one or two week long fly-ins in various parts of the country. One of the venues last year was a farmer's field near Cheddar in the county of Somerset. And June this year was to be a repeat performance. The event was open to day visitors, and when I looked at the forecast for the Sunday it promised that the ever-present wind was going for a break of its own. So the Sat Nav was fired up and off we went.

It was a fortuitous decision indeed, for the lessening of the wind meant that Dave Pullinger's mighty Zurivogel was going to fly, and here was my chance to witness it. As this is such an impressive model, I intend to devote most of report to the proceedings in which it played a large part.

Zurivogel

The Zurivogel S10 was an early design from Jakob Spalinger. Indeed, I myself designed and built one of his much later designs, the S25a. Dave originally produced a plan at 1/4 scale, many, many years ago, and he has spent the last six years putting together this new behemoth at one-half scale. Such is his passion for detail that vinyl graphics simply would not do and he employed a sign writer to perform the embellishments that go a long way towards making this model so special.

Rigging the beast is an art in itself, the process taking some two hours. But by late morning the job was done. I said that the wind had abated, but there was still a good 10-12 mph on offer and, wouldn't

John Greenfield's impressive Klemm tug

Tug pilot Tony Hazlehurst takes to the dark side with his Slingsby Petrel

The Zurivogel shows off its translucent flying surfaces

you know, it was directly crosswind to the runway.

Let's consider two statistics concerning the S10: it weighs in the region of fifty kilos - that's over 100 lb in old money - and it has no ailerons, the upper wing being warped by mighty servos in the old Wright Brothers tradition (Orville and Wilbur being the servos). Shivering and shaking with fear, a Greenley tug was lined up and connected to the Spalinger.

John Greenfield had the glider's transmitter, and after the usual last-minute checks he tersely uttered the words 'all out'. The tug's engine roared, the line tautened, as did certain muscles belonging to both pilots, and the S10 lurched forward a couple of inches and stopped. They tried again, this time with more success as the wingmen valiantly strove to keep up.

Alas, the crosswind insisted on pushing the starboard wing into the ground and the launch was aborted. The second attempt ended with the same result, but persistence sometimes pays off as at the third attempt there was just enough airspeed to keep the wing off the deck and the tug/glider combo started to grind their way upwards. The exhausted wingmen had to go off for a lie-down...

It was a good job that a representative of the RSPCT (Royal Society for the Prevention of Cruelty to Tugs) wasn't present as the poor old Greenley really had its work cut out. Eventually, before the whole tank-full of fuel ran out, the glider was released. Well, what a splendid sight! With the sunlight illuminating all those translucent surfaces, the S10 floated around in glorious fashion.

John commented that the wing-warping left a little to be desired, likening the control response to that of an oil tanker. And it was obvious that any turnning manoeuvres has to be planned well in advance.

Added to that, the drag from all the rigging wires and open cockpit meant that the model had all the aerodynamic efficiency of a grand piano with the lid open, so it wasn't long before she was lined up and touching down lightly on the runway to a round of spontaneous applause from the onlookers.

Later that day another session took place, with the model lined up as before at the far end of the runway. The windsock, thus far at right angles to the strip, now shifted a few degrees, just enough to render the take-off a downwind affair. Wearily, the handlers dragged the mammoth machine to the other end of the strip, whereupon the wind shifted a few degrees the other way, thus once again rendering the take-off a downwind one.

Eventually the conditions were suitable and the tug and glider were once again airborne. This time things went wrong at an altitude of about seven hundred feet, the glider seeming to stall out and then refusing to release. The tug released instead and the beautiful S10 went into a dive from which it never recovered.

This was a sad end indeed to such a magnificent creation. And although Dave took it in good stead, it must have been a wrench. I felt privileged indeed to have seen it fly. And, I believe, to paraphrase an old saying: 'it's better to have built and lost, than to have never built at all...'

Ironically, John Greenfield's half-scale Klemm, fitted as it was with a tow release, would have been an ideal companion to the S10, given its enormous radial engine. But due to exigencies of over-20 kg limitations he was the only person on the site certified for both models. Later in the day, however, we were treated to the sight of the Klemm towing up fellow tug pilot Tony Hazlehurst's 1/2 scale Slingsby Falcon instead.

With the exception of the S10's sad demise, it was an excellent day's flying, being the one day of the week when the ever-present wind relented just a little. As this now seems to be a fixture in the calendar, I look forwards to a repeat performance next year...

A trying time for the wingmen!

Scene at the Cheddar event

Happy scene at the White Sheet club's scale fly-in

Pat Teakle's 1:3.5 scale Moswey 3 at the White Sheet event

Bob Cooke's Nimbus and the author's Flamingo not in formation!

White Sheet Scale Fly-In

August 9th, 2015.

It was the best of times. It was the worst of times... No, wait! This event, in distinct contrast to previous events too numerous to mention, was of a calibre worthy of the highest praise. It was definitely the best of times, as all the participants agreed after a day of flying their socks off.

As usual, it was the weather that was the deciding factor. And this time we had the three positive factors that are essential to a really good slope event: sunshine, lack of rain and a steady wind blowing directly on to the slope. As people started to arrive, event director Steve Fraquet could be seen walking around erratically and mumbling to himself, 'I don't believe it, I don't believe it!'

As well as the usual local contingent, we had a coach party of the Mendip boys, up from the West Country looking for a break from the climb up Crook Peak. Before long chairs were unfolded, flasks undone and biscuits were freely flowing, whilst scale gliders hummed and cavorted around the sky.

Pat Teakle was flying his recently completed Moswey 3 from the free plan on the Scale Soaring UK website. Built to 1:3.5 scale, it reminded me greatly of the days of yesteryear, when the then Radio Modeller columnist Keith Thomas was one of the first to build a Moswey, and went on to do very well with it in the iconic scale competitions of the day.

My pal Motley is currently engaged in the process of building a 1:3.5 scale Flamingo (Traplet plan number MW3463). Unwisely, I thought it might be an idea to bring the prototype along for him to get his hand in, so to speak. But I had a heck of job getting my transmitter back, and I had to resort to waving a ginger biscuit under his nose for the purpose of the restoration of order!

The weather was glorious and the lift abundant, so of course someone had to spoil things by coming up with a Big Idea. That someone was me, of course, and the idea was to photograph a two glider simultaneous launch, this being by far the best way to get a decent photograph of two machines in action. I was to fly my new Kite 2 (soon to be a Traplet plan) and the other idiot, sorry, volunteer was the Man himself, Steve Fraquet, with his 1:3.5 scale Slingsby Petrel.

My number one cameraman, Smallpiece (Barry Cole) was strategically placed, and the proceedings commenced. Steve then

Motley (Geoff Crew) gets his hand in with the Flamingo

proceeded to trip over his wallet and throw the Petrel into the ground - not the best of starts. Nothing daunted, we reset and tried again.

This time, persistence met with success and we retired to the folding chairs for a celebratory drink-and-dunk. After a short interval, another thought bubbled to the surface in what passes for my mind. 'Why', I pondered aloud, 'don't we try for a threesome...?' Motley made a dart for freedom (Slingsby Dart Traplet plan MW 3178), but I deftly tripped him up before he could get away, and thus it was that he was the Third Man, complete with his Bergfalke 4 (Traplet plan MW 3750: do I see a theme developing here?).

Upon the given word the three of us sprang into action, the gliders wobbling nervously as their owners fought to keep clear air between them. Success! The resultant photograph shows more gliders in one shot going in the same direction as you are ever likely to see, other than after a long night on the scumble.

There it was then; after way too many years of indifferent weather this White Sheet scale fly-in was a big success. Thanks, of course, to event director Steve Fraquet and the host club, the only fly in the ointment being that most of the participants thought it highly likely that it will be years before we are looked upon so kindly by the weather gods again... ***RCMW***

CONTACT
c_williams30@sky.com

Short-lived formation after a simultaneous three-glider launch

Author launches the Kite 2a, soon to appear as a Feature Plan in RCMW

UMX F-16

Flight testing E-flite's micro Fighting Falcon

The carry box is worth keeping to store the model

Fighting Falcon in its polystyrene nest

It's been a while since we looked at one of Horizon Hobby's micro UMX series models. So we very very pleased to receive a sample of their petite F-16, which is perfect to thrash around above the small field just outside Traplet's new office building.

Due to the diminutive size of this tiny aeroplane, which spans just 11.6 inches, E-flite have been able to cram the F-16 into a much smaller carry box than the large square cartons we have come to expect with their cruciform UMX models. The concept is the same though, a flip top lid, which opens to reveal an inner moulded foam tray.

Nested in the centre of the tray is the micro jet, which is restrained by an upper foam moulding. In compartments alongside are a sheet of stickers and bag containing wingtip missile rails and a pair of ventral fins. Taped to the underside of the tray is one of Horizon's well-illustrated black and white multilingual manuals.

The UMX F-16 is pre-painted in a colour scheme inspired by the United States Air Force Thunderbirds precision aerobatics show team. Despite its small size, it is officially licensed by Lockheed Martin and is a near 1/32nd scale replica of the Fighting Falcon. The sticker set provided can be used to give your jet a number that matches one of the roles within the Thunderbirds team: Thunderbirds 1 to 6 fly in the air show displays, Thunderbird 7 is the operations officer and Thunderbird 8 is the advance pilot and show commentator. There are also a couple of stickers to add stars to the vertical fin.

The missile rails and ventral fins need to be glued on with foam safe cyano. Whilst these parts do add to the scale appearance, the manual recommends that they should be left off if you intend to belly land the aircraft as 'damage may result'. Presumably they can catch in the grass and are easy to dislodge. Although we test flew the model with its undercarriage, we wanted to remove it for a more streamlined look in later flights so we omitted these parts.

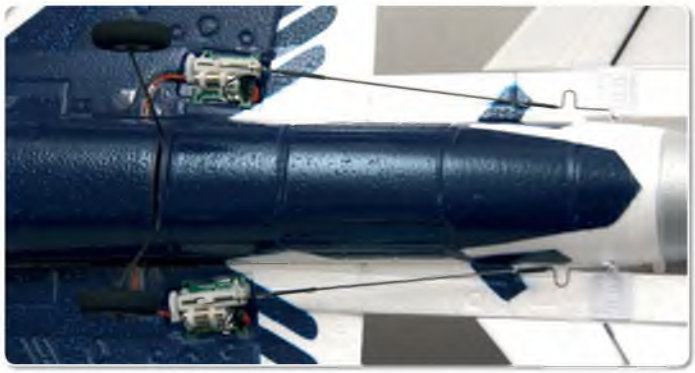
Bind-N-Fly Basic

The F-16 is supplied as a BNF Basic kit, which provides a truly Ready To Fly model that is fitted with a BL180m ducted fan motor of 13,500 KV, which in turn is fitted to a Delta-V 28 mm ducted fan unit. The model is also fitted with a Spektrum DSMX receiver and three 2.3 g linear long throw servos.

It is compatible with a wide range of Spektrum transmitters and you will also need to source a 280 mAh 2S 30C LiPo with which to power the model. The lack of at least one matching battery pack is our only small criticism of what is in all other respects a lovely little package. It is our experience that to get the best results from the higher performance UMX planes you need to fly them with a fresh battery pack.

Older packs will of course fly the model, but they may just take the edge of its

The colour scheme is inspired by the famous USAF Thunderbirds aerobatic team



Taileron servos and linkages. The controls are centred by tweaking the horseshoe bend in the pushrod, not by using sub trim

The canopy is retained with small magnets. Underneath is the rudder servo, with an extra link to the steerable nose leg. Just behind the tiller arm is space for a 2S LiPo

Optional missile rails and ventral fins

performance. In the case of the F-16 we found that the use of older cells limited its climb and looping potential, although it still flew really well in rolling and straight and level manoeuvres.

Setting Up

We have a DX6i transmitter pretty much dedicated to UMX aeroplanes. After setting up a fresh model memory it was quickly and easily bound to the F-16. The instructions give recommended settings for high and low Dual Rates and Exponential; since this model is controlled in pitch and roll using tailerons we thought it best to trust the recommended settings and they did indeed provide a good set up for the test flights.

It is important to check that the tailerons are properly centred and, as is normal with UMX models, the instructions warn against the use of sub-trims. One of our tailerons was sitting a bit low, so we adjusted the horseshoe bend in the pushrod to suit. Other than that the Falcon was all set fair.

The F-16 is fitted with a working rudder. The servo, located in the front of the nose, is also linked to a steerable nosewheel via a short pushrod. This isn't much use when flying outside over grass but if you are lucky enough to have a large indoor flying site you may be able to use it for take-off and landings.

Our taxi trials were limited to trundling over the office carpet and this proved to be surprisingly fun and quite addictive, the F-16 being able to perform quite tight U-turns in the limited space available. The undercarriage is a push fit and it can be removed easily for that fast jet look; it saves a bit of weight too!

Final Checks

It is important to check the Centre of Gravity with a LiPo fitted in the battery bay just behind the steerable nose-leg tiller arm. We've not known a UMX model to be out in this respect and the F-16 is no different, the small jet balancing perfectly at 38 mm back from the leading edge of the wing where it meets the fuselage.

We also used the clear diagrams provided to check that the controls, especially the tailerons, were operating in the correct directions.

A similar set of diagrams are provided to check the AS3X reactions. AS3X is at the heart of these small models and the 3-axis gyro stabilisation that it provides really does transform what would otherwise be quite tricky little machines into relatively benign flyers that Average Joe club pilots can enjoy piloting.

When activated the controls go all of a quiver while the model is being held and the corrections to the small control surfaces are quite tiny, so we found it difficult to follow the diagrams when checking the roll command. But the model responded correctly in all other respects so we put our trust in the factory set-up and made our way out to the flying patch to test fly the F-16.

The air inlet and exhaust ducting has been engineered to maximise performance of the 28 mm EDF unit

The editor holds the diddy jet before its first flight. It's tiny!

Climbing away after a hand launch

Despite her small size the F-16 is quite a faithful near 1/32nd scale replica of the famous fighter

The Thunderbird style underside shows up well

Nose held high, the F-16 can be flown quite slowly, which is ideal for landings

Hand Launch

Unless you are blessed with the smoothest of flying sites this model is best hand launched. Thanks to the layout of the F-16 there is plenty to hold on to underneath, and with which to give her a dart style launch. But we often find that an underhand lob is a good way of launching these UMX models, as it propels them skywards in a slight upwards arc. So with a gentle grip around the back of the canopy the throttle was advanced to full and the Fighting Falcon was given a gentle flick skywards.

The fan unit bit into the air straight away, propelling the F-16 forwards at an impressive speed. Trims were found to be well centred and on low rates the controls were gentle but effective. Flicking into high rates gives a more rapid response, as is to be expected, and in this Flight Mode you have to be careful not to over-control, especially when making tight low-level turns.

The nature of this model is such that you cannot help but make fast beat ups of the strip, followed by a good 'yank and bank' to bring her round for another low pass. But if you are too aggressive you can easily overdo things and find her dipping towards the ground at a rapid rate of knots. But the same rapid response that put her in such situations came to the rescue and despite a couple of close shaves we avoided meeting terra firma. However, flying over long grass, combined with the F-16's low weight (just 80 grams) means that she will probably remain relatively unscathed if we ever did run out of sky.

Pulling up for some aerobatics, this little beauty will easily perform all the jet style manoeuvres that are within our micro models repertoire. She really is great fun.

That little 28 mm fan unit does howl a bit as the Thunderbird streaks around at low level, but it's not too much of a distraction – to our ears at least! The small size of this model (and its carry box) means that it is ideal for keeping in the boot of the car and flying during lunch breaks, so you may be tempted to fly it over a nearby playing field or similar public space close to your workplace. But if you do, don't be surprised if that high-pitched howl brings forth a band of the local fetchermites!

Thanks to the AS3X stabilisation this mini jet can be brought round at high angles of attack for slower flypasts. Indeed the instructions recommend using high rates and a slightly nose high attitude when landing, as this will maximise the controls when approaching at low speed. We found that the F-16 was easy to land in this configuration and we have to say that it is easier to land on its wheels than some of the aerobatic prop style UMX models that we have flown in the past.

To sum up, the UMX F-16 looks great, flies even better and is just a totally fun-filled package. It follows on the tradition of fine flying micro scale models from this deservedly popular manufacturer in grand style.

RCMW

RC MODEL WORLD

DETAILS

MODEL INFORMATION

NAME:	UMX F-16
MANUFACTURER:	E-flite
DISTRIBUTOR:	Horizon Hobby
WEBSITE:	www.horizonhobby.co.uk/aeroonline/e2eflite/eflu2850/umx-f16.html
PRICE:	£115.99
MODEL TYPE:	Micro scale jet
CONSTRUCTION:	Moulded foam
PARTS SUPPLIED:	Ready To Fly airframe, receiver, BL180m motor and 28 mm EDF unit, 3 x SA2030L performance linear long-throw servos
PARTS REQUIRED:	280 mAh 2S 7.4V LiPo

R/C FUNCTIONS

1: Throttle
2 & 3: Tailerons (elevator and ailerons)
4: Rudder and steerable nosewheel

MODEL SPECIFICATIONS

WINGSPAN:	295 mm (11.6 inch)
LENGTH:	434 mm (17.0 inch)
WING AREA:	2.39 sq dm (37.0 sq inch)
FLYING WEIGHT:	80 g (2.80 oz)
	.50-.60 4-Stroke

DISLIKES

Would like to see a fresh LiPo supplied for top performance

LIKES

Thunderbird style livery • F-16 styling • 100% Ready To Fly out of the box • AS3X system makes it easy to fly but responsive too

CL-84 Dynavert

Flyzone
how high will you soar

No.: FLZA2800

First flown in 1965, Canadair's CL-84 Dynavert was an experimental platform designed to test the feasibility of VTOL (Vertical Takeoff & Landing) aircraft. By repositioning its entire wing, the CL-84 was able to take off like a helicopter and then transition to horizontal flight to perform like a conventional turbo-prop aircraft. In tests, it was found that in-flight transition was also possible, proving this to be a truly remarkable aircraft that pre-dated similar concepts by a significant margin!

Flyzone's replica Dynavert has many of the same features and can take off and land vertically with in-flight transition to fixed-wing flight – you can even take off and land conventionally on larger strips! Power is provided by 3 brushless motors and a 3-axis gyro guarantees flight stability. Supplied largely pre-assembled and decorated with all servos included and fitted, you'll just need a transmitter with a minimum of 6 channels, suitable receiver and a 4S 2200mAh LiPo to complete.

RC-Function:
Motors, Elevator, Aileron, Nosewheel, Wing Tilt, Pitch, Roll & Yaw

Set Contents:
- AeroCell Foam Construction Rx-R Model
- Factory-fitted RC Components
- Comprehensive Instruction Manual

Required (Not Included):
- Minimum 6Ch RC System
- 4S 2200mAh Flight Battery

Technical Specification:

Length:	1050 mm
Wingspan:	950 mm
Weight:	1700 g

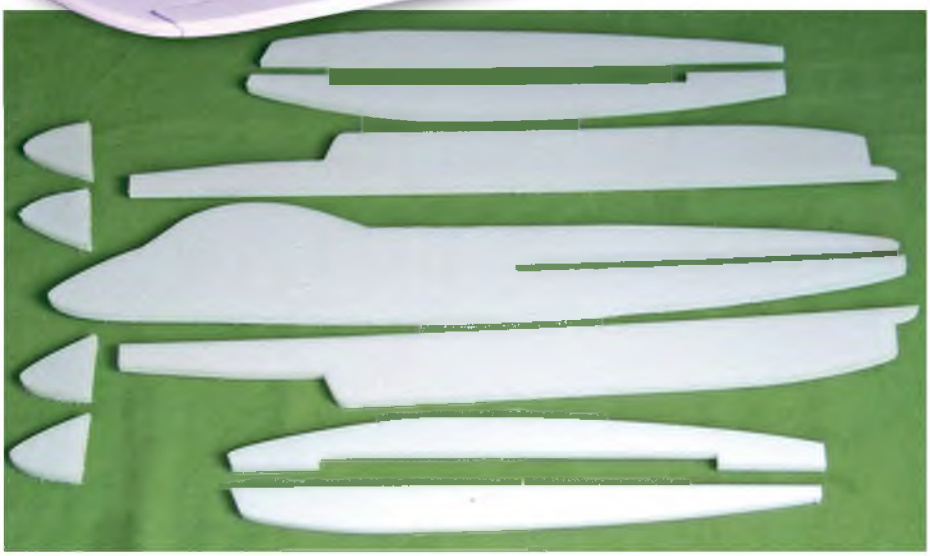
FLYZONE Distributed by Revell GmbH – Tring, Hertfordshire, HP23 4QR
Tel.: 0845 459 1966 – Fax.: 01296 660041 – Email: uk@hobbico.de
Trade enquiries welcome

HOBBICO DISTRIBUTED BY Revell

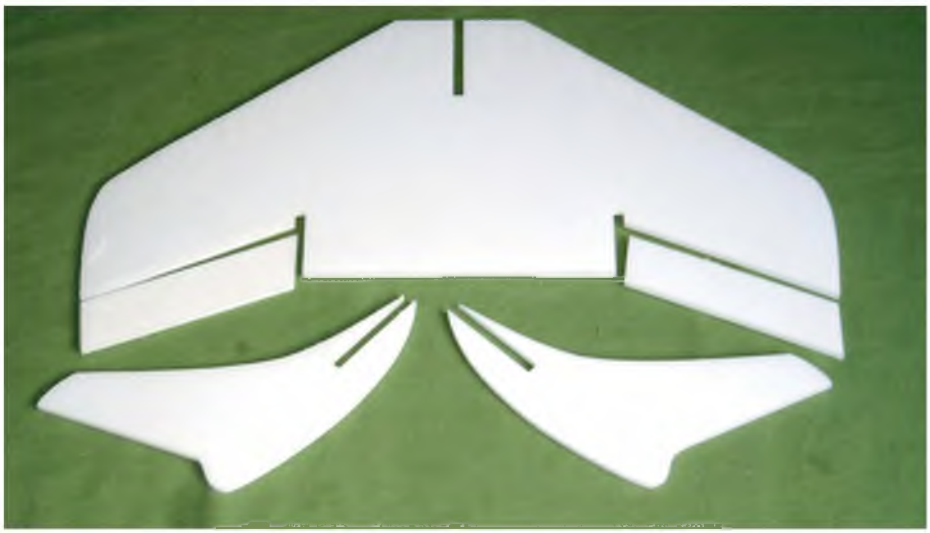
CHANCE VAUGHT F7U-3 CUTLASS

Free Plan

This quick-build all-Depron profile model, designed by John Rutter, has a wingspan of just 420 mm and requires three function R/C to fly with a 2S 300 mAh LiPo



Fuselage parts



Wing parts

I have a friend, Malcolm, who's just a bit crackers about the Cutlass, having flown practically nothing else but a Cutlass model for about the last 10 years or so. His model is rather robust (to put up with 10 years of abuse it has to be!) but is not very scale in appearance. I too have always liked the shape but decided something lighter and more true to scale would be more my style.

The model presented here is made entirely from 6 mm Depron, to scale outline (approximately 1:29), though in profile only for simplicity. At 16½" span and under 4 oz weight it's a very lively performer (more than can be said of Malcolm's model!), which is quickly built and relatively cheap to equip.

Construction Tips

There are not many parts to cut out (16 in all) and the easiest way to do this is to use a light coat of spray mount glue on the back of a copy of the plan to stick it to a sheet of Depron. Use a sharp knife to cut through paper and Depron, with the aid of a steel straight edge where needed.

I actually used a CNC milling machine to cut my model out but it probably took a lot longer to do it. I also used the machine to cut out 'pockets' for the aileron servos, but it is just as effective to cut right through for them or, if you fancy trying it, setting up a Dremel style tool with a router attachment. Round off the leading edges of the flying surfaces with sharp glass-paper.

I found it easiest to do the majority of the painting before assembly using Wilkinson's

Nose doublers ready to fit and basic paint applied

Wing and fuselage, with plan view parts glued on

Construction finished, top

Construction finished, bottom

own brand primer grey acrylic spray in light coats; Humbrol enamel or similar could also be used and indeed I used this for detail work, along with permanent marker pens. I used UHU-por to glue virtually everything together, with foam safe cyano only being used on the aileron horns, but this is up to you.

Assembly is as follows:

Glue the wing to the fuselage followed by the horizontal, plan view, pieces. Glue the 'engines' to the assembly and the fins to the wing. The nose is made of four doublers, glued using the 'por as a contact adhesive before the paired blocks are glued either side of the nose.

Elevons are top hinged so need a wedge cut from the underside towards the top to allow hinging. A little 'por smeared along the tapeline helps it to stick firmly. Shape the nose with knives or glass-paper. I don't think I've missed anything, that's it done apart from a bit of detail painting and lining.

Fitting Out

Equipment fit takes a little longer than construction, but not much. Glue the 3.7 g servos in place with hot glue and use a length of sharpened tubing to cut a hole through the fuselage for the ESC and one elevon servo lead. Use 'por to glue the servo leads flat near the leading edges of the wings. I used a Spektrum AR6100e Rx from Micron Radio Control (see Contacts), more due to the tiny aerial leads than anything else (long 35 MHz aerials being a bit of a nuisance on a pusher).

