PLANS HANDBOOK 1

Aeromodelling

MAP PLANS SERVICE 15p

AEROMODELLER & MODEL AIRCRAFT

PLANS HANDBOOK

A FULLY ILLUSTRATED CATALOGUE OF THE FAMOUS AERO-MODELLER PLANS TOGETHER WITH INSTRUCTIONAL ARTICLES TO HELP YOU TO BUILD AND OPERATE BETTER MODELS

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CONTENTS

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HOW TO CHOOSE THE RIGHT ENGINE FOR YOUR MODEL

Put the **right** engine in your A.P.S. designed model and you will have the perfect combination for many hours of model flying.

IS YOUR engine going to help you select your next model?—or are you selecting a design and then buying an engine to suit? Either way, this table of the World's model engines, the majority of which are in full scale production this year, will help you take your pick.

The old scheme of classifying engine utility against its capacity used to serve as a standard yardstick—until engine design unfolded new techniques, new power levels. For example, there are some 1.5 c.c. diesels equal in usefulness to others of 2.5 capacity. Conversely there are 2.5 c.c. engines with "slogging" power at lower revs per minute, that equal much larger engines for use in a sport model, yet fall below requirements for 2.5 c.c. when employed for a contest model.

Grading the World's engines so that due allowance be made for differences in characteristics and power output has meant that no less than fourteen classes are used to segregate the vast range from 15 to 26 c.c. The classes are lettered from

THE WORLDS ENGINES ARE LISTED ON THE FOLLOWING PAGES

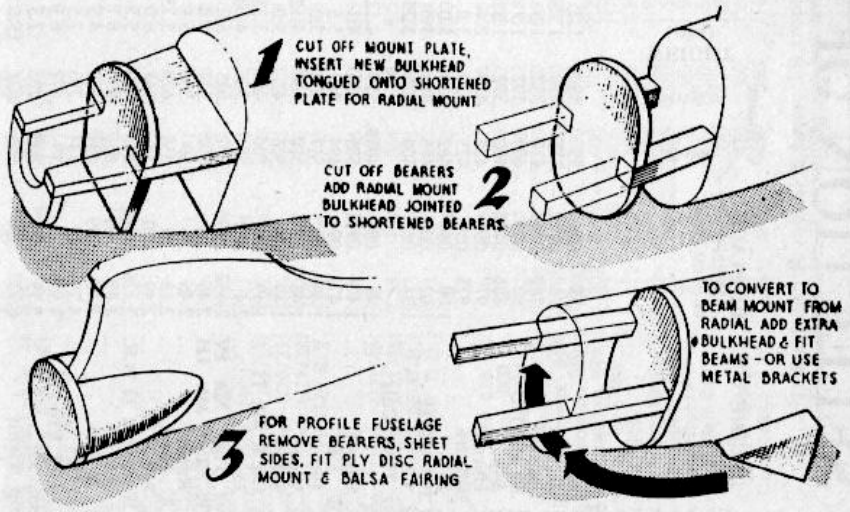
A to **O** and to find the grading for your particular engine, just follow the line against its name until you reach the "power coding" column.

In each caption to AEROMODELLER Plans Service power driven designs, equivalent code letterings are included between the plan number and its price. For example:—

PET/582 **BI-PLAY** C,D,E, **30p**

This is an exceptional example capable of taking a wide range of power units; but we quote it because giving more than one code letter means that **all** engines with these quoted codes will be suitable and capacity is more or less disregarded. It will be found that many diesels equal glowplug engines of larger capacity, that the "point-five" size diesels are divided, and that the method of mounting is also defined. "Radial" mounting generally implies an engine with a front rotary induction valve via the crankshaft. Such an engine may require slight modification to your A.P.S. selection since the majority of British power units are "Beam" mounted. Alteration is simple in every case when

Continued on page 10



MODIFICATION RADIAL TO BEAM OR VICE VERSA

A SELECTION OF THE WORLD'S ENGINES

ENGINE	DISPLACEMENT cc.	DISPLACEMENT cu. ins.	Cylinder Bore	Cylinder Stroke	WEIGHT (ozs)	Useful RPM RANGE	RECOMMENDED PROPELLER Sport F/F	Contest F/F	Contest C/L	MOUNTING*	Induction	POWER GROUP	ENGINE
BRITISH													**BRITISH**
Q.S. Dart	.55	.036	.35	.35	1.25	9–14000	7x4	6x3	6x4	R or B	FR	C	**Q.S. Dart**
Q.S. Merlin	.76	.047	.375	.420	1.75	9–14000	8x4	7x4	6x6	R or B	FR	C	**Q.S. Merlin**
Q.S. Bantam	.762	.0465	.410	.352	1.5	10–18000	6x3	5x3	6x4	B	FR	C	**Q.S. Bantam**
Frog .80 Mk IID	.80	.049	.400	.392	1.9	7–14000	7x4	6x4	6x6	B	FR	C	**Frog .80 Mk IID**
Frog .049	.808	.0492	.400	.392	1.8	8–15000	6x4	6x3	6x4	B	FR	C	**Frog.049**
M.E. Heron†	.97	.059	.424	.420	2.4	7–14000	8x4	6x4	7x6	B	FR	D	**M.E. Heron†**
Q.S. Spitfire	.975	.059	.425	.420	3.0	9–12000	9x4	7x4	7x6	R or B	FR	D	**Q.S. Spitfire**
A.M. 10	1.00	.061	.462	.430	3.0	11–14000	8x4	7x4	7x6	B	FR	E	**A.M. 10**
Frog 100 Mk II	1.02	.062	.415	.460	3.0	6–14000	8x5	7x4	7x5	B	FR	E	**Frog 100 Mk II**
Mills 1.3	1.33	.081	.406	.625	3.25	5–8000	9x5	7x4	8x6	B	SP	E	**Mills 1.3**
Oliver Tiger Cub Mk II	1.46	.089	.4659	.523	4.125	7–17000	9x4	8x4	8x4	B	FR	F	**Oliver Tiger Cub Mk II**
M.E. Snipe†	1.474	.0911	.505	.455	4.1	7–13000	9x4	7x4	7x6	B	FR	F	**M.E. Snipe**
P.A.W. 1.49	1.473	.09	.494	.469	3.5	7–18000	9x4	7x4	7x6	B	FR	F	**P.A.W. 1.49**
A.M. 15†	1.48	.09	.517	.430	3.0	7–15000	9x5	8x4	7x6	B	FR	F	**A.M. 15†**
Frog Viper	1.48	.09	.500	.460	4.125	8–16000	9x4	7x4	7x6	B	RDr	F	**Frog Viper**
Q.S. Sabre	1.49	.091	.525	.42	3.0	10–12000	8x6	8x4	8x6	B	FR	E	**Q.S. Sabre**
Frog 150 R Mk II	1.49	.091	.500	.460	3.25	11–14000	9x5	7x4	7x6	B or R	FR & RD	F	**Frog 149/150 R Mk II**
A.M. 25	2.4	.147	.57	.562	4.00	10–13000	10x6	8x3	8x6	B	FR	G	**A.M. 25**
Oliver Tiger Mk IV	2.452	.1496	.552	.625	6.0	8–18000	10x6	8x4	8x6	B	FR	G	**Oliver Tiger Mk IV**
P.A.W. 2.49 Mk III	2.46	.15	.592	.532	5.0	8–17000	10x6	8x4	8x6	B	FR	G	**P.A.W. 2.49 Mk III**
E.D. Racer†	2.46	.15	.59	.55	5.4	10–15000	10x6	9x4	9x6	B	RD	G	**E.D. Racer†**
E.T.A. Elite	2.48	.15	.558	.620	5.75	8–18000	10x6	8x4	8x6	B	RD	G	**E.T.A. 15 Mk II**
Frog 249 B.B.	2.49	.151	.58	.568	6.0	8–16000	11x6	10x4	9x6	B	FR	G	**Frog 2.49 B.B.**
P.A.W. 19 Mk II B.R.	3.128	.1912	.642	.590	5.5	7–16000	10x4	8x4	8x6	B	FR	H	**P.A.W. 19D**
Frog 3.49†	3.49	.209	.666	.600	6.7	6–13000	11x6	9x4	9x6	B	RDr	H	**Frog 3.49†**
A.M 35	3.42	.209	.687	.562	4.5	10–14000	11x6	9x4	9x6	B	FR	H	**A.M. 35**
Merco 29†	4.75	29	.734	.703	7.5	9–13000	12x6	10x6	10x6	B	FR	J	**Merco 29†**
E.T.A. 29 VIc	4.95	.30	.75	.672	6.5	12–18000	12x6	10x5	8x8	B	RD	K	**E.T.A. 29 VIc**
Merco 35†	5.79	.35	.800	.703	7.5	9–13000	11x6	10x4	10x6	B	FR	K	**Merco 35†**
Taplin Twin†	6.920	.420	.656	.621	15.0	6–10000	12x6	—	10x8	B	SP	J	**Taplin Twin†**
Merco .49†	8.00	.49	.880	.805	12.5	3–12000	12x6	12x6	11x6	B	FR	M	**Merco .49†**
Taplin Twin† Mk II	8.00	.49	.705	.625	17.0	6–11000	12x10	—	12x10	B	SP	M	**Taplin Twin† Mk II**
Taplin twin Mk III†	7.989	.4875	.705	.625	17.5	6–10000	14x6	—	11x8	B	SP	M	**Taplin twin Mk III**
Merco 61 Mk II†	10.00	.61	.9375	.875	13.0	3–12000	14x6	—	11x8	B	FR	N	**Merco 61†**
ITALIAN													**ITALIAN**
Barbini B38	0.99	.061	.400	.48	2.0	10–13000	9x4	7x4	6x6	B	FR	D	**Barbini B38**
Super Tigre G32	0.98	.0581	.413	.433	3.0	10–12000	9x4	7x4	7x4	B	RDr	D	**Super Tigre G32**
Super Tigre G31	1.47	.0899	.492	.472	4.0	10–15000	9x4	7x4	7x6	B	RDr	F	**Super Tigre G31**
Super Tigre G30	2.5	.15			6.5	13–16000	9x6	8x4	8x6	B	RDr	G	**Super Tigre G30**
Super Tigre G20/15D†	2.47	.151	.591	.551	6.0	10–16000	9x6	8x4	8x6	B	FR	G	**Super Tigre G20/15D†**
Barbini B40	2.47	.15	.570	.590	4.0	8–12000	9x4	8x4	8x6	B	RD	G	**Barbini B40**
Super Tigre G15 RV	2.47	.15	.591	.55	5.0	12–22000	9x4	7x3½	8x6	B	RD	G	**Super Tigre G15 R.V.**
Super Tigre 15G†	2.47	.151	.591	.5512	5.0	10–17000	9x4	8x4	8x6	B	FR	G	**Super Tigre G20/15G†**
Super Tigre G20/19†	3.21	.1962	.630	.630	5.0	8–13000	10x4	9x6	9x6	B	FR	H	**Super Tigre G20/19†**
Super Tigre G20/23†	3.76	.22	.668	.628	5.0	10–15000	10x6	9x6	9x6	B	FR	H	**Super Tigre G20/23†**
Super Tigre G21/29†	4.82	.294	.746	.668	8.5	10–15000	11x6	10x6	9x6	B	RD	K	**Super Tigre G21/29†**
Super Tigre G29 R.V.	4.82	.294	.746	.668	9.5	12–19000	11x6	10x5	10x6	B	RD	K	**Super Tigre G29 R.V.**
Super Tigre 35c & 35†	5.56	.345	.786	.707	8.5	10–17000	12x6	10x6	9x8	B	FR	K	**Super Tigre 35c & 35†**
Super Tigre G21/40†	6.6	.400	.805	.786	8.5	10–17000	12x6	10x6	9x8	B	FR	L	**Super Tigre G21/40†**
Super Tigre G21/46†	7.28	.460	.864	.786	8.5	10–17000	12x6	10x6	10x6	B	FR	L	**Super Tigre G21/46†**
Super Tigre 56 B.B.†	9.13	.556	.903	.864	12.0	10–15000	12x6	11x6	10x8	B	FR	N	**Super Tigre 56 B.B.†**
Super Tigre 60 B.B.†	9.92	.607	.95	.86	14.4	8–18000	12x6	13x4	9x12	B	RD	N	**Super Tigre 60 B.B.†**
Rossi 60†	9.8	.598	.940	.875	15.0	13–17000	12x6	13x4	9x12	B	RD	N	**Rossi 60†**
AMERICAN													**AMERICAN**
Cox Tee Dee 010	.163	.010	.237	.226	0.5	16–34000	3½ in. supplied			R	FR	B	**Cox Tee Dee 010**
Cox Tee Dee 020	.327	.020	.300	.282	0.85	13–23000	3½x2½ Cox, 4x2½ Cox			R	FR	C	**Cox Tee Dee 020**
Cox Pee Wee 020	.327	.020	.300	.282	0.80	10–20000	3½x2½ Cox, 4x2½ Cox			R	RR	B	**Cox Pee Wee 020**
OK Cub 024	.409	.025	.320	.310	0.9	10–20000	3x2	4x2	4x2½	R	RR	B	**OK Cub 024**
Holland Hornet 049†	.795	.049	.422	.350	2.0	8–15000	6x4	5½x3	5½x3	R	FR	D	**Holland Hornet 049†**
K & B Tornado 049	.800	.049	.400	.394	1.7	8–15000	6x4	5½x3	5½x3	R	RR	D	**K & B Tornado 049**
K & B Stallion 049	.801	.0496	.400	.395	2.2	10–18000	6x3	5x3	5x3	R or B	FR	C	**K & B Stallion 049**
Cox Babe Bee 049	.81	.0499	.406	.382	1.75	12–16000	6x4	6x4	6x4	R	RR	C	**Cox Babe Bee 049**
Cox Q.Z. 049	.817	.0499	.406	.386	2.1	10–18000	7x4	6x4	6x6	R	RR	C	**Cox QZ 049**
Cox Golden Bee	.81	.0499	.406	.382	1.9	10–17000	6x4	6x3	6x4	R	RR	C	**Cox Golden Bee**
Cox Medallion 049†	.81	.0499	.406	.382	1.5	12–18000	6x4	5x3	5x4	B	FR	C	**Cox Medallion 049†**
Cox Two-Ninety	.81	.049	.406	.382	1.9	12–16000	6x4	6x3	6x4	R	RR	C	**Cox Two-Ninety**
Cox Tee Dee 049	.81	.0499	.406	.382	1.5	14–20000	6x4	5x3	5x4	B	FR	D	**Cox Tee Dee 049**
Fox 049	.81	.0499	.390	.420	1.5	12–19000	6x4	5x3	5x4	R or B	FR	C & D	**Fox 049 & F.A.I.**
OK Cub 049 Diesel	.81	.0499	.420	.360	1.6	8–13000	6x3	5x3	5x3	R or B	FR	C	**OK Cub 049 Diesel**
OK Cub 049A	.81	.0499	.420	.360	1.4	10–17000	6x4	6x3	6x4	R	RR	C	**OK Cub 049A**

*Definitions : **R** radial. **B** beam. **FR** front rotary. **SP** sideport. **RD** rear disc. **RR** rear reed. **RDr** rear drum.
Dimensions with **B** mounting symbol are for distance in inches between bearers (crankcase clearance) for Beam mounting

†Indicates that engine also appears in Radio Control version, which is slightly heavier.

OK Cub 049B	.81	.0499	.420	.360	1.4	11–19000	6x4	5x3	5x4	R or B		FR	C	OK Cub 049B
Wen Mac Hotshot 049	.81	.0499	.420	.360	1.9	10–18000	6x4	6x3	6x4	R or B	¾	FR	C	Wen Mac Hotshot 049
Wen Mac Hustler 049	.81	.0499	.420	.360	1.3	10–17000	6x4	6x3	6x4	R or B	¾	FR	C	Wen Mac Hustler 049
Wen Mac Rotomatic 049	.81	.0499	.420	.360	1.8	10–17000	6x4	6x3	6x4	R or B	¾	FR	C	Wen Mac Rotomatic 049
Holland Hornet 051†	.89	.0503	.428	.350	1.8	13–20000	6x4	5x3	5x4	R		FR	D	Holland Hornet 051†
Cox Tee Dee 051	.90	.509	.420	.386	1.5	14–20000	6x4	5x3	5x4	B	¾	FR	D	Cox Tee Dee 051
KB & Tornado 060	.96	.0576	430	395	1.6	12–17000	6x4	6x3	6x6	R		RR	D	K & B Tornado 060
Fox 07 R/C†	1.14	.0698	.460	.420	—	10–15000	7x4	6x3	6x4	R or B		FR	C	Fox 07 R/C†
Gilbert 7	1.15	.070	.472	.400	2.6	12–16000	7x4	6x3	6x6	B	15/16	SP	D	Gilbert 7
OK Cub 074 Diesel	1.21	.0746	.479	.415	2.1	8–13000	6x4	6x3	6x4	R or B	¾	FR	C	OK Cub 074 Diesel
OK Cub 074	1.21	.0746	.479	.415	1.7	10–13000	7x4	7x3	6x4	R or B	¾	FR	D	OK Cub 074
Cox Medallion 09†	1.49	.0914	.497	.471	2.7	10–16000	8x4	7x4	7x6	B	15/16	FR	F	Cox Medallion 09†
Cox Tee Dee 09	1.49	.0914	.497	.471	2.7	11–18000	8x4	7x4	7x6	B	15/16	FR	F	Cox Tee Dee 09
Johnson Bulldog 09†	1.53	.0925	.498	.475	4.5	10–15000	8x4	7x3	7x6	R or B	15/16	FR	D	Johnson Bulldog 09†
OK Cub 099	1.6	.0999	.515	.480	2.0	8–13000	8x4	7x3	7x6	R or B	1	FR	D	OK Cub 099
K & B Torpedo 09	1.6	.0999	.521	.465	2.8	10–15000	9x4	7x4	7x6	B		FR	F	K & B Torpedo 09
Fox 10†	1.63	.1015	.530	.460	2.8	9–14000	9x4	7x4	7x6	B		FR	F	Fox 10†
Gilbert II	1.8	.1097	.582	.450	3.3	9–14000	9x4	8x3	7x6	B	15/16	SP	F	Gilbert II
Fox 15X†	2.420	.1476	.590	.540	3.6	13–30000	10x4	8x4	8x6	B	15/16	FR	F	Fox 15X†
OK Cub 14	2.46	.1499	.600	.530	2.8	9–15000	9x3	8x3½	7x6	R or B	1⅛	FR	F	OK Cub 14
K & B Torpedo 15R Ser 64	2.485	.1516	.600	.537	4.9	10–18000	9x3	8x4	8x6	B	1⅛	FR	G	K & B Torpedo 15 R Ser 64
Cameron 15†	2.49	.1524	.623	.500	4.2	8–13000	9x4	8x3½	8x6	B	1 1/16	FR	F	Cameron 15†
Cox Medallion 15†	2.49	.1525	.591	.556	4.2	10–17000	9x4	8x3	8x6	B	1	FR	G	Cox Medallion 15†
Cox Special 15 Mk II	2.49	.1525	.591	.556	4.5	11–20000	9x4	8x4	8x6	B	1	FR	G	Cox Special 15 Mk II
Cameron 19L†	3.113	.1933	.625	.630	4.5	6–14000	10x6	9x4	9xo	B	1⅛	FR	G	Cameron 19L†
OK Cub 19	3.23	.1988	.655	.590	2.9	9–12000	10x6	9x4	8x6	B or R	1	FR	G	OK Cub 19
K & B Torpedo 19†	3.25	.190	.64	.62	5.5	11–14000	11x6	9x6	9x6	B	1⅛	FR	H	K & B Torpedo 19†
Cameron 19R	3.26	.1995	.635	.625	4.5	9–13000	11x5	9x4	8x6	B	1⅛	FR	G	Cameron 19R
McCoy 19†	3.27	.1998	.642	.617	5.9	8–14000	11x6	9x6	9x6	B	1⅛	FR	H	McCoy 19†
McCoy Custom 19†	3.272	.1997	.642	.617	6.0	8–13000	9x4	9x4	9x5	B	1 5/32	FR	G	McCoy Custom†
FCP Twin Bee	1.634	.0997	.406	.386	6.5	7–13000	8x4	8x4	7x6	R		RR	E	F.C.P. Twin Bee
Veco 19 Series 150†	3.27	.1998	.635	.63	6.0	11–14000	11x6	9x6	9x6	B	1⅛	FR	H	Veco 19 Series 150†
Veco 19 B.B. Series 200†	3.27	.199	.634	633	7.0	6–16000	11x4	9x4	9x6	B	1⅛	FR	H	Veco 19 B.B. Series 200†
K & B Torpedo 201	3.28	.2011	.640	.625	6.0	11–14000	11x6	9x6	9x6	B	1⅛	FR	H	K & B Torpedo 201
Forster 29R†	4.86	.2969	.750	672	6.3	8–13000	11x6	10x5	9x6	B	1 1/16	FR	H	Forster 29R†
K & B Torpedo 29S	4.87	.2972	.725	.720	7.0	8–15000	12x6	10x5	10x6	B	1¼	FR	J	K & B Torpedo 29S
K & B Torpedo 29F Ser 64	4.9	.297	.725	.720	8.8	10–18000	11x4	10x5	10x6	B	1¼	FR	J	K & B Torpedo 29F Ser 64
K & B Torpedo 29R Ser 64	4.88	.2982	.750	.675	8.5	12–19000	12x6	10x5	10x6	B	1¼	RD	K	K & B Torpedo 29R Ser 64
Dooling 29	4.89	.2986	.800	.594	6.8	10–16000	10x6	10x4	7x9	B	1¼	RD	K	Dooling 29