The Rx and battery (a 2S 300 mAh 20C Hyperion from Robotbirds – see Contacts) are held with patches of Velcro, a smear of 'por helping it to stick to the Depron; both are as far forward as practical. The ESC is also held with Velcro but this time taking it to the rearward limit of its leads. I used a 6 A ESC but a 10 or 12 A wouldn't add much weight. The motor needs to be light, no more than 15 g and I like the Mini GBx kit from Micron (or the Micron 14 mm 5 g Micro Brushless Motor (2500 KV). It only needs winding (although in my case I also like to turn down the bearing shaft to 6 mm) to produce a light and very powerful little unit. I wound mine with 11 turns of 25 SWG wire and left enough wire on it to reach the ESC without further extensions.

As I like stick mounts I made a little adapter to attach the motor to a bit of 6 mm carbon tubing, which was in turn glued into the rear of the fuselage in the slot behind the wing. It wouldn't take much imagination to modify the model for a ply plate if that suits you better. This motor turns a GWS 5" x 3" at nearly 15,000 rpm, drawing 6 A on 2S, or a 4" x 2.5" prop at nearly 18,000 rpm, drawing a healthier (for the battery and ESC) 4 A.

You did make sure the servos were in neutral before gluing them in place didn't you? My method of linking servos to surfaces doesn't have any adjustment other than at the Tx, but it's light and secure. Make up a couple of elevon horns from thin ply and glue to the elevons with cyano and kicker.

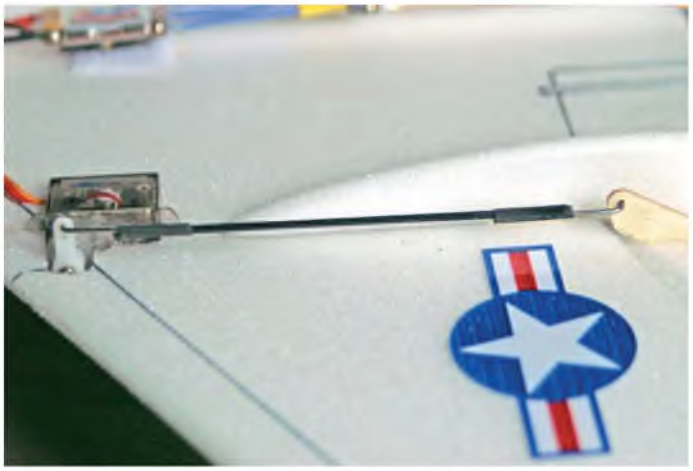
Assuming the servos are in neutral, make up four 'Z' bends in 20 SWG piano wire about 15 to 20 mm long. The pushrods are short lengths of 1.5 mm carbon rod. Slip a bit of heat shrink over a rod and one of the bits of piano wire, heat to shrink, then run a drop of thin cyano down the tubing to secure it. Put this end through either the elevator horn or the servo horn, mark the rod off a bit short of the other horn (no 'up' or reflex is needed), remove it from the model and cut it to length. Slide another bit of heat shrink over the bare end and replace the rod into the horn. Put the wire through the remaining horn, move things to allow the wire to be slid into the tubing with a little control reflex and glue with cyano.

DON'T try to shrink it in situ; when the glue is set remove the servo horn, remove the rod THEN shrink it. Actually the shrink I used was such a tight fit over the rod and wire I didn't need to shrink it but I can't guarantee you will be so lucky. Repeat for the other side. Check for control direction (my Tx has elevon mixing) and throws (elevator and aileron 5 mm each way, 9 mm on aileron full rate gives a blindingly fast roll). Make sure the motor is also turning the right way round with the prop facing forwards, and that is about it unless you want to programme in rates, exponential, etc.

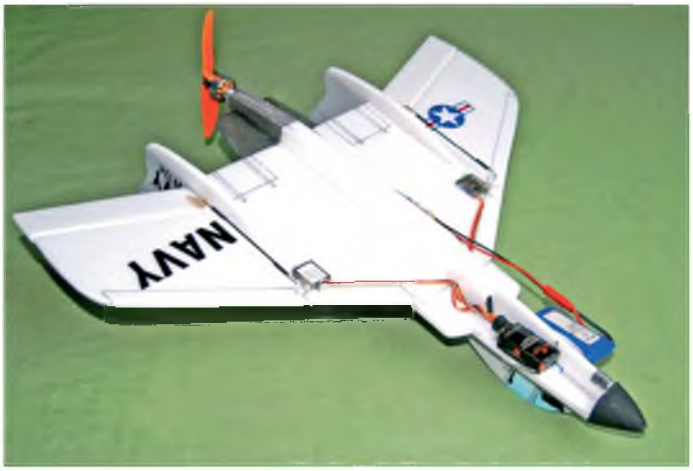
I have a little vinyl cutting machine that I used for most of the markings but it's just as effective to use inkjet vinyl (from Overlander – see Contacts); clear for the lettering and white for the 'stars and bars' markings.

Hole where motor mount fits

Motor on its mount ready to be fitted into the mounting hole



Servo and pushrod



Equipment layout

The battery rather spoils the looks but Velcro holds it securely

A steep climb out from hand launch

Flying The Cutlass

A little 'chuckie' I'd made seemed to indicate the model was a little tail heavy, so I resorted to a bit of lead under the nose before test flying began. (Balance should be 65 mm aft of the squared off wing leading edge.) Total weight of the model ready to fly was 3.75 oz (105 g) and much more thrust was available than the model weighed, about 170 W/lb with the 5" x 3" prop and 120 W/lb with the 4" x 2.5" prop.

The day I tested the model was flat calm for a change but with a heavy overcast, so it was no good for photos. I had decided to play safe with the smaller prop and a bit of lead on the nose. The first launch (hold the top of the model, nose high, give it full beans and toss upward) was 'interesting' as I had far too much throw on the controls and the model was a little out of trim, wanting to turn left. After a bit of juggling with controls, rates and those horrible electronic trims, I eventually got the thing stable and started having a bit of fun.

In the grey overcast a grey/white model isn't the best for visibility, especially when it is a 'different' shape, but the model flew really well. I eventually landed, with no problems and a big grin on my face. Further experimentation with throws led to the ones mentioned earlier in this article and I even fitted the bigger prop at one stage.

This gave a fantastic climb rate and ridiculous top speed but a rather short flight of only around thee minutes. With the smaller prop the battery has an easier time of it, with flights lasting six to eight minutes, and it still gives an excellent climb and high top speed for such a tiddler.

Summing Up

Balanced as shown the model needs just a tiny bit of 'down' for inverted flight. The Cutlass will do large or small loops but won't stall or spin. Some odd 'screwing' happens with my model in sudden looping manoeuvres, but I think this is because one of the cheapo servos works at about half the speed of the other, but this is not the fault of the model.

I doubt if it'll last as long as Malcolm's heavyweight version but I can still see this being a regular flier for me. **RCMW**

Fast pass at low level

CONTACTS

Email: John Rutter at j_j_rutter@hotmail.com
Micron radio Control
www.micronradiocontrol.co.uk
Robotbirds
www.robotbirds.co.uk
Overlander
www.overlander.co.uk

High banked turn for the camera with a ridiculous top speed!

MODEL WORLD

DETAILS

MODEL INFORMATION

NAME:	Cutlass
MODEL TYPE:	1:29 Profile scale
WINGSPAN:	16.5" (420 mm)
FLYING WEIGHT:	4 oz (112 g)
WING LOADING:	18.65 oz/sq ft (58 g/sq dm)
CONSTRUCTION:	Depron foam sheet
CENTRE OF GRAVITY:	65 mm aft of the squared off wing leading edge
CONTROL THROWS:	
Ailerons:	Low rates 5 mm, High rates 9 mm
Elevator:	5 mm each way

ELECTRIC POWER

MOTOR:	Micron 14mm 5 g Micro brushless outrunner motor (2500 KV)
PROP:	GWS 5" x 3" or 4" x 2.5"
ESC:	6 – 12 A
BATTERY:	2S 300 mA LiPo

R/C FUNCTIONS

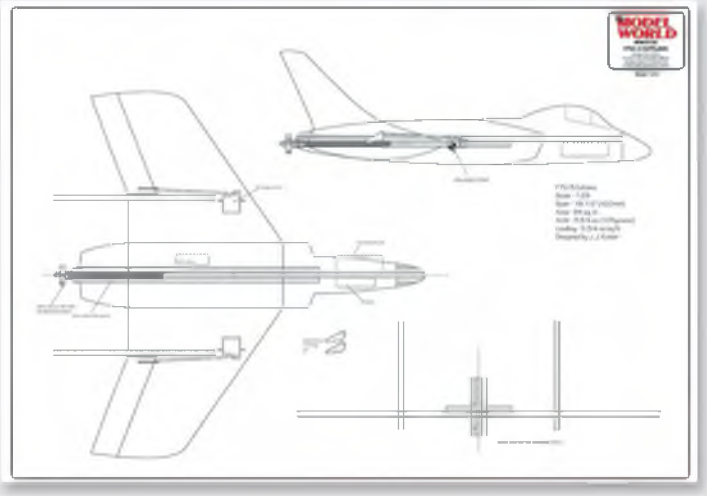
1: Throttle **2:** Ailerons **3:** Elevator

PLAN DETAILS

NAME:	Cutlass
BUILD CATEGORY:	Intermediate
PLAN NUMBER:	MW3735
PLAN PRICE:	£11.99 ($20.99)

Plans and parts (if available) are subject to Postage and Packing charges at standard rates.
Copies of plan number MW3735 are available from RC Model World (Plans Service), Traplet Publications Limited, Traplet House, Willow End Park, Blackmore Park Road, Welland, WR13 6NN, England,
Telephone: + 44 (0) 1684 588599,
Fax: + 44 (0) 1684 578558, Email: orders@traplet.com
or order online at www.trapletshop.com

For more information on the Traplet Publications Plans Service see our advertisement in this issue.



The South West's Premier Model Shop

TOTEM Hobbies

01752 268122

Get All Your Modelling Supplies At Internet Prices
But With Great Customer Service

www.totemhobbies.co.uk

St Johns Road, Cattedown, Plymouth, Devon, PL4 0PA

HACKER®
hacker-model.eu
MODEL PRODUCTION

ALL ITEMS YOU CAN FIND ON OUR WEBSHOP
WWW.HACKER-MODEL.EU

XTRA VECTOR
Wingspan 800mm

NEW

MXS-804 VECTOR
Wingspan 804mm

shock style

NEW

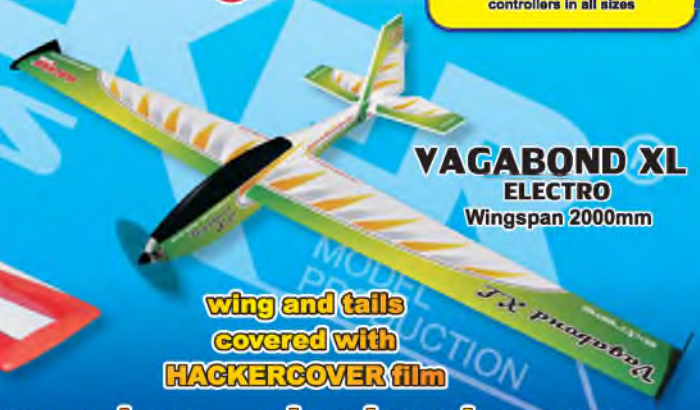
MASTER FORCE

BRUSHLESS POWER
Brushless motors and speed controllers in all sizes

BELLANCA SUPER DECATHLON
ARF

ELECTRO
Winspan 2000mm
Weight 3950g

WORLD CHAMPION'S STYLE



wing and tails covered with HACKERCOVER film

VAGABOND XL
ELECTRO
Wingspan 2000mm

... more types, more colors ... check web pages

Unique Designs Only by Hacker - Made in EU

NIModels.co.uk

NI's Fastest Growing Model Shop

QuadCopters

Hubsan X4
Camera Edition £58.49
LED Edition £34.49

UDI Quad
w/Camera
£69.49

Helicopters

E-Flite Blade
mCX2 £49.49

Axion RC Excell 200
RTF 2.4GHz
£53.49

Udi Blackhawk,Apache
Hummingbird 2.4GHz
3 Channel £48.99

Ready Built

WOT 4 XTREME

ARTF £269.99

Acro Wot Mk2 ARTF
£118.99

P-51D Mustang
BNF with AS3X £72.99

Trainers

Irvine Tutor 40 £64.99
Wot Trainer £84.99
Max Thrust
Riot RTF
£189.99

Radio Gear

Dx6i transmitter M2
£79.99

Futaba 6J Transmitter
& R2006GS
Receiver
£117.99

Spektrum AR400 £19.99
Futaba R2006GS £34.49
HS311 Servo £6.98
S3117 Servo £14.40
S3003 Servo £8.98

Accessories

Phoenix Pro flight
Simulator V4
£69.99

Sigma EQ
Mini AC/DC
Charger £28.99

Range Of Accessories
Online.Glues.Balsa.Props..

FREE UK & IRELAND DELIVERY

EURO DELIVERY FROM £16.00

facebook

SCAN WITH YOUR SMART PHONE

BUILDERS AND PILOTS CHOOSE ZAP

"When building a model from primarily Balsawood, it is really, really important to me that the CA glues I use cure the way they are supposed to! I'm Bob Curry, Chief Static Judge at Top Gun, and ZAP helps keep me up to speed!"

ZAPGLUE.COM

West Warehouse 760/246-6462 | houseofbalsa.com
Central Warehouse 630/584-7616 | robart.com
East Warehouse 863/607-6611 | franktiano.com

John Stennard takes a look at the fun Nano QX 3D and comes up with a workable system for dropping multiple parachutists

LIGHT FLIGHT

Wow, what a whopper! John holds up the Flash with its B&Q Beach Bomb ready for testing

The 'Bomb Gone' feature in the August issue by Bill Bowne was bound to catch my eye as I've always enjoyed dropping things from models and have written features on this subject in the past. There's a lot to be said for a simple system like Bill's that you can leave in situ and enjoy when you feel the need. I have had a lot of fun with my Flash profile foamy equipped with the EHL 'Bombs Away' unit. Due to the fact that I live close to one of our flying fields, I tend to fly frequently but for shorter periods. I am often alone and having a 'drop' option on a model can be very entertaining.

There is also a skill element to getting your 'store' to land close to you and not in a field (or more!) away; wind direction and strength is a vital component of the positioning calculations. When other flyers are around someone is always very happy to become the loadmaster and call 'now' at the appropriate time. You also have someone to blame if things go wrong!

A snag with dropping multiple parachutists is that if one gets hung up he may well finally fall out when the model is downwind and end up drifting off!

My ultimate goal was to drop multiple parachutes, streamer bombs, etc. from a profile model and this led to two different experimental containers. The first was too flimsy but the second example has performed well. With the container in place the Flash is hand launched and then flown to the drop zone. The container is then opened, setting free its contents and then the model is flown down to a low altitude and the container dropped so that a normal landing can be made.

My experiments eventually resulted in a very workable system using a servo to open the spring loaded container. I used stretched rubber bands for this, and the EHC unit to drop the empty container. The container was made from a cardboard tube (whisky bottle packaging) and can take a number of parachutes, but the photos just show a three-chute drop. It could also be used in a 'toffee bomber' type of role, as long as the model and power system can cope with the weight. The Flash has also been used in a very successful glider drop role.

This would be good time of the year to look at adding a drop system to a model ready for some fun during the next active

RC Factory Flash with the special stores container

The container opens to release the stores. Parachutes in this case

outdoor season. The EHC 'Bombs Away' system is still available on-line. The same system on my Flash profile foam model has also been used very successfully to lift small gliders aloft. Once a unit has been installed the 'bomb hangers' are available separately so they can be fitted to any number of stores, chutes, gliders, etc.

I'm always on the lookout for possible stores and came across this beach projectile, which weighs 132 g. The Flash takes this aloft surprisingly easily and the sound of the two whistles as it falls gets your attention. Obviously suitable precautions need to be taken when dropping an object of this size.

A better than usual stick of chutes. These use net instead of shroud lines so do not tangle

Finally, the container is dropped at a low level to avoid damage

EHC 'Bombs Away' system can also be used for glider launching

Lifting the Beach Bomb is a bit like a Lanc with a 22,000 lb Grand Slam!

The Flash managed to take up the Beach Bomb quite easily

Careful flying and safety planning before dropping this one. The two in-built whistles are quite effective!

RIAT At Fairford

July seems a long time ago but I have plenty of memories of two good weather days at the 2015 show. If you want to see and hear some of the top military aircraft this is the place to be, although this year of course there was also a special display of Battle of Britain aircraft.

I've included some photos of aircraft that impressed me with their presence in the air and their display flying. These are a Spitfire, ZD B, from the Old Flying Machine Co, the Ramex Deltas, two Mirage 2000N from the French Air Force and the F-16C from the demo team 'Zeus' of the Hellanic Air Force.

What a pretty sight. The Old Flying Machine Company Spitfire LFIXB

French Air Force Ramex Delta display team of two Mirage 2000Ns

The 'new shape' of the Greek Air Force's F-16C made an interesting comparison with the F-16A flown by the Belgian Air Force

Nano QX 3D

Whether you like them or not quads are definitely here to stay and manufacturers are making sure that new versions offer their pilots even more options. At one time a 'flip' was unusual and novel. Now even the tiniest quad can do this ad nauseum. The small quads really are ideal for small indoor space flying and virtually all our regular indoor flyers have a quad or two - or more! Well, they are much cheaper now!

I have flown both the E-Flite Nano QX and Nano QX FPV and found them to be excellent little Quadcopters. They are a good combination of stability and agility and even in the basic flight mode are plenty lively enough for me. They are also very quiet in flight and I use my Nano QX FPV version in 'non-FPV piloting mode' to demonstrate the FPV system. I fly the quad around while audiences take it in turns to look through the goggles or at a screen display.

Audiences of all ages are usually very impressed with the view and quite awed by the technology. They like the 'spy in the sky' idea so you can position the Nano QX FPV in a corner almost out of earshot with the live camera link showing a view of the audience.

When I saw that a new Nano QX 3D version was available I quickly went on line to check it out and find out what it will do. I was immediately impressed and saw plenty of possibilities for using it as one of my demonstration models. The idea of 3D flying was very appealing and inverted flying really caught my imagination. Basically the Nano QX 3D is about the same size as the Nano QX and QX FPV but has some very interesting features in addition to its 3D potential.

Looking at the physical features one of first differences is that it uses a different size of battery pack. The Nano QX uses the

Blade Nano QX 3D opens up aerobatic horizons on a small scale

Nano QX 3D is a touch bigger than the Nano QX but is still pretty small

The chassis doubles as the circuit board. The motors plug-in so they can be easily replaced

'Flips' are excellent and fast enough to lose almost no height

The invert function works faultlessly and is great fun

E-flite 1S 150 45C LiPo while the QX 3D uses a 1S 200 25C LiPo. A USB charger is also included. Other obvious features are in its construction; instead of a separate board the electronics are mounted on the chassis of the quad. This is a very rigid board with a keel that stiffens and protects the board from damage.

As this quad can take-off and land inverted it has prop protectors that also act as landing gear when inverted. The coreless motors clip in place and are not hard wired to the electronics. Instead they use a small connector so they can be easily replaced.

While the props are of course 'handed' they are also designed to give equal thrust in either direction.

The instruction manual is good up to a point. It clearly shows all the settings for a wide variety of Spektrum Tx's and has basic flying information. But I could not find anything to tell me how to actually flip or fly inverted. Both the flipping and inverted flight were clearly linked to the mode switch, which changed between 'stability', 'evo' and 'agility' modes and the push button switch, but I was going to have to check this out after the first test flights.

These showed that the Nano QX 3D is exceptionally stable, extremely agile and speedy, if required. I was soon doing some of the fastest circuits I had even done with a quad of this size and really enjoying flying her.

After a few false starts on the 3D hunt I found the following using a DX6:

In stability mode, after the button has been pressed the QX 3D will do a very precise flip in the left, right, forward or backward directions dependant on the stick movement. She loses very little height and does the flip in two stages; first 180, then after a short hesitation continuing round the next 180 back to the original position. This manoeuvre is impressive as it is done comparatively slowly and, as I found later, it can also be done from the inverted position.

Now for the inverted flight mode. To enter this mode the switch must be set for 'evo' and again the button has to first be pressed. After this has been done the QX 3D can be flipped to inverted using the roll or pitch stick. Using roll the nose/tail orientation stays the same but if you use pitch you are looking at the nose of the quad. If the quad is inverted in the same orientation the roll, pitch and yaw controls are unchanged. This means you can fly quite fast circuits and flip inverted without having to change stick inputs. All very clever stuff!

However, if you flip in the pitch, forward or backwards position, it will be like flying a helicopter nose-in. E-flite recommend practising 'aerobatics' over a plush carpet or the lawn. Having no plush carpet I used the lawn but I did then lose a prop after a crash landing.

The message is to definitely take it easy until you feel really comfortable with the controls. If you accidentally invert using pitch you can get caught out by the 'nose in' controls.

One thing I have not got to grips with yet is the 'agility' setting. In this mode the throttle stick is centralised and gives 0 - 50% negative thrust in one direction and 0 - 50% positive thrust in the other direction. I have not worked out yet how one uses this mode to best advantage when flying. Obviously it will give extremely rapid changes of direction vertically but it may well be a quad step too far for an aging pilot! Once you get the hang of the flipping and inverted flight these can be done in quite fast circuits and are very entertaining to perform.

The Nano QX 3D is certainly a delightful model to pilot whether you want to just cruise around or like the idea of livening up your small space flying. In many ways this size of quad is perfect - not too big and not too small – whilst being beautifully behaved and bright enough to keep in sight without straining your eyes! She really is a fun filled little package.

I tried my Horizon Hobby micro camera on the Nano QX 3D and it worked fine, although the duration suffers a little

Tail End

Inspired by the Gheerson CX-12 micro quad 'jet', I experimented with an aircraft-like body to fit to my Blade 200 QX quad. This quad has a very good lifting potential and the quad-jet VTOL plane has flown and performs well, I decided to go futuristic with this model. I'm now wondering what would happen if I added a grille above the props. This would improve the appearance but would it cut down the airflow and reduce the performance? I'm now on a lightweight plastic grille search!

Information and photos are always welcome to: john@stennard.orangehome.co.uk. I am available for talk/demos on indoor R/C within my 50 mile range of Bristol and, as the BMFA Western Area Education Coordinator, I am also happy to talk to school pupils and youth groups in the region. **RCMW**

The Cheerson CX-12 micro quad becomes a VTOL jet fighter

My Quad-Jet VTOL based on a Blade QX 200 quad. It gives an interesting flying experience!

ELECTRIC PYLON RACING TECHNOLOGY

National Champion, Ben Jones reports on the latest technology used for the demanding electric classes of the high speed R/C aero sport

August Bank Holiday weekend is a date in the calendar of many a model flyer in the UK and Europe, a date that marks the annual pilgrimage to RAF Barkston Heath in Lincolnshire for the BMFA British National Championships. If you haven't ever been to the Nationals I really recommend that you give it a go as it's the only event I know of at which you can see most disciplines of radio-controlled and control-line competition taking place alongside one another at the same time. Whether your interest is in R/C Scale or in FPV quadcopter racing, or you just fancy the free flight flying in the evenings, there is something there for you.

What Is Pylon Racing?

Briefly then, for those who are new to the world of R/C pylon racing, heats are contested by three models at a time over 10 laps of a triangular course, 180 metres long and 40 metres wide between the base pylons, giving a total race distance of 4 kilometres, pole to pole. FAI class pylon racing is essentially a time-trial event, with each model timed individually from a standing start and the clock stopped when the model crosses the start-finish line for the tenth time.

With simpler, less powerful models, E2K is designed to be the introductory class to electric pylon racing

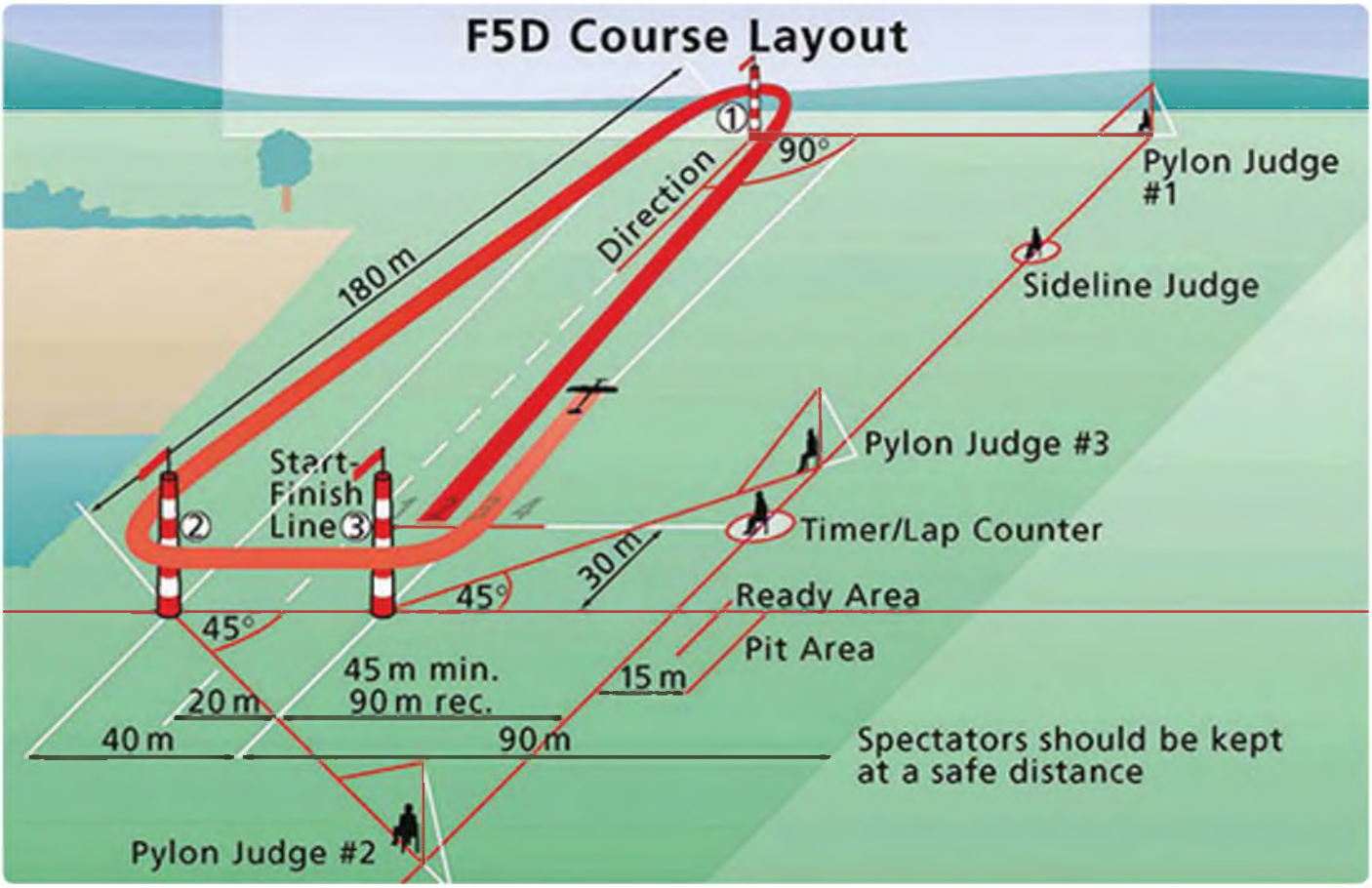
Pylon racing is a team event, with each pilot having a 'caller' whose job it is to launch the model and then watch for the turning light given by judges sat in line with the top (or 'Number 1') pylon. This light tells the pilot that they have made the distance to the top of the course and may turn back. Should a model make a false start or pass inside a pylon at any point during the race, thereby making a 'Cut', a penalty of ten percent of the race time is added to the final score for that flight. Two or more infringements in a single race combine to give an automatic penalty time of 200 seconds awarded for that round. With models travelling over 350 kph, race times regularly dip below the one minute mark for the top pilots and so this really is a brutal penalty by any standard.

Electric Pylon Racing

In the UK there are two classes of electric pylon racing that are regularly flown; E2K, which is designed to be an introduction to the sport and F5D, the international competition class and the pinnacle of electric racing.

E2K aircraft must use a wooden 2¼" box-section fuselage and a 35" minimum span, constant chord wing. No composite or carbon material can be used anywhere

Big Bruce Racing 'Dominator' of Paul Bardoe



Dimensions and layout of the FAI pylon course

on the model whatsoever. For power a four cell LiPo battery drives a 1500 KV maximum electric motor (for which there is an approved list of just three to choose from) to spin a standard 8" x 6" propeller (either APC or Radio Active).

As with any good introductory class, E2K really is designed to be 'stock', with the aim to have all models of equal performance and the flying skill of the pilot as the primary differentiator.

F5D aircraft are a totally different animal and whilst the skill of the pilot remains a vital ingredient, with no explicit restrictions on motor, speed controller, battery or propeller enforced, it has become as much the playground of electron wizards. The only boundary on the power train is a calibrated limiter inside the model that limits the total power consumption to a maximum of 1000 watts per flight before all power to the motor is shut off completely. Competitors must therefore choose a set up that gives sufficient run-time to match their flying ability, as a model that is blisteringly fast for 60 seconds before the available power is expended is of little use to a pilot who cannot fly well enough to break the 70 second barrier.

In terms of the airframe, the main limit on the model is a minimum weight of 1,000 grams and a maximum weight of 65 grams/dm^2 (so this does vary per airframe).

Different Strokes

This year's competition saw a battle of three very different approaches to set up:

Paul Bardoe entered with a brand new model, never before seen in the UK. Manufactured in Australia by Bruce de Chastel of 'Big Bruce Racing', a familiar name to anyone who has followed the world of I/C pylon racing over the last 20 years or so, the Dominator uses a V-tail configuration and a distinctive curved wing and, as such, looks totally different from any other model on the market today. With a wingspan of 55" it is a little bigger than other designs available right now, but its construction of a full carbon wing and a carbon/Kevlar weave fuselage makes it super-strong and light for its size.

To power his Dominator, Paul ran a 2300 KV Hacker motor on 5S battery packs. The most noticeable element of his set up, however, was a single-bladed carbon propeller, counterbalanced in the spinner hub. Approximately 6" in pitch at the tip of the blade, the propeller turned at around 35,000 rpm, running at close on 60 amp constant current for the duration of the flight.

Designed by the current F5D World Champion, Ondrej Hacker of the Czech Republic, this set up won the 2014 F5D World Championships in Turnau, Austria and also set a new World Record of 52.93 seconds. The blade of the propeller is extremely thin in order to achieve the desired performance, but because of this it is also very weak. As a result the blade is not fixed solid within the spinner but is allowed to pivot (front to back) and so find its own position under different loads as the model flies, rather than trying to flex the blade itself (which would inevitably tear it off).

Though the model showed good speed, Paul suffered the inevitable issues of such a radical set up when it is new and unfamiliar and he wasn't able to unleash its full potential, ending up third in the competition overall.

A second set up used this year is from Darron Rodrigues, with his Avionik D06 from Sergey Sobakin of Russia (a name no-doubt familiar to those of you who follow F5B in any way). Like the Dominator, this model also uses a full carbon wing and a carbon/Kevlar weave fuselage. But at just 51.8" wingspan it is quite a bit smaller than the Australian airframe.

Though popular for a long time in other classes of pylon racing the V-tail configuration is relatively new to F5D models

This single-blade propeller was designed by current F5D World Champion, Ondrej Hacker of the Czech Republic

The geared Leomotion 4200 KV motor, Kontronik ESC and folding carbon propeller of Darron Rodrigues

The super-thin blade is free to pivot to its own 'happy place' (from top to bottom within the channel of the spinner, as seen in this photo)

Measuring 12 inches in diameter, the tips of this propeller at 10,500 rpm turn at approximately 375 mph (Mach 0.49) during flight

Note the weave of the full carbon wing and carbon/Kevlar cloth of the fuselage on the 'Dominator'

Darron Rodrigues designed and made the 'sawtooth' folding propeller himself

The Avionik D06 of Colin Dilloway comes into land after another solid time

Darron's research makes use of the fact that F5D allows for a geared motor set up to be used and the theory that a larger propeller running at a lower rpm has a much greater efficiency.

Like Paul, Darron also runs on 5S (18.5 V) batteries. But this time to power a Swiss-made Leomotion 4200 KV motor and a German Kontronik Koby 90 A brushless ESC. With this, Darron uses a 6.7:1 ratio gearbox to drive a 12" x 21.5" folding 'sawtooth' propeller at approximately 10,500 rpm. Basic maths tells you that the motor itself is turning at 70,350 rpm and so because of this immense force, the rotor of the motor is held together by Kevlar roving. Special mention should be made of the propeller that has been designed and made by Darron himself – it really is a beautiful piece of work, and the airspeed it provides is something to behold.

The final set up used this year is what has become the more standard way to go in F5D, certainly in the UK, over the past 3 to 4 years. Though more standard, it is certainly not to be thought of as inferior; indeed the winner of this year's event, Colin Dilloway, flew this equipment.

Colin's model, again an Avionik D06, was powered by a Neu 1115/2.5D, 2100 KV motor running on 5S. The more standard part is the propeller, in this case a basic APC 5.25" x 5.25" turning at approximately 45,000 rpm.

Which Way For The Future?

The old adage that to finish first, first you must finish is particularly apt for pylon racing as once again the outright fastest model did not win the event. Clearly you have to fly around the course and not cut inside the pylons (as those carrying a penalty are rarely placed highly). But as I mentioned, it is imperative to match the demands of your set up to your ability to fly. A ballistic six laps is no good if you've spent your 1000 watts and must glide the last four!

Though they did not win the Nationals this time around it is clear to see that the geared motor set up and the single-bladed propeller produce significantly higher airspeeds than the 'standard' 5.25" propeller. But pylon racing requires more than that! There's no doubt in my mind that these are the ways forward, but like any technological development they will require some work to get them right. Here's looking forward to next year! **RCMW**

CONTACTS

BMFA
https://bmfa.org
British Miniature Pylon Racing Assn.
www.ukpylonracing.co.uk

SMC Sussex Model Centre

www.sussex-model-centre.co.uk

Here are just a few of our new items and special offers this month. See our website for a full range of products including * Aircraft, helicopters * Radio control cars, buggies, tanks & trucks. * Boats & ships * R/C systems * Electric motors * IC engines * Tools and accessories.

Seagull Focke-Wulf FW 190 2033mm for 33cc size engine (oversize parcel) £299.00

SMC twitter facebook

Flitework Shiny 100mm receiver ready £164.99

E Flite T-28 BNF Basic 1225mm span £193.99

Hawksky V2 Power Glider 1370mm RTF with 2.4ghz radio £169.99

Black Horse Hawker Hurricane II 1520mm span ARTF for 46-70 size eng. £246.99

Eflite UMX P-47 BL BNF Basic 482mm span £98.99

Blade Micro Apache AH-64 BNF £152.99 or RTF £193.50

VISA PayPal

57-59 Broadwater Road : Worthing W Sussex: BN14 8AH
Tel. (01903) 207525 (3 lines) or 233817 Open 9am.-5.30pm. Mon. to Sat.
Email: smc@sussex-model-centre.co.uk Web: www.sussex-model-centre.co.uk

RCMW20/10/15

E&OE

CONNECT

Yellow Dk Yellow Orange Lt Orange Red Dk Red Lt Green Dk Green Silver Medium Blue Tropic Blue Ocean Blue Dk Blue Lux Blue Antique Black Heather

Solarfilm

IRON-ON COVERING MATERIAL FOR FLYING MODELS

TO RECEIVE A SAMPLE PACK CONTAINING ALL PRODUCTS & AVAILABLE COLOURS SEND FOUR FIRST CLASS STAMPS TO:-

Solarfilm Sales Ltd. Ackhurst Rd, Chorley, Lancs. PR7 1NH England
Website www.Solarfilm.co.uk Tel 01257267418 Fax 01257276203

Green Blue Gold Violet Yellow Orange Red Pink Orange Green Red Yellow

On the third weekend in September, Bill and Micki Bowne were among the many electric modellers from the eastern US and Canada who converged on the Peaceful Valley campground for the 2015 rendition of the Northeastern Electric Aircraft Technology (NEAT) Fair

NEAT officially starts on a Friday but by the preceding Wednesday all sorts of unofficial events are underway. One of them is the JCSF's Micro Radian pylon racing

No extensive protection gear required when racing micro Radians!

Unlike NEAT 2014, when it rained heavily on the show's busiest day, the forecast was for NEAT 2015 to have beautiful weather the week before, during and after. Well, the weatherman was almost right; there was a mild shower late Saturday night, long after the end of the night flying. I think that's forgiveable!

Early arrival has become a tradition at NEAT. The official festivities start Friday, but several groups (such as the Jersey Coast Sport Fliers – the JCSF) run unofficial events Wednesday and Thursday. Since the local club (whose site is on the campground) welcomes camping flyers, the sky was full of models from dawn to well after dusk, all week.

As usual most of the models we spotted were ARFs, but we did see several creative projects, ranging from bashed ARFs to complex, original creations. Our overall impression was that the average model size is down, with only a few 10 or larger cell-count models visible (outside of the show teams). We suspect that the new wave of small gasoline/petrol engines is replacing the large electrics? That isn't a surprise, as repeated flights with large engines during

NEAT 2015

Marty Ludwin built this 1/5th scale Brisfit from the Flair kit. Power is an E-Flite 90 on a 6S 4200 LiPo pack and covering is Solartex. Guns, pilots and wheels are all from Williams Bros

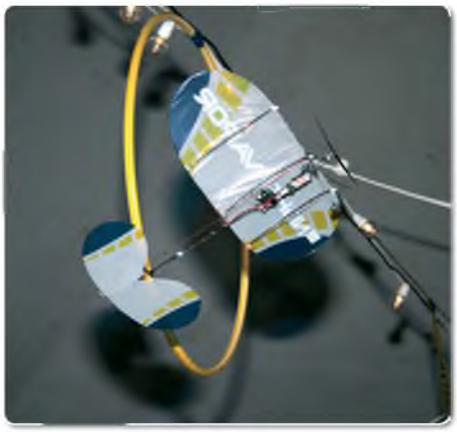
a flying session is both simpler and less expensive than charging or swapping large battery packs.

Many thanks go out to the manufacturers who support NEAT and JCSF, to the great guys of the Silent Electric Fliers of Long Island (SEFLI) who put on the event (including Event Director, Tom Hunt), and to the volunteers from SEFLI and other clubs who make NEAT happen.

We hope the included photos give you a small flavour of such a popular event.

RCMW

John McGrath built a Terry Dunn Parallax from the Model Aviation magazine plans. Liking it, he did another, but this time lengthened the wing chord and added scalloped edges, a 'Dick Dastardly' pilot and 'Wacky Racers' numbers. The model is mostly 1/2" insulation foam, with hollow Depron wings sporting carbon fibre spars



Thursday evening brought another 'unofficial' event, the JSCSF 'Vapor games' (sponsored by Hitec). Trying to fly Vapors through hoops hanging in a small circus tent is definitely challenging!

The Baron's men are on the prowl! Father and son team Tom and Jason McQuistan's fleet included this pair of all-foam and carbon fibre Fokker D-VII's (including the wheels!). Thanks to their under-cambered wings, they flew slowly and realistically

The Woodworth's (Lee and son Adam) never fail to impress us with their creativity. (Remember the 2013 flying inflatable swimming pool toy?) This year they brought quadcopters done up as speeder bikes from Star Wars, complete with hollowed out riders (we can hear the Star Wars collectors groaning!)

Another Woodworth innovation was this sport acrobat, combined with a quadcopter. It can do all of the normal quadcopter stunts, but when the nose motor is powered up and the model transitions to forward flight the quadcopter rotors (using a separate throttle) are throttled down, the wings take over lifting, the nose motor provides thrust, and the aeroplane control surfaces allow the model to be flown as an (almost) normal acrobatic aircraft

One more Woodworth innovation, the 'Experiment' sports four 3D Hobby Shop wing panels and two tails in an 'X' and '+' configuration. Watching it do 3-D acrobatics quickly leaves one dizzy! Adam won the 'Best Sport Model' award with this fascinating bird

Imagine looking at your approaching model and seeing this! It's hard enough remembering 'left is right' when approaching and 'Down is up and Up is expensive when inverted'!

Another McQuistan family project is this 'Skyvan' and 'Space Shuttle'. The nearly 6 lb Skyvan, powered by two E-flite 46 motors and two 4S 2200 LiPos, easily carries the Shuttle aloft. Like their other models, both are constructed from 'Dollar' store foam board or pink fanfold foam and are glued together with an ordinary craft-store hot glue gun

Former F3A Champion, Dave Lockhart put his Allure through its paces. Powered by a Neu 1512-2y motor and a contra prop, the 1100 square inch model ignored the winds as Dave flew his customary precise manoeuvres

Thayer Symes scaled up a rubber-band sport free flight design to produce this cute little beastie. Thayer says it's a handful in a crosswind, with all of that wing area up high, and that power MUST be applied gently, lest the 2 oz, doped Polyspan model try to point straight up!

Another McQuistan family model was this Davis DA-2. The all foam, over 6' span model flew slowly and gracefully in Friday's light winds. Jason tells us the model originally sported a 'V' tail but had some handling issues, until the tail was modified to conventional form

Tom Cerqua built this slow-flyer from foam-cored poster board, with some carbon fibre under the wings and functional wing struts. The unnamed 48" span/4 lb model takes-off in under 3 ft (under two feet with flaperons!) and cruises at a ridiculously slow walk. No, there are no plans – by the time Tom thinks about drawing up plans, he's started another unique project!

Don Belfort won the 'Best Civilian Scale' award with his Miles-Atwood special, scaled up from rubber band plans to 68" span! With an E-flite 60 on an 8S 5000 LiPo, Don easily flew the 10 lb model around imaginary pylons

Sawncraft displayed a series of rugged little foamie deltas, designed to use the bricks from deceased E-flite Champs, etc. Despite their prop-in-a-slot configuration they are surprisingly quiet and fared well in the wind. Their line includes a Javelin (left) and a B-58 (second from right)

Robert Caso showed us two models he kits: a Douglas SBD and a Fairey Swordfish. The SBD has an open-framework wing, whilst the fuselage is balsa sheeted. A vacuum-formed cowling is included in the kit. The prototype SBD weighs just under 16 oz (without battery)

Robert's 360 sq inch Swordfish weighs 23 oz RTF (with battery). The torpedo is available as a vacuum-formed option

Robert's Swordfish plans include instructions for a functional folding wing, using a super magnet on the top wing and a ply tongue that slides into a slot between spars, whilst a spring-loaded pin locks the tongue in place

Michael Fuso modified this E-com R/C Tiger Moth, electrifying it with an Axi 4324-30 motor and 10S 5000 batteries. He replaced the overly glossy colours by scuffing the stock shrink film covering with a scrubby pad, then giving it a flat clear overcoat

Michael hid his Tiggie's batteries under a simulated 'tonneau' cover over the front cockpit. First, he covered the cockpit area with sandwich wrap. A layer of 6 oz fibreglass cloth and resin, followed by two layers of half-ounce cloth and resin, created the basic cover, including scale-ish sagging. Next came a coat of semi-gloss primer, then some rivets to simulate snaps

CONTACTS

Neu Motors.....neumotors.com
Robert Caso Designs.....Raso916@aol.com
Sawn-Craft.....Sawn-Craft.com
The NEAT Fair.....neatfair.org

SARIK-VACFORM

for High Quality Vacuum Moulding

THE IDEAL VAC-FORMED MOULDS FOR YOUR BUILDS

White ABS - perfect for Cowls, spats and more

Clear ABS - perfect for canopy's

Many different canopy's in stock and bespoke orders welcomed!
For stock availability and more information on how Sarik-Vacform can meet your vacuum moulding needs

phone Barry or Janet on 01531 631605

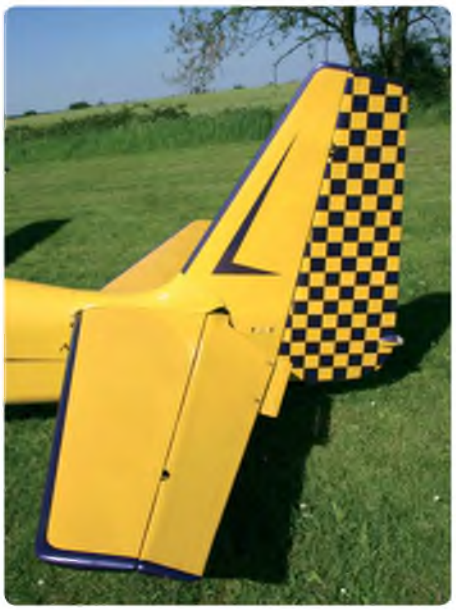
www.sarik-vacform.com
info@sarik-vacform.com

9 Lower Road Trading Estate, Ledbury, Herefordshire, HR8 2DJ

SCALE DOCUMENTATION

Peter Miller shows how to take photos to document your next scale project

My Fournier RF-7 in front of the full size aircraft. Traplet have a full set of my pictures on CD. (Fournier RF7 - 'Full Size Focus' Photo CD. Product code FF31, £10.99)



The fin of the full size aircraft. This picture helped me get the chequers accurate

Undercarriage of the Turbulent taken by a friend at the Museum of Flight

Any modeller who flies scale models will eventually want photos of the full size prototype. Even modellers who fly ARTF scale models may want to add some details or change a colour scheme to personalise their models, so they will need photos. Similarly, anyone building a model from a kit, plan or their own design will need pictures of their chosen subject; whether that is just to get a colour scheme right or to go down to the finest detail will depend on the level of accuracy wanted.

My own scale designs are intended to look good at a little distance, so the colour scheme has to be accurate and I like to get obvious detail such as exposed engines reasonably accurate. I am happy with a good set of walk around pictures and some of the larger detail shots. The competition modeller needs every fine detail possible and will need as many pictures as he can get. There are companies that sell sets of photos (such as Traplet's own 'Full Size Focus' CD's – KC) and these are often very useful, although the quality and content vary. The Internet can provide a few useful pictures but not a full set aimed at the modeller.

Therefore, the best option, when and where possible, is to take one's own set of pictures of a particular aircraft.

Finding Your Subject

Once one has chosen a subject, one has to find an example of the full size aircraft. There are various places to search depending on the type of subject.

For older or historical types museums are a good starting point, although in most cases access to the aircraft is very limited. Without going into a long saga, I was asked to get a very detailed set of photos of an Airspeed Oxford. Basically the answer was "NO!" Then the authorities decided it would be allowed at a cost of nearly £100. In the end I believe that a high ranking officer in the Polish air force spoke to a high ranking officer in the Royal Air Force and I was allowed to climb all over a particular aircraft at Hendon.

The resulting set of photos helped Piotr Zawada to win the World Championship control line scale event in 2010. On the other hand, the Museum of Flight at East Fortune near Edinburgh was most helpful and allowed a friend complete access to their Druine Turbulent so he could photograph it for me.

Finding private aircraft is much easier. There is a website run by the CAA that allows one to search by registration or by aircraft type. The former will show all aircraft of that type on the British registers, some with pictures. The latter will take you to an individual aircraft. Their website can be found at: www.caa.co.uk/application.aspx?catid=60&pagetype=65&appid=1

There you can find out where the aircraft is based and the owner's name and address. Links on the website will take you to similar ones in other countries.

When I started designing my Vans RV3, I found one aircraft on the Internet with an open cockpit. This would save me having to make a huge canopy. I went with the American version, got the owner's address

The Teverson Bisport. I was able to follow the construction from start to finish

Fuselage frame of the Bisport. You cannot always get the best background

A visiting Europa was worth photographing, but I will never tackle that fuselage

Wing construction of the Bisport. And you thought cutting out wing ribs was boring

Detail of the Europa flap hinge and outrigger

in Hawaii and wrote to him. I posted my letter on a Wednesday and on Sunday morning I had an email with photos of his aircraft.

I have found that owners of aircraft - and especially owners of homebuilt aircraft - are always helpful; they are very pleased that someone is going to model their aircraft. If you are lucky you will find an example of the aircraft that you want to model within easy reach. Otherwise, you may have to travel some distance. If you can't physically get to the aircraft some owners will send you a few photos, which will show the colour scheme at least. However, do not expect them to take a large and comprehensive set of pictures.

Some owners can be even more helpful. One was even kind enough fly his aircraft to a local private airstrip so I could photograph it. This model is now being built in Australia, where my set of photos has gone. If you are very lucky you may find a homebuilt of an interesting aircraft under construction locally. You can then follow the build with detailed pictures right through to completion, something that I was able to do in a couple of cases. One of these aircraft of was the Teverson Bisport, which I followed from first drawings to completion over several years.

There are times when you may have the opportunity to photograph a suitable aircraft, even though you do not have any interest in building a model of it. Take a full set anyway. Years later you may decide that you do want to build a model of it, or someone else may be grateful for a set of pictures.

Our club used to fly from a private airstrip, which often had interesting visiting aircraft. I always took a good few photos of them, even if I had no interest in modelling them. The same applies if you are on some airfield and you see an interesting aircraft. Take lots of pictures. You may never see one of them again.

A Few Words On Cameras

Almost any camera will do the job if the aircraft is out in the open. If it is in a hangar then a good built-in flash is essential. I sometimes use a second flashgun with a slave unit, which is triggered by the light from the flash on the camera. The flash may be useful when taking cockpit photos but it can reflect off instrument faces so that they are just white discs in the final picture. Taking the pictures from one side at an angle will eliminate this. More on this later… The flash will also be needed for details up in wheel wells.

Most cameras allow you to increase the ISO setting (what would have been the film speed on film cameras). This can be helpful in dark hangars. After all, they use high

Visiting CAP 10. Now I might build one of those, so I took a lot of pictures

CAP 10 instrument panel

While taking pictures of a Military Piper Cub I spotted this Nord NC 854S. An ideal subject

Compared with the CAP 10, the Nord instrument panel is basic and crude

Another lucky find in passing, the Luscombe Silvaire

Details such as the unusual shape of the spats are well worth recording

A Team Minimax would make an idea subject for modelling

Exposed engines should always be photographed. This is the left side

The silencer on the Team Minimax could be used as the model engine silencer

You would really need the photo to recreate this colour scheme accurately

This is the sort of detail that would enhance any military Piper Cub

ISO settings taking photos of rock bands in dark venues. A good zoom lens is also very useful. When taking the side view of an aircraft you can get a lot of distortion, so the further back you can stand the better. This will allow much better direct comparison between the actual aircraft and a 3-view drawing.