Fox 29X B.B.	4.90	.2994	.738	700	7.5	11–18000	11x6	10x5	7x10	B	1¼	RD	K	Fox 29X
OK Cub 29	4.90	.2994	.760	660	6.1	6–10000	11x6	10x5	9x6	B		FR	J	OK Cub 29
McCoy R.H. 29†	4.905	.2996	.732	.712	7.2	8–13000	11x6	10x5	9x6	B	1¼	FR	H	McCoy R.H. 29
Johnson 29R	4.91	.2997	.729	.718	8.0	10–14000	11x4	10x5	10x6	B	1¼	FR	J	Johnson 29R
Veco 29R Series 100†	4.92	.3001	.725	.725	7.4	8–15000	12x6	10x5	10x6	B	1¼	FR	J	Veco 29R Series 100†
Johnson Sports Spec†	4.95	.3025	.729	.770	8.0	8–12000	11x6	10x4	10x6	B	1¼	FR	K	Johnson Sports Spec†
Aero 35†	5.69	.3470	.812	.670	10.5	8–12000	11x6	10x4	10x6	R		FR	K	Aero 35†
McCoy R.H. 35†	5.701	.3491	.775	.740	7.2	9–13000	12x6	10x5	10x6	B	1¼	FR	K	McCoy R.H. 35†
Johnson Stunt Sup	5.704	.3492	.770	.750	8.3	9–14000	11x6	10x4	10x6	B	1¼	FR	L	Johnson Stunt Sup
OK Cub 35	5.704	.3493	.800	.675	6.3	8–11000	11x5	10x3	10x6	B		FR	K	OK Cub 35
Veco 35 Ser 100 & 35c†	5.71	.3495	.784	.725	7.7	10–14000	12x4	10x4	10x6	B	1¼	FR	L	Veco 35 Ser 100 & 35c†
Forster 35R†	5.714	.3497	.781	.730	6.3	8–12000	12x6	10x3	10x6	R or B	1 5/16	FR	K	Forster 35R†
Fox 35 Stunt†	5.75	.3519	.800	.700	6.5	10–14000	12x6	10x6	10x6	B	1 5/16	FR	K	Fox 35 Stunt†
Fox 36X	5.75	.3519	.800	.700	7.5	11–16000	12x6	10x6	10x8	B	1¼	FR	L	Fox 35X
K & B Torpedo 35 & 35c†	5.7	.3529	.790	.720	7.6	11–15000	12x6	10x6	10x6	B	1¼	FR	L	K & B Torpedo 35 & 35c†
K & B Stallion 35	5.78	.3529	.790	.720	8.5	10–13000	12x4	10x6	10x6	B	1¼	FR	K	K & B Stallion 35
Johnson Combat Spec.	5.87	.3585	.770	.770	8.3	12–15000	12x6	10x6	10x8	B	1¼	FR	L	Johnson Combat Spec.
McCoy 40 R.H.†	6.5	.40	.775	.81	7.2	9–13000	12x4	10x4	10x6	B	1¼	FR	K	McCoy .40 R.H.†
K & B Torpedo 40 Ser 65†	6.5	.40	.790	.66	9.1	9–16000	12x4	10x4	10x6	B	1¼	FR	K	K & B Torpedo .40 Ser 65†
K & B Torpedo .40 F/R	6.539	.3990	.840	.790	8.6	10–18000	13x4	11x5	10x6	B	1 5/16	FR	M	K & B Torpedo .40 F/R
Fox 40 B.B.†	6.5	.3971	.800	.790	8.0	13–17000	12x6	10x6	8x9	B	1¼	FR	M	Fox 40 B.B.†
K & B Torpedo 45†	7.42	.4544	.840	.820	8.0	9–12000	13x6	11x4	11x6	B	1 1/16	FR	M	K & B Torpedo 45†
Veco 45 Series 200†	7.61	.4653	.850	.820	11.0	9–12000	13x4	11x6	11x6	B	1½	FR	M	Veco 45 Series 200†
Fox 59†	9.6	.5848	.907	.905	10.0	10–16000	14x6	12x6	11x8	B	1½	FR	N	Fox 59†
Dooling 61	9.92	.6070	1.015	.75	14.0	11–18000	12x8	10x6	9x12	B	1½	RD	N	Dooling 61
McCoy R.H. 60 Ser 20	9.93	.6072	.940	875	14.0	12–16000	12x8	11x6	9x12	B	1½	RD	N	McCoy R.H. 60 Ser 20
AUSTRALIAN														
Taipan 1.5 Glow	1.517	.0927	.511	.452	3.0	10–13000	8x5	7x4	7x6	R or B	¾	FR	F	Taipan 1.5 Glow
Taipan 1.5b Series 66	1.522	.0929	.511	.453	3.8	9–15000	9x4	8x4	8x5	B	¾	FR	F	Taipan 1.5b Series 66
Taipan 2.5	2.506	.1529	.575	.578	5.5	9–13000	10x4	8x4	8x6	B		FR	G	Taipan 2.5
Taipan 2.5 B.R.	2.506	1529	.575	.578	6.0	12–15000	10x4	8x4	8x6	B	1 1/16	FR	G	Taipan 2.5 B.R.
Taipan 2.5 Glow	2.431	.1493	.575	.575	4.5	13–16000	9x4	8x4	8x6	B		FR	G	Taipan 2.5 Glow
Taipan 19 BB†	3.233	.1973	.634	.625	7.2	8–14000	10x4	9x4	9x5	B	1 5/32	FR	G	Taipan 19 B.B.
Glo-Chief 19	3.25	.1994	.640	.620	6.1	10–16000	11x6	9x6	9x6	B		FR	H	Glo-Chief 19
Glo-Chief 29 B.R.	4.87	.2972	.725	.720	8.0	13–17000	11x6	10x5	9x6	B	1 1/16	FR	J	Glo-Chief 29 B.R.
Glo-Chief 35†	5.87	.3592	.797	.720	8.0	9–14000	12x6	10x6	10x6	B	1¼	FR	K	Glo-Chief 35†
Glow-Chief 45†	7.43	.4544	.840	.820	7.6	9–12000	13x4	11x6	11x6	B	1¼	FR	I	Glow-Chief 45†
GERMAN														
WMD-05	0.50	.0305	.3346	3465	1.4	9–15000	6x4	6x3	5½x3	B		FR	B	WMD-05
Webra Piccolo	0.78	.049	.410	.350	1.5	8–14000	8x4	7x4	6x6	B	15/16	FR	C	Webra Piccolo

Taifun Hobby	0.99	.060	.424	.060	2.0	7–13000	8x4	7x4	6x4	B		FR	D	**Taifun Hobby**
WAF-I	0.99	.0601	.402	.472	2.5	8–12000	8x4	7x4	6x6	B		FR	D	**WAF-I**
Jena-I	0.993	.0604	.4213	.4331	3.1	8–11000	9x6	8x4	7x6	B	1⅛	FR	D	**Jena-I**
Webra Record†	1.48	.0898	.512	.453	3.0	8–14000	8x5	7x4	7x6	B	¾	RR	F	**Webra Record†**
Taifun Hurrican	1.51	.0903	.507	457	3.8	10–14000	9x4	7x4	7x6	B		FR	F	**Taifun Hurrican**
Wilo 1.5	1.6	.0912	.500	.4646	2.7	8–13000	8x4	7x4	6x6	B	⅞	SP	F	**Wilo 1.5**
Taifun Sprint	1.789	.1092	.5315	.4921	3.5	9–17000	9x4	8x4	7x6	B	29/32	FR	F	**Taipan Sprint**
Webra Sport Glo 1.7†	1.686	.1029	.5118	.5000	3.4	8-16000	9x4	7x4	7x6	B	29/32	FR	F	**Webra Sport Glo 1.7†**
Jena 2M & 2D	1.98	.1204	.5472	.5118	5.1	8–12000	9x4	8x4	8x6	B	1	RR & RD	F	**Jena 2M & 2D**
Jena 2.5 DK & MK	2.45	.1497	.6102	5118	5.0	8–13000	9x6	8x4	8x6	B	1	RR & RD	F	**Jena 2.5 DK & MK**
Taifun Orkan	2.46	.1503	.5512	6299	6.0	9–16000	9x6	8x4	8x6	B	1⅛	RD	G	**Taifun Orkan**
Webra Winner-II†	2.46	.1503	.5512	.6299	4.2	8–12000	10x6	9x4	9x6	R or B	1⅛	FR	G	**Webra Winner-II†**
Taifun Blizzard	2.477	.1510	.5905	.5512	6.0	8–16000	9x6	8x5	8x6	B	1	RR	G	**Taifun Blizzard**
Taifun Rasant-II and Tornado	2.477	.1510	.5905	.5512	5.0	8–14000	10x6	8x4	8x6	B	1¼	FR	G	**Taifun Rasant-II and Tornado**
Taifun Zyklon†	2.477	.1510	.5905	.5512	5.6	10–13000	10x6	9x6	8x6	B	1¼	FR	G	**Taifun Zyklon†**
Webra Mach-II	2.48	.1512	.5512	.6339	6.2	8–18000	9x6	8x4	8x6	B		FR	G	**Webra Mach-II**
Webra Bully II†	3.146	.2088	.6496	.6299	5.9	8–13000	9x6	9x6	9x6	B	1¼	RD	H	**Webra Bully-II†**
Webra Bison†	3.629	.2213	.6299	.7087	6.5	8–15000	9x6	9x4	8x6	B	1¼	FR	H	**Webra Bison†**
Webra Big Ben 5†	4.81	.2941	.7480	.6693	7.8	6–11000	11x6	10x6	10x6	B		FR	J	**Webra Big Ben 5†**
Webra 61†	9.953	.6074	.9449	.8661	15.6	8-14000	13x5	12x5	11x6	B	1 9/16	FR	N	**Webra 61†**
FRENCH														**FRENCH**
Micron Meteore 09	0.94	.0575	.3937	.4724	2.0	6–11000	7x4	7x3	7x4	B		SP	D	**Micron Meteore 09**
Allouchery Cormoran	.9503	.0580	.4331	.3937	2.7	7-15000	8x4	7x4	7x6	B	25/32	FR	E	**Allouchery Cormoran**
Fok 25	2.474	.1510	.5905	.5512	5.0	8-14000	9x4	8x4	8x5	B	1 3/32	FR	G	**Fok 25**
Stab 1.25	1.241	.0767	.3937	6299	6.0	8–12000	9x5	7x4	7x6	B		FR	D	**Stab 1.25**
Micron Meteore 1.5	1.523	.0931	.5118	.48	2.3	8–13000	10x5	9x4	7x6	B		FR	E	**Micron Meteore 1.5**
Micron Racing 2.5	2.46	.1501	.5551	.6201	6.0	8–16000	9x6	8x4	8x6	B		FR	G	**Micron Racing 2.5**
REA 2.5 Series 200	2.463	.1503	.5512	.6299	4.8	8–12000	10x4	8x4	8x6	R or B		FR	F	**REA 2.5 Series 200**
Micron Special 2.5	2.477	.1510	.5905	.5512	3.6	8–16000	9x6	8x4	8x6	B		FR	G	**Micron Special 2.5**
Micron Super Sport	4.81	.2941	.7480	.6693	7.7	9–13000	12x6	10x6	10x6	B		FR	J	**Micron Super Sport**
Micron 29	4.81	.2941	.7480	.6693	8.0	10–15000	12x6	10x5	8x8	B		RD	J	**Micron 29**
REA 5 cc. Series 200	4.97	.3029	.7087	7677	6.0	8–12000	10x6	10x4	9x6	B		FR	H	**REA 5 cc. Series 200**
Micron 35	5.93	.3626	.8071	.7087	8.0	9–13000	11x6	10x4	10x6	B		FR	H	**Micron 35**
Micron 60	9.94	.6074	.9449	.8661	13.4	9–13000	11x6	10x6	10x8	B		RD	N	**Micron 60**
HUNGARIAN														**HUNGARIAN**
FOK 10	0.94	.0575	.3937	.4724	2.9	9–12000	8x4	7x4	7x6	B		FR	D	**FOK 10**
FOK 15	1.45	.0899	.4921	.4724	3.3	7–14000	9x4	7x4	7x6	B		FR	F	**FOK 15**
Moki TR-6	2.46	.1503	.5512	.6299	5.8	8–18000	9x5	8x4	8x6	B		FR	G	**Moki TR-6**
Moki-S-2	2.477	.1510	.5905	.5512	5.1	10–20000	9x4	8x4	8x6	B	1¼	FR	G	**Moki S-2**
Moki S-3	2.477	.1510	.5905	.5512	5.3	12–20000	9x4	8x4	8x6	B	1¼	RD	G	**Moki S-3**
FOK-25	2.477	.1510	.5905	.5512	5.2	8–13000	9x6	8x4	8x6	B		FR	G	**FOK-25**
Moki D-I	2.477	.1510	.5905	.5512	5.7	8–14000	9x5	8x4	8x6	B		FR	G	**Moki D-I**
Moki S-4	4.94	.3021	.7480	6748	8.5	10–17000	12x6	9x4	7x10	B	1⅛	RD	K	**Moki S-4**
Moki M-3	5.94	.36	.7874	.748	7.87	9–14000	11x6	10x4	10x6	B	1⅛	FR	K	**Moki M-3**

CZECHOSLOVAKIAN														**CZECHOSLOVAKIAN**
M.V.V.S. 1-D	0.99	.0604	.4213	.4331	2.8	12–16000	8x4	7x4	7x6	B		FR	E	**M.V.V.S. 1-D**
M.V.V.S. 2.5 T/R	2.46	.1503	.5512	.6299	5.3	9–16000	9x6	8x4	8x6	B		FR	G	**M.V.V.S. 2.5 T/R**
M.V.V.S 5.6	5.67	.3458	.7874	.7087	7.3	10–14000	12x6	10x4	10x6	B	1⅛	RD	K	**M.V.V.S. 5.6**
POLISH														**POLISH**
Jaskolka-2	2.477	.1510	.5905	.5512	4.8	8–13000	9x5	8x4	8x6	B	1⅛	RR	G	**Jaskolka-2**
Jaskolka-3	2.477	.1510	.5905	.5512	4.8	9–14000	9x5	8x4	8x6	B	1⅛	RD	G	**Jaskolka-3**
Super-Sokol Glow	4.89	.2989	.7677	.6457	8.5	12–14000	11x6	10x5	10x6	B		RD	H	**Super-Sokol Glow**
Super-Sokol Diesel	4.89	.2989	.7677	.6457	8.7	10–13000	11x6	10x5	10x6	B		RD	H	**Super-Sokol Diesel**
CHINESE														**CHINESE**
Yin Yan (Sil. Swallow)	2.477	.1510	.5905	.5512	5.0	8–14000	9x6	8x4	8x6	B		FR	G	**Yin Yan (Sil. Swallow)**
JAPANESE														**JAPANESE**
Enya 049	0.803	.0495	.413	.370	1.9	9–11000	6x6	5x3	6x4	R or B		RR	B	**Enya 049**
Fuji 049	0.803	.0499	.4016	.3937	1.6	8–9000	6x4	5½x3	6x4	R or B	⅞	FR	B	**Fuji 049**
O.S. Max-6	0.989	.0603	.4331	.4094	2.0	10–13000	7x4	7x4	7x4	B		FR	C	**O.S. Max-6**
Enya 06 Glow†	0.994	.0607	.437	405	2.0	10–14000	7x6	7x4	7x6	R or B		RR	D	**Enya 06 Glow†**
Enya 06 Diesel†	0.994	.0607	.437	.405	2.3	8–13000	7x4	7x4	7x6	R or B		RR	D	**Enya 06 Diesel†**
Fuji 061	0.998	.0609	.4437	.3937	1.6	12–14000	8x3	7x3	7x4	R or B		FR	D	**Fuji 061**
Strong .09	1.6	.098	.5	.5	—	8–14000	8x4	7x3	7x6	B		FR	F	**Strong .09**
Enya 09-11†	1.60	.0982	.500	.498	3.5	7–15000	8x4	7x4	7x6	B	1	FR	E	**Enya 09-II†**
Enya .09-III	1.619	.0988	.5118	.4803	3.7	7-19000	9x4	8x4	8x5	B	15/16	FR	F	**Enya .09-III**
Ueda .09†	1.6	.096	.5	.48	3.4	8–14000	8x4	7x4	7x6	B		FR	F	**Ueda .09†**
Ueda Cougar .09†	1.5708	.0958	.500	.4882	3.8	7-11000	8x4	7x4	7x5	B	1	FR	E	**Ueda Cougar .09†**
Fuji 099	1.60	.0982	.500	.500	3.6	9–12000	8x4	7x3	7x6	R or B		FR	D	**Fuji 099**
Fuji 099-S	1.609	.0982	.500	.500	3.8	9-14000	8x4	8x4	7x6	B	31/32	FR	E	**Fuji 099-S**
Kyowa 09	1.61	.0985	.535	.438	3.0	7–13000	8x4	7x4	7x6	B		FR	F	**Kyowa 09**
O.S. Pet-II†	1.61	.0985	.529	.448	2.75	8–15000	8x4	8x3	7x6	B	¾	FR	F	**O.S. Pet-II†**
O.S. Max 10†	1.749	.1067	.5276	.4882	3.2	8–16000	8x4	8x4	7x6	B	29/32	FR	F	**O.S. Max 10†**
Enya 15-II†	2.477	.1510	.5905	.5512	4.4	9–14000	10x6	8x4	8x6	B	1⅛	FR	G	**Enya 15-II†**
Enya 15-III†	2.474	.1510	.5905	.5512	5.0	9-16000	9x4	8x4	8x6	B	1	FR	G	**Enya 15.III†**
Fuji .15†	2.48	.151	.59	.55	4.8	8–13000	10x6	8x3	8x6	B		FR	G	**Fuji 15†**
Enya 15 D-II†	2.477	.1510	.5905	.5512	6.3	10–16000	10x4	8x4	8x6	B	1⅛	FR	G	**Enya 15 D-II†**
Ueda .15†	2.48	.151	.59	.55	4.6	8–13000	10x6	8x3	8x6	B		FR	G	**Ueda .15†**
O.S. Max 15-III†	2.48	.1515	.598	.5394	4.0	9–16000	10x6	8x4	8x6	B	1⅛	FR	G	**O.S. Max 15-III†**
Ueda .19†	3.246	.1981	.6535	.5905	5.9	9-14000	9x4	8x4	8x6	B	1 5/32	FR	G	**Ueda .19†**
O.S. Max 19†	3.16	.1928	.6535	.5748	5.0	10–14000	10x6	9x4	9x6	B	1⅛	FR	H	**O.S. Max 19†**
Enya 19-IV†	3.21	.1962	.6299	.6299	5.4	12–16000	10x5	9x4	9x6	B		FR	H	**Enya 19-IV†**
Fuji 19†	3.21	.1962	.6299	.6299	6.0	9–13000	10x5	9x4	9x6	B	1⅛	FR	H	**Fuji 19**
Fuji 29†	4.81	.2941	.7480	.6680	8.5	12–14000	10x6	9x5	9x6	B	1¼	FR	H	**Fuji 29**
O.S. Max-III 29†	4.85	.2951	.739	.688	8.5	10–14000	11x6	10x5	9x6	B	1⅛	FR	J	**O.S. Max-III 29†**
O.S. Max-III 29X	4.85	.2951	.739	.688	8.2	12–17000	11x4	10x5	8x8	B		FR	J	**O.S. Max-III 29X**
K.O. .15†	2.49	.152	.60	.53	3.6	9–13000	10x6	8x3	8x6	B		FR	G	**K.O. .15†**
O.S. Max-H 29R	4.86	.296	.74	.69	8.5	10–17000	11x6	10x5	9x6	B	1⅛	FR	J	**O.S. Max-H 29R**
O.S. Max-H 29T/R	4.86	.296	.74	.69	8.5	11–16000	11x6	10x5	8x8	B	1⅛	FR	J	**O.S. Max-H 29T/R**
O.S. Max-S30†	4.86	.296	.74	.69	7.8	8–14000	11x6	10x6	10x6	B	1⅛	FR	J	**Max-S 30†**

O.S. Max-S30†	...	4.86	.296	.74	7.8	8–14000	11x6	10x6	10x6	B	1 5/16	FR	K	Max-S 30†
Enya 29-IVM†	...	4.88	.2987	.735	6.8	12–15000	12x4	10x5	9x6	B	1 5/16	FR	K	Enya 29-IVM†
Enya 29-IV Spl.	...	4.88	.2987	.735	7.2	13–16000	12x4	10x5	8x9	B	1 5/16	FR	K	Enya 29-IV Spl.
Fuji 35†	...	5.75	.3516	.7992	8.8	13–15000	12x6	10x6	10x6	B	1 5/16	FR	K	Fuji 35
O.S. Max-III 35†	...	5.80	.3545	.810	8.3	10–14000	12x6	10x5	10x6	B	1 5/16	FR	K	O.S. Max-III 35†
O.S. Max-S/35	...	5.82	.3559	.811	—	9–13000	12x4	10x5	10x6	B	1 5/16	FR	K	O.S. Max S35
Enya 35-III†	...	5.98	.3565	.803	8.3	9–12000	12x4	10x6	10x6	B	1 5/16	FR	K	Enya 35-III†
O.S. Max-H 40RR†	...	6.5	.396	.811	8.3	10–17000	11x5	10x5	8x9	B	1 5/16	FR	K	O.S. Max-H 40RR†
Enya 45†	...	7.35	.4488	.874	8.2	9–13000	13x6	11x5	11x6	B	1 5/16	FR	M	Enya 45†
Kyowa 45†	...	7.41	.4531	.8629	9.3	8–13000	13x6	11x5	11x6	B	1 1/8	FR	M	Kyowa 45†
O.S. Max 49†	...	8.15	.4978	.8976	9.8	9–12000	13x6	11x5	11x6	B	1 1/8	FR	M	O.S. Max 49†
O.S. Max 50†	...	8.29	.507	.905	12.1	9–12000	13x6	11x5	11x6	B	1 1/8	FR	M	O.S. Max 50†
Enya 60†	...	9.95	.6074	.9449	14.0	10–16000	14x6	12x5	12x8	B	1 1/8	FR	N	Enya 60†
O.S. Max-R 60†	...	9.95	.6074	.8661	—	10–17000	14x6	12x6	9x12	B	1 1/8	RD	N	O.S. Max-R† 60

Continued from page 3

beams are specified on the plan. First measure the distance from the rear of the propeller to the rear face of the "Radial" engine mount and indicate this on the plan with a vertical line on the side view. This will be the position of your new "Radial" bulkhead and the beams should be sawn off flush to allow a key to be made with the ½-in. plywood radial mount.

Should the design be a profile type, for example **P E T 4 9 9 S T O M P E R** a bulkhead can be attached directly to the front of the fuselage, the existing beams deleted, and block balsa fillers used to streamline and support the engine mounting. If the desiga calls for radial mounting then one must first consider whether beams are at all possible. A tank or structure of some importance may prevent a full set of beam mounts being inserted through the existing bulkhead. In such cases, use metal angle bearers, once a popular item in every model shop and nowadays a rather neglected feature.

Every A.P.S. design can be converted from beam to radial in this way, but designs that specifically call for one or other of Beam or Radial mounting are duly captioned, for example **PET 453 Fokker D.R.1**, which is "Radial" or **U.488 Jumping Jiminy**, which is "Beam." This does not necessarily restrict the design to that particular mounting, for modification is still possible with a minimum of ingenuity. Likewise, engines with rear disc (R.D.) induction, such as the E.D. 2.46 c.c. "Racer" call for additional clearance immediately behind the engine to allow access to the carburettor.

Propeller Selection

Against each engine there are three sizes of propeller. These are basic dimensions derived from practice in the field, contest flying, sports flying and designer's advice. Use the size given if you have any doubt on your own selection—and remember—large airframes (72 in. for 2.5 c.c.) require an extra inch in prop diameter, keeping advised pitch, and smaller airframes (48 in. for 2.5 c.c.) can be cut by as much as half an inch on diameter.

Gear the pitch of your prop against the rate of climb and engine r.p.m. (4 in. pitch for a fast climbing contest model and 12,000-13,000 r.p.m. engine) or step up the pitch for slower sports models (6 in. pitch for 7,000-9,000 r.p.m.). A good tip is to fit the prop back to front for first test flights when full thrust is not advisable.

Above all: mount your engine firmly, treat it with the respect it deserves and give it a fair chance—you can always rely on the A.P.S. design to make full use of the power it develops.

Starting a Model Diesel Engine

MOUNT THE ENGINE firmly and fit the propeller on the shaft by slipping it in position, turning the engine until the piston can be moved no further against compression, and tightening the prop nut with the propeller pointing at "twenty-to-two" as on a clock. Left handed people should treat this as "ten-to-four". Now swing the prop over in an anti-clockwise direction. The engine is dry, stiff and there is little "feel" about it. Fill the tank, open the needle valve by unscrewing it the required number of turns from fully closed, and choke the engine. This means placing the spare forefinger over the carburettor, and rotating the prop one turn. Engines with the carb. in front will indicate that fuel is entering the engine as you observe the flow through the tubing. Should there be a conglomeration of bubbles in the pipeline, then we must choke again to get the line full of fuel. Now try another swing at the prop. Don't be afraid of it, it certainly will not fire, as all you are doing is filling the crankcase with a mixture, and creating a fine mist of fuel throughout the moving parts. This little amount of lubrication will change the engine from a lifeless object to something with the urge to "go", and as you contniue to swing the prop, you'll find there is an active "plop" as compression drives the prop over.

Choke again, and repeat the swing at the prop only this time putting a real effort into it. Start by putting your forefinger against the topmost blade, about halfway along and push the prop over compression with a smart swing of both wrist and arm. At the same time take a firm grip on the compression screw at the cylinder head, and hold this set at the position indicated in the instructions. After a few sharp flicks of the prop. there should be some reaction in the form of a mild firing stroke—or if you are extraordinarily lucky, the engine may burst into full song straightaway.