At the other extreme, a good wide-angle lens will allow better coverage in cramped spaces such as cockpits.

How Many Pictures?

Back in the days of film, cost was something to be considered. One could go through a 36-exposure film very easily. This made one careful and a vital view was often missing from a set of pictures. These days digital cameras remove any limitations, so one can cover every detail from different angles, if one is going to that level of detail. But why not take them anyway? You may just decide to make it a more detailed model.

The first basic pictures should be a walk round, taking at least eight pictures covering the front, side and rear views, plus the quarter views. If you can get a bit higher the view looking down is always helpful, although this is not usually possible. But I have managed to climb on a hangar roof to get pictures of a special colour scheme.

The next important area is the cockpit. This is where most people look, so you will want to have a reasonable representation of this area on a scale model. Taking a photo of the instrument panel can be tricky. You may not be able to cover it with one picture and if you need to use the flash you will get the light reflected from the dials. One can take the panel from an angle, which will allow it to be covered in one shot and will also prevent the flash from reflecting back into the lens.

Later the panel can be drawn using the straight on views for the positions of the dials and the angled view to see which dial is where. The other method is to use a good photo processing program to correct the distortion in the same way that perspective in pictures of buildings are corrected.

Another area that merits special attention is the undercarriage. A good range of views will allow you to make sure all the details are correct and look right. Close-ups of control surfaces will show how the hinges work and things like gaps etc. Detail pictures of complicated colour schemes will help when doing the final colour scheme, as well as any logos or badges.

Even small details such as wingtip lights and aerials should be photographed from at least two angles so that they can be duplicated accurately. Remember, you may not be able to go back to take more pictures.

RCMW

IMPORTANT MESSAGE FOR GLOW ENGINE OWNERS

Why not fit electronic back-up to your glow engine and **say goodbye to engine failures.**

Get convenience, reliability and safety with the **AGS Advanced Glowswitch.**

Just some of the features:

- Heats the plug only when needed.
- Active over the whole throttle range.
- No need for a glow lead for starting.
- Use a colder plug and get more power.
- Suitable for singles, twins and multis.

To learn more go to:

www.southhertsmodels.com

OptiFUEL™
...your passion
THE UK'S ULTIMATE NITRO FUEL
WWW.OPTIFUEL.CO.UK
+ COMPLETE RANGE OF LIPO CELLS
& CHARGERS WWW.OPTIPOWER.CO.UK
OptiPOWER
...your passion

BRAINCUBE AEROMODELS
From Only £24 +P&P
LASER IT!
Get your plan precision laser cut - High quality materials included in the price
Simple online ordering - Know the price before you order
Goto www.braincube-aero.com
or call 0845 459 3174

Get mobile with our APP - download it FREE now!
RC MODEL WORLD App
Now you can read RC Model World magazine – no matter where you are!
Available at
pocketmags.co.uk
Ipad • Android • Kindle Fire • Windows 8
Available on the App Store
Google play
Available on kindle fire
Windows 8
HSAD.APPHP.ROMW.MAR15

HIGH PERFORMANCE CERAMIC BEARINGS

ORANGESEAL
CERAMIC HYBRID • ABEC #7 • NON-CONTACT SEAL

ULTIMATE RACING BEARINGS! BOCA BEARING

(800) 332-3256 I www.bocabearings.com

STEPCRAFT.

Realise unique projects - with computer-aided desktop 3D systems.

Exclusively in the UK with STONEYCNC!

Customised projects with the desktop 3D system

- CNC router
- 3D printer
- Foam cutter
- CNC plotter
- Vinyl cutter

All you need to CNC from £1000

Visit our website www.stoneycnc.co.uk and watch the machine in action!

Distributed exclusively in the UK by STONEYCNC

Happy to help at all times:
+44 (0) 1432 607 908

info@stoneycnc.co.uk
www.stoneycnc.co.uk

INWOOD MODEL SUPPLIERS
The Home of Radio Control Modelling

ONLINE SUPERSTORE
open 24 hrs, 7 days a week

Most comprehensive RC Model
Model Website in the UK

SITE UPDATED WEEKLY!
www.inwoodmodels.co.uk

airtek
APEX
SERIES
performance brushless outrunners

From Just £9.95

The Airtek Apex Series Motors have been introduced to provide the modeller with the best value outrunners you can buy. Featuring CNC machined aviation grade alloy cases, EZO Japanese bearings (generally considered to be the best miniature bearings available), 0.2mm silicon-steel stators and a host of other quality features. These smooth running, rugged motors are built to give a long trouble free life.

Apex Motors are available in 7 can sizes

2822 (1100, 1450 and 1800kv versions)	£9.95	3542 (1000, 1250 and 1450kv versions)	£21.95
2826 (1000, 1400 and 2200kv versions)	£10.95	3548 (790, 900 and 1100kv versions)	£23.95
2836 (880, 1120 and 1500kv versions)	£14.95	4250 (880, 1120 and 1500kv versions)	£29.95
3536 (1100 and 1450kv versions)	£16.95	FULL RANGE OF SPARES, SHAFTS ETC AVAILABLE	

OPEN 24/7
Shop from the comfort of your own armchair on our 3-D Secure Site

01484 506 118

Read all About Them at (and the other 2000+ items we list) at
www.airtekhobbies.com

airtek
your local model shop on the internet

All prices quoted are correct at time of going to press (26.10.15). Offers are subject to availability. E&EO.

SOARERS' SLOT

This month Mike Proctor offers well proven advice on how to stop your valuable thermal soarer from disappearing during the climb out or on the glide

The white upper surfaces on this Explorer stand out well against the dark clouds ahead, but the addition of Day-Glo orange tips all-round give that extra bit of insurance for changing light conditions

Now you see it, now you don't!

Forty years ago many things in the Thermal Soaring world were different. If you didn't get your contest entry and fee to the CD concerned, by return of post after the advert appeared, you might not have been accepted as one of the 72 entrants. Contests ran on the six frequency spots available on 27 MHz, up to a usual maximum of 12 rounds. Would that we still had that problem!

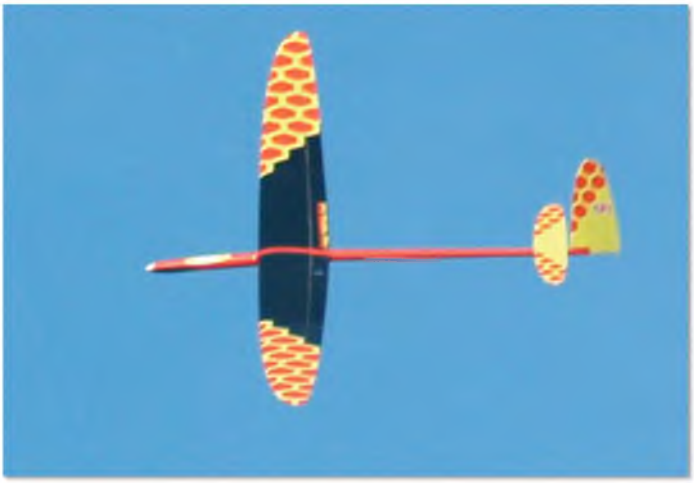
However, we do retain at least one problem to this day.

I well remember watching a slot about that time, when no less than five Graupner Cirrus' took part, with one other model making the six. After tow launch one Cirrus circled away downwind and crashed gently in the next field, across a slight valley and in full view of all watching. Despite much shouting about what was happening, not one of the five pilots turned round to check and all five continued to fly the four remaining models.

One by one, each of the remaining models peeled off to land, until one model was still being 'flown' by two people. And not until that model was a few feet from landing did one of the two 'pilots' realise he wasn't flying it! All this happened despite literally dozens of people shouting warnings the whole time. (It should be recorded that the warnings had stopped

Models with 'sticky-up-bits' are usually the best to see, especially when, like Mike Connell, you have plenty of colour incorporated as well

Simon Haley shows how blocks of colour work well and maximise his chances of seeing the Explorer in varying sky colours



The black on the Pike Perfection shows up well, as does the red/yellow honeycomb on the tips. But notice that this picture was taken late in the day and the sun is at a low angle, which highlights model colours well. Black needs covering when not flying or it gets hot quickly!

Colin Paddon has bright colours (actually bright orange) to contrast with the black on his Cluster. Note the fin is all red and similarly stands out very well

This Maxa has the solid all-over red scheme, with different stripes on the undersides. Note that Patrick has the colour continued onto the tailplane – a component often ignored

Not often you get a chance to directly compare V and X tails with the same colour scheme; I think the X wins here. Andreas Freundl has, however, made sure that the colours can be seen well at all angles on the V tails

and most people were paralytic with laughter by this time!)

On Bank Holiday Sunday, at the Silent Flight Nats, two models were lost to the same problem. Not something electronic, nor mechanical, just confusion over whose model was whose.

In both cases the loss of control was noticed quite quickly by others flying and helping in the slot concerned. Warnings were shouted but, as so often happens, the pilots concerned seemed slow to react because, at first, they could not bring themselves to believe it was their model concerned. By the time they did realise, the situation was beyond recovery.

What can you do if you get into a situation where there is any doubt as to which model you might be flying? Obviously you can bank one way or the other and check the response but everybody might be doing that! Doing a full circle might seem a good idea but in the time that takes, an uncontrolled model could be halfway to the ground and still accelerating.

Better to try something quick and obvious, like a 90 degree right, followed by a quick 90 degree left. Or, if you want to do something more different, you could stall, or dive the model. The most important thing is do so something straight away, even if you think it can't be happening to you, because that's what all the people who have pulled models out of the ground thought - and they were wrong!

It Never Rains...

Whilst on the subject of visibility, I think it worth mentioning three problems which happened in the later part of the year to 2 Metre models during the climb phase.

In each case the problem was the same; the models were lost, under power, during the climb. I was present each time this happened and the circumstances were very similar; the models reached about 2/3rds launch height and vanished!

In the first case a Reichard Magic was lost (and still remains so) despite at least five people hearing the shout of the pilot having "lost model" and turning to search the sky immediately, saw absolutely nothing! However, most of us thought we heard the motor again and quite close, despite earlier shouts to "turn off", "hold in some up" and "put the brakes on" – the model still vanished into thin air!

The second case was exactly the same as the first, except the model was an HK Phoenix and it was a week later; even the pilot was the same! The rest of us were completely amazed at first, that this could happen twice, then astonished when the model was found within 10 minutes!

Thirdly, a competition flight I was timing vanished to the pilot's view, as I glanced down to call the climb time off the stopwatch. In a matter of seconds the motor was 'off' and some up applied, but the model vanished. It was found damaged, 20 minutes later, in the next field.

Once again there were several common factors.

When climbing electric gliders it is important to remember that the profile is often very slim in the side and end-on directions. There is a tendency to climb-out straight ahead at about 45 degrees and with a model having a good contrast to the sky and good general visibility this works most of the time. Flying a slight 'porpoising' path also helps.

If your model does not contrast well with the background (sky) or flies into a sky of different colour (from cloud to clear blue, usually), or your eyesight is not as good as it was, then invisibility is lurking nearby. To minimise the chance of this happening it might help to put in some gentle left-right turns while climbing, thus presenting the upper surface of the wing to your view as much as possible.

This is a standard HK Phoenix 2M and shows how plain an all-over white scheme can be, especially in the prevailing bland overcast

Although light green on the upper surfaces is not the best colour in these 'slate blue' conditions, the black/red undersides nearly always work well. This Kappa 3.5 has a massive fin, as you can see, and cries out for a bright colour to give the super slim side view maximum visibility

This is another Phoenix 2M with all the decals applied. On an only slightly brighter day than the plain version was pictured in, the colour panels stand out noticeably

An alternative to this is to power forward with very little climb for 50 - 100 m, then climb steeply, presenting as much of the model's plan view as possible.

As before, with confusion of models when gliding, the speed at which things go wrong cannot be overstated. It is very important to remember that when using a height limiting switch the motor will re-start after 10 seconds if you do not select motor 'off' on your Tx. So in the event of your losing sight of your climbing model for more than two seconds – switch it 'off'!

In two of the above cases this was not done, probably contributing largely to the demise of the model. In the heat of the moment, when all the pilot thinks about is looking up and around for the model, controlling it is far from his mind and it is often the helper who needs to be on the ball with instructions to 'switch off'!

This should be followed by the application of either up elevator (gently applied, so as not to rip the wings off!) or brakes - or both. This usually makes a model flop about, giving a much larger 'sky-print' and therefore a bigger object to spot.

The essence of all this is the need to do something very quickly if you are to save your model in these circumstances. It is worthwhile practising recovery from these situations, under controlled conditions, and with someone else watching, of course.

I estimate that in all the above cases the model was on the ground fewer than 10 seconds after being lost; what goes up does come down, but an awful lot faster! This is why, if you have a spare pair of eyes, they could do little better than watch closer to the horizon because that is the place that aeroplanes go to die!

Graupner Cirrus Revisited

Talking of the famous 'Cirrus Incident' earlier brought back memories of that famous model and the impact it had on the thermal soaring scene in the 70s.

In an era when virtually all models were hand built and many models looked like overgrown free flighters, the Graupner Cirrus cut quite a dash when it appeared in 1969. To start with it was semi-scale, had clean lines and even big decals for the wings and fuselage, which was a three-piece ABS moulding, enabling it to be packed in a relatively small box for sale.

The standard fuselage was a problem, or rather the material used for its manufacture was, because it was prone to cracking on a firm landing and this situation worsened as the temperature dropped. This problem was often rectified by exchanging the ABS original for a 'cottage industry' produced fibreglass replacement.

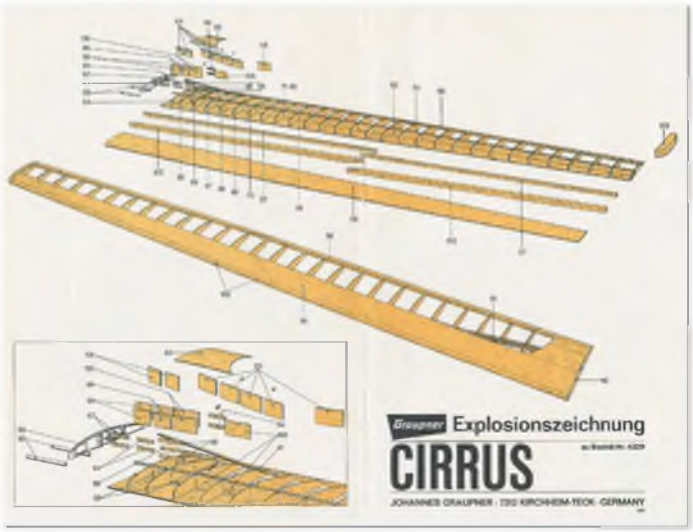
The wing was also a classic piece of German engineering and was built from a lot of well formed die-cut parts, which produced a light, strong, D-box structure.

The tail was fully symmetrical, all flying and fairly unusual at the time. Rudder and elevator control were used on the original, with the rudder needing all the movement possible to generate turns with the low, straight dihedral.

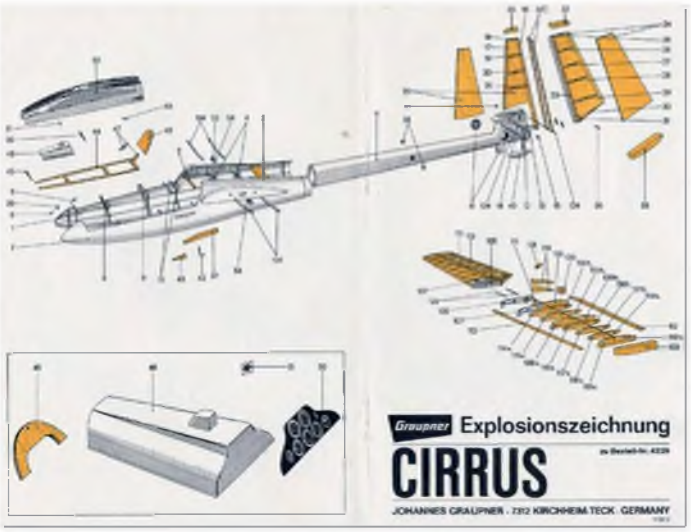
Some brave souls installed ailerons or spoilers but the weight penalty, with the monster servos of the day, tended to consign such versions to the slopes, where they flew well. On the flat they needed a bit of a blow to compete with the 'floaters' of the time but where pilots started to fly them in a more modern 'search pattern', rather than their competitors' more usual 'park-and-glide', they started to show the way forward.

Un-built versions still trade on the Internet, alongside built ones, often converted to electric power. They certainly don't look over 40 years old!

The Graupner Cirrus, which started life in 1969, was a 3 m model, which by careful design and manufacturing came in a box about 700 mm long! Several are still flying, often converted to electric and they are still traded on the Internet. The wood must be well seasoned by now but not sure about the state of the ABS?



Exploded view of the Cirrus wing. As you can see the standard of the graphics is well up to today's computer generated equivalents and of course there was a full size plan as well to do all that building over. Sometimes spoilers and even ailerons were added



The Cirrus fuselage was fabricated essentially from three large pieces of ABS. Experience proved that replacement with an 'aftermarket' GRP version was beneficial! This was an 'ahead of its time' kit, which performed well in a steady wind, or on slopes. Some still do!

Dave Worrall

The very sad news of the death of Dave Worrall reached us at the SF Nationals.

Dave had been fighting a blood disease for several years but restarted flying F3B when it became possible to use electric motors for launching. He was still fit enough earlier this year to play golf, as well as fly to a good standard in F3B, eSoaring and F5J.

Dave was at the top of the soaring tree for many years with his own designed 'Plus' series of models for slope and thermal soaring, taking part in several F3B World Championships, the last being in Switzerland 2007. In York in 1983 he won Individual Bronze and Team Silver. He took the individual Silver Medal in Australia 1985, narrowly missing the Gold; but the team took Gold. In 1987 he took a Team Silver in Germany.

Apart from those prestigious events, Dave took part in and won many UK contests, both slope and thermal. He was awarded a Royal Aero Club silver medal in 1985.

As a qualified engineer working in the aerospace industry for most of his life, he spent several years in Germany and always took a measured, technical and uncompromising approach to producing and flying model aircraft, making many innovative steps along the way. He was also a qualified yachtsman and pilot, having built his own light aircraft (with 8000 rivets!), which he flew to rallies in Europe.

He will be sorely missed by his many friends, but most of all by his wife Lesley, and their daughters Melanie, Charlotte and Elise.

RCMW

Dave Worrall, who died in August, obviously enjoying flying as ever, at his last F3B event in May this year. He will be much missed by his friends and fellow competitors

SPARMAX AIRBRUSH SET

Putting together the Sparmax ARISM compressor and Sparmax MAX-4 airbrush makes for a great airbrush set up for fine model detailing

ARISM compressor and MAX-4 airbrush set up and ready for action

The ARISM comes in a neat carry box

MAX-4 is supplied in a protective case, with slip on packaging

When you start aeromodelling your first priority is to put together a set of building tools. But as time goes on you'll no doubt want to add to your tool and accessory collection, and one of the most popular ancillary items is a basic airbrush powered by a compressed air can. This will allow you to add a few personal touches to your latest R/C model aeroplane – maybe a broad sweep of black paint to represent an exhaust trail down the fuselage of a warbird, or a few streaks on the wing leading edges to replicate gun residue.

But as with most modelling tasks adding such simple touches can become addictive and you'll soon find yourself wanting to upgrade to a decent airbrush so that you can add fine details to areas like a cockpit or to mask off scale panel lines that accurately represent those on a real aircraft.

You'll also want to equip yourself with a constant, reliable air supply as there's nothing more frustrating than shaking an empty air can after your brush stutters to a halt half way through a painting session – not to mention the splodges of paint it leaves on your work piece! A decent air compressor is the answer here.

Luckily a good quality airbrush and compressor combination doesn't have to cost a fortune and the Sparmax brand that we will be looking at here offers a number of cost effective solutions. Sparmax ARISM products are exclusive in the UK to the Airbrush Company Limited and their resellers (visit www.airbrushes.com for full details).

ARISM Compressor

Let's begin with the air source. The ARISM air compressor is a fine looking piece of kit, consisting of a sturdy cube shaped black metal box with rounded edges and polished metal end plates.

It is the shiny end plates that really catch your eye as you lift the ARISM out of its carry case box; both ends carry the Sparmax branding vertically in large letters, with a neat grille of round ventilation holes alongside. The front face also has the threaded air outlet and a small pressure gauge, marked in kg/cm sq and psi. At the rear is the on/off switch and AC power cord connector.

On top is a carry handle and a rubberised hole into which you can push a see-through airbrush holder, which keeps the paint cup upright whilst not in use.

As well as the transparent holder the ARISM also comes with a 2M braided hose,

an airbrush bleed valve, a Silver Bullet moisture trap and a UK plug and power cord.

Inside the unit is a low maintenance, oil-less single cylinder compressor with a working pressure up to 35 psi. While it needs to be switched on using the power switch at the back, an automatic pressure switch stops and starts the air whilst in use. With a dual-action airbush connected, but not being used, this switch automatically stops the compressor when the pressure reaches 35 psi. Conversely, when the airbrush is being used and the pressure drops to 25 psi the auto switch switches the compressor back on.

Air Pressure Valve

The air pressure reaching the airbrush is regulated using the bleed valve. Turning it clockwise increases the pressure, and vice versa to decrease the pressure. The pressure required will vary depending on your own preference for how the paint is applied and it will also vary with different types of paints and pigments.

Higher pressure will give a finer mist of paint and may result in fewer blockages (although all airbrushes will eventually clog up and need cleaning whilst in use). But it can lead to more overspray and more paint vapour hanging in the air (you may want to consider using a mask for bigger paint jobs and depending on the toxicity of the paint). The finer atoms of paint will also cause the paint to dry faster and can even lead to them drying off before they reach the work surface, resulting in a matt, sandy finish.

On the other hand less pressure gives less overspray, so you can paint in finer detail and with less wastage. The larger droplets of paint mean that more of the paint being sprayed will actually stick to the work surface. However, the coarser droplets can lead to a rougher finish, and they are more likely to clog the fine needle and nozzle of an airbrush. For this reason it is important to thin the paint correctly for airbrushing according to any instructions provided with it.

Generally speaking, you should set the valve so that your airbrush sprays at the lowest pressure that atomises the paint to your liking.

Silver Bullet

The Silver Bullet is a moisture trap. It needs to be fitted at the end of the flexible air hose so that it can collect any moisture in the air before it reaches the airbrush. You want to be spraying paint, not water! Water accumulates in the hose as the compressor heats up during extended use, as warmer air holds more moisture (this can also be more of a problem at times of high humidity). As the air cools off during its short trip towards the airbrush any moisture will condense and be propelled down the inside of the line. The Silver Bullet is designed to collect any water so produced and this can be drained off using the valve provided as soon as you start to see it collecting in the bowl. Keep a paper towel handy to soak up the water when you release the drain valve.

The instructions state that the ARISM compressor should not be run continuously for more than 40 minutes, after which it should be allowed to cool down for at least 10 to 15 minutes. Besides keeping moisture to a minimum this will also help prolong the working life of the unit. It also features a thermal safety switch that will cut in if the unit gets too hot. If this happens it should be switched off at the main switch and allowed to cool down for at least 10 minutes.

After each use any remaining air in the compressor should be released by triggering the airbrush until it runs out.

ARISM looks very stylish – for a compressor!

A 2 metre braided hose is supplied with the compressor

This air bleed valve is used to regulate the pressure to the airbrush

The moisture trap is called a Silver Bullet for obvious reasons

ARISM Mini

Although the ARISM is not a huge unit, if you only have limited space on your workbench then you may want to consider the ARISM Mini, which is a more compact device, measuring L17.5 x W9 x H18.2 cm (5.6" x 3.5" x 6.6"). It features a built-in airbrush holder, a pressure adjuster and offers a working pressure up to 28 psi.

The Mini is available in eight colour options. Retail price is £95.00.

Rear panel view

PRODUCT INFORMATION	
NAME:	ARISM air compressor
MANUFACTURER:	Sparmax
SUPPLIED BY:	The Airbrush Company Ltd.
WEBSITE:	airbrushes.com
PRICE:	£125.00 inc. VAT
ACCESSORIES SUPPLIED:	Airbrush bleed valve, Silver Bullet moisture trap, 2M braided hose, airbrush holder, UK power cord

PRODUCT SPECIFICATIONS	
WORKING PRESSURE:	0-35 psi
AUTO ON/OFF SWITCH:	1.7/2.4 bar (25/35 psi)
AIR FLOW:	13-15 lpm (0.46-0.53 cfm) at open flow
OUTLET:	1/8 BSP
SIZE:	L 19.2 x W 12 x H 18.5 cm (6.7" x 4.7" x 7.6")
WEIGHT:	2.6 kg (5.7 lb)
VOLTAGE:	220-240 V 50 Hz
NOISE LEVEL:	49± dB
DUTY CYCLE:	40 minutes continuous use

MAX-4 Airbrush

Of course a decent compressor is not much use without a good quality airbrush to connect the hose to. Sparmax also manufacture a range of airbrushes and we were sent the MAX-4 to try out with the ARISM compressor.

The MAX-4 is well suited to the ARISM and ARISM Mini, and other small compressors, because it will atomise paint well at low pressures. The 0.4 mm needle and nozzle is a good combination for general purpose work, offering a high paint flow and a spray pattern up to one inch wide. Alternatively, it can be used for much more detailed work if required. This size of nozzle is good for spraying the thicker and heavier types of paint that are often used on R/C models.