If the engine refuses to show any inclination to work, look through the exhaust ports and see if the top of the piston is at all wet with fuel. If it is, then use the compression screw as though you have your hand on the pulse of the engine, treat it as you would a human, and raise the compression by screwing in the "vernier" as one maker calls the tommy bar or comp. screw. But do not be forceful for over-compression is dangerous, and is signified by a hydraulic lock when it is impossible to rotate the propeller. This also indicates that our choking has been too generous, the cure being to set the piston at the bottom of its stroke, and to blow hard through the exhausts to clear the excess mixture, and to release compression.

Should the piston be completely dry on inspection through the ports, then the choking has not been sufficient, or the needle valve setting is not open enough It is better to err on the rich or "open" side for first starts — providing you release the comp. screw when compression seems too great.

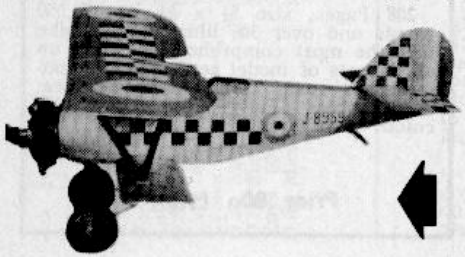
After a while. you get into the swing of things, and soon you are rewarded with a start. Once the engine has begun to run, leave it as set for a few seconds and take stock by watching the exhaust and listening to the note. Smoky, rich exhaust is cured by screwing in the needle valve, and a staccato misfire indicates the need for more compression. Most engines start for the first time in this condition, and will not harm themselves if allowed to run rich. Should the note sound laboured, gradually dying aff in r.p.m., then the engine is over-compressed to some degree, and the comp. screw must be slackened off.

Free Flight Scale

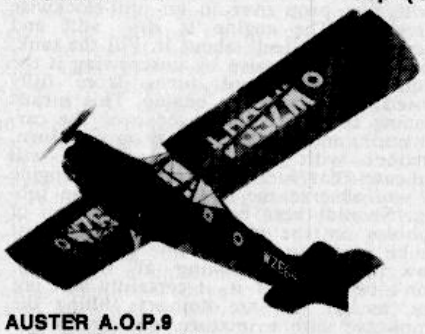
AIRSPEED COURIER
By D. Rattle
A lightweight scale model of the little known between the wars light 'plane. 34 in. wingspan. For the original Cox PeeWee.
FSP/1016 B. ** 20p (4/-)

ALBATROS D.V.
By J. D. McHard
Finest of all A.P.S. single-engined scale model plans, this elegant $\frac{1}{8}$th scale model of the famous 1917-1918 fighter is extremely accurate and one of the most attractive models in the air. Sheeted fuselage and full colour detail. Span 44 in.
FSP/646 D, E. * 50p (10/-)**

A.W. FK 8 (Big Ack)
By G. F. Elsegood
A little known W.W.1 reconnaissance type, modelled at one twelfth scale to give a realistic stable flyer of 45½ in. wingspan.
FSP/960 C. *.* 40p (8/-)



ARSENAL DELANNE
By N. P. Harrison
Profile free flight replica of the little known tandem wing French fighter. 23 in. wingspan for .020 (.3 c.c. motors).
FSP/1024 B * 20p (4/-)



AUSTER A.O.P.9
By R. G. Moulton
36in. span version with all sheet fuselage and tail assembly, simple wings. Flies like the real thing, aerobatics or sport flying.
FSP/580 B or C * 30p (6/-)

AVRO AVIAN SPORTS
By R. Booth
Accurate model of a popular light aircraft of the early '30's and one of the simpler biplane prototypes. Span 35 in.
FSP/468 C, D. ** 50p (10/-)

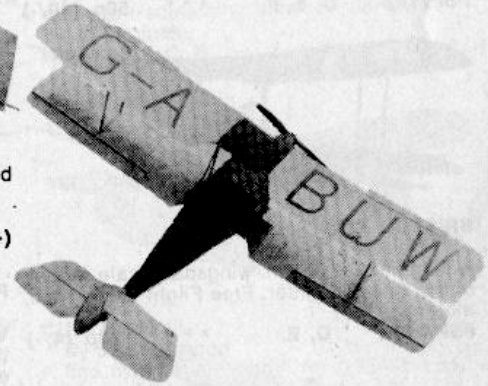
A.W. SISKIN 3a
By P. E. Norman
A superb scale free-flight model of advanced design for 1.5—2.5 c.c. engines with authentic flight characteristics. Span 36 in.
MA/314 F, G. * (Two sheets) 50p (10/-)**

AVRO 504K
By R. Booth
This one-twelfth flying scale model is one of the finest designs yet produced. Winner of many contests, the realism of this machine is remarkable. Span 36 in.
FSP/343 C, D. ** 50p (10/-)

B.E.2e
By K. McDonough
Lightweight and with large wing area, this 1/12th scale 40¾ in. model of the W.W.1 reconnaissance aircraft flies slowly and is extraordinarily stable. Copious detail on the plan including the gun and camera!
FSP/721 C, D. ** 50p (10/-)

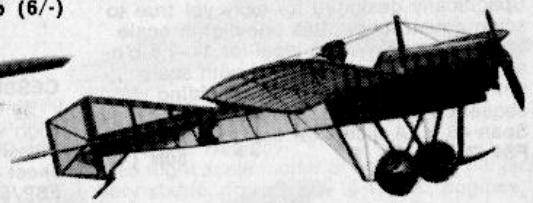
B.A.C. SUPER DRONE
By E. A. Fonteneau
A scale flying model of a pre-war powered glider with steady flying qualities. For engines of 0.5-1 c.c. Span 54 in.
MA/193 C, D, E. * 30p (6/-)

B.A. SWALLOW
By J. W. Coasby
Authentic 50 in. span model of a popular low-wing lightplane. Pendulum rudder, simple construction and detachable wings.
FSP/560 B, C or D. ** 30p (6/-)



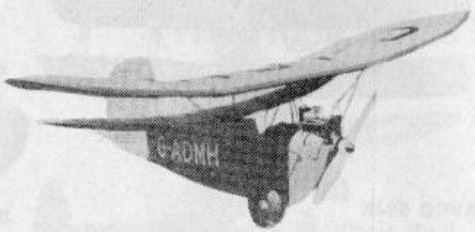
BLACKBURN B2
By D. P. Fidling
Free flight scale model of this unusual trainer. 37 in. span model uses 1—1.5 c.c. engines. Could be converted to single channel R/C.
FSP/1028 E, F. ** 40p (8/-)

BELLANCA SKYROCKET
By H. G. Bowers
A 55 in. span scale model of this high wing old timer with a large radial cowl. Knock off wings, suitable for radio control conversion. For 1.5 c.c. engines.
MA/396 E, F. ** 35p (7/-)



BLACKBURN 1912 MONOPLANE
By A. M. Finucane
Perfect $\frac{1}{8}$th scale, 48 in. span model of a pioneer monoplane, this "old-timer" will fly as well as any of its modern counterparts.
FSP/567 C or D. * 50p (10/-)**

BRISTOL BULLDOG
By P. J. Allnutt
From Canada comes this 1/12th scale model of the famous "Bulldog." The machine uses some spruce and ply in its rib for rib, stringer for stringer construction. Full colouring and marking details given on plan. Winner of many Canadian scale competitions. Span 33¾ in. Engines 1—1.5 c.c.
FSP/762 D, E, F. * * * 50p (10/-)



CARDEN-BAYNES "FLYING FLEA"
By F. G. Longbon
A superb model of this challenging subject in exact scale, performs just like the real plane, with its tandem wings and slow flight. 44 in. span, makes it one-sixth scale.
FSP/853 D, E. * * 50p (10/-)

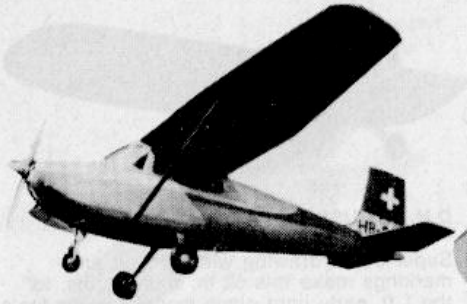
BRISTOL F2B
By H. F. Palmer
A magnificent 39½ in. wingspan scale model of the Bristol Fighter. Free Flight using 1 c.c. motors.
FSP/1021 D, E. * * * 20p (4/-)

POU du CIEL
By R. Stamm
Very stable 31 in. span, semi scale version of the 'Flying Flea' for free-flight, using a .8cc engine.
FSP/1040 C.D. * * 20p. (4/-)

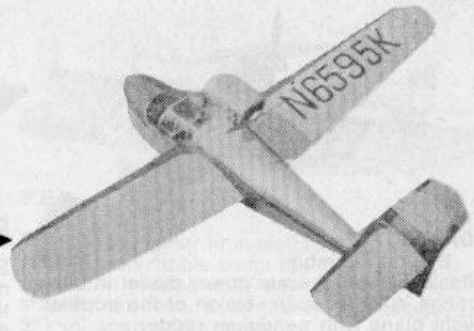
BRISTOL MONOPLANE SCOUT
By B. Barton
Specifically designed for easy yet true to scale construction, this one-eighth scale fighter from W.W.1. is ideal for 1—1.5 c.c. engines. Very easy to build with scale stringers and rib positions. Building sequence and colour scheme given on plan. Span 46 in. A nice slow flier for calm days.
FSP/759 D, E. * * 50p (10/-)

CESSNA BIRD DOG
By E. Fearnley
High wing cabin model of 36 in. span. Pleasing lines are developed from a simple sheet balsa fuselage construction.
FSP/568 B or C * 30p (6/-)

BUCKER JUNGMEISTER
By W. Lister and W. Newman
An easy to build 26¾ in. span free flight scale model for .5—.8 c.c. engines. This is the In-Line engined version of the aircraft, considered to be one of the finest aerobatic mounts available.
FSP/807 C. * * 35p (7/-)



CESSNA 172
By W. P. Holland
This 72 in. 1/6th scale model of the popular American lightplane is the answer to those who want an easy to build large model for radio conversion. Knock-off wings and shock absorbing trike u/c.
FSP/668 G, H. * * 50p (10/-)



COLONIAL SKIMMER
By E. Fearnley
Designed by an acknowledged expert, this model will appeal to flying scale enthusiasts who want something different. For 0.75—1 c.c. engines.
MA/250 C, D. * * * 35p (7/-)

CESSNA 172E
By F. Arigaya
A 46½ in. span single channel R/C flying scale model for 1.5—2.5 c.c. e..gines. Rudder only or with flaps, ailerons, elevator, rudder, throttle and steerable nose wheel which can be flown free flight. A top seller.
FSR/RC 902 E, F, G. * * * 60p (12/-)

CURTISS OWL
By J. Bridgwood
A fine flying scale model for 0.75—1 c.c. engines. 41 in. span.
MA/159 C, D, E. * * 35p (7/-)

CHILTON D.W.I
By J. M. Greenland
A sturdy replica of the interesting low-wing monoplane, to 1½ in.—1 ft. scale. Span 36 in.
FSP/340 B, C, D. * * 20p (4/-)

CURTISS-WRIGHT JUNIOR
By J. Headley
Free flight scale model of an unusual subject. Very stable, powered by .5—1 c.c. engines. 48 in. span.
FSP/1043 B, C, D. * * 40p (8/-)

CHRISLEA SUPER ACE
By E. J. Riding
This tricycle undercart, high-wing design lends itself admirably to flying. Simple construction. Span 54 in.
FSP/331 C, D. * * 50p (10/-)

DART KITTEN
By John Lamble
Easiest to build scale power model in our range, a 32 in. span version of the popular light plane with pendulum rudder.
FSP/497 D, E. * 30p (6/-)

D.H. 80 PUSS MOTH
By F. G. Longbon
Super detail drawing with cockpit and markings make this 52 in. span 1½ ins. to the 1 ft. early light plane model a scale fan's delight. Knock-off wings, etc.
FSP/891 F. * 50p (10/-)**

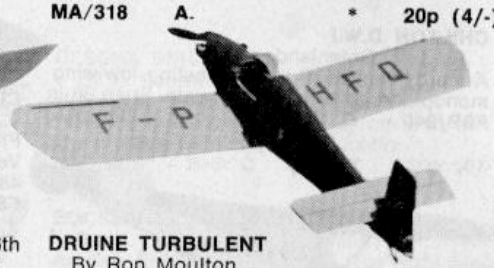
DE-HAVILLAND D.H. C.2 BEAVER
By A. Moore
A beautiful scale version of an ideal subject for model flying. Slabsided, with but one wing strut and cantilever undercarriage. Span 60 in
FSP/388 E, F, G. * 50p (10/-)

TIGER MOTH
By A/M Staff
A magnificent 44 in. span model of one of the best known aircraft ever. Flies extremely well with magnificent air of realism, ⅛th scale.
FSP/555 D, E or F ** 50p (10/-)

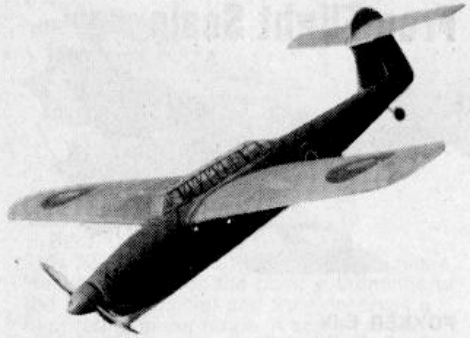
D.H. C.1 CHIPMUNK
By J. M. Greenland
Masterpiece of low-wing scale model design, and most realistic in flight. Span 51½ in.
FSP/290 D, E. * 50p (10/-)**

DRUINE TURBULENT
By J. D. McHard
A free-flight power-driven model of the Duke of Edinburgh's entry in the King's Cup air race.
MA/318 A. * 20p (4/-)

D.H.60 GIPSY MOTH
By J. Bertola
Superb model, drawn on two sheets. 1/6th scale version of Sir Francis Chichester's Mme. Elijah. May be flown free flight with 3.5 c.c. engines, single channel with 5 c.c. or multi channel R/C using 8—10 c.c. engines. 60 in. span.
RC/135 J, K, L, M, N. * 90p (18/-)**



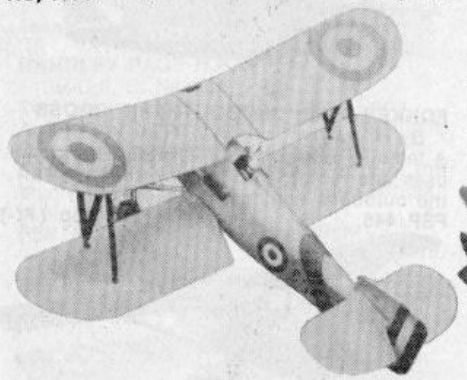
DRUINE TURBULENT
By Ron Moulton
A French home-built lightplane in miniature. Most realistic in flight, easy to build and foolproof to fly. Wing slots aid stability. Wing span 32 in.
FSP/613 B, C. ** 20p (4/-)



BARRACUDA
By P. McAlroy
A 32in. span semi-scale model of the famous Fleet Air Arm Torpedo Dive Bomber. Suitable as either a free flight or a Single Channel radio model for .75 c.c. (.049 cu. ins.) motors.
RC/1095 C. ** 50p (10/-)

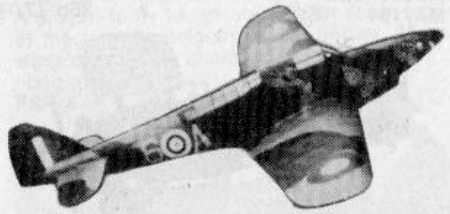
F.E.8
By V. King
The '14-'18 fighter in miniature, pusher engine, detachable boom tail supports, pendulum rudder, and high degree of stability are features of the most unusual . 39½ in. span scale model.
FSP/495 C. ** 50p (10/-)

FIESELER STORCH
By P. L. Whittaker
German observation plane in true scale with characteristic slats, flaps and stilty u/c. Stringer fuselage construction, detachable wing halves. Span 46½ in. Full single channel R/C details.
FSP/669 C, D. ** 45p (9/-)



FAIREY FLYCATCHER
By S. B. Perry
The old biplane charm captured by this 29 in. fleet fighter with pendulum rudder control. A model for the vintage enthusiast.
FSP/586 C or D. * 50p (10/-)**

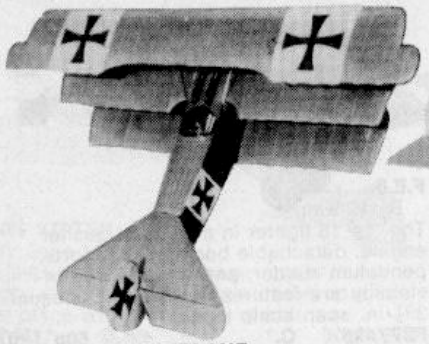
FOCKE WULF 190
By H. F. Palmer
A 28 in. wingspan free flight scale model, with knock off wings. Not a raw beginner's model but ideal for modellers with a little experience.
FSP/935 E. * 40p (8/-)**



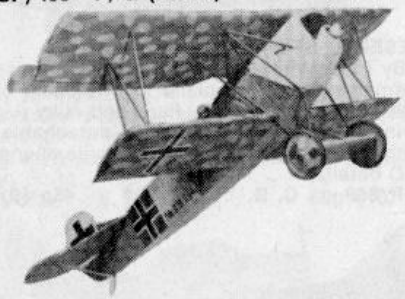
FAIRY FULMAR
By M. F. Hawkins
Free-flight scale model for the Cox .010. Span 30 in.
MA/363 B. ** 25p (5/-)

FOCKE WULF STOSSER
By B. Barton
Pre-war German trainer has novel insignia, makes a fine, stable flyer with pleasing lines, stringered fuselage, detachable wing halves. Span 42 in.
FSP/617 C, D. ** 30p (6/-)

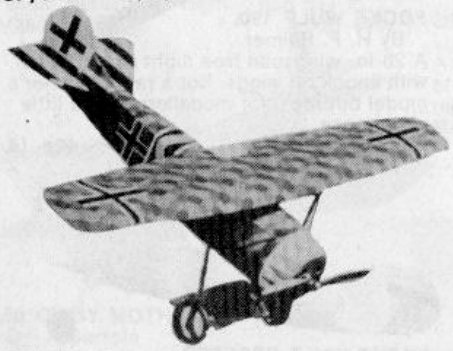
Free Flight Scale



FOKKER DR.1 TRIPLANE
By P. E. Norman
World War I favourite in attractive free-flight form. 40½ in. span, with pendulum control and a surprisingly flat glide. To ⅛ in. scale.
FSP/453 F, G (radial) * (50p (10/-)**



FOKKER DVII
By J. D. McHard
29 in .scale model for R/C or free flight, .5—1 c.c., very popular design. See also S.E. 5A.
FSP/916 B, C, D. * 25p (5/-)**



FOKKER D.8
By M. F. Hawkins
This model put up an impressive performance at the Nationals. Despite its small size it is quite happy in breezy conditions. Span 27 in. Suitable for 0.5 c.c. engines.
MA/353 B, C. ** 35p (7/-)

FOKKER E.IV
By C. F. Edwards
Accurate 1 in.—1 ft. model of the famous Eindecker. Simple construction with excellent flying characteristics. Span 36 in.
FSP/551 Bor C. ** 30p (6/-)

FOKKER FVIIb 3M SOUTHERN CROSS
By H. Parrish
A famous between-wars aircraft. The model uses one motor, with dummy airscrews on the outboard engines. Span 40 in.
FSP/445 B. ** 35p (7/-)

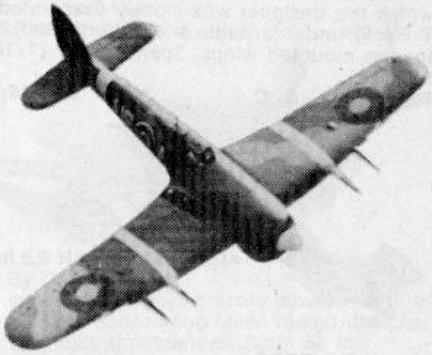
FOSTER WICKNER WICKO
By E. Fearnley
A really attractive scale model of a 'plane designed in 1936 but which still has modern lines. An ideal "sport" flier for 1—1.5 c.c. motors. Span 47½ in.
MA/194 E, F. * 35p (7/-)

GLOSTER GAMECOCK II
By P. E. Norman
A 36 in. 1/10th scale version of the famous 1926 fighter arranged for free-flight aerobatics by pendulum control. Tough structure and crash-proof design.
FSP/410 F, G. (radial) * 50p (10/-)**

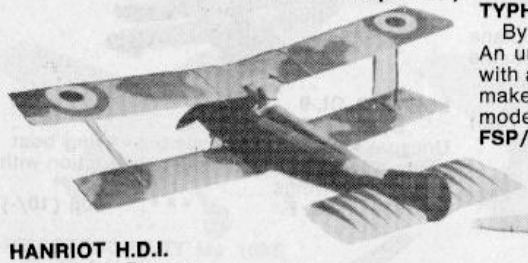
GLOSTER GLADIATOR
By J. D. McHard
This 32 in. model is to 1/12th scale, has a wealth of detail on the plan, is authentic to the last rib position and truly deserves a high rating in our range. A scale contest winner that flies just like the real thing.
FSP/719 C, D. ** 40p (8/-)

HAWKER HURRICANE
By R. Meixell
A detailed 40 in. span true scale replica of the famous W.W.II fighter for .8—1.5 c.c. engine. Detailed cockpit and markings are for "The Last of the Many"—one piece model—1/12th scale.
FSP/862 C, D. * 50p (10/-)**

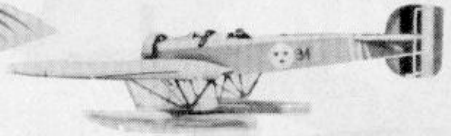
HANDLEY PAGE H.P.42
By Cpl. S. Newton
The fabulous "Hannibal" London-Paris Airliner for either control line or free-flight, 2 or 4 engines. Very detailed drawing for this 65 in. model, makes light work of the involved structure. Recommended for all scale enthusiasts.
FSP/615 2x C, D. (Free Flight) * 50p (10/-)**



TYPHOON 1B
By P. E. Norman
An unusual type of construction, combined with automatic, pendulum operated elevators, makes this model attractive to the advanced modeller. Span 32 in.
FSP/372 F. * 30p (6/-)**



HANRIOT H.D.I.
By B. J. Rogers
A simple to fly tough one-twelfth scale model of the famous Belgian W.W.I. fighter, 28-inch wing span. Ideal choice for a scale "beginner."
FSP/837 B. ** 35p (7/-)



HEINKEL He 5 (S5) HANSA
By AEROMODELLER Staff
Unique flying scale subject of a Swedish Air Force floatplane with very simple construction. Can also be flown over grass for smooth landings on its large floats. Wing span 38 in.
FSP/608 C, D. ** 30p (6/-)

HAWKER HIND TRAINER
By D. Marsh
The dual control version of one of the immortal Hart variants. This accurate 38 in. replica is one of the most realistic scale models ever.
FSP/476 C. * 50p (10/-)**

HONEY BEE
By W. E. Mooney
Perfect scale model of full-size aircraft with which the designer was closely associated. Tricycle undercarriage and butterfly tail, tongue mounted wings. Span 33½ in. (1/10 full size).
FSP/505 B, C. ** 30p (6/-)

JODEL D.9 BEBE
By Hoh Fang-Chiun
Neat replica of the famous French light plane with pendulum or "fixed" rudder. Detachable 38½ in. wing, easy structure and a super flyer.
FSP/591 B, C. ** 30p (6/-)

JUNKERS Ju 87 STUKA
By AEROMODELLER Staff
Famous German dive bomber in true scale for free flight or control line. An outstanding design of attractive appearance, using .5 c.c. for free-flight and 2.5 c.c. in C/L version; 34 in. wingspan.
FSP/CL/675 B or G. ** 30p (6/-)

KIRBY MOTOR TUTOR
By E. Fearnley
A 63 in. span flying scale model of an unusual light plane. Suitable for 1 c.c. engines, the Tutor can easily be adapted for radio control.
MA/210 E. ** 40p (8/-)

KYUSHU SHIRAGIKU
By M. F. Hawkins
37 in. span, mid wing all sheet covered Japanese W.W.2. observation aircraft, has knock off wings and removable cowl. 0.75 c.c. engines.
MA/383 C, D. ** 30p (6/-)

LOENING OL-9
By C. F. Stuby
Unusual 47 in. 1/12th scale bipe flying boat of pre-war U.S. Navy, simple construction with detachable wings.
WP/650 E, F. * 50p (10/-)**

LUSCOMBE 8A "SKY PAL"
By F. Lees
A contest winner both for appearance and quality flying. Has many "knock-off" features and can be dismantled for easy transport. Full booklet of gen with each plan of this outstanding 63 in. scale model.
FSP/503 E, F. ** 50p (10/-)

LUTON MINOR (Prototype)
By Walter E. Mooney
A 22¾ in. span replica of a famous light plane for the diminutive engines. Flies well with Davies Charlton Bambi and Cox Pee Wee engines.
FSP/697 A, B. ** 25p (5/-)

LUTON MINOR
By E. Fearnley
A large, light scale model of a popular ultra-light aircraft, and one of the easiest scale models in the A.P.S. Span 42½ in.
FSP/534 C, D. * 30p (6/-)

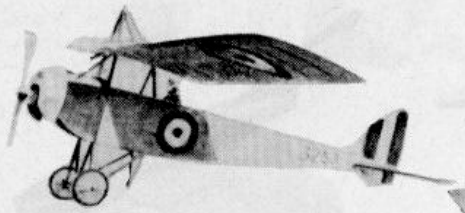
MESSERSCHMITT Me 109E
By S. Cole
Scale model of this famous World War II German fighter, featuring sheet covered fuselage and knock-off wings. Suitable for 1.5 c.c. engine, drawn on two sheets. 40 in. span.
MA/355 F. ** 40p (8/-)

MIG 15
By P. E. Norman
Magnificent ducted fan design by Britain's leading exponent of this exciting method of propulsion. Full details of fan unit, alternative fibre glass or planked method of construction. Span 34½ in.
FSP/603 G (radial only) * 30p (6/-)**

MILES HAWK SPEED SIX
By D. P. Golding
A successful low-wing scale power model of one of the outstanding Miles racing designs. Scale flight appearances. Span 52 in.
FSP/434 F, G. * 50p (10/-)**

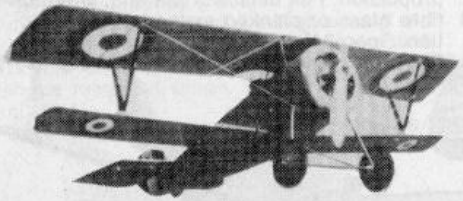
MILES SPARROWHAWK
By D. M. Collin
36 in. span version of this attractive light aircraft. Ideal proportions of the full-size makes this robust little model extremely stable, particularly for a low winged design. Features detachable wings and pendulum controlled rudder, to suit .8 c.c.—1 c.c. engines.
FSP/1089 C, D, E. ** 50p (10/-)

MESSERSCHMITT Me 109 F
By S. Cole
A 34 in. wingspan free flight scale model of the famous German fighter. Features plug in wings. For .5—.8 c.c. motors.
FSP/1017 B, C. ** 20p (4/-)



MORANE PARASOL
By D. Rattle
R/C or F/F of Warneford VC's Zeppelin buster 34 in. for .8 c.c.
FSP/924 B, C. ** 20p (4/-)

PIPER COMANCHE
By P. M. H. Lewis
A 1 in. to 1 ft. scale free-flight model of a popular light plane. Designed for 0.75—1 c.c. motors. Span 36 in.
MA/317 C, D, E ** 30p (6/-)



NIEUPORT 17
By D. M. Collins
A one twelfth scale model of the well known W.W.1 allied fighter aircraft. Features pendulum control and is suitable for light-weight R/C. 27½ in. wingspan.
FSP/951 B, C. * 35p (7/-)**

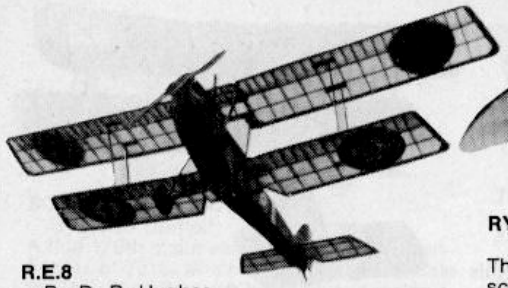
PIPER SUPER CRUISER
By D. Garrett
A 1 inch to 1 ft. scale, 35 in. span model of a famous American lightplane. Intricate, though not complicated rib for rib structure as something for a "builder" to get his teeth into. For the popular diesels and glow motors of .3—.8 c.c. (.020—.049 cu. in.).
FSP/832 B, C. ** 35p (7/-)

BISHOP'S NIEUPORT 17c
By L. C. Bagley
One-eighth scale model of the famous French fighter used by R.F.C., etc. For experienced builders, but pendulum rudder makes flying easy. Span 41½ in.
FSP/285 D, E. * 50p (10/-)**

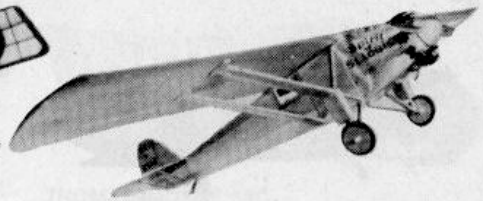
PRESTWICK PIONEER II
By R. Burns
A 52 in. version of this ideal subject. Robust and very practical design.
FSP/425 F, G. ** 50p (10/-)

PFALZ DIII
By F. Palmer
Superb details in this German W.W.I. fighter design by Canadian modeller from Calgary. Is a beautiful flier, realistic in every way, yet practical in construction. Ideal project for those who already have other W.W.I. free flight scale models. Span 46½ in. for 1.5 c.c. or low power 2.5 c.c.
FSP/775 F, G. * 50p (10/-)**

P.Z.L. P-24 FIGHTER
By D. F. Bryant
An inch to the foot version of the gull wing fighter, built for fast flying, with knock-off parts and pendulum elevators. 35 in. span, this model is extremely robust.
FSP/487 E, F. ** 50p (10/-)

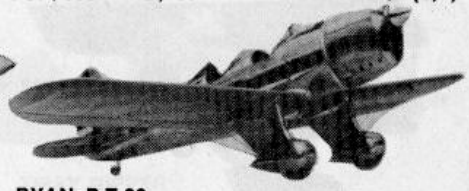


R.E.8
By D. R. Hughes
Span 43 in., this is a 1/12th scale model of the famous W.W.I "Harry Tate" two-seat observation and reconnaissance aircraft.
FSP/418 C, D, E. ** 30p (6/-)



RYAN NYP
By R. G. Moulton
The famous "Spirit of St. Louis" in perfect scale with rib for rib or alternative simple wing structure; 34 in. span, knock-off wing on what is virtually a square box fuselage.
FSP/663 B, C. ** 30p (6/-)

REPUBLIC SEA-BEE
By H. J. Towner
Unusual, yet a good flyer, this model will appeal to the enthusiast who enjoys building as much as flying. Span 53½ in.
FSP/319 D, E, F. * 50p (10/-)**



RYAN P.T.20
By G. Cannon
One of America's most popular Service aircraft modelled to 1½ in.—1 ft. scale, 45 in. span, this low-wing design is really easy to handle.
FSP/554 C or D. * 35p (7/-)**

RUMPLER TAUBE
By P. M. H. Lewis
An interesting flying scale model of a'14-'18 reconnaissance plane for 0.5-0.9 c.c. engines. span 30 in.
MA/168 C, D. ** 30p (6/-)

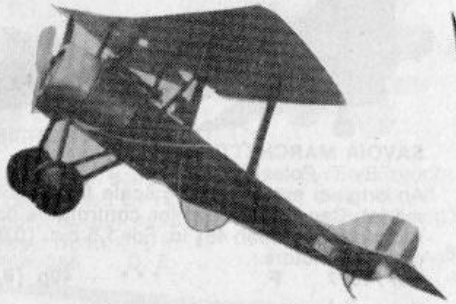
SAVOIA MARCHETTI SM 81
By T. Potesta
An original and appealing scale free flight model. Can be adapted for control line or radio control. Span 48½ in. For 1.5 c.c. (0.09 cu. ins.) motors.
FSP/1077 F. * 40p (8/-)**

RUMPLER C.V.
By D. Rattle
Highly detailed scale biplane for .75—1 c.c. engines. Knock off wings and dummy engine details.
MA/402 D, E. ** 40p (8/-)

S.E.5a
By J. D. McHard
Mick Mannock's famous fighter in full detail on specially-printed plan with copious instructions, ten photo illustrations. Fine performer with tough construction. Span 27 in. Also suitable for R/C.
FSP/682 B, C. ** 25p (5/-)

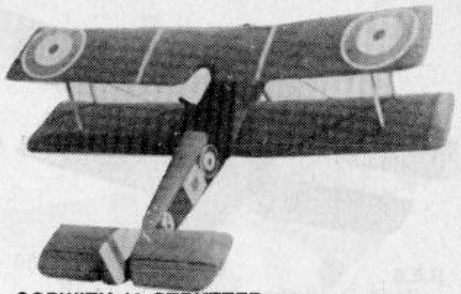
SHORT SEAMEW
By E. Fearnley
A very easy to construct scale version of this anti submarine aircraft. 36½ in. span for .5 c.c. engines.
MA/218 B, C. * 35p (7/-)

SOPWITH CAMEL
By F. C. Saunders
The Camel needs no introduction to flying enthusiasts, and this 25 oz., 42 in. model captures the atmosphere of this historic fighter. 1/8th. scale.
FSP/441 D,E. * 50p (10/-)**



SOPWITH PUP
By G. E. Fisher
One of the best-known W.W.1 scouts. The 40½ in. model has an excellent and extremely stable performance. To 1/8th scale.
FSP/305 D, E. ** 50p (10/-)

SOPWITH PUP
By K. McDonough
A 1/12th scale model of a famous W.W.1 machine. Full colouring details given on plan. Span 26½ in. Engines 0.5—0.8 c.c. Designed by a real enthusiast for scale, who is a stickler for accuracy. One of the most popular free flight scale designs in A.P.S.
FSP/750 B, C. ** 40p (8/-)

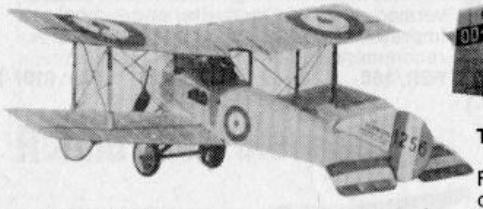


SOPWITH 1½ STRUTTER
By I. Rae
One-twelfth scale, knock-off wing version of this famous W.W.I. fighter. Span 33½ ins., for .5—1 c.c. engines.
FSP/907 ** 40p (8/-)

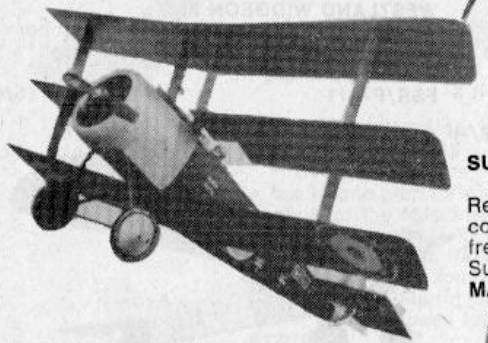
SOPWITH SCHNEIDER
By J. Simmance
A one eighth scale model of the floatplane version of the Sopwith Tabloid. For 1—1.5 c.c. motors. 38¼ in. wingspan.
FSP/1019 D, E. * 20p (4/-)**

SOPWITH SNIPE
By John Simmance
A ⅛-scale free-flight model, featuring automatic pendulum stabilising, of a famous World War 1 fighter aircraft, drawn on two large sheets. Span 46½ in. Suitable for 1.5—2.5 c.c. motors. Winner of the British National Championships.
MA/339 F, G. * 50p (10/-)**

SOPWITH SWALLOW
By John Darnell
A fine 1/8th scale version of a little known fighter of 1918, which forms a perfect mate for the other Sopwith types in our range. 41 in. span and with the characteristics of a sport model, it is fine for the beginner scale enthusiast.
FSP/625 E, F ** 50p (10/-)

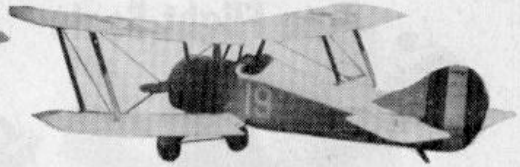


SOPWITH TABLOID
By K. McDonough
The diminutive Tabloid makes an ideal scale subject and perfect 1/12th scale little Free Flighter spanning 25½ inches for .3 to .8 c.c. engines.
FSP/810 B, C. ** 50p (10/-)



SOPWITH TRIPLANE
By V. King
35 in. scale model of a famous W.W.I fighter for builders with a little experience. Features pendulum rudder and complete accuracy. 1/9th scale.
FSP/545 C, D. ** 50p (10/-)

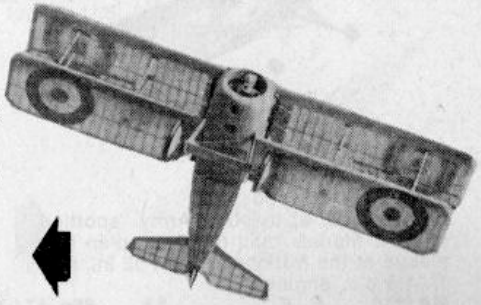
S.P.A.D. S-7CI SCOUT
By L. C. Bagley
A perfect scale version of the attractive 1914-18 fighter. Span 38 in. 1/8th scale.
FSP/373 D, E. * 50p (10/-)**



THOMAS MORSE 54C
By J. G. Watkins
A scale free flight model of the American designed World War 1 fighter. A nice stable flier and looks attractive in the air. For .5-.8 c.c. (.036-.049) cu. ins. motors.
FSP/1102 B, C. ** 50p (10/-)

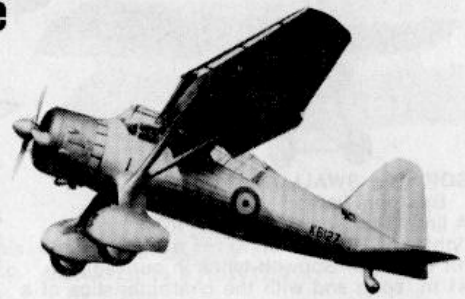
TIPSY NIPPER
By C. C. Badger
Free-flight; but capable of C/L or even R/C conversions, this simplified version of the Tipsy prototype has perfect modelling proportions. Span 37 in., detachable wing halves.
FSP/731 C, D. ** 30p (6/-)

SUPERMARINE SPITFIRE VB
By S. Cole
Realistic flight performance plus rugged construction make this a really practical free-flight replica of the immortal fighter. Suitable for 0.5 c.c. engines. Span 31 ins.
MA/376 B, C. ** 30p (6/-)

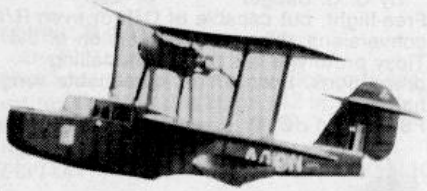


Free Flight Scale

SPITFIRE LF XIV
By P. Whittaker
Near scale version of the famous low altitude fighter with robust construction, knock-off wings, and engine off-set, cleverly incorporated in construction. Wing span 26¾ in. Also suitable single channel R/C.
FSP/607 C, D. ** 30p (6/-)



WESTLAND LYSANDER
A completely redesigned and modernised version of an old favourite, and a most impressive model. Span 60 in. Not recommended for R/C.
FSP/160 G. ** 50p (10/-)



V.A. WALRUS
By AEROMODELLER Staff
38 in. span perfect scale model of famous war-time amphibious pusher. Steel hull construction and detachable wings make it a tough design for over land or water flying.
FSP/661 C, D. ** 40p (8/-)

WESTLAND WIDGEON III
A complete revision of the popular rubber driven design by Eddie Riding for small motors. Span 36½ in.
FSR/P/211 ** 25p (5/-)

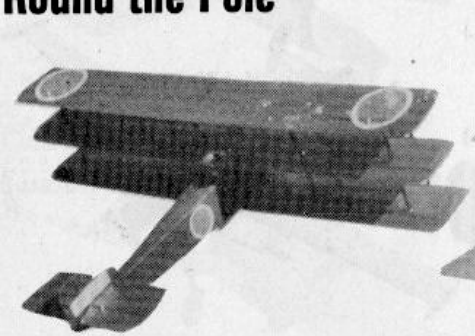
VULTEE VIGILANT
By J. Bridgwood
Scale model of the U.S. Army "spotting" aircraft. Models built from this plan have placed at the Nationals. Span 52 in., for 1—1.5 c.c. engines.
MA/136 E, F. ** 35p (7/-)

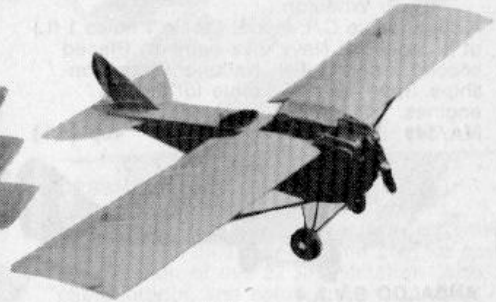
WORKMASTER
By R. G. Moulton
Beginner's semi-scale tough radio control model for simple single channel systems. Airframe is designed to give the greatest possible strength and still provide an easy to build model of light weight. Span 47¾ ins. for 1—1.5 c.c. engines.
RC/821 D, E, F. ** 35p (7/-)

WACO YQC-6
By R. Meixell
Superb one-ninth scale model of the 1936 Waco Custom Biplane. Model features padded seats, cloth upholstery, veneer trim, and scale structure. The most detailed F/F scale plans yet with all interior detail. For advanced builders only, 45 in. span.
FSP/844 E, F. ** 75p (15/-)**

ZAUNKOENIG
By J. Greenland
39 in. version of the German experimental parasol lightplane, fully slatted, complete with instructions.
FSP/392 B, C, D. ** 35p (7/-)

Round the Pole



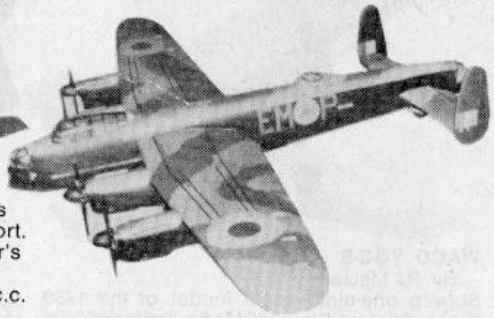


MITSUBISHI TYPE 10
WRIGHT MARTIN M5
By M. F. Hawkins
A two in one plan for round-the-pole scale models, of the Mitsubishi type 10 carrier borne fighter of 17½ in. wingspan bomber, and torpedo attack triplane of the Japanese Navy and a 22 in. span model of the little known Wright Martin M-5 WW.I. monoplane which was produced for the U.S. Army.
RTP/942 B, C. ** 35p (7/-)

D.H. 88 COMET
By P. Bullivant
Neat little scale model for round-the-pole flying on two electric motors. The model flies on up to 40 ft. lines. Plan gives full detail of motors installation. For 2 FT16D or 2 FT26D electric motors.
RTP/1086 ** 20p (4/-)

Control Line Scale

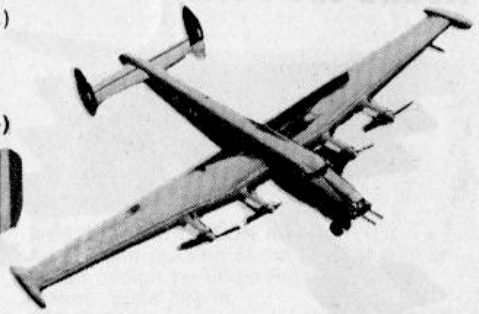
AERO COMMANDER 680 SUPER
By J. D. McHard
A 53½ in. span model of America's famous high wing twin engined executive transport. Plan gives markings for Pres. Eisenhower's own aircraft. Planked fuselage structure, part sheeted wing. For two 1.5 c.c. to 2.5 c.c. engines, side mounted. Tricycle u/c.
CL/733 E, F, G. * * * 50p (10/-)



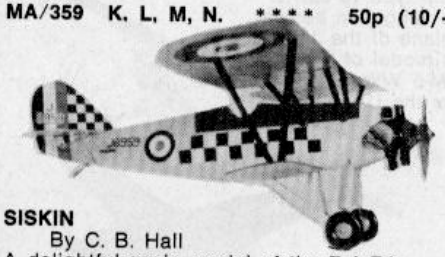
AVRO LANCASTER
By H. J. Towner
This 52 in. span scale control line model of the famous Avro Lancaster is aimed at the ardent scale enthusiast. Very detailed plan giving colour and cockpit details. For .09 cu. in. (1.49 c.c.)
CL/1081 4 engines F. * * * 75p (15/-)

AICHI 99 "VAL"
By P. Wheldon
A super scale C/L model (scale 1 in. to 1 ft.) of a Japanese Navy dive bomber. Placed second in the British National Championships. Span 39 in. Suitable for 2.5 c.c. engines.
MA/349 G, H, J. * * * 40p (8/-)

ANSALDO S.V.A.4
By C. Milani
A magnificent model of the famous Italian World War 1 fighter by the foremost C/L scale model designer in the country. For experienced modellers only. Suitable for 6—11 c.c. motors. Span 45 in. drawn on two sheets.
MA/359 K, L, M, N. * * * * 50p (10/-)



SHACKLETON MR3
By J. M. Bodey
A 61 in. span multi engine model of the famous tricycle undercarriage version of the "Shack." Simplified structure. For any engine combination total of 5—6 c.c. A sure crowd pleaser and a good flier, even after one or two engines have cut out.
CL/746 E, F, G. * * * 50p (10/-)



SISKIN
By C. B. Hall
A delightful scale model of the R.A.F.'s first all-metal fighter. Robust construction allows model to take many hard knocks. Simple to build and easy to fly, this model will give hours of pleasure. Span 22⅝ in. for engines 1—1.5 c.c.
CL/742 D, E, or F. * * 30p (6/-)

BELL P.39 AIRACOBRA
By B. Reggiano
Scale control liner of this mid-engined W.W.2 fighter, has also placed high in Air Races. Span 27 in. for 2.5 c.c. engines.
MA/251 G. * * 35p (7/-)

BOEING F4B-4
By W. I. Barrett
A C/L scale model of a colourful American biplane fighter of the '30s. Span 20 in. Suitable for 1—1.5 c.c. engines.
MA/290 E, F. * * 30p (6/-)

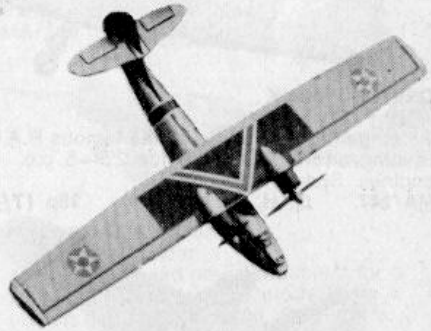
BUCKER JUNGMEISTER
By C. Hall
Control line scale model of a famous aerobatic biplane. 31½ in. wingspan for 2.5—3.5 c.c. motors.
CL/1020 G, H. * * * 30p (6/-)

BRANDENBURG SEA MONOPLANE
By A. Warren
A really original scale model of the World War I German seaplane. Span 35 in. for 2.5 c.c. motors.
MA/343 G. * * 35p (7/-)