The Sparmax MAX-4 is a dual-action airbrush but it can be easily converted to a single-action airbrush by fitting the single-

action air valve that is included in the see-through storage box. See the sidebar for an explanation of the two types of airbrush.

The pre-set handle limits the backwards action of the trigger as a safety net to limit the paint flow when in either single-action or dual-action modes. In both modes you still have full control of the paint flow right up to the pre-set limit.

Single Or Dual-Action?

On a single-action airbrush the trigger only operates the flow of air. When you press it the air is turned on and a preset amount of paint will be sprayed out. The preset amount is altered by turning either a tip or cone on an external mix airbrush or a preset knob or ring on the handle of an internal mix type (such as the MAX-4). A single-action airbrush is good when you want to perform long strokes using a steady spray pattern, or simply want to add a base or top coat.

On a dual-action airbrush the trigger controls both the air and the fluid. The 'golden rule' when using a dual-action brush is 'Air on first; Air off last'. In practice this means that the trigger is first pressed down to start the air flowing and it is then pulled back to let the paint flow; the further you pull back on the trigger the more paint is let through. This rule ensures that the paint is always introduced to an existing airflow and so it will be atomised immediately. If you start by pulling back for paint, even for an instant, then it will build up at the tip before being atomised and will be splattered out as the air begins to flow, which could make a mess of any work that you have already done.

The ability to gradually introduce the paint in order to avoid splatters is one of the advantages of a dual-action airbrush. However, the main advantage is the instant control you have over the paint, which allows you to go from a wide spray pattern down to a fine line in one stroke without having to pause to change a preset, as would be necessary with a single-action airbrush.

However, with the single-action valve fitted to the MAX-4 you still retain complete control over the spray pattern because the air is on all the time. The only downside is that the compressor remains switched on. But it simplifies the operation of the airbrush if you can't get the hang of the dual-action 'Air on first' technique, although you should still try to practice that until it becomes second nature in case you want to use other airbrushes.

Also supplied is a small brush for cleaning the airbrush, as well as a crown cap. The standard needle cap protects the delicate tip of the needle at the front of the airbrush from being damaged. But the crown cap is used when painting fine details close up. The crown shaped cutouts allow air to displace when spraying very close to the work piece, without it swirling the paint around as it is being applied.

A MAX-3 version is also available with a 0.3 mm nozzle and both versions are fitted with 0.7 oz (2 ml) gravity fed colour cup, with a push-fit lid.

Test Piece

In use we found the ARISM and the MAX-4 to be well matched.

Whilst we would normally use a bottle-fed airbrush, with paint syphoned up from below, to cover large areas of a new air frame, the MAX-4 proved to be ideal for small touch up work as the gravity fed cup allows for the use of small amounts of paint. For this test we used pigments from the water based Createx Wicked Colors range, also supplied by The Airbrush Company Ltd., to touch up a few foam aeroplanes that were showing signs of wear and tear around the battery hatches and where the models were constantly picked up around the rear fuselage. The small cup allowed us to rapidly change colours as required. (Note: please be sure to test any paint you use on a small hidden area of a foam model, just in case of any adverse reactions.)

The ARISM performed faultlessly and was quiet in operation. The automatic switch cut the air at very close to the 35 psi upper limit, and it kicked in quickly as soon as the airbrush trigger was pressed down. We didn't note a great deal of moisture building up in the Silver Bullet, but we were only using the compressor for short periods.

A great pairing then for detailed work areas. All we need now is a review model with a nice cowling or similar large area to spray so we can test the ARISM compressor out on a larger, more time consuming job when fitted with a bottom-fed airbrush.

RCMW

PRODUCT INFORMATION

NAME:	MAX-4 Airbrush
MANUFACTURER:	Sparmax
SUPPLIED BY:	The Airbrush Company Ltd.
WEBSITE:	airbrushes.com
PRICE:	£45.00 inc. VAT
ACCESSORIES SUPPLIED:	Crown cap, cleaning brush and single-action valve

PRODUCT SPECIFICATIONS

- Gravity fed via a 0.7 oz (2 ml) fixed cup with lid
- Dual-action airbrush (single-action valve included)
- Internal mix
- 0.4 mm needle and nozzle
- Fine detail up to a 1" (0.4 mm to 25 mm) spray pattern
- Pre-set flow control handle

The moisture trap is fitted at the end of the hose to collect any water that condenses in the line. The air bleed valve screws on the other end, with the airbrush fitted on top

Pressing the drain valve releases any water. A kitchen towel can be used to mop it up

With the airbrush holder fitted to the top of the ARISM the paint cup is kept upright and safe from any spillages

Neat packaging used for the MAX-4, with its accessories located in the bottom corner. The cleaning brush is underneath

The MAX-4 airbrush comes with a fixed gravity fed colour cup. Just below are (l to r): the single-action air valve, the crown cap and the small wrench

A small brush is provided to clean the delicate parts of the airbrush

For a Professional Finish at an Affordable Price Buy Your Traplet Top Quality Tools and Accessories All in Our Seasonal Sale!

The amazing GYRO-CUT® Paper-Cutting Craft tool

Designed to easily cut paper and other thin sheet materials.

Gyro-Cut
Ref GC-1311
RRP. £12.95 NOW £10.95

Replacement Blades
GC-1312
RRP £4.95 NOW £3.95

This hand-held tool has a 360 degree rotating blade which enables the user to cut very complex shapes easily and quickly.

Perma-Grit Tools
Tungsten Carbide Abrasives

THE PERFECT GIFT FOR ANY MODELLER OR DIY'ER

DOUBLE SIDED SANDING BLOCKS

280 mm X 51 mm
Ref PGSB280
Was £25.99
NOW £23.39

CONTOURED SANDING BLOCKS

140 mm X 51 mm FINE
Ref PGCB140F
Was £16.99
NOW £15.29

140 mm X 51 mm COARSE
Ref PGCB140C
Was £16.99
NOW £15.29

280 mm X 51 mm FINE
Ref PGCB280F
Was £25.99
NOW £23.39

280 mm X 51 mm COARSE
Ref PGCB280C
Was £25.99
NOW £23.39

FLEXIBLE SANDING SHEETS

280 mm X 51 mm COARSE
Ref PGFXT104
Was £9.35
NOW £8.42

280 mm X 51 mm FINE
Ref PGFXT103
Was £9.35
NOW £8.42

140 mm X 51 mm COARSE
Ref PGFXT107
Was £7.07
NOW £6.36

140 mm X 51 mm FINE
Ref PGFXT106
Was £7.07
NOW £6.36

FLAT HAND FILES

COARSE
Ref PGF102
Was £8.30
NOW £7.47

FINE
Ref PGF101
Was £8.30
NOW £7.47

CUTTING DISCS

19 mm CUTTING DISC
Ref PGRD1
Was £8.99
NOW £8.09

32 mm CUTTING DISC
Ref PGRD2
Was £9.99
NOW £8.99

NEEDLE FILES

SET OF 5 14 cm NEEDLE FILES
Ref PGNF1
Was £23.99
NOW £21.59

SET OF 5 18 cm NEEDLE FILES
Ref PGLNF1
Was £36.99
NOW £33.29

SET OF 8 HAND TOOLS

FINE GRAIN
Ref PGSET8F
Was £60.99
NOW £54.89

COARSE GRAIN
Ref PGSET8C
Was £60.99
NOW £54.89

NOW PAY WITH PayPal

+ P&P

ORDER NOW!
TEL: +44 (0) 1684 588599
www.trapletshop.com

After a false start, here's the start of the long awaited short series on building and flying 30 cc Laser 200 ARF QB kit from Aeroworks. This time we show how to check the covering and apply some bespoke stickers

LASER 200

Sincere apologies to our readers for the delay in starting the promised short series on building the Aeroworks Laser 200 kit, first featured in the August issue. And apologies too to Allan Ballard of Ladbroke Hobbies (www.ladbrokehobbies.co.uk), who has been waiting to see his kit in print for much longer than we intended. Anyway, enough of the excuses – let's build this pretty red aerobatic ship.

Airframe Check

The Laser features a built up airframe and has copious quantities of laser cut balsa and ply parts. All the visible parts appeared to be well cut and also well glued, resulting in a strong but light structure.

The model is covered in red and blue Ultracote. The model comes with gold and white trim already applied; on the fin, tail and fuselage this takes the form of 'shooting stars', which would be fiddly to apply so it's a relief to see that Aeroworks have done all the tricky work in this area.

Allan kindly supplied some of his own artwork to decorate some of the large uncovered areas, notably the underside of the wing panels. We will show how these were applied a bit later.

The first job, however, after unpacking the kit and spending a short while admiring the nicely made parts, is to check the film for wrinkles and sags, and also to iron down any edges that may have started to lift. This is common to most ARTF models with built up structures covered in factory applied heat shrink film.

The most difficult items to seal back down on model aeroplanes is the trim, particularly those with sharp points. So you might be expecting the shooting stars on this model to be a bit of a pain. But we are mightily relieved to tell you that every single one of the stars and trails on our model were neatly stuck down.

The wings were also pretty much free of any major wrinkles and sags, and any that were present were easily dealt with by lightly hovering our sealing iron over them and drawing them out until they disappeared. The fuselage did exhibit a few

The fuselage sides and turtle deck exhibited some slack areas of film but fortunately the shooting star trim was still nice and tight

Hovering the sealing iron close to the work piece allows the film to tighten up. Avoid touching the surface where possible, and if you do use a clean sock over the sole of the iron

The only edges that lifted slightly were at the base of the fin

Allan Ballard kindly taped his Ladbroke Hobbies stickers to the wing bags to show us where they should go

Make sure the wing is clean before starting work

Spray a thin film of soapy water on to the area to be covered by the start of the sticker

To apply the stickers you'll need a spray bottle and some fresh beermats (other brands of ale are available!). Use a sharp pair of stickers to trim the decals to size, leaving an inch or two excess around the outside

wrinkles, most noticeably around and over the turtle deck. So this is the area that we needed to concentrate on.

As with the wings most of the blemishes were easily removed by hovering the iron over the sagging areas of film and then working them out until the film re-tightened and they vanished.

A small number proved to be more stubborn and direct contact with the film was required to buff them out. To minimise the risk of scratching the gloss covering we fitted a commercial heat sealing iron sock to the sole of our iron. These are well worth investing in but they do need to be kept clean as any dirt trapped on them can rapidly act as a scouring agent and you may find that lovely finish covered in fine scratches.

Alternatively you can make your own and we have used trainer socks to great effect (the type with no material above the ankles). However they do need to be made from 100% cotton as any synthetic material in them may melt and could damage the covering and the iron. You can also search the internet for inspiration using 'homemade-sealing-iron-socks', which will bring up many other suggestions for materials to use for this purpose. It should be noted that using a sock will absorb heat, so you may have to turn up the iron from its normal setting. But please do this in small steps to avoid scorching both the sock and, more importantly, damaging the covering on the model.

You will find that darker colours tighten up more easily than lighter ones as they absorb heat more quickly. In our case the small wrinkles on the 'Midnight Blue' undersides of the wings nipped up more smartly than those on the 'True Red' turtle deck.

While the iron was still hot we carefully examined all the edges of the film over the entire model to check if any had lifted during transit and storage. The Laser passed these checks with flying colours and the only edges that had lifted slightly were those at the base of the fin. These were quickly and easily tacked back down.

Sticker Time

The full size Laser that this kit is based on was flown by Leo Loudenslager, who won several US National Aerobatic Championships whilst flying it, and also one World Championship. The top surfaces and fuselage sides are quite decorative,

Peel back the backing sheet to expose the first letter and float it on the soapy water

Gently rub the sticker down using the edge of a clean, fresh beer mat

After checking the position of the entire sticker you can expose more stickers, rubbing them down with a beer mat as you go. Note how the backing sheet is peeled back at 90 degrees to the direction that you are working in

Our Ladbroke sticker in its final position but with the carrier sheet still applied

especially with those white and gold shooting stars on the fuselage and tail. But the underside is a bit bland, being just covered in plain 'Midnight Blue' film. So we were grateful to Allan for providing a giant Ladbroke Hobbies sticker set to add some colour and contrast to this area. It will also come in handy when flying the model as there will be no doubt which way is up when flying her!

The first thing to do is to gather some simple tools. In this case all you need are some scissors to trim the sticker sheets slightly oversize, a spray bottle filled with a small amount of soapy water (washing up liquid is ideal), some kitchen tissue to wipe away any excess water and, most important of all, some square beer mats. If you cannot find any beer mats (we got ours from a friendly bar manager) then you can make your own from the sides of a sturdy cardboard box. But do make sure that the corners are rounded off as they will be used as improvised squeegees and you don't want to find the corners digging in to the film.

A quick word about the sticker material used. Our letters were cut out using a vinyl cutting plotter onto a 70 micron PVC film called 'ORACAL Intermediate Cal 651'. This is available in 59 glossy and 53 matt colours so there's plenty of choice. Your local vinyl cutting service or sign shop should be able to cut a similar set for you. The adhesive side is protected by a backing sheet, whilst the letters are held in position using a low tack carrier sheet. To apply a sticker the backing sheet is peeled away from the adhesive side and the sticker can then be positioned and rubbed down. When the sticker has been stuck down the carrier sheet can be gently peeled off, leaving the letters in position and neatly spaced, just as they came off the vinyl cutting plotter.

Let's Spray

Although the stickers provided are very large the method used to attach them is very simple. First you spray the wing with soapy water to provide a slippery film on which the beginning of each sticker can be placed and moved around to position it. We used a lotion pump from a transparent travel set (the sort that customs officers can see through at airports) but you can use any clean spray bottle. Plant sprayers are ideal and we've also used kitchen cleaner bottles, after flushing them out several times to get rid of the chemicals. The liquid only needs to be a very dilute solution, so just a few drops of washing up liquid in the bottom of the bottle will be fine.

With the large Ladbroke sticker we sprayed the end of the wing just enough to put the first letter L in position. Using a fresh beer mat as a squeegee we ran it over the back of the letter to squeeze out any excess water, which we mopped up with a kitchen tissue.

The rest of the large sticker was then spread out and its position checked. The thin film of soapy water underneath the L was just enough to allow it to be re-positioned as necessary so that the word 'Ladbroke' was evenly spaced down the length of the wing. When happy another fresh beer mat was used to squeeze out any remaining water and to make the letter adhere to the covering film.

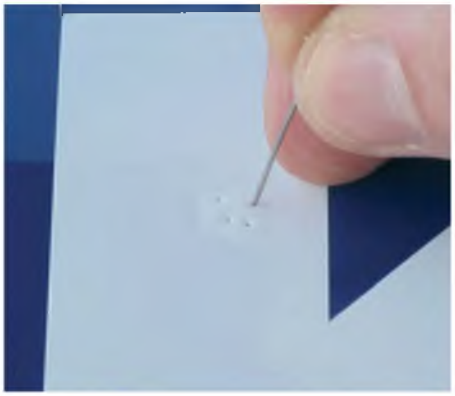
There will of course be a very thin film of soapy water left under the sticker so care needs to be taken not to disturb this letter whilst the other letters are fixed in place. However, it will take a fair bit of pulling about before it displaces, so don't be too worried about it. If it does come loose then simply spray some more water underneath and squeegee it back in place once again.

When you are happy with the position of the whole sticker you can start to gradually peel back the backing sheet, whilst using the edge of a beer mat to squeeze out any air bubbles and to make sure that each letter is firmly attached. Peel the backing sheet off at right angles to the direction you are working in, and try not to let the paper wander off at an angle as the letters may end up out of line if you let this continue. If you work slowly and methodically you should be able to keep trapped air to a minimum but there is sure to be a small bubble or two, which we will deal with later.

When you reach the end of the sticker the backing sheet can be peeled completely away and disposed of. The sticker will now be firmly attached to the covering film, but it will be partially hidden by the opaque

Peel back the carrier sheet at 90 degrees to the long end of the sticker, working slowly and checking for any edges that may start to lift

A gentle rub down after each letter is exposed will make sure that it is well attached to the covering film



Bubbles can be pricked with a needle or pin and then rubbed down. We've used a thicker pin here so that the holes stand out, but if you use a fine needle then the holes will be almost invisible

The final effect of the Ladbroke Hobbies logo across the full span of the Aeroworks Laser 200 wing

carrier paper. If you want you can go over the whole sticker once again with a beer mat 'squeegee', just to make sure that all the edges are firmly stuck down before taking the next step.

All Is Revealed

Working from the end furthest away from the 'wet' letter, you can start to gently lift off the carrier sheet. The low tack adhesive used has a surprising amount of grip and if the letters have not been pressed down enough the edges can start to lift. The trick here is to work slowly and to peel the paper off at right angles. If a letter does start to lift just back up a bit and reapply some pressure to the top of the carrier sheet using a trusty beer mat.

Most of the letters will go down smoothly enough but that 'wet' letter may prove a bit more tricky as the low tack carrier sheet may have more pull on it than the soaped up adhesive underneath whilst it is still wet. If this happens the letter may start to lift away from the model so you will need to hold the letter in place whilst the rest of the carrier sheet is removed. But if you work very carefully you can make sure that this letter (or number!) stays in its original position.

When the carrier sheet has been removed use the edge of a fresh beer mat to rub down each letter, paying extra attention to that first 'wet' letter. Don't be surprised if some more water seeps out from the edges, and you may also be amazed by how much the water will have travelled along the rest of the sticker by capillary action. So be careful with the other letters too until the water has dried out. Any remaining soapy water will evaporate if the part being decorated is left in a warm, dry room overnight.

Bubbling Up

If you have worked methodically when applying the sticker, rubbing each letter down with the edge of the beer mat as the backing sheet is slowly removed, then the end result should be pretty much free from bubbles. But a few bubbles always seem to persist.

You can get rid of the bigger ones by pricking them with a sharp needle or pin and then teasing the air out with the beer mat.

So there we have it. A simple, clean way of attaching even the largest sticker sets to your latest model. You can use the same 'soapy water' technique to attach pre-cut areas of heatshrink film or trim sheet, tacking the film down straight after squeezing out the soapy water with a beermat. **RCMW**

RC MODEL WORLD DETAILS

MODEL INFORMATION

NAME:	30 cc Laser 200 ARF QB
MANUFACTURER:	Aeroworks
DISTRIBUTOR:	Ladbroke Hobbies
WEBSITE:	www.ladbrokehobbies.co.uk/Aeroworks-Aircraft.aspx
PRICE:	P.O.A.
MODEL TYPE:	Scale aerobatic
CONSTRUCTION:	Built up from laser cut parts
PARTS SUPPLIED:	Airframe and extensive accessories
PARTS REQUIRED:	Radio equipment and petrol engine

R/C FUNCTIONS

1: Throttle (Hitec HS-5625MG recommended)
2: Aileron (2 off Hitec HS-5645MG recommended)
3: Elevator (2 off Hitec HS-5645MG recommended)
4: Rudder (Hitec HS-5645MG recommended)

MODEL SPECIFICATIONS

WINGSPAN:	76" (1930 mm)
LENGTH:	64" (1626 mm)
WING AREA:	1121 sq in
WEIGHT:	11.5 – 12.5 lb (5216 g)
COWL WIDTH:	8.75" (222 mm)
ENGINE:	30 cc – 35 cc petrol
SPINNER:	3.5" (89 mm)
RADIO:	6-channel minimum

DROMIDA VISTA

Join us as we take Dromida's new UAV quadcopter for a spin

Supplied in a colourful carry box, the Vista quad is protected in a plastic clamshell tray. The transparent top has been removed for clarity

On the first flight outdoors Vista was found to be well trimmed and easy to fly

This smart looking carry box arrived in the editorial office on the same day as a planned photo shoot. The weather was perfect so we wasted no time in opening it up, finding the flight battery (an 850 mAh 1S LiPo) and putting it on charge using the USB charger supplied. The charger shows a steady red LED whilst charging, which then flashes to show that the battery is fully charged.

With that done our attention turned to loading the gamer style 2.4 GHz controller with the four AAA dry cells provided. The battery hatch is secured with a small crosshead screw but Dromida thoughtfully include a small screwdriver to remove it. With this done we were all set to test this compact but sleek looking quadcopter, which measures 251 mm (9.8 in) across the diagonal.

A Pleasing View

This is the definition of Vista and the model lives up to its name. The grey and black plastic upper body has attractive 'space fighter' styling, while the transparent bottom cover is moulded in two parts to allow the bright LED's fitted to the underside of each motor boom to shine through. The front section matches the colour of the front rotor blades (green on our sample) so that the Vista casts a matching glow when close to the ground; the rear section is clear. Besides looking good the LED's also act as an orientation guide, especially if you are tempted to try your hand at a spot of night flying. Vista is available in four colours: green, red, white and blue.

A set of spare blades is included in the box and these are simply retained using a small screw in the side of the hub, which engages in a hole in the gear shaft. The Vista is very light, weighing just 122 g (4.3 oz) and it survived a couple of tumbles during our tests with no ill effects. But if you do damage a prop it is nice to know that you can be up and running again in just a few seconds. Dromida also thoughtfully include spare screws too, just in case you lose the original whilst swapping the props over – an easy thing to do as they are quite small.

Due to its light but durable construction

Gamer style controller operates on 2.4 GHz. Alternatively, Vista can be flown using an SLT transmitter

Shoulder mounted buttons are pressed to perform flips and to engage different Flight Modes

we imagine that you would have to hit a wall or a hard floor at some speed to break the Vista. But if the model sustains more significant damage the informative 6-page instruction sheet has clear instructions on how to fit a replacement gear shaft, a brushed motor or even the Flight Control Board that is situated in the centre of the machine, underneath the battery tray. The Vista has full parts back-up, which are detailed on the back page of the instructions.

Flight Controls

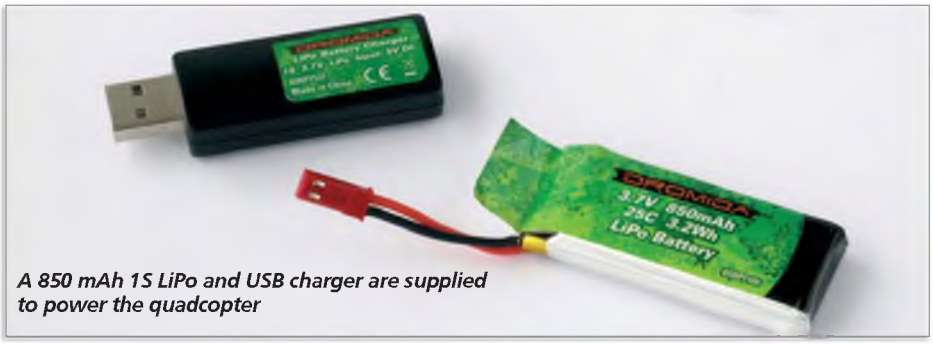
As is common with small, ready to fly models the transmitter supplied features Mode 2 controls. The left hand stick operates the throttle to make the Vista climb and descend, as well as providing 'rudder' control to yaw the model to the left or right. The right stick provides 'aileron' to bank the small quad to the left or right, whilst forward/aft motion of the 'elevator' stick tilts the Vista to make it move forwards or backwards. Digital trims are provided for fine-tuning the model in flight.

Vista also offers high and low control rates, and these are switched by pushing down firmly on the right hand stick. Rate sensitivity can also be changed; the default setting is 50% at mid-stick and low rates are 25% lower than high rates.

Other features of the Tx to note are that it uses an internal aerial, and there is a push button shoulder mounted on each side. Pushing the right hand button operates four Flight Modes: 'Easy' is default and is best for indoor flying or if you are learning to fly. 'Normal' initiates high rates and is best used outdoors or if you have quick reactions when flying indoors and want more agility. 'Advanced' switches off the advanced stabilisation provided by the electronics, but control rates are low. Vista will, however, be very agile in this mode as it is not limited on how far it can turn in any direction. And if you are feeling very brave you can initiate 'Expert', where advanced stabilisation is turned off and the rates are set high.

The Flight Mode switch needs to be pushed in sequence together with the Dual Rate control on the right stick to toggle through the options, so it is best done with the model on the ground. The 'Flight Mode' light on the front of the Tx changes between blue and orange depending on the mode selected, and it also flashes when set to the Advanced and Expert settings. So if it starts blinking during set up you have fair warning that things are going to get interesting! For normal flight toggling the Dual Rate settings by pressing the right stick gave a good level of control, and this can be done in-flight. We did try flying in Advanced mode and it was fine but you need to have quick responses, especially if flying near to the ground.

The left hand shoulder button sets the Vista up to perform flips. When pressed you simply have to prod the right hand stick in the direction that you want it to flip in – forwards or back, left or right. The motors will then briefly increase in power (to make sure that the model is climbing during the manoeuvre) and it will flip smartly in the chosen direction. It works well and adds a bit of spice to hovering and circuit flying.



A 850 mAh 1S LiPo and USB charger are supplied to power the quadcopter

SLT Compatible

One of things that sets the Vista above the normal type of Ready To Fly multicopters is that you can use it with a 'proper' R/C transmitter, as long as it has SLT (Secure Link Technology). In practice this means that you can link it directly to either a Hitec or Tactic transmitter fitted with SLT. Alternatively, you can use a Tactic AnyLink adapter to provide SLT to a wide selection of other popular R/C transmitters, such as those from Spektrum etc.

A full model set up is provided for you to copy over to your favourite transmitter.

Let's Fly!