CESSNA 310
By E. R. Atkins
Colourful American executive twin for small engines. Full detail on this fine plan for easy construction of this 27 in. miniature. Also cabin interior, and colour pattern.
CL/638 2 engines B, C, D. * * 40p (8/-)

BREWSTER F2A-I BUFFALO
By P. Wheldon
A super detailed scale control-line model of this famous World War II fighter, wingspan 37 in. Suitable for 3.5—5 c.c. engines.
MA/367 H, J. * * 35p (7/-)

BRISTOL BEAUFIGHTER X
By B. I. Fry
A twin-engined C/L scale model for 2.5 c.c. engines. Span 39 in.
MA/275 2 x G. * * * 50p (10/-)



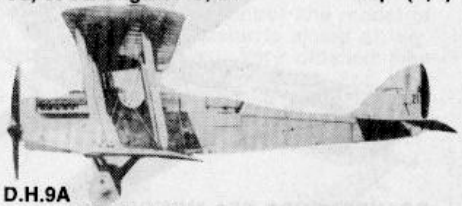
CONSOLIDATED CATALINA
By F. H. Buckland and A. D. Kingswood
Famous wartime amphibian in any of three versions for water or land flying; any combination of engine totalling 4 c.c. or more. Wing span 63 in.
CL/606 G. * * * 50p (10/-)

CURTISS HAWK P-6E
By D. Deeley
Super-scale model of the famous American "pursuit ship." Fully aerobatic, or perfect as a concours project. Span 36 in.
CL/539 H, J. ** 50p (10/-)

D.H. 89a DRAGON RAPIDE
By H. J. Towner
Superbly detailed control-line model of this old favourite to a scale of $\frac{7}{8}$ in. to 1 ft. Full colour and marking details shown on plan. 42 in. span. Uses two .8—1.5 c.c. engines.
CL/981 2 x D, E, F. * 75p (15/-)**

D.H. CHIPMUNK
By F. Buckland
An authentic C/L model of the famous R.A.F. training aircraft. Suitable for 2.5—5 c.c. engines. Span 40 in.
MA/247 G, H, J. ** 35p (7/-)

D.H. 88 COMET
By J. Last
Famous England-Australia air racer to 1/18th scale for two .75—1 c.c. engines. Full insignia and cockpit data on a Super detailed plan for this 29¾ in. span controliner.
CL/694 2 engines C, D. * 40p (8/-)



D.H.9A
By E. Fearnley
A scale C/L model of the famous 1917 war plane for 1.5—2 c.c. motors. Span 35 in.
MA/174 F, G. ** 30p (6/-)

D.H. MOSQUITO
By Aeromodeller Staff
A beautifully accurate scale control-liner of 40 in. span, suitable for any pair of diesels totalling more than 4 c.c. All sheet covered and extremely robust.
CL/570 F, G or H. ** 50p (10/-)

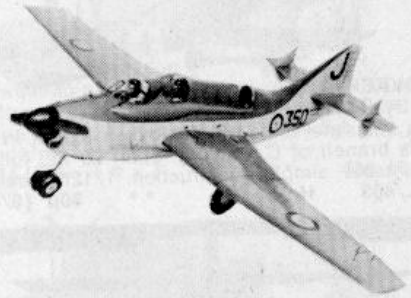
DORNIER 215
By C. Milani
Connoisseur's model. Most detailed of all A.P.S. scale plans, and a design that will satisfy the most exacting enthusiast. Cabin internal detail, motor throttle control, colouring data and relatively simple construction, for this all-sheet covered 44 in. twin.
CL/627 2 engines G, H. * 50p (10/-)**

DOUGLAS A26 INVADER
By D. Deeley
Accurately-detailed scale model of one of the most attractive W.W.II twins. 46 in. span, for two engines. Speed 55 m.p.h. with two 1.49 c.c.
CL/520 2 engines F. G. H. ** 50p (10/-

DAKOTA Mk. III
By J. Last and J. M. Bodey
A true-scale control-line model of the famous workhorse of the air, for a pair of 1.5 c.c. engines designed by two of the most experienced multi-engined model flyers in this country. Plan gives extensive and exclusive colouring and marking detail. Span 47½ in. A very popular "Twin" with A.P.S. followers.
CL/765 2 engines F. ** 50p (10/-

ERCOUPE
By D. Deeley
A scale stunter, accepted for publication after six months development in detail design. Will do all aerobatics except square loops. Span 39½ in., 262 sq. in. area.
CL/385 H, J. ** 40p (8/-)

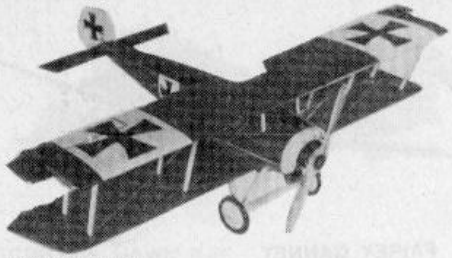
FAIREY GANNET
By J. M. Bodey
A most accurate reproduction of the anti-submarine search aircraft, with drop-off "dolly" undercarriage and all balsa sheet covering, 38 in. span and capable of aerobatics with a good 3.5 c.c. diesel, it is also admirable for conversion to the U.S.A. Carrier Deck Landing type of contest.
CL/631 G, H. ** 50p (10/-)



FAIREY GANNET
By B. Randle
Highly detailed model for advanced builders only, contra rotating propellers driven by **two** engines through a split shaft. Single engine installation also shown. 40 in. span for one 6 c.c. .and one 2.3 engine.
MA/380 G and K. ** 40p (8/-)**

FOCKE-WULF MOSKITO
By P. Wheldon
A fascinating and unusual subject for a twin-engined control-line model, with a proven flight performance. Span 28 in. Suitable for two 1.5 c.c. motors.
MA/319 2 x F. ** 45p (9/-)

FAIRCHILD CORNELL P.T.19
By C. P. G. Wheldon
A low wing design with a handy 29 in. wingspan for 1—1.5 c.c. engines.
MA/400 E, F. ** 40p (8/-)



FOKKER DIII
By F. Beatty
Unusual World War I Biplane fighter to 30½ in. span, and capable of all manoeuvres with a powerful 3.5 c.c. diesel. A most attractive and colourful subject for scale contests.
CL/623 G. H. ** 35p (7/-)

FOKKER D VII
By R. Ward
An accurate scale stunter by an expert in this branch of C/L flying. Span 29 in., fully stuntable, simple construction. 1/12th scale.
CL/403 H, J. ** 30p (6/-)

FOKKER TRIPLANE
By W. Musciano
Simple, foolproof construction includes line-up strutting for wings. The Triplane has a character of its own. 23½ in. span. 1/12th scale.
CL/307 G, H. ** 30p (6/-)

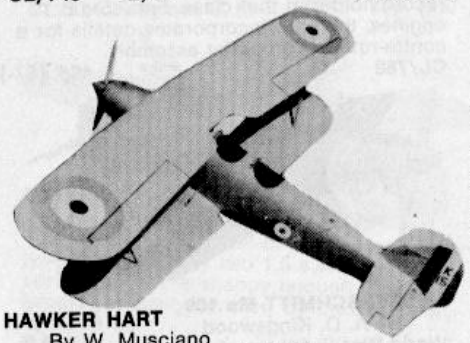
FOKKER FVIIb 3M
By L. Ackroyd
True scale 54 in. version of the famous "Southern Cross" with full internal detail. For single engine in nose and two free wheeling props on nacelles. Detachable wing panels, a scale contest winner.
CL/688 G, H, J. ** 40p (8/-)

FOKKER F.27 FRIENDSHIP
By M. Bodey
An exact one-twenty-fourth scale model in Australian Mac Robertson Miller Airlines colour scheme, suitable for two 1—1.5 c.c. engines. Has sprung nose wheel, 47½ in. span. Flies at 60 m.p.h.
CL/856 2 engines D, E, F. * * * 50p (10/-)

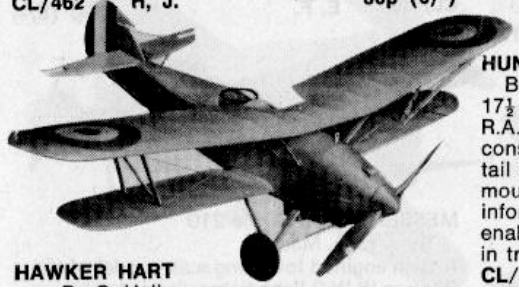
GRUMMAN F8F BEARCAT
By P. M. H. Lewis
The last of the famous Grumman piston-engined fighters designed for shipboard use. This scale control-line model is suitable for 1.5 c.c. diesels. Span 25 in.
MA/214 F, G. ** 30p (6/-)

HALIFAX VII
By M. Bodey
Well detailed 54 in. (1/24th) scale control-line for 1, 1.5 or 2.5 c.c. assorted engines.
CL/919 2 engines E, F, G. * * * 50p (10/-)

HAWKER FURY
By Clive Hall
A 20 in. span model of the famous between wars fighter. Spritely performance with moderate stunts make it a most rewarding project for 1.5 c.c. engines. Extensive sheet areas make for easy and quick construction.
CL/745 E, F. ** 30p (6/-)



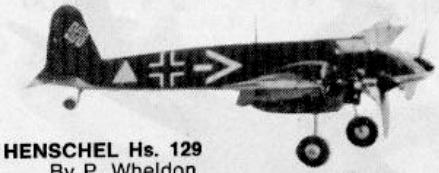
HAWKER HART
By W. Musciano
Rugged scale stunt model, 28 in. span, of a favourite between-wars two-seater maid of all work.
CL/462 H, J. ** 30p (6/-)



HAWKER HART
By C. Hall
A detailed scale control-line model of the famous pre-war biplane. Suitable for 3.5—6 c.c. engines, drawn on two sheets.
MA/374 G, H, J, K. ** 40p (8/-)

JUNKERS Ju 87 STUKA
By AEROMODELLER Staff
Famous German dive bomber in true scale for free flight or controline. An outstanding design of attractive appearance, using .5 c.c. for free-flight and 2.5 c.c. in C/L version; 34 in. wingspan.
FSP/CL/675 B or G ** 30p (6/-)

TEMPEST II
By H. J. Pridmore
Those who prefer scale fidelity with their model work will find this design, with its snappy performance, well to their liking. Span 31 in.
CL/336 G, H. ** 30p (6/-)



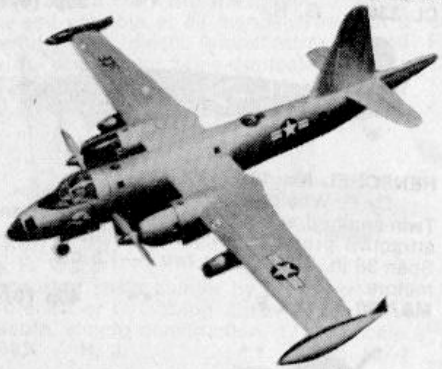
HENSCHEL Hs. 129
By P. Wheldon
Twin-engined scale control-line model of an attractive prototype. Highly detailed plan. Span 36 in. Suitable for two 1—1.5 c.c. motors.
MA/330 2 x F. ** 40p (8/-)

HUNTING PROVOST
By Clive B. Hall
17½ in. wingspan near scale model of the R.A.F. piston-engined trainer with ultra-simple construction including all sheet wing and tail surfaces. Has an inclined engine mounting at 45 deg. and plan includes full information on a remote-controlled pylon to enable any model of this size to be piloted in true manner from outside the flying circle.
CL/720 B, C. * 25p (5/-)

Control Line Scale

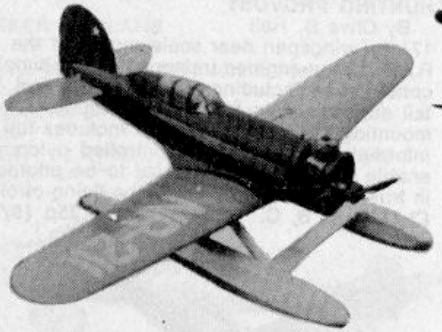
LOCKHEED P38 LIGHTNING
By A. Troberg
39 in. span twin for wide range of engines to perfect scale with simple structure and high speed performance.
CL/671 E, F, G ** 40p (8/-)

MACCHI-CASTOLDI MC-72
By E. Bizzozero
A 25¾ in. scale model of the world's fastest piston engined float plane and world speed record holder in that class. For 2.5 c.c. engines, the plan incorporates details for a contra-rotating propeller assembly.
CL/788 G. * 40p (8/-)**



LOCKHEED P2V-7 NEPTUNE
By J. M. Bodey
An exciting and unusual 37½ in. span twin engined scale control line model for two .8—1.5 c.c. engines. Tricycle u/c and all sheet covering.
CL/783 2 engines C, D, E. ** 50p (10/-)

MESSERSCHMITT Me 109
By A. D. Kingswood
World War II fighter of 24 in. span with inverted engine, all sheet covered surfaces, tough construction and ideal for sport flying. Original had 1.5 c.c. diesel.
CL/709 E, F. * 30p (6/-)



LOCKHEED SIRIUS
By W. Musciano
Flying scale model of the famous American machine, this version can be fitted with either floats or wheel undercarriage. Span 32 in.
CL/328 H, J. ** 20p (4/-)

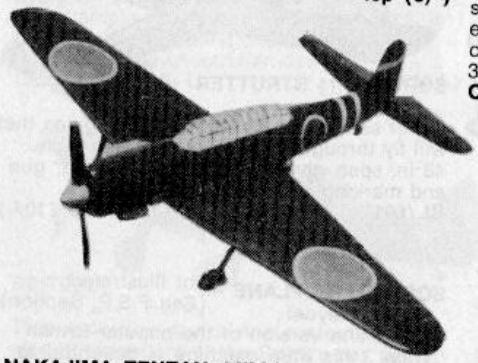
MESSERSCHMITT Me 210
By J. E. D. Mackie
A twin engined low wing scale model of the German W.W.2 light fighter/bomber. All sheet covering, with engine throttle control details.
MA/395 G, H ** 50p (10/-)

BEAGLE-MILES 218
Scale twin engined beauty of the low wing executive plane for 2.5—5.0 c.c. engines. Detailed cockpit and building instruction sheet, span 60 in. on two 50 in. long sheets.
CL/874 2 engines G, H, J. ** 75p (15/-)**

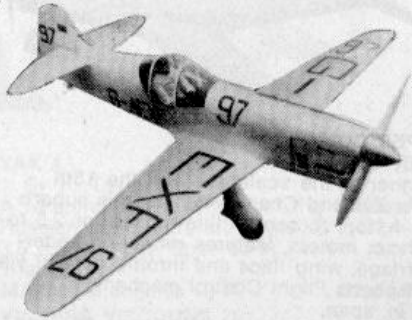
NORTH AMERICAN O.V.—IDA
By P. L. Spence
A 1 in.—1 ft. of this C.O.I.N. aircraft in production for the U.S. Army and U.S. Air Force has two bellcranks for elevator control. A fine flier this 30 in. span model makes an ideal introduction to twin engined C/L modelling. Engine 1.5—2.5 c.c.
CL/912 F, G. ** 50p (10/-)

GEMINI
By F. Buckland
This control-line model of an unusual prototype is powered by two 1.5 c.c. engines. In performance it is snappy enough for the expert yet easily handled by the beginner. Span 36 in.
MA/221 2 x F. ** 40p (8/-)

NORTHROP P61 BLACK WIDOW
By M. Bodey
¾ in.—1 ft. scale model of America's first specially designed night fighter. This 49½ in. span version by a well-known multi-engined enthusiast, Maurice Bodey, features robust construction, and is suitable for two 2.5—3.5 c.c. engines.
CL/1092 2 x G, H. * 75p (15/-)**



NAKAJIMA TENZAN (JILL)
By M. F. Hawkins
A scale C/L model of a Japanese torpedo bomber for engines of 2.5—3.5 c.c. Span 36 in.
MA/268 G, H. ** 40p (8/-)



MESSERSCHMITT Me 262
By A. P. Lloyd
Unusual profile-scale control line model of 20½ in. span for 1—1.5 c.c. engines. Suitable for the sport flyer or beginner to control line.
CL/1047 D, E, F. * 20p (4/-)

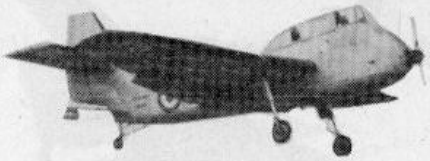
PERCIVAL MEW GULL
By H. C. Thomas
Accurate scale Racer, capable of 75 m.p.h. with a plain bearing engine. Wing span 24¾ in.
CL/600 G. * 25p (5/-)**

PIAGGIO P.166
By W. P. Holland
Control line scale model of a famous Italian executive aircraft of most pleasing and out-of-the-rut shape, featuring Gull wing, nosewheel undercarriage, swept fin and twin pusher engines. Span 42 ins. for two 1—1.5 c.c. engines.
CL/824 two D, E, F. ** 60p (12/-)

PIPER APACHE
By J. Stivala
A 37 in. span model of the famous American executive transport aircraft, featuring planked wing and fuselage and tricycle u/c. Specially created for the scale enthusiast with smaller engines. Marking and colours for a British registered machine given on plan. Engines 1—1.5 c.c.
CL/756 E, F. ** 40p (8/-)

PIPER COMANCHE
By L. Ackroyd
Winner of the scale event at the 13th New Zealand Championships, this superb 1¼ in. to 1 ft. control line replica for 2.5 to 3.5 c.c. motors, features retracting undercarriage, wing flaps and throttle control via J. Roberts Flight Control mechanism. 45 in. span.
CL/790 G, H. ** 50p (10/-)**

PITTS LITTLE STINKER
By P. Donavour-Hickie
Scale 25½ in. span, control line model of the famous "Little Stinker" U.S.A. National Champion Aerobatic biplane. 3.5—5 c.c. engine.
MA/98 H, J. ** 30p (6/-)



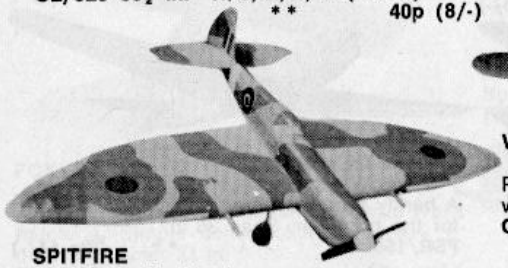
SEAMEW
By M. Reeves
Two designs to suit both Class I (.40 cu. in. engines) or Class II (.60 cu. in.) carrier deck competition rules. Plan includes full details of operating flaps, arrestor hook and engine throttle. Span 35 in. and 44 in.
CL/1061 J, K, L, M, N. ** 75p (15/-)

SAAB SAFIR
By Hoh Fang Chuin
A 37 in. wingspan C/L scale model of this Swedish light aircraft, for motors of around 2.5 c.c., featuring all balsa structure.
CL/966 G, H, J. ** 35p (7/-)

SOPWITH 1½ STRUTTER
By B. Sichi
Super semi-scale stunter for big engines that will fly through all manoeuvres with ease. 48 in. span gives generous wing area, gun and marking details on plan.
CL/651 H, J, K. ** 50p (10/-)

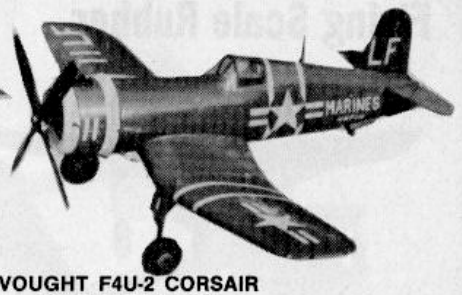
SOPWITH TRIPLANE Not illustrated. (See F.S.P. Section)
By J. Pleydel
Control-line version of the popular British "Tripe," this little machine is delightful to handle. Span 20 in.
CL/361 D, E. ** 30p (6/-)

TIPSY JUNIOR
By H. G. Hundleby
An ideal design for scale adaptation, this model has swept the board at many meetings. Available in three sizes to suit your engine.
CL/321 28½ in. D, E. (radial) 25p (5/-)
CL/322 34 in. G, H. (radial) 30p (6/-)
CL/323 39½ in. H, J, K, L, M (radial) ** 40p (8/-)



SPITFIRE
By G. Pentland
The Mk. VIII Spitfire as used by R.A.A.F. in S.E.A.C. is made semi-scale for full stunt flying on a 29 or 35 engine. Span of 53½ in. offers ample wing area for all aerobatics, is flapped, has all latest design features incorporated by Australian design.
CL/776 J. E. L. ** 50p (10/-)

SPITEFUL
By J. R. Bishop
This appealing control-line scale model of a sleek descendant of the Spitfire has been designed for engines from 1.5—2.5 c.c. Span 27 in.
MA/183 F, G. ** 30p (6/-)



VOUGHT F4U-2 CORSAIR
By P. M. H. Lewis
C/L scale model of the famous U.S. fighter designed for 1—1.5 c.c. engines. Span 26 in.
MA/141 E, F. ** 30p (6/-)

WACKETT BOOMERANG
By C. A. Taylor
Popular full-stunt model of a well-known war-time Australian aircraft. Span 38 in.
CL/433 G, H (Radial) ** 30p (6/-)

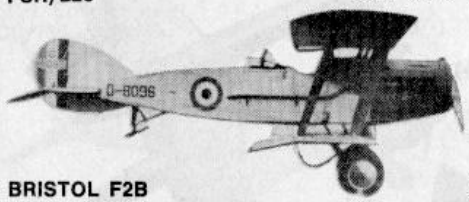
YAK 4
By K. Taylor
A twin-engine C/L model of the famous Russian attack aircraft. Suitable for 2.4—3.5 c.c. engines. Span 50 in., drawn on two sheets.
MA/346 2 engines G, H. * 50p (10/-)**

VICKERS VISCOUNT 701
By J. M. Bodey
Queen of all the scale control-liners, this 1/18th scale, 62½ in. span beauty is a great favourite. Colour livery for BEA, Capital and Air France. Relatively simple structure. For a combination of 7 c.c. in engines. Original used two 2.5, two 1.5 c.c.
CL/701 F, G, H Multi * 50p (10/-)**

Flying Scale Rubber

BLERIOT MONOPLANE
By J. M. Greenland
Military version of exceptional charm and fine performance. Complete with "pilot" and true to scale. Span 44 in.
FSR/275 *** **50p (10/-)**

BRISTOL BULLET
By E. J. Riding
A super detailed flying model by one of Great Britain's foremost authorities. Span 37 in. With 1 c.c. power conversion.
FSR/226 ** **30p (6/-)**



BRISTOL F2B
By J. L. Roberts
The machine which contributed so much to Allied air supremacy in W.W.I. A fine replica. Span 26½ in. 1/18th scale.
FSR/111 ** **25p (5/-)**

D.H. 80A PUSS MOTH
By J. M. Greenland
An accurate replica with a scale area tail-plane. Excellent performance. Span 30 in.
FSR/256 ** **20p (4/-)**

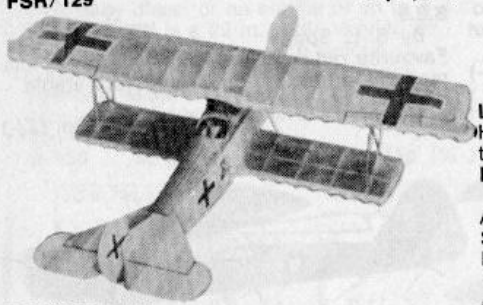
D.H. TIGER MOTH
By C. R. Moore
Build a model of this famous training machine. The model is capable of high performance, and a picture in flight. Span 44 in. This is the most popular rubber driven scale model in our range and will always be the classic of its class.
FSR/197 ** **40p (8/-)**

D.H. MOTH MINOR
By G. W. Day
A handy size low-wing model, well suited for the beginner. Span 35 in.
FSR/168 ** **20p (4/-)**

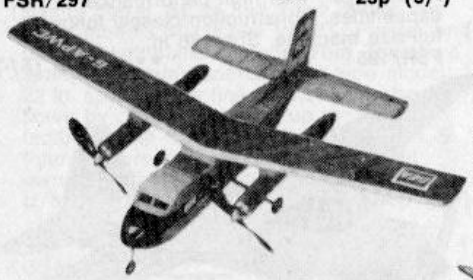
DORNIER 27
By D. Garrett
A 27 in. span rubber powered scale model of a modern German lightplane for the painstaking enthusiast. Plans include modifications to take .3—.75 c.c. engines.
FSR/796 B. ** **30p (6/-)**

FAIRCHILD ARGUS
By E. J. Riding
Authentic appearance makes this a winner. Span 37 in.
FSR/272 ** **25p (5/-)**

FOCKE WULF 190
By K. A. Hodgson
One of our most popular scale designs, and with structural modifications capable of being converted to C/L. Span 36 in.
FSR/129 ** **25p (5/-)**



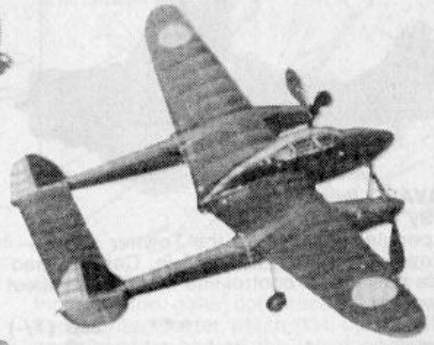
FOKKER D.VII
By D. R. Hughes
Fine flying version of the famous World War I machine. Simple construction and easy trimming. Span 21 in.
FSR/297 ** **25p (5/-)**



HANDLEY PAGE HERALD
By R. Malmstrom
Rubber powered twin motor semi scale model of simple construction using commercial propellers. 25 in. span.
FSR/1002 * **20p (4/-)**

N.A. NAVION
By H. J. Pridmore
A fine flying example of a well-known American light plane. Scale 1 inch to 1 foot. Span 33½ in.
FSR/264 *** **25p (5/-)**

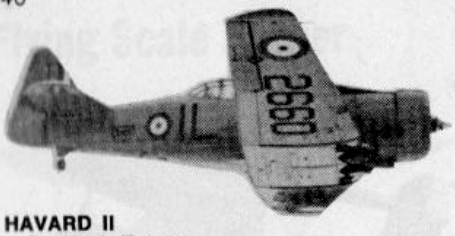
HEINKEL 51
By G. R. Woollett
Most attractive model of an early W.W.II German fighter. 30 in. span and extremely elegant.
FSR/141 *** **30p (6/-)**



LOCKHEED LIGHTNING
Half-inch to 1 foot version of the famous twin fuselage fighter. Span 26 in.
FSR/158 ** **20p (4/-)**

Another larger version is also available. Span 42 in.
FSR/159 ** **30p (6/-)**

MILES M.48
By H. J. Pridmore
This fine looking low-wing is a good free-flight performer, and is also convertible to control-line. Span 36½ in.
FSR/CL/243 ** **30p (6/-)**



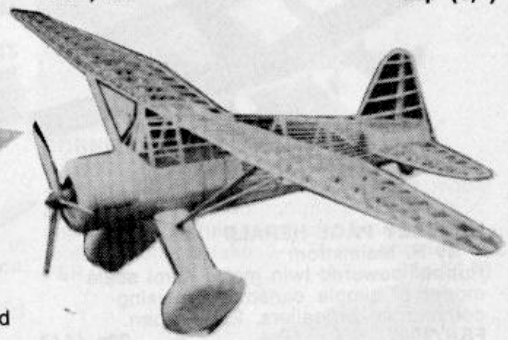
HAVARD II
By H. J. Towner
A popular model from the Towner stable—a low-wing trainer. Span 45 in. Can be used as a basis for a control-line model with sheet covering.
FSR/139 *** **35p (7/-)**

S.E.5
By S. L. Spittle
Favourite old-timer in flying scale form, this model is a fine performer and very stable. Span 28 in.
FSR/274 *** **25p (5/-)**

PIPER PAWNEE
By R. Malmstrom
A 24¼ in. span novices basic rubber scale model. Stage by stage construction with illustrations.
MA/348 * **20p (4/-)**

TAYLORCRAFT AUSTER
A sure flyer, with high performance capabilities. Construction closely follows full-size machine. Span 36 in.
FSR/195 ** **25p (5/-)**

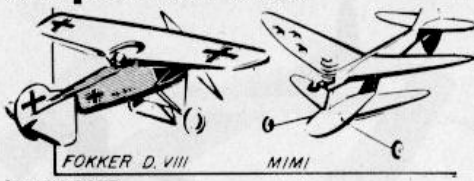
POTEZ 75
By Vic Dubery
All balsa sheet model of the French reconnaissance pusher, 21 in. span and though designed for rubber power, could be modified for under .5 c.c. diesels.
FSP/581 * **25p (5/-)**



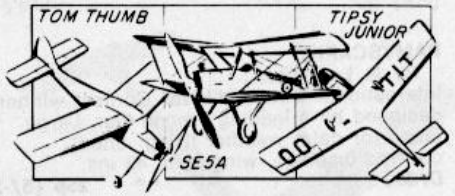
WESTLAND LYSANDER
By H. Boys
Many hundreds of this design have been built and successfully flown. The design lends itself admirably to flying scale work. Span 50 in.
FSR/161 **** **45p (9/-)**

WESTLAND WIDGEON III
By E. J. Riding
A first-class flying type with extreme stability. Ideal for the beginner at scale work. Span 36½ in.
FSR/211 ** **20p (4/-)**

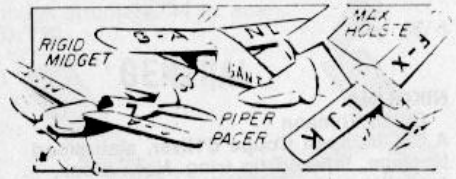
Simple Plan Sets

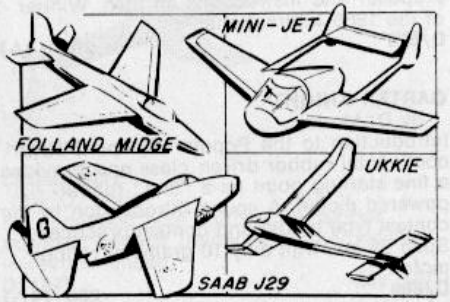


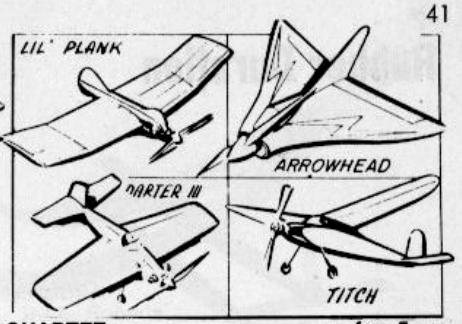
TWOSOME
A pair of free-flight models designed for the E.D. Baby diesel or an engine of up to .5 c.c. **Fokker D.VIII** is a 22 in. scale version of famous W.W.1. Fighter with unique detachable wings, sheet construction fuselage. **Mimi** is only 16 in. span, extremely simple to build with fool-proof stage-by-stage constructional illustrations.
U/655 B, C. ** **15p (3/-)**



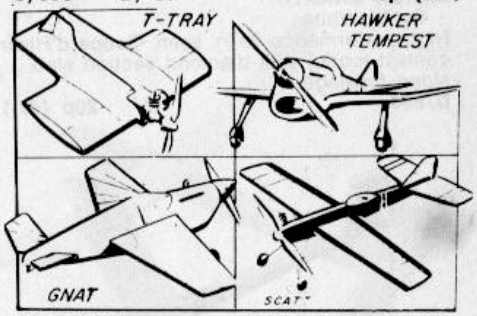
TRIO
Three designs for the popular .15 c.c. Bambi diesel. **SE.5a** and **Tipsy Junior** are scale models of famous W.W.1. Fighter and Belgian lightplane designs, **Tom Thumb**, a specially created sports cabin type model, 22 in. span. These fine models can also be flown by other engines of up to .32 c.c. including the Kalper and American K & B Infant. Thoroughly recommended to all owners of these miniature engines.
U/656 A only ** **15p (3/-)**







QUARTET **for .5 c.c.**
Includes the delta controliner **Arrowhead** and stunter **Darter** which has coupled flaps and elevators and all the latest control-line features. Straightforward free-flying cabin duration design **Titch** and novel flying wing the **Lil Plank,** make up a perfect quartet to suit any small engine.
U/595 B, C. * **15p (3/-)**



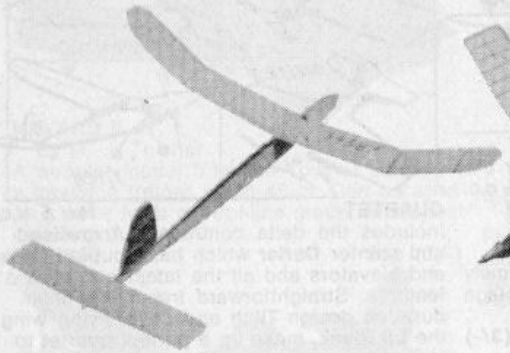
FOURSOME **for 1 c.c. Control-line**
A complete course in control-line for beginners, **Scatterbrain** takes any .8 c.c.—1.5 c.c. engine as a simple trainer, then one can progress to the novel **T-Tray stunter,** or **Gnat** Team Racer for the ½A class or to the scale **Hawker Tempest** for either team race or sport flying.
U/596 C, D. * **15p (3/-)**

THREESOME
Three attractive rubber-driven models including two scale types of the **Piper Pacer** and **Max Holste MH.152,** plus **Rigid Midget,** a novel racy freelance design. All about 21 in. span, these designs are inexpensive to build and cater for the commercially-produced plastic propellers. Recommended for indoor R.T.P. Speed and Scale Contests.
D/658 ** **15p (3/-)**

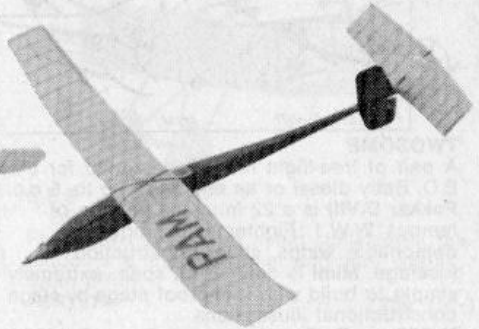
JETEX QUADS
A duration design for the 50 unit, the **Ukkie** is a Dutch design which comes with a profile plan for the Swedish **SAAB J.29** for Atom 35, the French **SIPA Minijet** for a 100, or the famous **Folland Midge** for either the 50B or 100 units. Four really first-class jetex models, with the SAAB specially advised for the beginner.
U/597 ** **15p (3/-)**

Rubber Duration

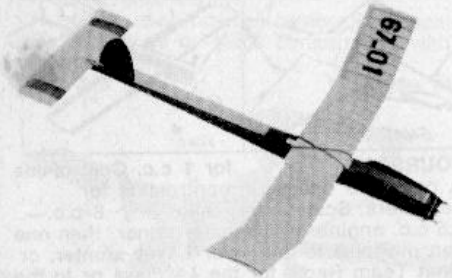
COUPE D'HIVER



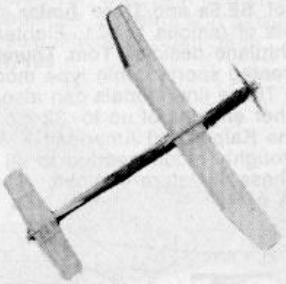
BARON KNIGHT
By D. White
High performance 39 in. span. **Coupe d'Hiver** contest model with diamond section slab sided fuselage.
D/894 * **20p (4/-)**



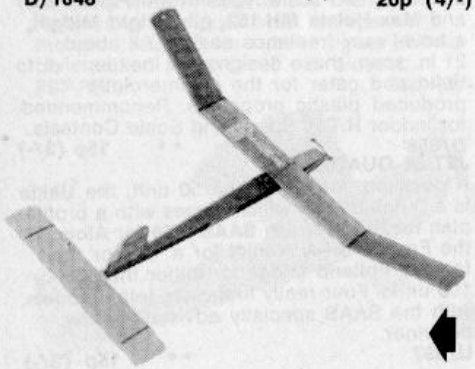
PAMYSCAPHE
By A. Landeau
International **Coupe d'Hiver** Contest winner, designed by a leading French flier. Large areas for calm weather flying. Sheet covered fuselage, wing span 43 ins.
D/880 ** **25p (5/-)**



DEUZIO
By C. Menget
Top French Coupe d'Hiver class model, renowned for its performance and consistency. 36 in. span.
D/1048 ** **20p (4/-)**

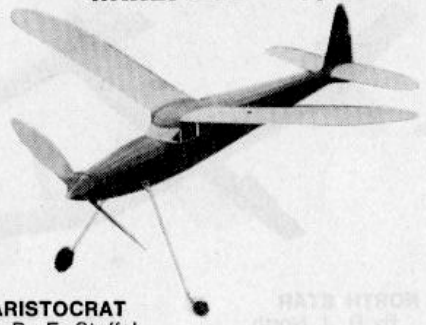


NIKOLINA
By O. Ehmann
A 33½ in. span **Coupe d'Hiver,** slab sided fuselage, tapered tip wing. Nose block, propeller and instructions on plan. Winner of the 1966 International.
D/873 ** **20p (4/-)**



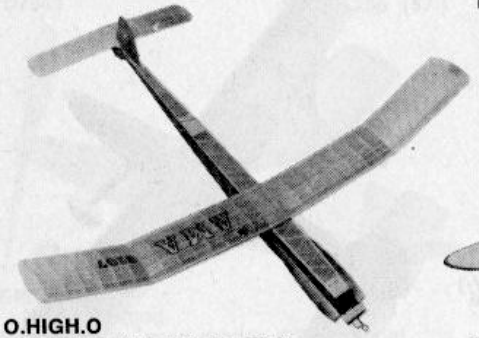
GARTER KNIGHT
By D. Morley
Introduction to the Popular **'Coupe D'Hiver'** continental rubber driven class and provides a fine starting point as a "first" rubber-powered model. A sound introduction to the contest type model and contest practices. Span 39 ins. with only 10 grams of rubber motor.
D/809 * **20p (4/-)**

WAKEFIELD TYPES

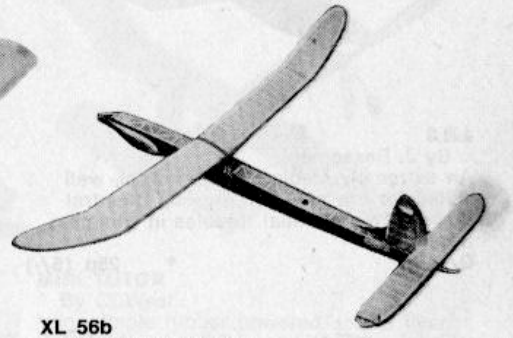


ARISTOCRAT
By E. Stoffel
High wing, semi-streamlined cabin **Wakefield** size model with exceptional good looks and performance. Span 43¾ in.
D/311 *** **30p (6/-)**

PANDORA
By L. Roberts
In the British team at the 1959 World Champs, this **Wakefield** is an outstanding design. Features hinged fuselage, the rear section tips up to form a D/T and whole model breaks down into six pieces for easy transport in a box 7 in. x 8 in. x 27 in.—complete with reserve model! Span 50 in. Winner of many rally and gala day events.
D/755 ** **30p (6/-)**

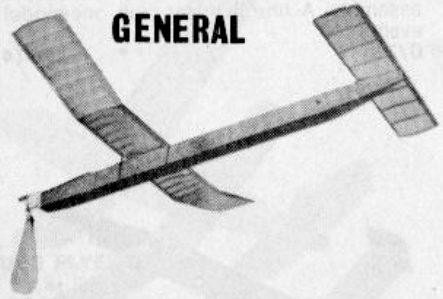


O.HIGH.O
By G. Reich and Joe Elgin
Two U.S.A. experts of the renowned Cleveland Model Club designed this **Wakefield** as a high performance model for the novice. Extra plan detail for difficult parts, tough structure, 44 in. span.
D/726 * **30p (6/-)**

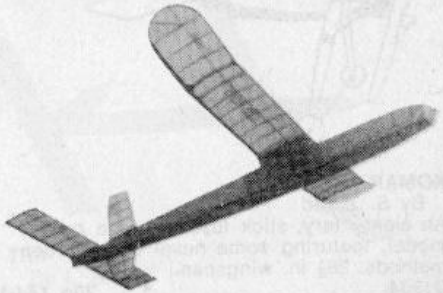


XL 56b
By Radoslav Cizek
51 in. **Wakefield** of attractive lines and with a great reputation for high performance. Suited to current 40 gramme rules, has been in the Czechoslovakian team many times.
D/690 ** **40p (8/-)**

GENERAL



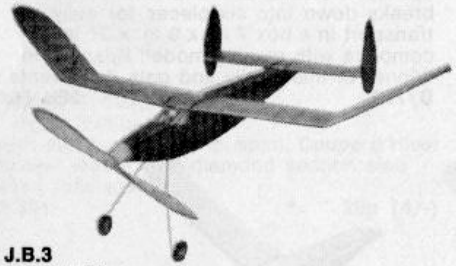
CLOUDMITE
By C. West
An appealing little lightweight rubber powered contest trainer. A dethermaliser is recommended.
D/1075 * **20p (4/-)**



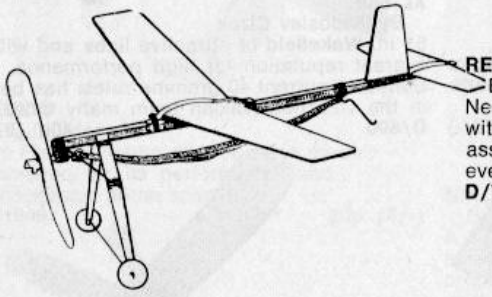
DELINQUENT
By J. O'Donnell
British Champion's simple 36 in. "open" rubber duration design.
D/923 ** **30p (6/-)**

Rubber Duration

JEEP
By C. A. Shaw
A good general purpose model with consistent performance. Span 28 in.
D/152 * **20p (4/-)**

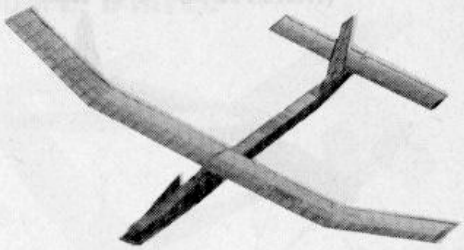


J.B.3
By J. Bessemer
An extremely stable vintage model, well suited for the novice. Large tip dihedral prevents many initial troubles in trimming. Span 36 in.
D/149 * **25p (5/-)**

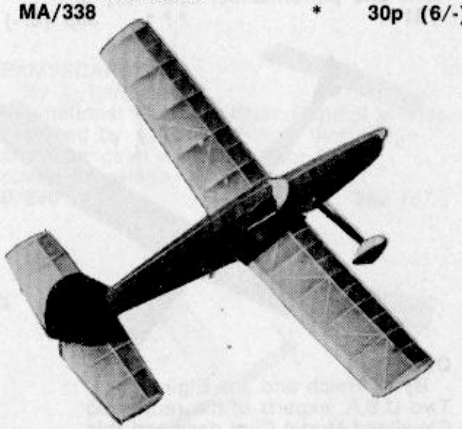


KOMAR
By S. Zurad
An elementary, stick fuselage type rubber model, featuring some novel construction methods. 26½ in. wingspan.
D/934 * **20p (4/-)**

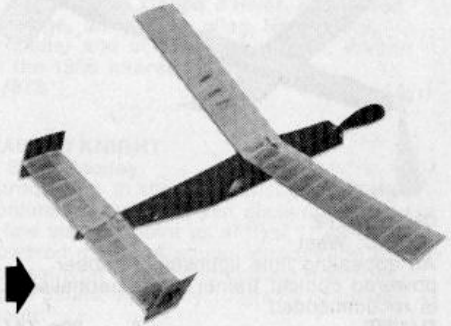
LITTLE MAVIS
By J. Pool
The perfect junior rubber model, slab sided construction, propeller and nose block detail. Flies off the board. Span 28½ in.
D/890 * **20p (4/-)**



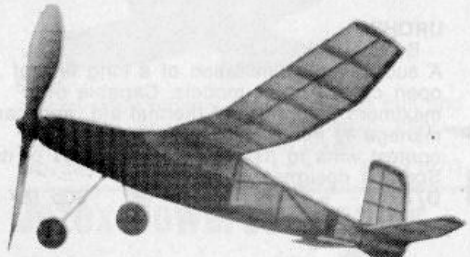
NORTH STAR
By R. J. North
A simple construction 52 in. span contest rubber model, ideal for the novice, has nose block details.
MA/338 * **30p (6/-)**



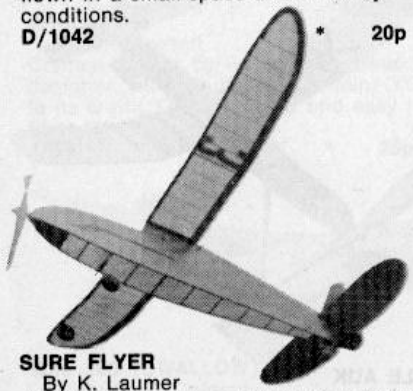
RED ADMIRAL
By R. S. Brewer
Neat 32 in. low-wing design for sport flying with sheet type fuselage sides and easy assembly. A fine flyer for club one-model events.
D/718 ** **20p (4/-)**



SKYRANGER
By B. Cracknell
Pert little 30 in. rubber model capable of extremely good performance. Simple and inexpensive to build and fly, pleasing appearance, semi-scale.
D/541 ** **25p (5/-)**

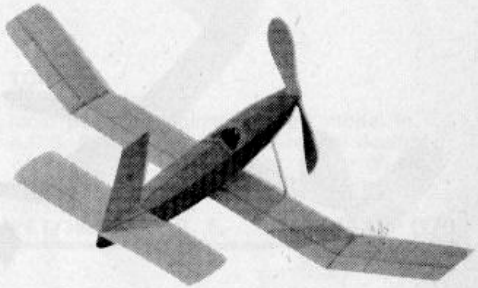


SPINNER
By H. Ellwood
Simple 24 in. span rubber driven model designed for the beginner—capable of being flown in a small space and in windy conditions.
D/1042 * **20p (4/-)**

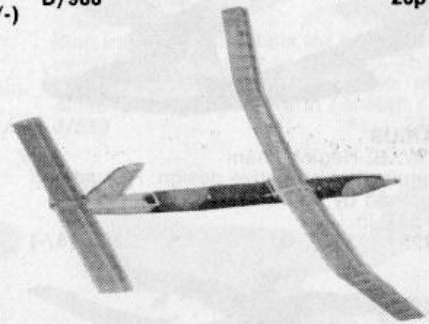


SURE FLYER
By K. Laumer
A 30 in. span rubber driven model with especially simple construction to set the beginner on the way to a successful modelling career. Sure Flyers will teach the basic techniques and provide a great deal of fun.
D/800 * **30p (6/-)**

TUTOR
By C. West
Beginner's rubber duration model of unusual low wing design. 32 in. wingspan.
D/954 * **20p (4/-)**



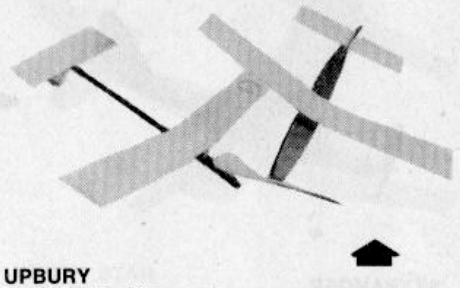
MINI TUTOR
By C. West
Very simple rubber powered sports flyer, designed as a really quick-to-build model. 25 in. span.
D/988 * **20p (4/-)**