The first thing we noticed when placing the Vista on the ground to fly is that it sits quite low to the ground. It uses the motor casings as legs, the end of which are fitted with domed rubber feet. Which is fine when flying indoors on a smooth surface, but when trying to rise off ground outside meant that it bogged down as the props got lightly tangled in the grass.

Our ace photographer, Barry Atkinson, bravely volunteered to let us try a take-off from his outstretched hand, and this time the Vista rose up steadily into a nice stable hover.

Although it was a relatively calm day we were very impressed with the trim of this little quadcopter and we didn't need to touch the digital trims during our test flights. If, however, your Vista does exhibit a constant drift in one direction then full instructions are provided to show how to re-calibrate the sensors.

Fortunately for us we could put the instructions to one side and just enjoy posing the Vista for photographs using the Easy flight mode, during which it remained easy to maintain a stationary hover. We then steered it around easy to fly circuits

using Normal flight mode, during which the controls became nicely responsive but maintained the easy to fly characteristics of this attractive quadcopter.

Back in Easy mode we then experimented with the Flip function and these manoeuvres proved to be fun and easy to perform. But trying to time them so Barry could capture one on camera was not so easy, but we persevered and there should be a picture of the Vista in mid-flip somewhere nearby.

Flight times are commendably long and whilst we didn't time our test flights, the first one gave us the opportunity to take a long series of photos, plus enough time to test the flip functions and to do a spot of circuit bashing. A spare battery or two would, however, be a worthwhile investment to allow you to continue to fly this neat little model whilst re-charging the original LiPo. The part number for the LiPo is DIDP1105, SRP £7.99.

Thumbs Up!

In summary the Dromida Vista gets a well-deserved thumbs up. And whilst the best outdoor flying days for flying it here in the UK are probably behind us for this season, it would make a great choice for adding to your indoor flying fleet.

Whilst it is not a mini or micro quad it is still not a big model, so hovering it indoors in a decent size living or dining room should be possible – just don't try to hit the flip button! And by turning the lights down low and taking-off from a smooth floor this is probably the best environment to show off the night flying LED's, which will give you a nice glow. **RCMW**

Plugging in the LiPo links the quad to the Tx and lights up the bright LED lights on its underside

Motor and gear casings act as short legs for take-off and landing...

...But be careful not to take-off if the grass is too long as the blades can get tangled up!

Safely airborne, the Vista proved to be a delight to fly

Well done to Baz, our photographer, who captured the Vista mid-flip! It took a few goes though!

The stability of Vista makes it ideal for practicing nose-in hovering, a skill that is directly transferable to R/C helicopters

MODEL WORLD

DETAILS

MODEL INFORMATION

NAME:	Vista
MANUFACTURER:	Dromida
DISTRIBUTOR:	Hobbico in the UK
WEBSITE:	www.dromida.com/air/dide03xx-vista-uav/index.html
PRICE:	£59.99
MODEL TYPE:	Ready To Fly quadcopter
CONSTRUCTION:	Moulded plastic
PARTS SUPPLIED:	Airframe, controller and AAA batteries, flight LiPo and charger, spare props
PARTS REQUIRED:	None

MODEL SPECIFICATIONS

DIAGONAL SPAN:	251 mm (9.8 in)
WEIGHT:	122 g (4.3 oz)

DISLIKES

None

LIKES

Well presented • Complete package, with all batteries supplied • Attractive appearance • Easy to fly, with no noticeable trim required

MASSIVE CHRISTMAS BOOK EXTRAVAGANZA SALE

25% OFF
ALL our Model Flying Books
For a Limited Time Only!

Understanding Aerofoil Data for R/C Soarers by Denis Oglesby
Focusing on the understanding and appraisal of aerofoil data, this comprehensive book will guide you through the concepts employed by designers in realising aerofoil performance.
Product Code UAD
~~RRP £14.99~~
NOW £11.24

The Model Turbo-Prop Engine for Home Construction by Kurt Schreckling
This book provides a practical approach to producing a small but powerful turboprop engine.
Product Code TPB
RRP £14.99
~~**NOW £11.24**~~

Radio Control Thermal Gliding
Should you happen to be reading this while your glider is flying through strong downwinds at a height of 100 metres, you are cutting it tight. However, if you read this book before your next flight, we see every chance that your next thermal flights will last a little longer than the previous ones.
Product Code TG
~~RRP £14.99~~
NOW £11.24

Gas Turbine Engines for Model Aircraft by Kurt Schreckling
Kurt Schrecklings innovative model turbine designs have quickly become legendary. Any jet modellers library is quite simply incomplete without a copy of this ground breaking classic.
Product Code STB
~~RRP £9.99~~
NOW £7.49

Scale Model Helicopters, 2nd Edition by Sean Brown
This fantastic book by renowned model and full size helicopter pilot Sean Brown, was originally designed to help you achieve your ultimate goals both for building and flying scale model helicopters.
Product Code SMH2
~~RRP £12.99~~
NOW £9.74

Scale Model Gliders - by Cliff Charlesworth
This 152-page book is an essential resource for anyone interested in power and scale gliders. Learn how to plan, draw, build and fly your own scale model glider with this indispensable book from expert aeromodeller Cliff Charlesworth.
Product Code SMG
~~RRP £14.99~~
NOW £11.24

Small Electric Flying Models by George Stringwell
Learn about the increasingly popular area of electric powered flying in this great book for model enthusiasts.
Product Code SMALL
~~RRP £9.99~~
NOW £7.49

Radio Controlled Sport Flying for Beginners - By Simon Delaney
Aimed at modellers who have recently started radio control flying, this 72-page book provides much needed help and advice that will enable readers to get the most out of this exciting and diverse hobby. Even if you have a bit more experience under your belt, there are some excellent little 'refresher' tips that can help your flying.
Product Code SFB
~~RRP £9.99~~ **NOW £7.49**

Model Rocketry – Space Modelling
This book sets out in an easy to follow style, everything you need to know to get started in the Model Rocketry hobby, including the Model Rocketry Safety Code for safe and enjoyable flying.
Product Code MR2
~~RRP £12.99~~
NOW £9.74

Small Electric Helicopters
Taking the beginner through each step of buying and flying small radio control electric helicopters. These fun to fly models are a great way into the fascinating world of flying model helicopters. However, for the keen beginner they can still present a somewhat daunting prospect.
Product Code SEH
~~RRP £9.99~~ **NOW £7.49**

Scale Construction by Duncan Hutson
Duncan Hutson's best-selling book is now back in print!
Product Code SC
~~RRP £9.99~~
NOW £7.49

R/C Aeroplanes – A Guide for Beginners
This book contains a wealth of information on building and flying your first radio controlled model aeroplane.
Product Code RCA
RRP £12.99
~~**NOW £9.74**~~

Radio Control Park and Slow Flying by Henrik Schulte
Made from Depron, wood or polystyrene, small or big, the possibilities are endless. You can even build and fly beautiful slow and park-flyers that look like the original aeroplanes.
Product Code PSF
~~RRP £12.99~~
NOW £9.74

Radio Controlled Model Jet Guide by Thomas Kamps
This book is a valuable resource providing all the detailed information you need to make your own radio controlled jet model aircraft and fly it successfully.
Product Code MJG
~~RRP £9.99~~
NOW £7.49

Model Jet Engines (3rd Edition) by Thomas Kamps
Thomas has devoted an enormous amount of time to the development of model jet engines and in the third edition version hes explains:
The history of model jet engine development,
Basic principles behind the technology,
Examining engine components in full detail,
Examining cutting edge technology.
Product Code MJE3
~~RRP £14.99~~
NOW £11.24

Model Helicopters - A Guide for Beginners by Malcolm Messiter
Written in a light hearted style, this consise booklet guides the beginner through every aspect of getting started in building, maintaining and flying radio controlled model helicopters. It describes how what and where, and even why!
Product Code MHB
~~RRP £7.99~~ **NOW £5.99**

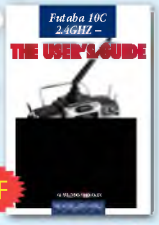
High Flying On A Low Budget - by Peter Miller
Initially, building and flying radio controlled model aircraft can seem an expensive hobby. In this book Peter Miller, a master of modelling on a budget, demonstrates in detail that building and flying radio controlled model aircraft need not be prohibitively expensive.
Product Code HF
~~RRP £7.99~~ **NOW £5.99**

Flying Models made from EPS Foam by Hinrik Schulte
Enjoy using Depron to create quick fun flyers through to outstanding gliders. Kick-start your model building hobby by ORDERING THIS FANTASTIC BOOK TODAY!
Product Code FME
~~RRP £9.99~~
NOW £7.49

Futaba 9C The User Guide - by Annmarie Cross
Whether a brand new pilot, a first-time computer radio owner, or a world level aerobatics pilot looking to get the most out of this incredibly flexible radio, this book is for you!
Product Code F9C
~~RRP £12.99~~
NOW £9.74

Futaba 7C The Users Guide - by Annemarie Cross
This is the essential guide for any 7C heli or acro user, whether you are a novice or a world level aerobatics pilot this book has all the tricks and background information not found in the factory manuals.
Product Code F7C
~~RRP £12.99~~
NOW £9.74

Futaba 10C 2.4GHZ - The User's Guide
This is the book that begins where the user manual ends and takes the owner of a 2.4 GHz 10C, or FF7 in the UK, to a new understanding of what their transmitter can do.
Product Code F10C
~~RRP £14.99~~
NOW £11.24



Prices correct at time of going to press and may be subject to change without further notification. Plus p&p.

Now pay with PayPal

TO ORDER CALL: 01684 588599 OR VISIT: TRAPLETSHOP.COM

HSAD.RCMW.FPBOOKS.NOV15

TOP GUN

Barry Vaught reports from the annual Invitational Top Gun event held in Lakeland, Florida, USA

Dino DiGiorgio's P-47 Razorback, 1/4.5 scale , 102", 54 lb, DA 100 inline twin, Spektrum 18

The best of the best pilots, builders, vendors and fans from nine countries enjoyed five beautiful, sunny days at Lakeland Linder Regional Airport in Lakeland, Florida, USA. The scale aeroplanes there are arguably unparalleled in the world, as are the pilots and builders. It really is like a family reunion that keeps growing and getting better year after year.

A new first time Mr Top Gun has been crowned and his name is Jack Diaz from Canada. Jack and his son Geraldo have become elite pilots/builders and are becoming more and more accomplished and proficient each year. Jack and his Fouga Magister were first in Expert Class, had the High Static Award, and Jack flew his 1/4.5 scale Fouga Magister to win Top Gun 2015.

There are so many great stories from Top Gun, and one of my favourites concerns Dino DiGiorgio and his P-47 Razorback. Twenty years ago young Dino was with his Father at Top Gun 1995. There were some mechanical problems that prevented the P-47 from flying and the aeroplane was placed in storage for many years. For the 20th Anniversary, and to honour his father, Dino completely restored the same P-47 and actually wore the same uniform his father wore 20 years ago. Dino had assistance from Kimberle DiGiorgio, Doug Smith, Rick Smith, Bob Scott, PJ Ash, Patrick Ash and a long list of sponsors. He then took 1st place Pro Am Prop at Top Gun 2015. Congratulations to Dino DiGiorgio and everyone involved for demonstrating what scale modelling is all about on the highest level!

It is always exciting to meet new pilots and builders at Top Gun. The youngest pilot/builder was 18-year-old Alex Farwell from North Carolina, flying his Hellcat F-6F. Alex will be entering the Air Force later this year. We wish him well and hope he is able to continue flying model aeroplanes.

Another crowd pleaser was Boli Muentes's F-16 with its blonde haired Major Marley pilot figure. Major Marley will become more popular with each passing year.

Tim Cardin brought his Cessna T-50 Bobcat, which is a scale model of the aeroplane 'Songbird' used in the 'Sky King' TV shows. Tim is a former member of the famous 'Blues Brothers' Giant Scale Racing Team.

The half-time airshows are packed with thrills and the Warbird Alley flyby was one of a kind, with twenty warbirds flying at one time. Frank Tiano won the air combat demo event and can be seen with a big smile and the longest ribbon, which determines the winner.

There were sixteen P-47 entries and the heaviest was Brian Omera's 120 lb P-47. The nose art is a painting of the pilot's wife, Jean, as pictured in 1942, who now lives in California.

Top Gun 2015 will always be remembered as a breathtaking and entertaining event. Congratulations to Frank Tiano and everyone involved for another memorable Top Gun. For more information please contact: www.franktiano.com

Mark your calendars for Top Gun 2016 and enjoy the camaraderie, scale models and state of the art flying.

RCMW

Mr Top Gun 2015, Jack Diaz's Fouga Magister, 1/4 scale, 89" span, 33 lb, KingTech turbine, Expert High Static Award, Best Jet Award

Alex Farwell's Hellcat F6F, 1/6 scale, 87", 28 lb, Sachs 4.2, Futaba T10J

David Payne's Electric B-17, 1/9 scale, 138", 65 lb, Hacker A605, Spektrum 18, Best Multi Performance Award

Boli Muentes's F-16, 1/6 scale, 90", 36 lb, JetCat P140 RXI, JR28X

Tastsuo Sugita's speedy P-47D Thunderbolt, 1/7 scale, 72", 19 lb, G-38, Ziroli, Futaba 18MZ

Frank Tiano after winning the half-time air combat demo

Bob Rullie's Me 262, 1/5 scale, 103", 40 lb, JetCat P60 x 2, Grumania, JR 12X

Creig Jones' Spacewalker, 1/3 scale, 72", 24 lb, Moki 210, Futaba 18MZ. The fuselage is partially made from stove pipes. Creig's father keeps adding Creig's hair to the pilot figure

Tim Cardin's Cessna T-50 Bobcat, 1/6 scale, 100", 35 lb, Saito 120 radials, Don Smith Plans, Airtronics 10, Best Civilian Runner-Up Award

David James' Spad V11, 45% scale,138", 60 lb, DA 150, self built, JR 28X radio, Best WW1 Award

Frank Mirandes's BAC Provost TM5, 1/5 scale, 102", 48 lb, JetCat 160, Jet Went, JR radio, side by side pilots

Randy Clark's Jet Legend Yak 130, 1/4 scale, 113" long, 95" wingspan, 58 lb, two Jet Central Cheetahs, Jet Legend, JR 14 radio, Best Unlimited Showing Award

Jack Buckley's DH-82A Tiger Moth, 1/3 scale, 117", 40 lb, DA 50, Futaba 14G, Best Pre-WW2 Award

Peter Goldsmith's Skymaster F-9F Cougar. The F-9F is powered by a JetCat P140 Rx and weighs 39 lb

David Morales's P-51 Mustang, 1/4 scale, 112", 45 lb, ZDZ 120, 3w, JR 9303. Modelled after Bob Hoover's full size P-51

Todd Bixby's Airco DH1-A, 1/3 scale, 164", 55 lb, DLE 111, Spektrum 18. The largest wingspan aeroplane at Top Gun 2015, Outstanding Craftsmanship Award

Skip Mast's C-130 Hercules, 1/12 scale, 132", 39 lb, 950 KV x 4, Self, Airtronics, Engineering Excellence Award

Al Kretz's Dornier Do 23G, 1/8 scale, 123", 32 lb, OS 91 4C, self built, Futaba 10

Fernando Caveria's Meister P-47, Moki 180 cc petrol engine. Fernando spent over 1,100 hours building this P-47 in Brazil and then shipped it to Florida for Top Gun

Steve Thomas' Rallie Morain, 1/3 scale, 150", 48 lb, 3W 150 twin, Air World, Jeti 14

Sean Curry's Hawker Tempest V, 1/5 scale, 96", 45 lb, 3W-75, Vailly Aviation, Futaba 18MZ

Eduardo and Ana Esteves's P-47D Thunderbolt, 1/4 scale, 110", 63 lb, Moki 250, Carf, JR 12X

John Boyko's Pitts Special, 46% scale, 96", 41 lb, DA 150 Twin, Modellbau, Futaba14MZ Best Biplane Award

PJ Ash's Zero on a bombing run, 1/4.5 scale, 118", 39 lb, Q-100, Meister, Spektrum 18S

Pilot Aarahn Stewart's P-47, 1/4 scale, 122", 75 lb, 3W 157 Twin, Meister. The strongest 1/4 scale P-47 at Top Gun, built by Jeff Naul and Scott Duggan. Best Pro-Am Sport Award

Pilot Tommy Yates's Airtractor, 1/6.5 scale, 93", 18 lb, DLE20, Habets kit, Futaba

Barry Hou's photogenic F-16, BVM, K180 power, DX-18

Walt Carnes's Hawker Sea Fury, 1/5 scale, 93", 48 lb, Moki 250, World Models, Spektrum 18QQ, piloted by Greg Foushi

Marco Benincasa's Hawk BAE MK-100, 1/5 scale, Evojet 160, Skymaster, Futaba 18MZ

Walter Alexander's Fokker D-7, 1/3 scale, 118", 38 lb, GT-80, Busa, Hitec Optic

Bob Benson's Cessna 150, 30% scale, 130", 42 lb, 3W85, Bob Patton, Futaba 10

Sandro Novelli's A-10, 1/6 scale, 120", 50 lb, JC Cheetah, Skymaster, JR12X

Matt Lupri's P-51D Mustang, 1/4.5 scale, 100", 45 lb, 3W 85, Carf, JR 9303

Brian Omera's P-47, 1/3.3 scale, 143 in, 116 lb, ZDZ420, F.T.E., Futaba 18MZ, Best WW2 Award, Best WW2 Performance Award

Gabriel Pellegrini's F-100, 1/8 scale, 80", 40 lb, KingTech 210, BVM, Futaba 18MZ, Best Military Runner-up Award

Mike Barbee's Grumman FM-2 Wildcat, 30% scale, 142 in, electric chain drive landing gear, 3W 240 cc twin cylinder engine with twin spark ignition, Futaba 18MZ radio. Best Military Award, Critic's Choice Award

Gustavo Campana's Pampa IA-63, 1/4 scale, 115", 42 lb, Jet Central, Spektrum 18, Best Pro-Am Pro Award

Carlos Rangel's Sonnex, 1/3 scale, 94", 35 lb, ZDZ 50, self-designed, JR11

Walt Fletcher's Fokker DR-1 Triplane, 1/3 scale, 100", 42 lb, DA 85, JR 9303

Mike Barbee's T34B, 36% scale, 138", 115 lb, DA 240 Twin, Futaba 14MZ, Critic's Choice Runner-up Award

Jack and Geraldo Diaz with their trophies and the Top Gun 2015 Horizon Team

Jack Diaz's F-86 Sabre Jet, 1/5 scale, 80", 35 lb, JetCat P160, BVM, Spektrum 18

Top Gun Team Entry by David Barry and Roger Niolet is a Nieuport 28 C-1, 1/4 scale, 80", 21 lb Saito 180, Balsa USA, Hitec 9

Michael Fetyko's Stearman, 1/3 scale, 116", 60 lb, Evolution 260, BUSA, Spektrum, Best Civilian Award

TOP GUN 2015 STATIC & FLIGHT AWARDS

Static Awards	Sponsored By	Winner/Aircraft
Masters High Static	ZAP Glue	Jeff Foley, Bf 109E, 97.917
Expert High Static	FLY RC Magazine	Jack Diaz, Fouga, 99.167
Team High Static	RC Sport Flyer	Graham Mears, T-33, 97.417
Unlimited High Static	Model Airplane News	Team Rudy, Stinson SR9, 96.167
Best Civilian Runner-Up	Red Bull	Tim Cardin, T50 Bobcat
Best Civilian (Pilots' Choice)	Bold Props	Mike Fetyko, Stearman
Best Military Runner-Up	Spektrum Radio	Gabriel Pellegrini, F-100
Best Military (Pilots' Choice)	Horizon Hobby	Mike Barbee, Wildcat
Best WW2	Ray & Robins Hobby	Brian O'Meara, P-47
Best Biplane	EZ Balancer	John Boyko, Pitts Special
Best WW1	Falcon Props	David James, SPAD
Best Pre WW2	Warbirds Over The Rockies	ack Buckley, Tiger Moth
Best Jet	Elite Aerosports	Jack Diaz, Fouga
Best Pro-Am PRO	Cortex - Demon Gyros	Gustavo Campana, Pampa
Best Pro-Am SPORT	Model Airplane News	Aarahn Stewart, P-47
Engineering Excellence	ZAP Glue	Skip Mast, C-130
Outstanding Craftsmanship	Micro Fasteners	Todd Bixby, Airco DH1A
Best Unlimited Showing	Robart MFG	Randy Clark, YAK 130
Top Buns Award	Fly Girls	Mike Fetyko
Best Jet Performance	KingTech Turbines	Peter Goldsmith, F-104
Best WW2 Performance	CARF Models	Brian O'Meara, P-47
Best Multi Performance	Global Jet Club	David Payne, B-17
Critic's Choice Runner-up	FTE	Mike Barbee, T-34
Critic's Choice Award	Zap Glue & Model Airplane News	Mike Barbee, Wildcat

Achieve Precision, Accuracy and Authenticity With Plans From Internationally Renowned Scale Model Designer Brian Taylor.

WOODPACKS & PARTS ALSO AVAILABLE

Whether You Need a Plan, Precision Cut Woodpack or a Part, The Traplet Shop Has it All

MESSERSCHMITT BF109F (61") MW3348

A popular-sized warbird from the design board of British scale champion Brian Taylor.

RRP £19.99

SALE PRICE £18.00

MESSERSCHMITT BF110C (71") MW3326

This twin-engined German WWII fighter/bomber has been designed to a scale quality standard by Brian Taylor

RRP £23.99

SALE PRICE £21.60

REPUBLIC P-47D THUNDERBOLT AZORBACK) (76") MW3335

From the drawing board of champion Brian Taylor comes this larger example of the famous American WWII escort-fighter on superbly detailed plan sheets that produces a superb model that achieved 3rd place in 1994 British Scale Nationals

RRP £23.99

SALE PRICE £21.00

MESSERSCHMITT BF109E (68") MW3341

Designed by British Scale Champion Brian Taylor, this German fighter design features retracting undercarriage and working scale flaps on the well detailed 2 plan sheets.

RRP £21.99

SALE PRICE £19.80

GLOSTER GLADIATOR (56") MW3344

British Scale Champion Brian Taylor achieved 2nd place in the 1983 British Nationals and top scale static points with his design of the RAF's all-metal WWII fighter.

RRP £21.99

SALE PRICE £19.80

VULTEE BT-13 VALIANT (73.5") MW3351

This design achieved 2nd place in the hands of its designer, British scale champion Brian Taylor, and the 2 large well-detailed plans show working flaps and also include a separate 3-view scale drawings of the full-size aircraft.

RRP £21.99

SALE PRICE £19.80

MESSERSCHMITT ME163 KOMET (49.75") MW3347

This WWII German rocket-powered fighter designed by British scale champion Brian Taylor has a lively performance with no viscous tendencies, and can also be flow very slowly.

RRP £16.99

SALE PRICE £15.30

CHANCE-VOUGHT F4U-1 CORSAIR (61.5") MW3349

The classic American warbird designed by Brian Taylor achieved 1st place in the 1973 British Scale Nationals.

RRP £19.99

SALE PRICE £18.00

GRUMMAN F6F-5 HELLCAT (64.25") MW3350

This highly-detailed plan designed by British scale champion Brian Taylor was prepared from direct measurement of the full-size aircraft preserved in the Fleet Air Arm Museum, Yeovilton.

RRP £21.99

SALE PRICE £19.80

FOR MANY MORE REDUCTIONS ON BRIAN TAYLOR PLANS VISIT WWW.TRAPLETSHOP.COM

Make ordering even easier PayPal is now available on www.tapletshop.com

TRAPLET PUBLICATIONS

World Leaders in Hobby & Leisure Publications, DVDs, Plans & Parts

HAWKER HURRICANE MK.1 (70")
SET3333

This popular British WWII fighter designed by scale master-builder Brian Taylor has been replicated in fine detail on these 2 large sheets of well-detailed plans showing working flaps and retracting undercarriage.

WINGSPAN	70" / 1780MM
RADIO	6 FUNCTION
ENGINE	75-.80 CU. IN. 4-STROKE OR .60 CU. IN. 2-STROKE

PLAN	£21.99
WOODPACK	£80.99
SPINNER SET	£22.99
FG COWL	£23.99
CANOPY	£6.99

BUY THE FULL SET & SAVE!
SAVE 15% - ONLY £133.41

SUPERMARINE SPITFIRE 1A (69")
SET3334

This British fighter helped win the Battle of Britain in 1941 and this scale model design went onto to win the British National Scale Championships in 1985.

WINGSPAN	69" / 1753MM
SCALE	1:6.4
RADIO	6 FUNCTION
ENGINE	.75 - .80 CU. IN. 4-STROKE

PLAN	£21.99 / $35.99
WOODPACK	£107.99
SPINNER SET	£22.99
FG COWL	£36.99
FG ALT. COWL CHIN	£11.99
CANOPY	£6.99

BUY THE FULL SET & SAVE!
SAVE 15% - ONLY £177.60

SUPERMARINE SPITFIRE MK.VIII & IX (83") SET3337

Possibly the most popular marque of Spitfire, this design features retracting undercarriage and working flaps on the detailed plan.

WINGSPAN	83"
SCALE	1:5.33
RADIO	6 FUNCTION
ENGINE	1.50 CU IN. 4-STROKE

PLAN	£26.99
WOODPACK	£188.99
SPINNER SET	£22.99
FG CARBURETTER INTAKE	£15.99
FG COWL	£42.99
CANOPY	£6.99

BUY THE FULL SET & SAVE!
SAVE 15% - ONLY £259.19

N.A. P-51D MUSTANG
SET3325

3rd in the 1987 British Nationals the F4C class scale WWII American warbird requires 6-channels and offers ample moulded accessories.

WINGSPAN	69" / 1753MM
RADIO	6 FUNCTION
ENGINE	.75 TO .90 FOUR-STROKE

PLAN	£21.99
WOODPACK	£64.99
SPINNER SET	£22.99
FG RADIATOR INTAKE	£12.99
FG HATCH/FAIRING	£7.99
FG COWL	£40.99
ABS DROP TANKS	£12.99
CANOPY D TYPE	£13.99

BUY THE FULL SET & SAVE!
SAVE 15% - ONLY £169.08

HAWKER TEMPEST MK.V (61.5")
SET3328

This 1976 British Scale Nationals winner features working flaps and the all-wood construction.

WINGSPAN	61.5" / 1562MM
SCALE	1:8.2
RADIO	4+ FUNCTION
ENGINE	.60 CU. IN. TWO-STROKE

PLAN	£21.99
WOODPACK	£87.99
SPINNER SET	£22.99
FG COWL	£41.99
CANOPY	£6.99

BUY THE FULL SET & SAVE!
SAVE 15% - ONLY £154.66

HAWKER TYPHOON 1B (72.75")
SET3339

Introduced at the end of WWII, this classic British fighter design features retracting undercarriage and working flaps.

WINGSPAN	72.75" / 1848MM
SCALE	1:8.86
RADIO	6 FUNCTION
ENGINE	.90 TO 1.20 CU. IN. 4-STROKE

PLAN	£21.99 / $35.99
WOODPACK	£107.99
SPINNER SET	£22.99
FG COWL	£50.99
CANOPY	£11.99

BUY THE FULL SET & SAVE!
SAVE 15% - ONLY £176.78

DH98 MOSQUITO PR.XVI (81")
SET3340

This model 3rd place in the 1988 British Nationals with a beautifully finished twin-engined warbird from the superb large 3 plans.

WINGSPAN	81" / 2.057M
SCALE	1:8
RADIO	6-7 FUNCTION
ENGINE	TWO .40 TO .50 CU. IN. 4-STROKE

PLAN	£26.99
WOODPACK	£94.99
SPINNER SET	£22.99
FG UNDERCARRIAGE DOORS	£16.99
FG COWL	£68.99
CANOPY SET	£10.99

BUY THE FULL SET & SAVE!
SAVE 15% - ONLY £209.05

DH98 MOSQUITO FB.VI (71")
SET3345

This twin-engined WWII RAF fighter-bomber took 1st place in the 1982 British Scale Nationals. Constructed from all wood from well detailed plan sheets.

WINGSPAN	71" / 1830MM
SCALE	1:9.15
RADIO	6 FUNCTION
ENGINE TWO	.25 - .40 CU. IN. 2-STROKE

PLAN	£23.99
WOODPACK	£57.99
SPINNER SET	£22.99
FG UNDERCARRIAGE DOOR	£16.99
FG COWL	£64.99
CANOPY	£11.99

BUY THE FULL SET & SAVE!
SAVE 15% - ONLY £169.10

CESSNA 120 (62")
SET3346

An ideal first scale model has been specifically designed for the beginner. Constructed from all wood from detailed plans. An easy flyer!.

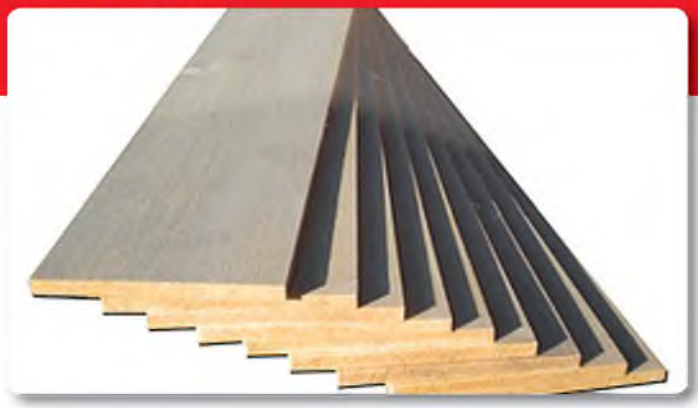
WINGSPAN	62" / 1575MM
SCALE	1:6.45
RADIO	4 FUNCTION
ENGINE	.30 CU. IN. 2-STROKE

PLAN	£19.99
WOODPACK	£47.99
FG COWL	£23.99
CANOPY SCREEN	£11.99

BUY THE FULL SET & SAVE!
SAVE 15% - ONLY £102.96

Check out the full range of Brian Taylor Range at www.trapletshop.com or phone +44(0)1684 588599

NEW! Complete your Project With Our Balsa Wood Packs – Strip and Sheet Packs Available.



Strip Wood - Pack A
- 6 X 1/8" (3.2 Mm)
- 6 X 3/16" (5 Mm)
- 6 X 3/32" (2.4 Mm)
- 4 X 1/8"X1/4" (3.2mm X 6.5 Mm)
- 6 X Spruce...

Rrp £10.99 + P&P/S&H

Strip Wood - Pack B
- 9 X 1/8" (3.2 Mm)
- 10 X 3/16" (5 Mm)
- 10 X 3/32" (2.4 Mm)
- 6 X 1/8"X1/4" (3.2x6.5 Mm)
- 10 X Spruce...

Rrp £17.82 + P&P/S&H

Strip Wood - Pack C
- 14 X 1/8" (3.2 Mm)
- 14 X 1/8" (3.2 Mm)
- 14 X 3/16" (5 Mm)
- 14 X 3/32" (2.4 Mm)
- 10 X 1/8"X1/4" (3.2x6.5 Mm)
- 15 X SpruceE...

Rrp £26.65 + P&P/S&H

Strip Wood - Pack D
- 14 X 1/8" (3.2 Mm)
- 14 X 1/8" (3.2 Mm)
- 20 X 3/16" (5 Mm)
- 20 X 3/32" (2.4 Mm)
- 20 X 1/8"X1/4" (3.2x6.5 Mm)

Rrp £21.62 + P&P/S&H

Sheet Wood - Pack A
- 2 x 1/8" (3.2 mm)
- 2 x 3/16" (2.4 mm)
- 2 x 3/16" (5 mm)
- 5 x 1/16" (1.6 mm)
- 1 x 1/4" (6.5 mm)

RRP £21.13 + p&p/s&h

Sheet Wood - Pack B
- 3 x 1/8" (3.2 mm)
- 4 x 3/32" (2.4 mm)
- 4 x 3/16" (5 mm)
- 8 x 1/16"x1/4" (1.6 mm)
- 2 x 1/4" (6.5 mm)

RRP £37.51 + p&p/s&h

Sheet Wood - Pack C
- 6 x 1/8" (3.2 mm)
- 6 x 3/32" (2.4 mm)
- 6 x 3/16" (5 mm)
- 10 x 1/16" (1.6 mm)
- 4 x 1/4" (6.5 mm)

RRP £50.56 + p&p/s&h

Sheet Wood - Pack D
- 10 x 1/8" (3.2 mm)
- 10 x 3/32" (2.4 mm)
- 10 x 3/16" (5 mm)
- 14 x 1/16" (1.6 mm)
- 6 x 1/4" (6.5 mm)

RRP £92.11 + p&p/s&h

Hawker Hurricane Mk 1 G-HUPW - 'Full Size Focus' Photo CD
Product Code FF14

Supermarine Spitfire Mk.IX TE566 - 'Full Size Focus' Photo CD
Product Code FF05

North American P-51D Mustang G-SUZY - 'Full Size Focus' Photo CD
Product Code FF02

This series of aircraft walkaround photo CDs contains a selection of individual types of aircraft for reference, from vintage to classic warbirds, and home-builds.
Product Code: FF14
RRP. £10.99 + P&P

Many More Available- Visit www.trapletshop.com

NEW!

You will be amazed what you can create with one of the most advanced and versatile 3D printers on the market for this incredible price!

RepRapPro Fisher Delta 3D Printer
Product Code FD3DP
RRP. £298 + P&P

RepRapPro Ormerod 2 3D Printer
Product Code 023DP
RRP £486 + P&P

GOT AN IDEA IN MIND? Make Your Ideas Come To Life With This Fantastic 3D Printer.

HURRY! SALE PRICES ON PLANS EXPIRE ON 17TH DECEMBER 2015

www.trapletshop.com

Visit www.trapletshop.com for full specification and details on our 3D printers, or alternatively telephone our Customer Services Team on 01684 588599 today for information on these or any of our products.

Please note a wood pack consists of the ribs and formers for the model. You will need to source additional strip wood and balsa from your local modelling materials supplier to complete the model. All prices are correct at time of going to press but may be subject to change without further notification. Prices do not include P&P/S&H. For more information on postage, please see www.trapletshop.com.

THE SPORT CHANNEL

Vulcans, Aquilas, Magpies and Monocopters are all up for discussion this month in Gray's regular sport model slot

The last flying Avro Vulcan is finally grounded but not forgotten. (Though not always correctly identified – see text!) Picture by Neil Hutchinson

This Month's Wise Words

I don't know, it could be the company I keep or just the fact that I'm instinctively attracted to these situations, but this column has frequently reported on an inexplicable phenomenon in which rational members of the public (including, it must be admitted, some modellers), when confronted with aviation, suddenly adopt an alternative grasp of reality.

Back in October a neighbour had heard that the only flying Avro Vulcan, XH558, would be flying over our part of Gloucestershire en route to one of its last air show engagements before being permanently grounded.

Although by no means an aviation enthusiast, our neighbour still understood the historical significance of this and having heard on good authority the approximate time and direction for the Vulcan's appearance he began excitedly pacing his garden path, scanning the sky.

"A LITTLE INACCURACY SAVES A WORLD OF EXPLANATION!" (C.E. AYERS)

He asked me to let him know if XH558 was anywhere near. I assured him that if and when it appeared there would be no danger whatsoever of missing it!

As the minutes and then a full hour passed it began to become apparent that the Vulcan would be giving our part of the Cotswolds a miss. As I took my camera indoors, I suddenly heard my neighbour cry out, "Quick! Come and look! Is that it? Is that it?"

Almost dancing with exuberance, he pointed skyward... as a lone Cessna from Wellesbourne airfield puttered by on a lazy afternoon pleasure flight. He was puzzled to hear that a Vulcan would probably look more like a huge delta-wing jet bomber with an accompanying noise that would make the ground shake as it passed.

I then realised that as a non-devotee he possibly didn't possess even such basic, crucial facts. In a rather futile attempt to commiserate, I told him that it was an 'easy mistake to make'! (Did I really say that?) As it turned out XH558 did fly over our county but about thirty miles from our area.

I was reminded of a story that a local modelling pal tells about his schooldays in the 1960s. Back then the average schoolboy could quite possibly be aviation-obsessed, with a fondness for all things WW2. One of my friend's classmates was just such an enthusiast and he had a 'thing' about Boeing B-17's. Such was his consuming fascination for the type that whenever any multi-prop aircraft flew over, be it a Hercules or Shackleton of the time, he would declare, "That is a Flying Fortress!" And he steadfastly refused to be told otherwise.

I'm sure you have similar stories, so you know where to send them...

Simon Rogers picked up this great rarity from the Vulcan's earliest days. This semi-scale Vulcan glider kit, featuring paper wing skins formed over balsa root ribs, was sold only at Farnborough air shows in the early 1950s

Back With A Bird Strike!

One of this column's earliest correspondents from beyond the UK was Steve Winnall of Melbourne, Australia. Steve was part of the small band who comprised the Australian wing of the Small Model Association. After a long break it was a pleasure to hear from Steve again, reporting that he was returning to the hobby and was catching up with today's micro R/C.

Steve related an extraordinary incident during a park flying session with his foamie Aeronca Champ. Out of nowhere a magpie suddenly appeared and launched a fierce attack on the Champ, almost severing a wing and knocking it out of the sky. Steve was astonished by the fierceness of the onslaught on such a small model but soon had it repaired and flyable again. He wondered if British modellers had a similar uneasy relationship with our bird life.

Most modellers seem to have extraordinary stories about bird attacks on all kinds of models but in our experience, locally, only larger species seem to object to models invading their airspace. And even then they've only taken on models close to their own size.

A few summers back we had a Hawk-shaped electric glider and two Alula-style flying wings thermalling over our patch. A group of buzzards flew over and for several minutes they seemed to launch co-ordinated, violent sorties against the soarers, even pursuing one down to the ground!

Good to see you back, Steve. I hope peace is re-established between the models and the magpie population now. Keep in touch.

***Above:** Steve Winnall of Melbourne, Australia returned to the hobby recently following a long break. Steve's Parkzone Aeronca Champ was the victim of an unprovoked attack by a magpie, the first time we've heard of wildlife turning against micro models!*

Aquila-Mail From Home...

Our coverage this year of the much-admired Aquila family of competition R/C gliders from the 1970s and 80s is still bringing in correspondence and requests where to get downloadable plans. Interestingly the majority have come from the Aquila's home, the USA.

David Nutt Jr from Tucson Arizona writes: *"There is some Nostalgia flying activity here and recently I made a set of moulds from an original Aquila Grande fuselage and plan on building another. Sometimes I've been able to stay with modern gliders, along with my AG, Maxas, Pikes and Supras.*

I gave a fuselage and plans to a friend and expect him to have one up pretty soon. Enclosed are a couple photos of an AG I bought; it's the one I made the moulds from. (Larry Jolly has told me the fuselages were originally by Prather Model Boats, back when Aquila's and AG's first came out.)"

This was soon followed by mail from confirmed fan Bud Johnston: *"Your discussion, on the joys of the Aquila, brought back some great memories. In a far distant time, the Olympic ruled the thermals and gentle slopes of Northeast Kansas.*

In an effort to join the 'cool kids' I went to the local emporium to obtain my entry ticket. Unfortunately a copy of the Oly parts and plans was non-existent, due to the demand. A box of balsa, labelled 'Aquila' was presented to me. Due to its

Our Aquila coverage has reached long-time fans back in the USA. Dave Nutt of Tucson, Arizona flies this magnificent Aquila Grande, the stretch-wing, glass fuselage version of the classic soarer

Now that's how Brits imagine US soaring conditions! Dave Nutt at the field with his Aquila Grande. Plans still available

similar configuration and my desire to join in the fray, I laid down the slightly higher price and hit the door running. This proved to be one of life's most satisfying, serendipitous events.

When I finally got to take my black fuselage with transparent blue Monokote and gold striping to the local field it was a revelation to all. Here's Fumblethumbs Bud sitting at the top of the heap! Needless to say the hobby shop soon had no Aquilas and an abundance of Olympics!"

We then heard from reader Mike McIntyre from Illinois, who has a remarkable connection to the Aquila's history. Mike wrote: *"It is good to see the Aquila. A great old plane. I have three Aquilas. One original prototype (1975 pre-production), one production and a fibreglass fuselage production type. Also, I have two Aquila Grandes, one of which was a prototype (pre-production) that was flown to a 5th place in the FAI Team selection in Pensacola, Florida. Last, a pre-production Aquila XL (1975) with a polyester glass fuselage. The Aquila XL was flown in the 1976 Great Race (inaugural) cross-country race.*

My Dad and I had a close relationship to designer, Lee Renaud (Mr. Airtronics) who gave us pre-production planes to build and fly. The prototypes we were able to do were: Oly II/Oly 650, electric Oly 650 with Astro 035. Aquila/Aquila Grande/Aquila XL. Sagitta 600/ 900/XL, Eclipse (electric), Legend and Cumic.

One that Dan Pruss and I built that did not make it to production was the Buteo for electric (Lee Renaud's last design). Skip Miller was the only other person to build that design as well. Thanks for letting me remember the great times I had with my idols. I have cherished them for years, the planes and their builders."

Thanks Dave, Bud and Mike for your reminiscences and the references to those 'big name' US soaring figures of the time! If you'd like to help keep the Aquilas flying and want to discuss where to get plans just email me at the address at the end of this column.

***Below:* For all those who doubted the concept of the Monocopter. In one of those fabulous, futuristic science mag covers of the early 20th century, we see a depiction of the Papin-Rouilly 'Gyropter'. Looks a very precarious way to fly, but a full size version was built and tested in 1915. Not successful, but the concept lives on today**

Don't Mock The Monocopter!

As we mentioned in our recent item on that perennial oddity of rotary wing flight, the Monocopter, not everyone is convinced that what is little more than a single rotor blade and an engine on a stick could ever fly. Some mail we received still supports that view.

But, as we pointed out, the monocopter has been around a long time within aeromodelling and the configuration had its origins in a genuine, full size, piloted aircraft!

The 'Gyroptere' was designed by Alphonse Papin and Didier Rouilly in France from 1911-1914. The inspiration for this early monocopter was the aerodynamics of the sycamore seed and it was genuinely ahead of its time. The aircraft was powered by an 80 hp, nine-cylinder Le Rhone rotary engine. This drove a fan which blasted air through a duct in the wing, which then exited at the tip and propelled the whole thing into rotary motion, creating lift.

The pilot sat in a nacelle right on the centre of rotation, which was mounted on a system of bearings, the single blade whirling around him. The pilot controlled a swivelling air-duct to prevent his nacelle and seat from spinning with the blade, and to provide forward thrust for flight.

The Gyroptere was intended to be amphibious and testing (delayed by the First World War) was carried out in 1915 on Lake Cercey, in eastern France. Sadly, it sustained damage during test hops and this first monocopter was abandoned.

As we noted previously the monocopter configuration has come into its own in the age of drones and has become a practical proposition for R/C or autonomous control. And we must mention a farsighted concept by the late, great Ben Buckle, who besides enthusiastically promoting Vintage aeromodelling and starting his famous kit range, also designed UAV's (Unmanned Aerial Vehicles) decades before they hit the mainstream media.

Ben devised a large R/C monocopter that was to be used as a launch vehicle for a fixed-wing surveillance drone, lifting it vertically out of restricted spaces such as jungle clearings. Then, having gained altitude, releasing it to fly off on its mission.

If I can interest any SC readers in trying a monocopter of their own, drop me an email and I'll supply a plan.

Contributions, please to The Sport Channel, c/o the Traplet Publications address. All Email correspondence to: gray_rcmag@hotmail.com

RCMW

A FREE service, advertise your club's event, show, fly-in, bring and fly, swapmeet, sale or whatever. Simply send in the details to: 'Diary Dates', RC Model World, Traplet Publications Ltd., Traplet House, Willow End Park, Blackmore Park Road, Malvern, WR13 6NN, UK. Or Email to RCMW@traplet.co.uk Traplet Publications Ltd. are unable to take responsibility for event cancellations. **Check before you go.**

Check our website for a full list of events
www.rcmodelworld.com

Diary Dates

INDOOR

28th Nov '15
Tonbridge Gassers and Rubber Fanciers Indoor Flying, at King's Rochester Sports Centre, 601 Maidstone Road, Rochester, Kent ME1 3QJ. From 6.30 pm until 10.00 pm. Freeflight and also lightweight R/C timed flying sessions throughout the evening. For more information contact Steve on 0208 942 5000 or Eric on 01622 737814 before travelling to confirm

5th Dec '15
Indoor Fun Flying at Furzefield 2015. Furzefield Sports Centre, Mutton Lane, Potters Bar, Herts EN6 3BW. 6 pm until 10 pm. Flyers £8, spectators £2.
Contact Mike Quille, Tel: 020 8500 3549 or Email: mp.quille@live.co.uk

5th Dec, 9th Jan '16, 6th Feb '16, 5th March '16
Indoor R/C Meets, in the Main Hall at Havant Leisure Centre, Civic Centre Road, Havant PO9 2AY. From 7 pm to 10 pm. No free-flight models. £7 for flyers, £1 for spectators, proof of insurance required. For further details please contact: Alan Wallington, 'Wrenbeck', Bull Lane, Waltham Chase, Southampton, Hants. (Tel. 01489 895157) or see our website: www.wcaero.co.uk

7th & 21st Dec '15, 4th & 18th Jan, 1st & 15th Feb '16
Yeovil RC Flyers Indoor Flying at Crewkerne Sports Centre (south west of Yeovil, Somerset), 7 pm to 9 pm, £10 per adult, juniors half price, insurance required. Flying takes place in a big, 4 court hall with some power points. Meets first and third Mondays each month, except Bank Holidays. For more details contact Jack Mitchell on 01935 445311 or Email: jack@home9999.plus.com or check out the website www.yeovilrcflyers.org.uk/index.php

12th Dec '15
North London MFC Indoor Radio Control Meetings 2014. Furzefield Sports Centre, Potters Bar, Hertfordshire EN6 3BW. Saturdays, 6 pm to 10 pm. All up weight for fixed wing 225 g, 36" span and helicopters 400 g. BMFA insurance required. Flyers £9, spectators £2.50. Contact Peter Elliot, Tel: 01707 336982

29th Dec '15, 26th Jan '16, 23rd Feb, 29th Mar, 26th Apr, 31st May, 28th Jun
Indoor R/C Small Models Meets, in the Main Hall at Wickham Community Centre, Mill Lane, Wickham, Hants PO17 5AL. All meetings will run from 7.00 pm to 9.30 pm. Models to be flown at these meetings are to be limited to a maximum weight of 95 grams (3.5 ounces) for fixed wing aircraft, in flight trim, including battery (not to exceed a 2-cell LiPo pack). Helicopters are to be limited to a rotor diameter of 12" (305 mm). All models will be weighed before flight, and will be judged on their suitability for the venue on the evening. Admission to the meetings will be £4 for fliers and £1 for spectators. Flyers will be required to show proof of insurance. For further details please contact: Alan Wallington, "Wrenbeck", Bull Lane, Waltham Chase, Southampton, Hants. (Tel. 01489 895157) or see our website: www.wcaero.co.uk

23rd Jan '16, 20th Feb '16, 19th Mar '16
Indoor R/C Meets, in the Main Hall at Fleming Park Leisure Centre, Passfield Avenue, Eastleigh, Hants SO50 9NL. From 7 pm to 10 pm. No free-flight models. £8 for flyers, £1 for spectators, proof of insurance required. For further details please contact: Alan Wallington, 'Wrenbeck', Bull Lane, Waltham Chase, Southampton, Hants. (Tel. 01489 895157) or see our website: www.wcaero.co.uk

GENERAL

6th Dec '15
18th Annual Swapmeet, hosted by Loughborough Model Flying Club, at Rawlins Academy, Loughborough Road, Quorn, Nr. Loughborough Leics. LE12 8DY (Directions on www.lmfc.net). Sellers set up at 9 am, open to public 10 am. Hot & cold refreshments available, tables £4, admission £3, table pre-booking essential please. For further details call Richard on 07400 921929

15th to 17th Jan '16
London Model Engineering Exhibition, at the Great Hall, Alexandra Palace, Alexandra Palace Way, Wood Green, London N22 7AY. Fri & Sat 10 am-5 pm (last entry 4 pm), Sunday 10 am-4.30 pm (last entry 3 pm). Model Active Zone closes 3.30 pm Sunday. Adults £11, Senior £10, Child £4. www.londonmodelengineering.co.uk or contact Meridienne Exhibitions, Leamington Spa, Tel: 01926 614101. Website: www.meridienneexhibitions.co.uk

19th to 21st Feb '16
Brighton Modelworld, at the Brighton Exhibition Centre, Kings Road, Brighton, East Sussex BN1 2GR. General model show with boats, planes, cars, trains etc. Contact Exhibition Manager: Alex Tombling, Tel: 0845 2241823/07789 913584.
Email: alex@brightonmodelworld.com

25th & 26th Jun '16
30th Wings & Wheels Model Spectacular, at North Weald Airfield, Epping, Essex CM16 6AR. 9.30 am-5.30 pm. R/C displays of all kinds, trade, Bring & Buy, Boat Pool and lots more. Weekend camping. All enquiries:
Email: admin@wingsnwheels.net or
Tel: 01242 604126, www.wingsnwheels.net

Dust off those small planes, helicopters and quads – the indoor flying season is in full swing!

WEB DIRECTORY

TO ADVERTISE HERE PLEASE CONTACT ANGELA ON

☎ 01684 588568 🌐 angela.price@traplet.com

WEB DIRECTORY

TRAPLET Media

Digital Services

If you're in need of expert Video production look no further.
Video production for DVD or digital use including Web sites is what we do!
Traplet can even help with Google, YouTube and Facebook Advertising campaigns!
Have you got a YouTube Channel or Video promoting your business?

How ever big or small Traplet are on hand to help. Call today on +44 (0)1684 588599 or email: info@traplet.com

PROPGUY

Specialising in World Class Model Propellers at the best prices
FALCON props and spinners EME petrol engines and Danhaki fuel & smoke tanks
PRECISION • DEPENDABILITY • QUALITY • PERFORMANCE
07949-274274 website - www.propguy.co.uk

THE SONATA IS BACK

SONATA
3 in1 Kit. Can be Electric, Thermal or as a Slope Soarer. Modern electrics can be fitted without enlarging the fuselage from the original design. PRICE £59.99

THE BALSA CABIN

INDEPENDENT BALSA SPECIALISTS

We Take Orders Over The Phone, Email and Through Our Website.
Balsa Wood, Plywood, Accessories, All Types of Coverings, Batteries, SC Engines and many more items.
Call For a Free Catalogue Tel: 01621 859711,
balsacabin@hotmail.com, www.balsacabin.co.uk

www.wingsnwheels.net
30th Anniversary!
June 25th & 26th, 2016
01242 6041256

www.rcmodelworld.com
"see the NEW web site for this magazine"

electricwingman
www.electricwingman.com
quality at great prices
in stock

Trapletshop.com

Supporting modellers for over 30 years

With 1000's of plans, woodkits, accessories, DVD's, books and more www.trapletshop.com is the one stop shop for all modellers from the beginner to the advanced.