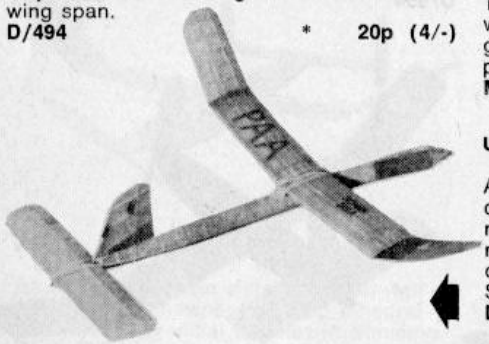
TRIP STICK
By L. Barr
39 inch span high performance Open Rubber class model for local field flying or major contests. Simple construction make this design quite suitable for the novice, and high performance will reward the effort put into building.
D/818 ** **35p (7/-)**

Rubber Duration

THE NEW A/M CABIN DURATION
By Bill Dean
Revival of one of our most popular little rubber-driven models in a new and up-to-date form. A truly perfect little flyer, and very pretty to watch in flight. Plans contain fully illustrated building instructions. 20 in. wing span.
D/494 * **20p (4/-)**



UPBURY
By G. F. Elsegood
Two models in one, ideal for the novice, will introduce him to both rubber and glider flying. Span 36 in. **two** plans for the price of one. Simple slab sided construction.
MA/392 * **30p (6/-)**



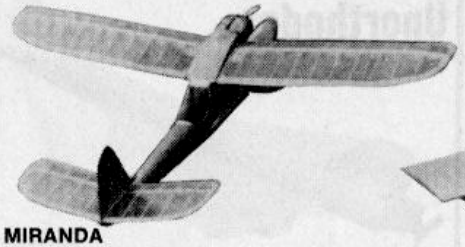
URCHIN
By E. Black
A successful culmination of a long line of open class rubber models. Capable of a maximum time **without** thermal aid, and can manage 4½ mins. Span 40 in. Has many contest wins to its credit in the hands of its Scottish designer.
D/751 ** **30p (6/-)**

Waterplanes

AQUARIUS
By W. B. Heginbotham
An angular but attractive design. Robust and well proved by hours of over-water flying. Span 51½ in.
WP/423 **E, F, G.** ** **30p (6/-)**

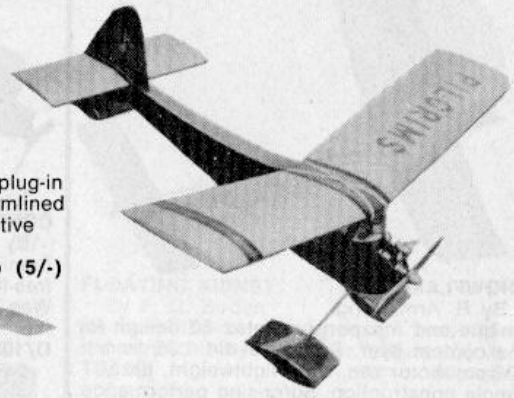
GULL
By K. Kuosma
A very attractive gull-winged 63in. flying boat, streamlined engine pod and swept back tail-plane, give this model a very sleek look. Radio conversion suggestions on the plan.
WP/850 **G.** *** **50p (10/-)**

LITTLE AUK
By J. Trinder
30 in. amphibious rubber powered design, can be fitted with floats or normal u/c for excellent contest performance in club events. Free-wheeling prop. Sturdy yet simple construction.
WR/685 * **30p (6/-)**



MIRANDA
By W. P. Holland
Amphibious model with a detachable plug-in undercarriage. Large cabin and streamlined engine nacelle make this a most attractive design. Wing span 49 in.
WP/605 **C, D.** ** **25p (5/-)**

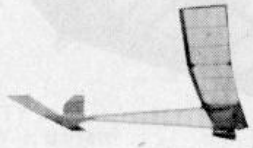
SEAL
A semi-scale biplane, featuring long hull and removable wings. 49¾ in. wing span. Very stable in the air and on the water.
WP/849 **G.** *** **50p (10/-)**



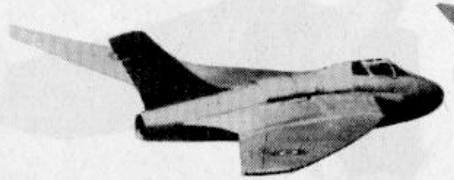
TOMBOY
By Vic Smeed
Most popular beginner's sport model in A.P.S. Simple cabin power model designed especially for the beginner. Either 36 in. or 44 in. span, both on plan. Seaplane version also given.
PET/398 **C, D, E.** * **35p (7/-)**

Jetex Powered Models

ARROW 100
By Ian Dowsett
Contest winner by well-known "Jetex" designer, with one flight of 18 min. O.O.S. to its credit. Quick to build and easy to trim. Span 24 in.
J/511 * **25p (5/-)**

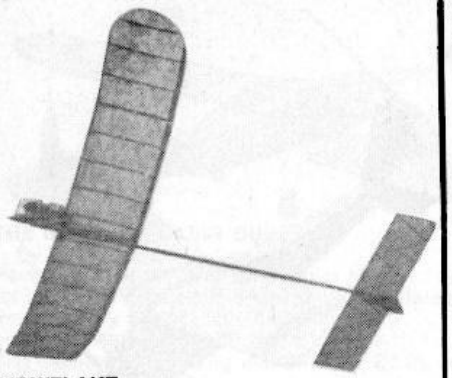


FIZZLEQUICK
By I. V. Dowsett
Plan includes full details for two versions, using either Jetex 50 or 100 unit. This outright contest model has terrific rate of climb and has won several contests.
J/599 * **25p (5/-)**



D.H. 108 (SWALLOW)
By D. P. Golding
Scale model for Jetex 100 power by a scale expert. Capable of most realistic performance, it closely resembles this full-size high-speed jet plane in every detail and in the air.
J/479 ** **25p (5/-)**

METEOR IV
Twin engined scale model for two "Jetex 100" units—most realistic in flight. Span 21½ in.
J/293 *** **20p (4/-)**



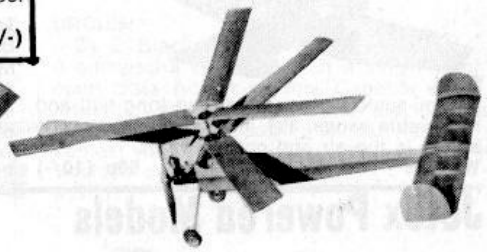
SNOWFLAKE
By R. Armstrong
Unique and inexpensive Jetex 50 design for the contest flyer. Prototype did 1:35 from 10 sec. motor run. Ultra lightweight, ultra simple construction. Surprising performance. Span 15⅜ in.
J/772 * **20p (4/-)**

Unorthodox

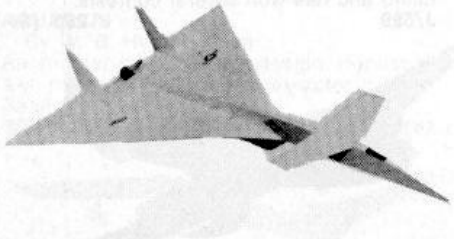
CONCORD
By K. J. Downton
Semi-scale, all sheet construction, 12 in. span free-flight sportster powered by a Cox Pee Wee engine. Great flier, provides hours of fun.
U/1038 **B.** * **15p (3/-)**

Unorthodox

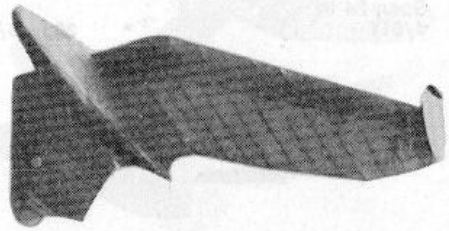
A.V. 10
By Guy Borge
This machine, designed by a French expert, is of especially easy construction, and ideal for the beginner. Span 40 in.
TG/240 ** **30p (6/-)**



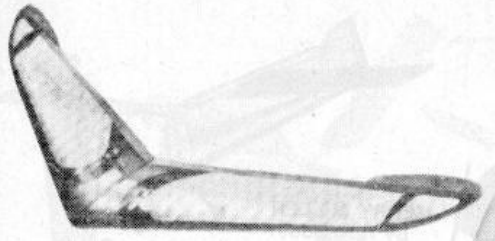
CONTRA-GYRO
By Laurie Ellis
Twin rotor autogiro completely eliminates torque troubles and enables the model to be trimmed for flight direction. Flies well in all weathers, particularly in strong wind.
U/644 **C, D.** ** **30p (6/-**



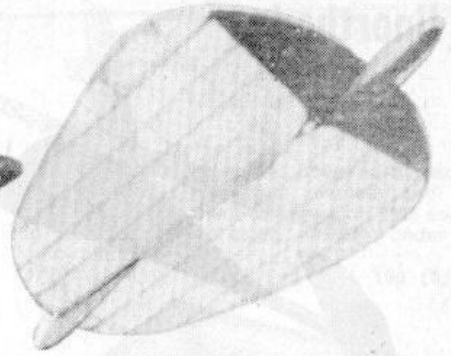
B-70 VALKYRIE
By Bob Linn
Ultra modern "low budget" semi-scale delta of 23 in. span for .8 c.c. motors which will run in a clockwise direction if a pusher propeller is unobtainable. A thriller to fly. All sheet construction, very easy to build.
U/784 **C, D.** * **40p (8/-)**



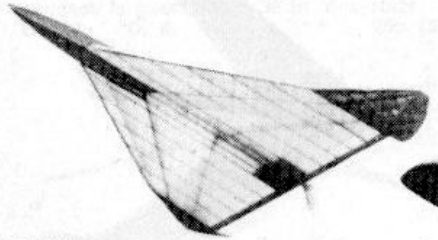
CROWFLY
By S. R. Crow
A recognised English expert is responsible for this unique and extremely stable model. Excellent duration ensured. Span 32 in.
TG/241 *** **30p (6/-)**



DACTYL
By C. M. Holden
True flying wing glider without centre pod fuselage, and elevon controlled. Span 60 in.
TG/326 ** **30p (6/-)**



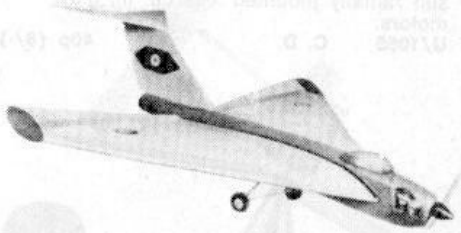
FLOATING KIDNEY
By F. G. Birden
An out-of-the-rut all-wing design resembling the mythical "flying saucer." Span 15¼ in.
TG/251 ** **30p (6/-)**



DELTA I
By J. N. Lancaster
A real delta model with all the full-size delta characteristics. Perfectly stable at all speeds and remarkably hard to stall. 35 in. span.
U/490 **C, D.** * **40p (8/-)**

HOPPITY
By W. I. Barrett
A novel C/L autogiro for 2.5cc motors, with semi-scale appearance and very stable to fly. 24 in. diameter rotor
U/947 **C** ** **40p (8/-)**

FLAP HAPPY
By P. Schoenky
This most unusual model is one of the few really successful ornithopters yet produced. Holder of American records. Span 41 in.
D/333 ** **30p (6/-)**

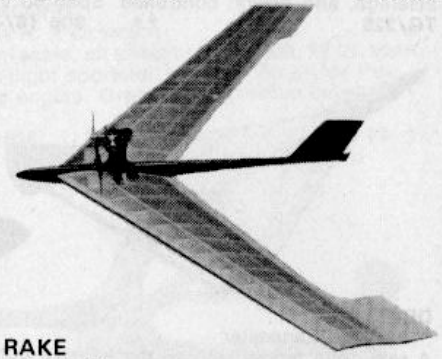


JAVELAN
By Laurie Ellis
A 34 in. delta with a tailplane, not unlike the Gloster fighter, with same appearance and flying characteristics. For a new thrill in sport flying, this model is the tops.
U/579 **C.** * **40p (8/-)**

Unorthodox

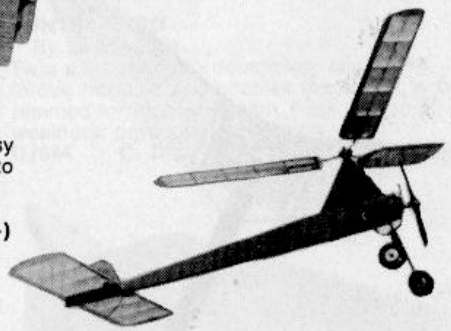
JUMPING JIMINY
By Ron Moulton
Simple construction, easy to fly, virtually crash-proof. The thrills of autogiro flights are as yet little known; but Jiminy can help to introduce you to this fascinating side of aeromodelling. Maximum rotor size, 30 in. dia.
U/488 C. ** 30p (6/-)

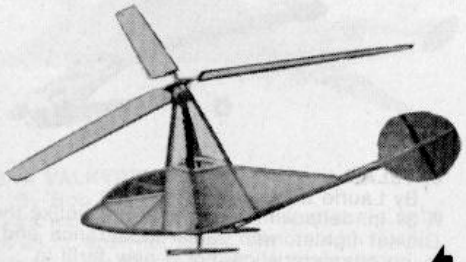
MERRY MILLER
By Ray Booth
A simply constructed autogiro. Rotor diameter is 32 in. and engines of 0.75—1 c.c. provide suitable power.
MA/212 D, E. * 30p (6/-)



RAKE
By L. Ranson
A free-flight tailless sports model. Suitable for 0.5 cc engines. Span 42 in.
MA/377 B,C. ** 40p (8/-)

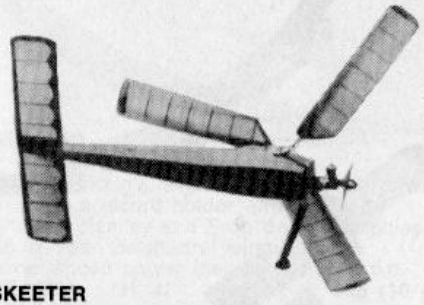
KAMAN HELICOPTER
By J. Bishop
Semi-scale helicopter of comparatively easy construction, with a 24 in. rotor diameter, to suit radially mounted .049 cu. in. glow motors.
U/1055 C, D. ** 40p (8/-)





RO-DART
By D. Neale
Simple power driven autogiro for small motors. Most amusing and instructive to flv. Quick construction.
U/456 C. * 20p (4/-)

LITTLE TWISTER
By R. Dudley
Simple all strip construction, elastic band powered helicopter for indoor or outdoor fun.
MA/387 * 20p (4/-)



SKEETER
By D. Cooper and R. Coles
The ideal introduction to autogiro flying. The sixteenth in a line of experiments, success is guaranteed. 32 in. dia. rotor.
U/532 D, E. ** 25p (5/-)

TWIDDLER
By E. R. E. Morse
Very successful helicopter powered by two Jetex 50B units, only 15 in. diameter and with very simple sheet construction. Will soar to great height and safely descend under auto-rotation.
J/702 * 15p (3/-)

SYCAMORE AND HOVERFLY
By F. G. Boreham
Three-in-one plans for easily made Helicopters by Britain's leading expert. 21 in. diameter for .5 c.c. and 31 in. dia. for .75 c.c. plus a scale Bristol Sycamore profile fuselage.
U/713 B, C. ** 25p (5/-)

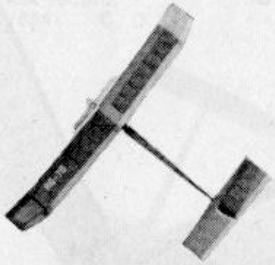
XERNES
By L. C. Harris
An all-wing sailplane of futuristic lines with excellent flying characteristics. Span 84 in.
TG/394 ** 40p (8/-)

NOT ILLUSTRATED

BUZZERCOPTER
By F. G. Boreham
A 28 in. span torque reaction helicopter with free-wheeling rotor for descent. Elementary construction for a "flying machine" that fascinates.
U/860 C, D. ** 25p (5/-)

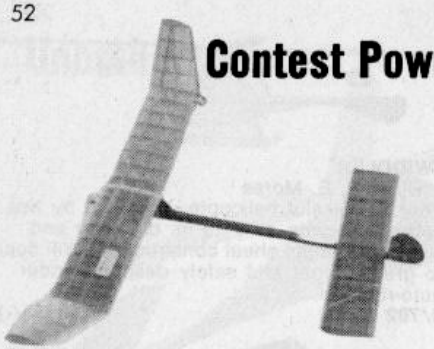
Contest Power

½A TRAIN
By G. French
High performance contest model, by one of the country's leading exponents. 52 in. span, using .8 c.c. (.049 cu. in.) engines.
PET/994 C, D. ** 40p (8/-)



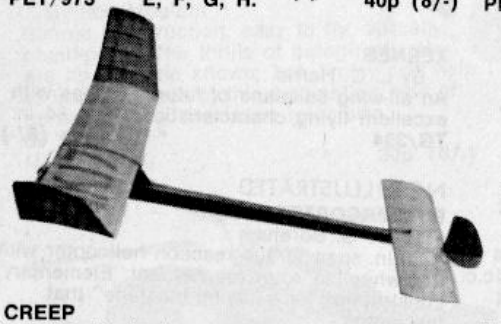
CELERITAS
By T. Strassberger
29 in. span, this model is designed by a top Yugoslavian modeller. Suitable for a beginner's first contest machine.
PET/527 C. * 30p (6/-)

Contest Power

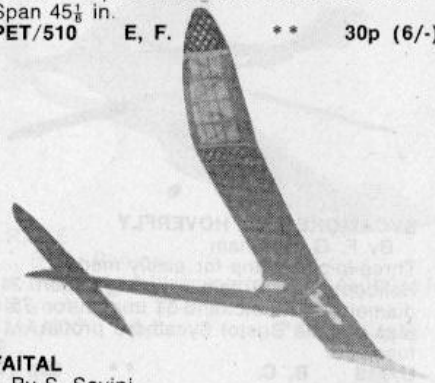


CLIMAX
By P. M. Arnould and D. J. T. Miller
Open power model for a wide variety of engines. Very easy to build and fly. 40½ in. wingspan, this model is an ideal first contest type.
PET/973 E, F, G, H. ** 40p (8/-)

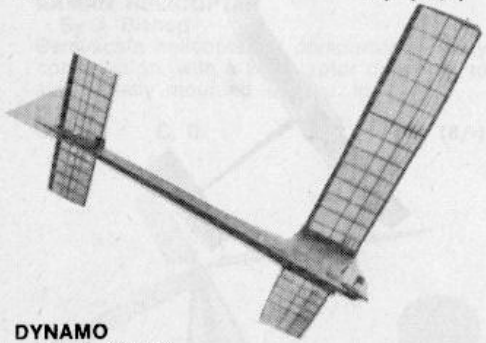
ELIMINATOR
By B. Wheeler
One time World Championships winner. Side-mounted motor and 52% tail-plane. Wings may be made in two halves, when model will pack in 8 x 8 x 33 inches box. Span 45⅛ in.
PET/510 E, F. ** 30p (6/-)



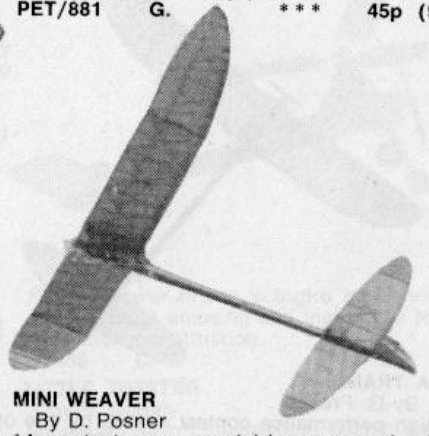
CREEP
By B. Eggleston
High performance contest winning design for F.A.I. or open events, especially suitable for vertical take-off. Wing span 50 in.
PET/609 G. ** 50p (10/-)



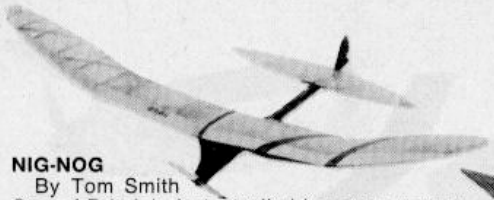
FAITAL
By S. Savini
A 62 in. span International contest winning, eliptical tipped F.A.I. power model. Engine mounted in cast alloy pan.
PET/881 G. * 45p (9/-)**



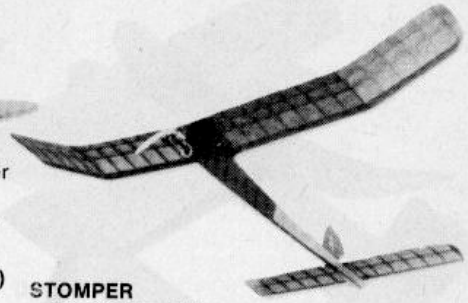
DYNAMO
By A. Young
Contest winning ½A free flight model of 45 in. wingspan and simple as can be for ease of construction and flying. Suits all .8 c.c. (.049 cu. in.) motors. Placings in a whole string of contests prove this to be a tip-top competition design.
PET/812 C, D. ** 30p (6/-)



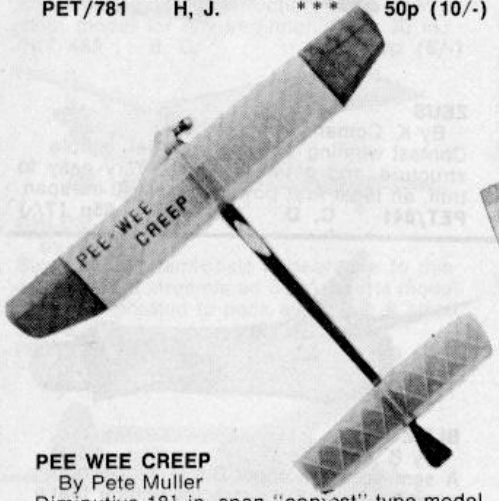
MINI WEAVER
By D. Posner
½A contest power model by an expert, with winning capabilities using a hot 049 (.8 c.c.) motor.
PET/1012 C. ** (35p 7/-)



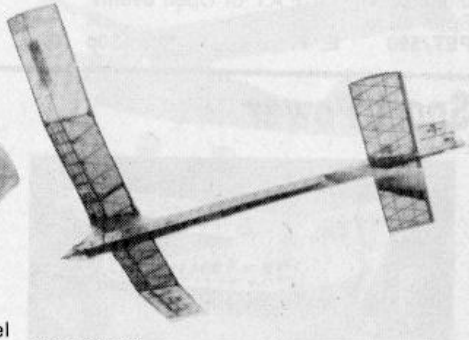
NIG-NOG
By Tom Smith
One of Britain's fastest climbing open power models, a record holder and winner of Shelley, Hamley and Frog Senior Trophies. 66 in. span polyhedral wing. For the experienced power flier only. 3.5—5 c.c.
PET/781 H, J. * 50p (10/-)**



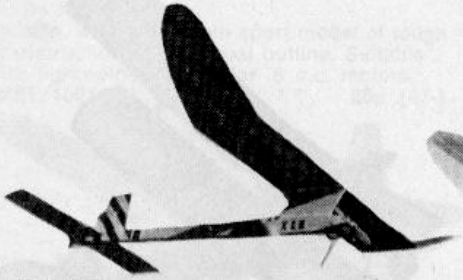
STOMPER
By George Fuller
Slab-sided contest power model with prize-winning performance. Very easy and inexpensive to build. Span 48 in.
PET/499 E, F (Beam) * 30p (6/-)