DH98 MOSQUITO PR.XVI (81")
Plan £25.99
Woodpack £93.99
Full Kit & accessories £211.64

AVRO VULCAN B2 ABS SET
Plan £22.99
Woodpack £119.99
Full kit & accessories £160.97

See all our full range at www.trapletshop.com
or call our friendly customer service team on UK 01684 588599

Traplet Publications RC MODEL WORLD @ Traplet

EXAD BMFA PRODUCTIONS HP AUG14

CLASSIFIEDS

Private For Sale Advertisements FREE.
Trade Advertisements Semi Display £12 per column centimetre plus VAT. Min. 2 cm, max 7 cm or £15 per column centimetre plus VAT colour.
Send your advertisements to:
R/C Model World Magazine, Traplet House, Willow End Park, Blackmore Park Road, Malvern, Worcestershire WR13 6NN. 01684 588568 or advertising@traplet.com

We will print your prepaid classified advertisement in the next available issue of R/C Model World. Classified adverts received after copy date may be held over the following issue. We advise you to type or print clearly (capital letters preferred) the text of your advert on the coupon provided and clearly indicate whether the goods referred to are 'wanted' or 'for sale'. No responsibility will be accepted for misprints. Trade Description Act. Attention should be paid to the requirements of the Act when giving detailed descriptions of all goods offered for sale. The Business Advertisements (Disclosures) Order 1977 requires that persons attempting to sell goods in the course of business must make that fact clear. Consumers should know whether an advert relates to a sale by a trader or private seller.

FOR SALE

CHRIS FOSS designs
STYLE • PERFORMANCE • QUALITY
DESIGNER AND MANUFACTURER OF TRADITIONAL R/C AIRCRAFT CONSTRUCTIONAL KITS SINCE 1976
FOR THOSE WHO LIKE TO BUILD AND FLY

MIDDLE PHASE Versatile slope soarer trainer
PHASE 6 Advanced fully aerobatic slope soarer
UNO-WOT Basic power trainer/sport aerobatic model
WOT-4 Amazing aerobatic trainer/stunt model
ACRO-WOT Stylish fully aerobatic low winger
WOTS-WOT Realistic yet highly aerobatic bi-plane
XTRA WOT 25% enlarged & restyled Acro Wot
ALPHA WING flexible composite undercarriages & GRP wheel spats.

Chris Foss Designs, Unit 1, Freehold Street, Shoreham, W. Sussex. BN43 5TQ. Tel/Fax: 01273 452642.
www.chrisfoss.co.uk
TRADE AND EXPORT ENQUIRIES WELCOME

Perma-Grit Tools

Tungsten Carbide Abrasives
Order on-line
www.permagrit.com
or Tel: 01529 455034
Tools despatched same day

PRIVATE FOR SALE

FLAIR Legionaire (Nieuport 17) kit, 52" span, for 35 2 stroke, 48-52 4 stroke, or electric, £125, includes postage (£10 less if buyer collects). 01226 766636, Yorks.
AVICRAFT Moronic Fun Fly kit, 52" span, 35-46 2 stroke, 40-52 4 stroke, or electric, quick, easy build, £40 includes postage (£10 less if buyer collects). 01226 766636, Yorks.
SEAGULL Sport-cruiser, wingspan 70", length 49", engine ASP91 two stroke, servos, 3 tower/pro SG5010, 4 Futaba S3003, receiver/battery 6v 2300 mah, needs receiver, plane has never been flown, engine needs running in, kit and components, all new, £150. Call Arthur on 01502 589065, Suffolk.
FUNKEY Jet Ranger, 30 size version, one cabine top front. 01493 308602, Norfolk.
WOTS Wot electric biplane, 2 batteries, £195. Hangar Nine, S.Bach 120 Saito, new, £350. Galaxy Magician, big model, S. Tigre 75, £145. All planes rtf, less receivers. Mick Banks 07443 618928, Yorks.

FOR SALE

D.B. SPORT & SCALE
Quality traditional builders kits.
Auster, Piper Cub, Hurricane, SE5, Autogyro, Spitfire, and more,
also **Plan** packs and **materials**.
www.dbsportandscale.com
Tel/fax 01792 897501
Major Credit cards accepted

Lighting for Aero Modellers
High intensity lights, flasher units and circular light arrays for fixed wing, helicopters and drones.
See www.lightingforaeromodellers.co.uk and request details PDF and price list.

FLIGHT TRAINING

Midlands Flight Training R/C
Radio Control Training Specialists For Over 30 Years

Fixed wing training in a friendly, relaxed atmosphere at one of our private flying sites, based in Northamptonshire. All levels of skill and aircraft types including jet turbines catered for.
• Basic Flight Training course provided on school's dual controlled aircraft.
• Coaching to BMFA Achievement Scheme "A" and "B" level with qualified Instructors.
• Take your "A" and "B" test with our BMFA Examiners.
• Special Advanced Flight Training with Former Multi-National Aerobatics Champion. All flying styles and aircraft types undertaken.
• Professional setting up and test flying service for all types.

Contact Midlands Flight Training now
T 07711 963939
E Colin.chapman19@btopenworld.com

PRIVATE FOR SALE

E-SOARERS Topmodel Fantasy, 3.2 m with MVVS glider motor and Hitec servos, £260. RCM Pelikan Pike V-tail 2.6 m with Hitec servos, £90. Both in very good condition. For details call 01409 231151, Devon.
FOR sale Parkzone Radian Pro glider, well flown, but good condition, original motor, ESC and six servos, plus synthesises 35 mhz Rx fitted, £75. Terry 01225 863464, Wilts.
JAMARA Stinson Reliant, ARTF, 1420 mm span, 840 kv outrunner, 70 amp, ESC, four servos, two props, Spectrum receiver, gyro, Williams dummy, radial, all untouched, £190. 07734 556194, Herts.
FUTABA servo, FP-S3101 micro servo, new, packaged, £15 each. Futaba servo, S3102 micro metal gear servo, new, packaged, £25 each. 01322 669753, Kent.

Trade Advertisements Semi Display

Mono £12 per column cm
Colour £15 per column cm
plus VAT.
Min 2cm, max 7cm
01684 588510
advertising@traplet.com

PRIVATE FOR SALE

TSK Mystar .46 heli, untouched kit, classic all metal helicopter, purchased 1995, collectors model, requires engine, radio gear and rotor blades, offers. dermot.oflynn@yahoo.com +35387 7949555, Ireland.
CESSNA 182, 81" with OS 91FS motor and radio, £175. Cessna 310, 120" with retracts, £400. New EDF Hawk, 54", £200. X3 1/4 scale sport fuselages, x 2 @ £200 each and x 1 @ £75. Yellow Aircraft, 101", AT6 and 38 cc motor, £600. Other aircraft for sale, £1,500 for everything. 07477 532752, Hants.
DH89A Dragon Rapide plans, 4 large rolled sheets, 2"-1', 96" span plus moulded nosecone and cockpit canopy, fibreglass engine cowlings/wheel pants, £50. Tony 01664 371613, Leics.
RARE Saito FA-56 Golden Knight, new in box, box shabby, engine mint, £100. OS FS-40S, new in box, superb, £100, £8 p&p. For info call Bob 01202 621383, Dorset.
MANY Giant scale RC aeroplanes for sale, Ziroli Stuka, Spitfires, AT6, scale, biplanes, four stroke motors, etc. 07477 532752, Portsmouth area.
TWO Ripmax glow plug starters plus chargers, £8 each. Five model aero DVDs, £25. Ares Ethos quadcopter, £20. Electramax 400 electric motor, £5, all plus postage extra. 01603 759256, Norfolk.

PRIVATE FOR SALE

SELLING up, SE5A, Cularis, Mirage, Futaba T10CP Tx, as new, flight box with starter, etc., electric motors, various props, many accessories. For free typed list, call Laurence 01372 373354, Surrey.
E-FLITE Super Cub, 68" span with servos installed, new condition, £140. Morse Scout, USA WWI electric biplane, 48" span, complete, just add receiver, £60. Call Peter 01970 832205, Ceredigion.

WANTED

JAMARA Stinson Reliant, ARTF, 1420 mm span, 840kv outrunner, 70 amp ESC, four servos, servo Y lead, two wooden props, Williams dummy radial, all untouched, £160. 07734 556194, Herts.
KONTRONIK Rondo 400 speed controller wanted. Nick Fitton 02882 242810, 07899 963907, email: itwillpass@btinternet.com N. Ireland.
ANY made or unmade plastic model kits wanted, Tamiya, Airfix, Revell, etc. Also aviation and military books, diecast models, etc. Write 27A The Grove, Biggin Hill, Kent. TN16 3TA.
WANTED ARTF kit for a Britten Norman Islander, will pay reasonable price. 01461 500224, Dumfries-shire.

CLASSIFIEDS

Trade Advertisements Semi Display

Mono £12 per column cm. Colour £15 per column cm plus VAT.

Min 2cm, max 7cm

Telephone: 01684 588510 or email: advertising@traplet.com

ADVERTISE FREE

IN OUR FLYING TITLES

PRIVATE FOR SALE/WANTED CLASSIFIED ADVERTS ONLY

RC MODEL WORLD ☐ Jet ☐

Use this coupon for FREE private classified ads. Free ads are ONLY accepted on a coupon, by post, fax or email.

TICK ONE OR BOTH BOXES

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30 COUNTY

SEND US YOUR FREE ADS NOW!

PLEASE ENSURE YOUR NAME AND ADDRESS IS INCLUDED FOR RECORD PURPOSES. ANY INFORMATION GIVEN BELOW WILL NOT APPEAR IN YOUR ADVERT

Name..... Address.....

.....

Postcode.....Tel. No.....

Send to: RC Model World, Traplet Publications, Traplet House, Willow End Park, Blackmore Park Road, Malvern, Worcestershire, WR13 6NN.

Fax no. +44 (0)1684 578558 Email: adcopy@traplet.com

If you do not wish to receive future mail shots please tick this box ❑

IF YOU DON'T WANT TO SPOIL YOUR MAGAZINE JUST PHOTOCOPY THIS FORM.

We will print your classified advertisement in the next available issue of RC Model World. Classified adverts received after the copy date may be held over for the following issue. We advise you to print clearly (capital letters) the text of your advert and indicate, which section you would like your advert to appear in. No responsibility will be accepted for misprints or printing errors.

NEWSAGENT ORDER FORM • NEWSAGENT ORDER FORM • NEWSAGENT ORDER FORM • NEWSAGENT ORDER FORM

Having difficulty obtaining your copy?

RC MODEL WORLD

RADIO CONTROL MODEL WORLD

Then place an order with your newsagent!

All Traplet Publications Limited magazines are available from all good newsagents either as a stock item or via the ordering service.

WHSmith

Name.....

Address.....

.....

.....

.....

Post Code .....

ON SALE THE SECOND THURSDAY OF EVERY MONTH

DISTRIBUTED TO THE NEWS TRADE BY

Seymour Distribution Limited, 2 East Poultry Avenue, London, EC1A 9PT, England.
Tel: +44 (0)20 7429 4000
Fax: +44 (0)20 7429 3628

DISTRIBUTED TO THE HOBBY TRADE BY

Traplet Publications Ltd., Traplet House, Willow End Park, Blackmore Park Road, Malvern, Worcs. WR13 6NN. England.
Tel: +44 (0)1684 588568
Email: angela.price@traplet.com

SHOPPER'S DIRECTORY

To advertise in the RCMW Shopper's Directory

Call Traplet 01684 588568 01684 578558 or email: advertising@traplet.com

Indicates retailers who stock RC Model World. *Are you missing out on extra sales?*

ENGLAND, CHESHIRE

STEVE WEBB MODELS

Tel. 01928 735225
80 Church Street, Frodsham, Cheshire. WA6 6QU
sales@servoshop.co.uk
www.servoshop.co.uk
Mon-Tues, Thurs, Fri, Sat 9.30-5.30
Closed Wed & Sun.
Most major credit cards

PLEASE MENTION RC MODEL WORLD WHEN REPLYING TO THESE ADVERTS

DEVON

RC EVERYTHING

Tel. 01752 249612
90 Wilton Street, Plymouth. PL1 5LT
rceverything@hotmail.com
www.rceverything.com
Tues-Fri 10am-6pm, Sat 10am-5pm
Most major credit cards
+ paypal

ESSEX

ACTIVE SCALE MODELS

Tel. 01702 202155
Unit 22, The Foundry Business Park, Hockley, Essex. SS5 4HS
sales@activescalemodels.co.uk
www.activescalemodels.co.uk
All major credit cards + Paypal + BACS
Mail Order

GLOUCESTERSHIRE

C J MODELS

Tel. 01452 308007

121 Barton St., Gloucester. GL1 4HR
Open Mon-Tues, Thurs-Fri: 10am-5.30pm, Wed: 2.30pm-5.30pm,
Sat: 10am-5pm.

PLEASE MENTION RC MODEL WORLD WHEN REPLYING TO THESE ADVERTS

PLEASE MENTION RC MODEL WORLD WHEN REPLYING TO THESE ADVERTS

HAMPSHIRE

MAINLY PLANES N TRAINS

Tel. 02392 581402
79 Stoke Road, Gosport, Hampshire. PO12 1LR
Mon-Sat 9.00-5.00
www.mainlyplanesntrains.com
enquiries@mainlyplanesntrains.com
All cards accepted (apart from AMEX)

PLEASE MENTION RC MODEL WORLD WHEN REPLYING TO THESE ADVERTS

KENT

ASHFORD MODEL SUPPLY CENTRE

Tel: 01233 635837
Fax: 01233 639761
Unit 23, Ellingham Way, Ellingham Ind. Estate, Ashford. TN23 6NF
Email: admin@kalmservices.com
Open Mon, Tues, Thurs, Fri. 10-4
Sat 10-3, Closed Weds & Sun

AVICRAFT LTD.

Tel. 0208 460 0818
www.avicraft.co.uk
15 Chatterton Road, Bromley, BR2 9QW
Mon-Sat: 10am-6pm, Closed: Wed,
Late night, Thurs: 9pm
Email: avicraft@yahoo.co.uk
Easy Parking
Mastercard Switch Visa *Mail Order*

TJD MODELS

Tel. 01322 865111

83 Main Road, Sutton At Hone, Dartford. DA4 9HQ
Mon-Fri: 9am-5.30pm, Thurs: 9am-8pm, 9am-5pm Sat, 10am-4pm Sun.
sales@tjdmodels.com www.tjdmodels.com
We accept all major credit cards *Mail Order*

LEICESTERSHIRE

STEVES MODELS

Tel/Fax. 01530 416827

Bullens Courtyard, Mill Lane Mews, Ashby-de-la-Zouch. LE65 1HP
Mon-Sat: 9.30am-5pm,
Wed: Closed
Mastercard Visa *Mail Order*

PLEASE MENTION RC MODEL WORLD WHEN REPLYING TO THESE ADVERTS

LINCOLNSHIRE

MASONS MODELS

Tel. 01775 722456

20 New Road, Spalding, Lincs. PE11 1DQ
Open Mon-Fri: 9am-5pm,
Sat: 9am-4.30pm, Closed: Thurs. & Sun.
www.masonsmodels.co.uk
All major credit cards *Mail Order*

PLEASE MENTION RC MODEL WORLD WHEN REPLYING TO THESE ADVERTS

PLEASE MENTION RC MODEL WORLD WHEN REPLYING TO THESE ADVERTS

NORFOLK

ANGLIA MODEL CENTRE

Tel. 01493 664815
Fax. 01493 658005
Unit 4 Riverside Ind. Estate. NR31 6PU
Open Mon-Sat: 9am-5pm.
www.modelshops.uk.com
All major credit cards accepted
Mail Order

PLEASE MENTION RC MODEL WORLD WHEN REPLYING TO THESE ADVERTS

NOTTINGHAMSHIRE

GEE DEE MODELS & HOBBIES LTD

Tel. 0115 9412211
Fax. 0115 9417717
21 Heathcote St, off Goosegate, Nottingham.
Open: 9.30am-5.30pm Mon-Sat
hobbies@geedee-modelshop.com
www.geedee-modelshop.com
Mastercard Visa *Mail Order*

RcBazaar
India's Coolest Hobby Super Store

BANGALORE
RcBazaar
1193, 26th Main
Jayanagar 9th Block
Bangalore 560069
Karnataka, India
Tel: (+91) 80 41738892

PUNE
RcBazaar
Shriram Yashoda Building
Baner Road,
Baner-balewadi Phata
Pune-45
Tel: (+91) 020 65006575

www.rcbazaar.com
RCBazaar is a proud stockist of Traplet Magazines and associated products.
TRAPLET PUBLICATIONS World Leaders in Craft and Hobby Magazines, Books, DVDs, Plans and Parts

SHOPPER'S DIRECTORY

To advertise in the RCMW Shopper's Directory
Call Traplet 01684 588568 01684 578558 or email: advertising@traplet.com
Indicates retailers who stock RC Model World. *Are you missing out on extra sales?*

PLEASE MENTION RC MODEL WORLD WHEN REPLYING TO THESE ADVERTS

SURREY

ADDLESTONE MODELS

Tel. 01932 845440
Fax. 0870 706 4463
130 Station Road, Addlestone, Surrey. KT15 2BE
Open 7 days: 9.30am-5.30pm, Sun: 11am-2pm.
sales@addlestone-models.co.uk
www.addlestone-models.co.uk
All major credit cards accepted *Mail Order*

SURREY

MICK CHARLES MODELS

Tel. 020 8393 3232
192-194 Kingston Road, Ewell.
Mon-Sat: 9.30am-5.30pm,
Closed All Day: Weds,
Late Night Thurs: 9.30am-7pm
info@mickcharlesmodels.co.uk
www.mickcharlesmodels.co.uk
Mastercard Switch Visa *Mail Order*

PLEASE MENTION RC MODEL WORLD WHEN REPLYING TO THESE ADVERTS

PLEASE MENTION RC MODEL WORLD WHEN REPLYING TO THESE ADVERTS

EAST SUSSEX

THE HOBBY BOX

Tel. 01825 765296

121 High Street, Uckfield,
East Sussex. TN22 1RN
Closed Sunday and Monday, Tues-Fri
10am-5.30pm, Saturday
9.30am-5.00pm
www.thehobbybox.co.uk *Mail Order*

WEST MIDLANDS

PENN MODELS

Tel. 01384 400085

134 Moss Grove, Kingswinford. DY6 9ES
Open Mon-Fri: 9.30am-5pm,
Sat: 9am-5.30pm. Free car parking
Email: pennmodels@btconnect.com
'New Website Coming Soon'
Mastercard Visa *Mail Order*

PLEASE MENTION RC MODEL WORLD WHEN REPLYING TO THESE ADVERTS

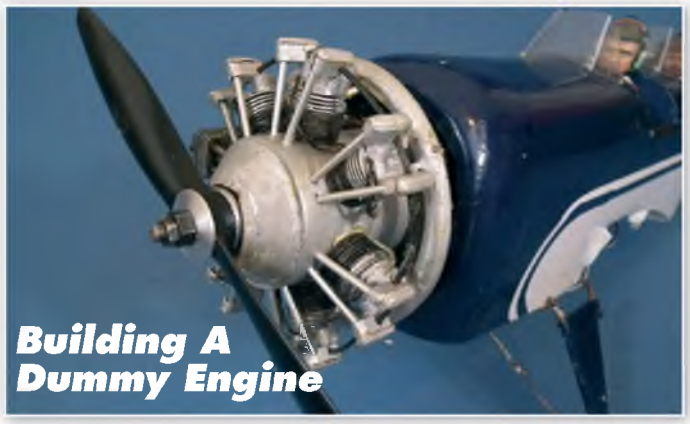
WANT TO STAND OUT FROM THE CROWD?

ADVERTISE HERE
Call: Angela Price
+44 (0) 1684 588568
E-mail: angela.price@traplet.com

Don't miss our January 2016 issue!

NEXT ISSUE

Chris Williams has revisited a classic scale sailplane to make it build and fly well with a minimum of effort. Drawn to 1:3.25, Chris' latest vintage glider has an impressive 4.7 metre wingspan and it is based on the nicely restored Kite 2a 'Percy', named after the aviation pioneer Percy Pilchard.



There are many aircraft that have an exposed engine, most commonly those with Continental and VW motors for light planes, and all the radials and rotary engines used by pre-jet warbirds and Golden Era aircraft.
For his latest scale model, the Aerolab Locamp, Peter Miller needed to replicate the Rotac 7 cylinder radial engine fitted to the original aircraft. At 1/6th scale his dummy engine is just over 5" diameter and his OS FS48 Surpass blends in remarkably well. In this informative article he shows how to construct your own engine from scratch. Please keep a copy of the article close too hand as Peter's Locamp design will be a Feature Plan, coming soon in RC Model World!

JANUARY 2016 ISSUE ON SALE THURSDAY 17TH DECEMBER

Neil Hutchinson was at Bruntingthorpe airfield in early October to see Avro Vulcan XH558 perform one of her last public displays as part of her Southern Tour. In this article he pays tribute to this magnificent aircraft, which concludes with details of all the Vulcan plans that are on offer in the Traplet Plans range. There's never been a better time to build your own R/C model of XH558!

PLUS...

More features, columns and reviews from across the complete spectrum of the R/C model-flying hobby

All contents are subject to change without notice

THE JANUARY ISSUE WILL BE ON SALE THURSDAY, DECEMBER 17TH, 2015.

Order your copy TODAY from your newsagent or model shop. Alternatively, check out the Subscription Offers in this issue and be among the first to take advantage of our FREE classified advertisement service

Advertisers Index

Airtek Models	85	Hobbico	59	Sarik Vacform	79	Totem Hobbies	64
Al's Hobbies	10-11	Horizon Hobbies	2, 29, 40-41	Solarfilm	73	TPL Digital	84
Balsa USA	50			South Herts Models	83	TPL Plans & Parts	109-111
Boca Bearing	85	Inwood Models	85	Stoney CNC	85	TPL Products	93, 101
Braincube	84	Macgregor	123	Subscriptions	14-15	UK Drone Show	35
CML Distribution	3	NI Models	65	Surrey Models	51	Web Directory	116-117
Electricwingman	7	Optifuel	84	Sussex Model Centre	73	Weston UK	49
Hacker Models	64	Ripmax	124	Tony Nijhuis Designs	21	Zap Glues	65, 79

Pilot GIANT SCALE KITS THAT STAND OUT FROM THE CROWD!

30 ~ 60CC
SKYWOLF

30 ~ 50CC UPTO 150 ~ 180CC
DECATHLON

30CC UPTO 275CC ~ 340CC
SBACH 342

30 ~ 50CC UPTO 150 ~ 170CC
EXTRA 330SC

26 ~ 35CC UPTO 150 ~ 170CC
EXTRA 260

26 ~ 35CC UPTO 150 ~ 170CC
EDGE 540

53" ELECTRIC POWERED
YAK 54 EP

26 ~ 35CC UPTO 400CC
YAK 54

30 ~ 35CC UPTO 150 ~ 180CC
YAK M55

20 ~ 35CC - LOW WING
SPORT TRAINER

8-14KG TURBINE
DOLPHIN JET

FOR COMPLETE MODEL SIZES AND SPECIFICATIONS PLEASE VISIT:
WWW.MACGREGOR.CO.UK/PILOTRC.HTM

MacGregor Industries
World Class Products • Excellent Service

Pilot

WWW.MACGREGOR.CO.UK • WWW.HOBBYPLASTIC.CO.UK

PILOT-RC PRODUCTS ARE AVAILABLE FROM ALL GOOD MACGREGOR RC STOCKISTS. FOR DETAILS OF YOUR NEAREST MACGREGOR RC STOCKIST PLEASE VISIT: **WWW.MACGREGOR.CO.UK/LINKS/STOCKIST.HTM**

Futaba

T6K

6 Channel Digital Proportional R/C System

SSP
£189.99

The new Futaba T6K is the perfect entry/sport level radio for aircraft, helicopter and multirotor pilots. This stylish, stealth looking transmitter is packed with features including 30 model memory, a built-in aerial, jog dial navigation and a backlit LCD screen for easy programming. The T6K is not only about style, it also includes some more advanced features that you would usually only expect in high-end transmitters.

The T6J has been designed to take full advantage of Futaba's popular T-FHSS telemetry system, enabling a wide array of data to be monitored during use, either on screen or using the in-built speaker. The T6K is also capable of using S.Bus/S.Bus2 servos, which can be easily programmed via the transmitter. The included 2.4GHz T-FHSS R3006SB receiver also features telemetry and is capable of both S.Bus and standard servos.

More information is available at www.ripmax.com

2.4GHz T-FHSS Telemetry System

2.4GHz S-FHSS

S.BUS2

Ripmax

Distributed to all good model shops by:
Ripmax Ltd., Green Street, Enfield, EN3 7SJ.

www.ripmax.com