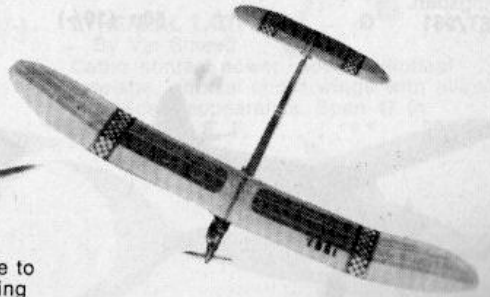
PEE WEE CREEP
By Pete Muller
Diminutive 18½ in. span "contest" type model for the U.S. Pee Wee .020 engine. Climbs like a rocket!
PET/732 A, B. ** 30p (6/-)



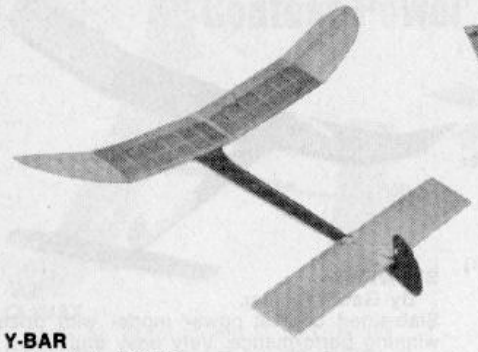
VINDALOO
By M. Dilly
A really hot ½A contest power model with a rocket-like climb. 45 in. span, excellent contest record.
PET/854 C, D. ** 30p (6/-)



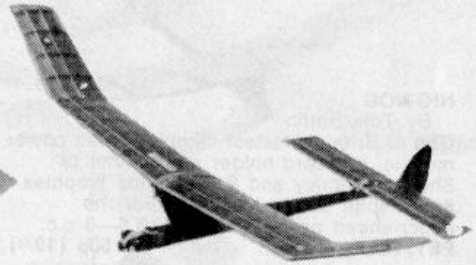
PULTERI
By O. Niemi
F.A.I. Power design from Finland. Simple to build and easy to trim. Flat bottomed wing section for fast climbing. Many contest successes in Finland and the Nordic Countries, including 2nd Nordic Countries Championships, 1960. Span 60 in., for 2.5 c.c. engines in F.A.I., or 3.5 c.c. if flown in open contests.
PET/764 G, H. ** 40p (8/-)



VITAL
By S. Savini
Top F.A.I. power design of 64 in. span featuring a variable incidence tailplane and auto rudder. For 2.5 c.c. engines.
PET/1041 G. * 40p (8/-)**

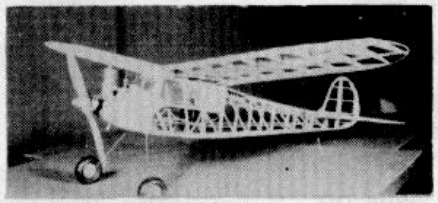


Y-BAR
By A. J. Brooks
Profile fuselage contest winning pylon design with large tailplane and rear mounted fin, for F.A.I. or Open events. Span 40 in.
PET/590 E, F. * 30p (6/-)



ZEUS
By K. Coman
Contest winning ½A power model, simple structure, and a terrific climb. Very easy to trim, an ideal first power model. 40 in. span.
PET/841 C, D. ** 35p (7/-)

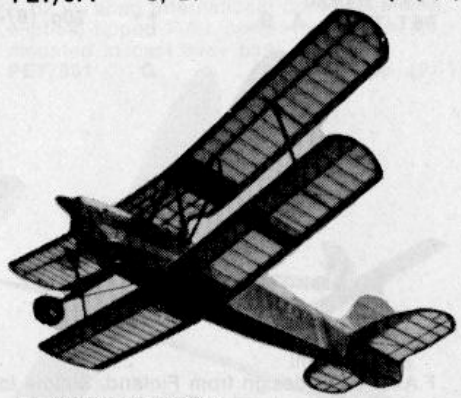
Sport Power



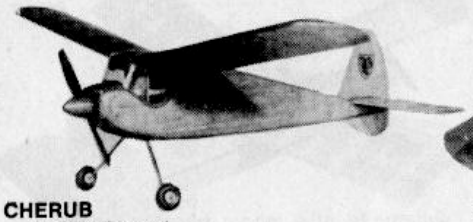
AIR TRAILS SPORTSTER
By B. E. Shereshaw
A true vintage sports model of the pre-WW2 era, the plan gives details for installing spark ignition engines; although modern engines can of course be used. 40 in. wingspan.
PET/961 G ** 50p (10/-)

BLITZ
By B. Osborne
A semi-scale all sheet B.A.C. Lightning powered by a .8 c.c. tractor engine that's hard to see in flight.
PET/871 C, D. * 20p (4/-)

BLACK MAGIC
By F. Hempsall
Elegance of appearance and performance make this one of the most popular power models in our range. Span 60 in.
PET/268 F, G, H. ** 50p (10/-)

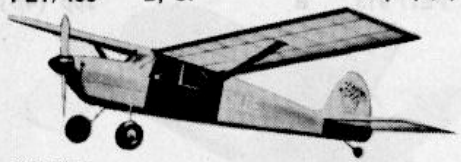


BROOK'S BIPLANE
By B. Brooks
No bipe was ever more famous than this one the prototypes of which have flown for hundreds of airborne hours. Amazingly stable and realistic, ideal for radio conversion, span 66 in.
PET/492 G, H. ** 50p (10/-)



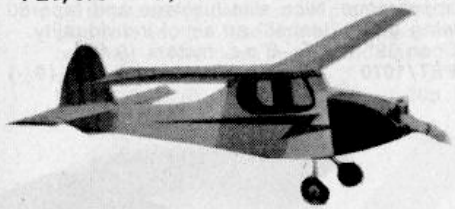
CHERUB
By Vic Smeed
An aptly named "baby." All sheet fuselage and simple wing construction make it an ideal model for any beginner. Span 30 in.
PET/485 B, C. * 30p (6/-)

DOOHICKY
By John Swift
Diminutive biplane with a sparkling performance. Only 25 in. span, it can be dismantled and carried about in a small case.
PET/565 B or C. ** 30p (6/-)



CHLOE
By R. Darr
Struts give a semi-scale appearance to this easy-to-build streamlined 36 in. sports model. Specially created to pack away into a small space.
PET/678 B, C. ** 30p (6/-)

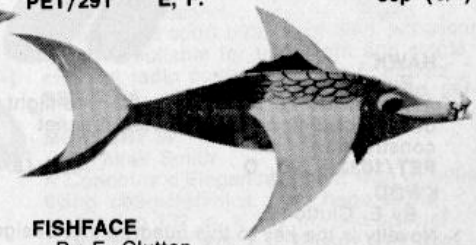
ENVOY
By C. A. Shaw
Cabin tricycle model of pretty appearance and good performance. Extremely safe to fly. Span 40 in.
PET/461 C, D. ** 25p (5/-)



CRICKET
By N. Shennan
A 32in. wingspan cabin sport model of tough construction and unusual outline. Suitable for lightweight radio. For .8 c.c. motors.
PET/1007 C ** 20p (4/-)

ETHEREAL LADY
By Vic Smeed
Cabin contest power model, elliptical fuselage, parallel chord wings with elliptical tips. Scale appearance. Span 47 in.
PET/291 E, F. ** 30p (6/-)

DEBUTANTE
By Vic Smeed
As the name implies, a pretty model with high performance and unblemished character. Specially printed plans include full photo detail and instructions for this 40 in. cabin sports job.
PET/493 C, D, E. * 25p (5/-)

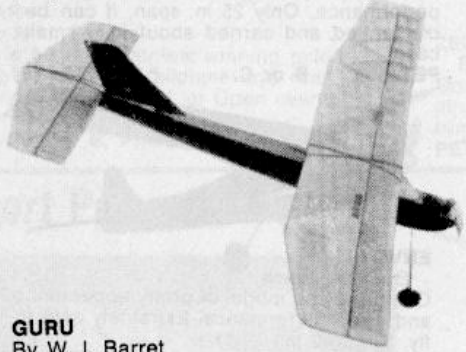


FISHFACE
By E. Clutton
Scale to the last gill, this 20-inch span novelty is made for Sunday sports flying.
U/851 B. * 20p (4/-)

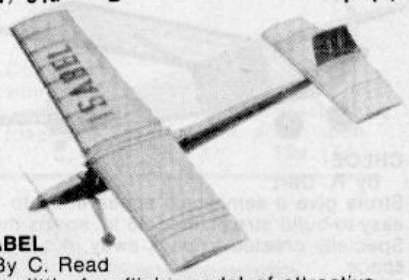
Sport Power

FRANKENSTEIN
By M. W. Thompson
Easily constructed slabsider power model, designed for precision flying. Span 50 in.
PET/346 **D, E.** ** **30p (6/-)**

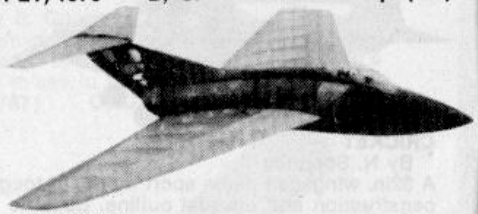
HORIZON
By R. Malmstrom
26 in. Shoulder wing .010 simple free flight power for small field flying.
PET/ 913 **B** * **20p (4/-)**



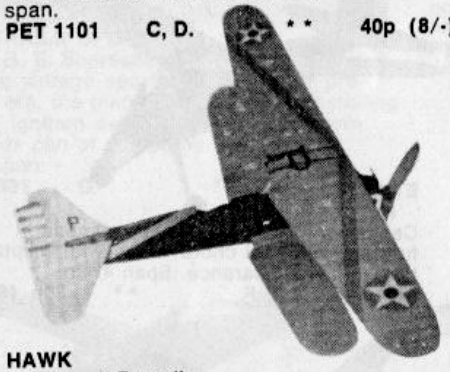
GURU
By W. I. Barret
A free flight sports model of unique design. A good flier with novel construction features. For .75-1.5 c.c. (.049-.09 cu. ins.) motors. 40in. span.
PET 1101 **C, D.** ** **40p (8/-)**



ISABEL
By C. Read
Easy little free-flight model of attractive appearance. Nice slim fuselage and tapered wing gives "Isabel" an air of individuality. Span 39" for .5—8 c.c. motors (0.49).
PET/1070 **B, C.** * **45p (9/-)**



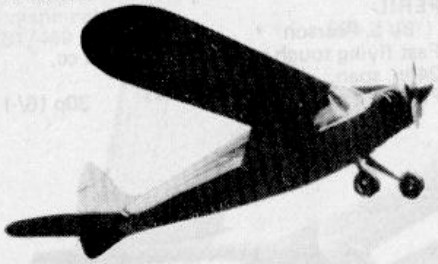
JAVAHAWK
By P. E. Norman
Unique ducted fan design by Britain's recognised expert in this field. Ply formed fuselage gives very strong yet light structure. Full details for building model and fan are given on plan. This model climbs fast! For 1.5 c.c. engines. Span 27½ in.
U/740 **E, F.** *** **40p (8/-)**



HAWK
By A. J. Dorrell
A semi-scale 28 in. span profile free-flight design for .049 cu. in. motors. All sheet construction.
PET/1032 **C, D** * **40p (8/-)**

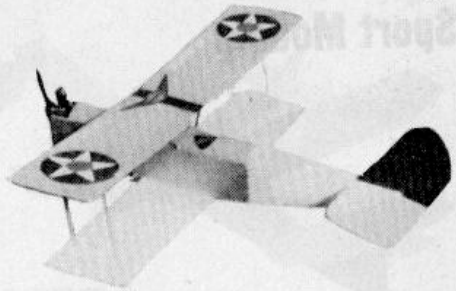
KWOD
By E. Clutton
Novelty is the key to this quadraplane design, though not without purpose, for it can be flown within the boundaries of a small field. Span 20 ins. for .5—.8 c.c. engines.
PET/787 **C.** * **40p (8/-)**

MADCAP
By Vic Smeed
Beginner's power model with alternative fuselages, profile contest or cabin sports. Very tough and virtually fool and crashproof. Span 45½ in.
PET/470 **D, E.** * **50p (10/-)**



MAM'SELLE
By Vic Smeed
Most attractive cabin sport plane with elliptical section fuselage and neat nose cowling. A fine flyer in all conditions. Wing span 37½ in.
PET/612 **B, C, D.** ** **30p (6/-)**

MANDY
By Mike Green
The novice's ideal first power model. Elementary construction combined with sleek lines add up to a perfect local park flying model. Wingspan 45 in. Engines 1—1.5 c.c.
PET/861 **D, E, or F.** * **30p (6/-)**



MINI CLOWN
By T. Stothers
Sports F/F biplane for small radial mounted engines. Features realistic lines from simple all sheet construction.
PET/974 **B, C.** * **20p (4/-)**

MOSS TROOPER
A 35 in. wingspan semi-scale sport power model featuring low wing and large cabin.
PET/962 **C** * **35p (7/-)**

MPUNKU
By A. W. Bennie
An all sheet sport biplane of 33in. wingspan which is suitable for free flight and single channel radio control. For .8 c.c. motors.
PET/1001 **C** * **20p (4/-)**

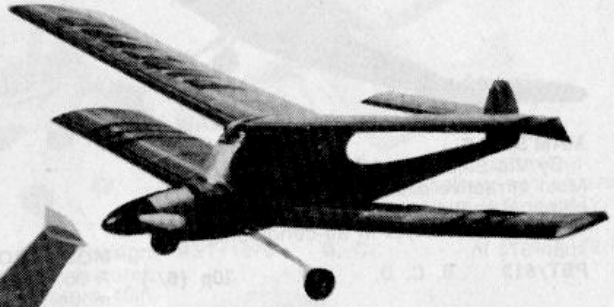
MERCURY IV
By Mick Smith
A Concours d'Elegance winner with excellent flying characteristics. Two huge plans measuring 132 in. x 38¼ in. and special instructions for this 8 ft. beauty. An ideal subject for the connoisseur and "big stuff" radio-control enthusiasts.
PET/504 **J, K, L, M.** *** **£1**

Sport Models

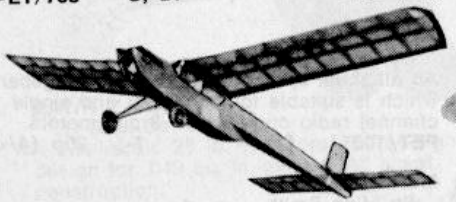
MOSES
By W. I. Barrett
Novel sportster for flying off water, or over grass. 31 in. span, using .5-.8 c.c. engines. Features detachable wings.
PET/995 B. C * 40p (8/-)

PERIL
By S. Pearson
Fast flying tough sportster for .5 - .8 cc, 24 in. span.
PET/921 B,C. ** 30p (6/-)

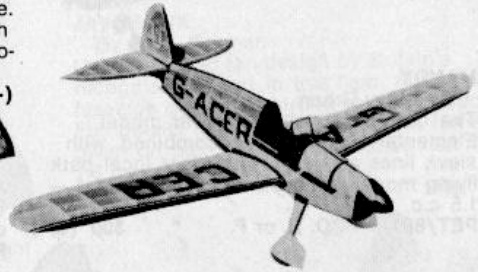
MUDHOPPER
By J. C. Trinder
Low-wing sport design for .75—1 c.c. engines and having a near-scale appearance. Gets its name for ability to withstand rough landings on bad terrain. 48 in. wingspan, two-piece wings, open cockpit or bubble hood.
PET/705 C, D. ** 30p (6/-)



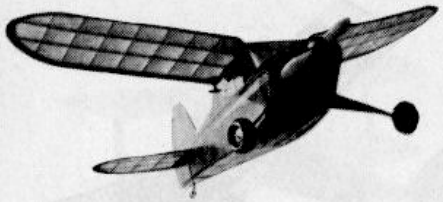
PIPETTE
By C. Read
Unusual cabin biplane sportster which is easy to trim and fly. 35 in. wingspan. For .5-.8 c.c. motors.
PET/1009 C ** 20p (4/-)



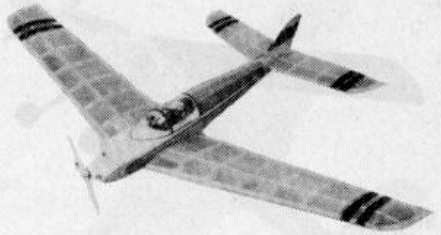
PEPE
By A. Healey
Want an easy to build model for that spare .3 to .8 c.c. engine? Here is one that the least experienced modeller can build without difficulty. 36 in. wingspan, has novel fuselage shape.
PET/835 B, C. * 25p (5/-)



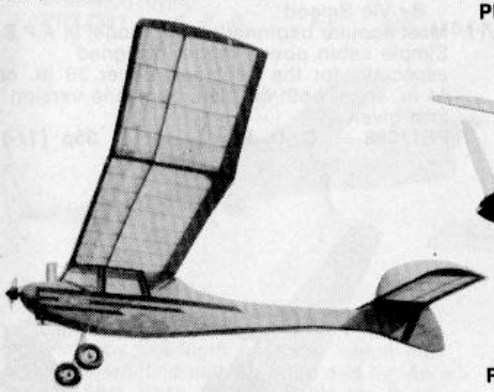
PINKY
By C. Read
Unusually smart little low wing sports free flighter of 35½ in. wingspan .5—.8 c.c. powered. Completely stable in flight and offers to any modeller a great deal of enjoyment.
PET/813 C. ** 30p (6/-)



POPSIE
By Vic Smeed
Rugged sports model, 38½ in. span, capable of accommodating lightweight radio-control and absorbing a tremendous amount of punishment.
PET/460 C, D, E. ** 50p (10/-)

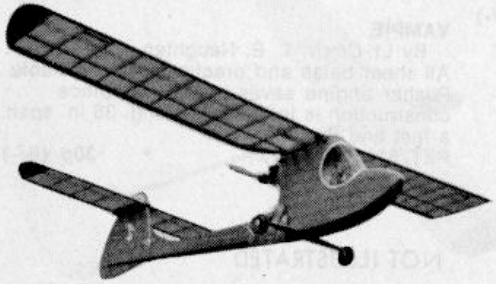


RAMBLER
By R. Howe
Novel free flight sport model of semi scale design and modernistic lines. 35 in. wingspan for .020 cu. in. (.3 c.c. motors).
PET/1011 B ** 20p (4/-)

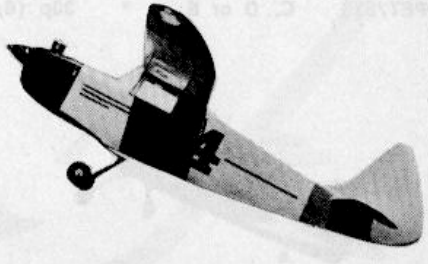


POPPET
By C. Read
A neat little easy-to-build sportster of rugged construction. Suitable for 0.5—0.75 c.c. engines. Span 37 in.
MA/334 C, D. * 20p (4/-)

ROARING 20
By B. A. Striegler
Nifty sport biplane of very attractive and practical lines and high degree of stability. 28½ in. wingspan, sheet fuselage sides, easy-to-build and a sure flyer.
PET/695 B, C. ** 30p (6/-)

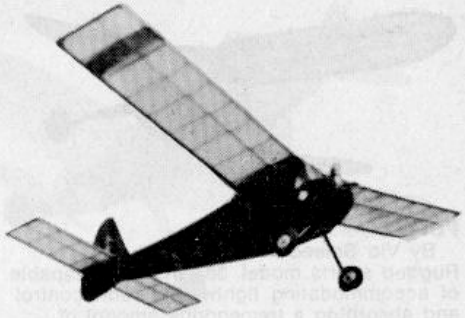


PUSHY-CAT
By Vic Smeed
Neat little pusher model, of straightforward construction with all-sheet fuselage. Winner of 1953 Bowden Trophy. Stable flight, excellent take-offs and landings. 44 in. span.
PET/528 C, D. ** 50p (10/-)



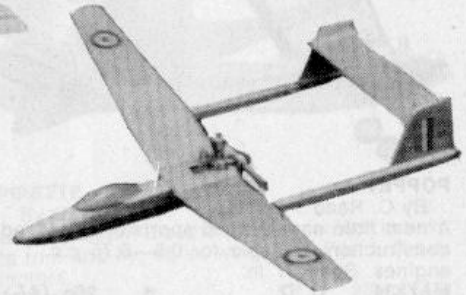
SHARP SCOOTER
By K. Laumer
A slick 29 in. span sport free flight for .5—.8 c.c. engines, the Sharp Scooter has eye appeal from every angle. Simplest possible structure enables the modeller to put this model in the air with a minimum of delay.
PET/804 B, C. * 30p (6/-)

SKYTALE
By R. A. Chivrall
Large near-scale model for sport or radio control conversion. Voluminous cabin permits use of bulky R/C equipment and well spaced structure makes it an easy model to build. Two plan sheets give full detail for this 78in. beauty.
PET/636 **G, H, J.** *** **75p (15/-)**



TOMBOY
By Vic Smeed
Most popular beginner's sport model in A.P.S. Simple cabin power model designed especially for the beginner. Either 36 in. or 44 in. span, both on plan. Seaplane version also given.
PET/398 **C, D, E.** * **35p (7/-)**

SNOW WHITE
By M. Bridge
Attractive 40 in. Sport flyer suitable for beginners. All-sheet fuselage and simple tapered wing constructions with constant thickness ribs.
PET/585 **C, D or E.** * **30p (6/-)**



VAMPIE
By Lt.-Cmdr. T. E. Naughten
All sheet balsa and practically unbreakable. Pusher engine saves props., one-piece construction is incredibly strong. 36 in. span, a fast and thrilling flyer.
PET/619 **C. D.** * **30p (6/-)**

TERRIER
By Brian Lewis
Quick building, strength and attractive lines ensure popularity for this 33 in. span design. Excellent for the newcomer to power flying.
PET/553 **B or C** * **30p (6/-)**

NOT ILLUSTRATED

UPBURYS CONVERTIBLE
By G. Elsegood
Versatile sports free flight model which can be flown as a glider, power or radio controlled model, 48 in. span. For .75 c.c. motors.
PET/G/1010 **C** ** **20p (4/-)**

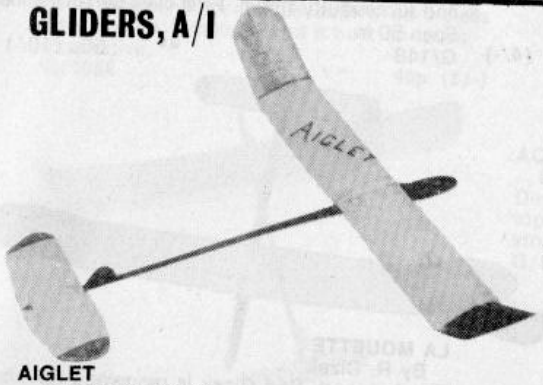
VENTURE
By M. Campbell
Semi-scale, open cockpit biplane for inverted motors. Span 42 in. Great for precision flying.
PET/391 **E, F, G.** ** **50p (10/-)**

WHIPPET
By J. Wylie
A really smart little biplane for round-the-pole or fair weather flying. Makes the most of the current range of small motors. Span 17½ in. Suitable for engines of .15—.32 c.c.
MA/309 **B, C.** * **20p (4/-)**

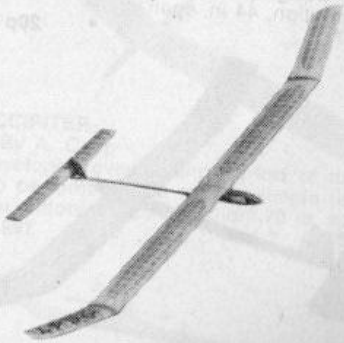
WEE SNIFTER
By J. D. McHard
A snappy free-flight sportster which the novice will find easy to build and fly. An all-time best. Span 30 in. Suitable for .5—.8 c.c engines.
MA/340 **B, C.** * **30p (6/-)**

WINDBAG
By C. Read
Airship type sports model, span 9 in. length 31 in., simple construction for .75 c.c. tractor engine on nose.
MA/386 **C, D.** * **20p (4/-)**

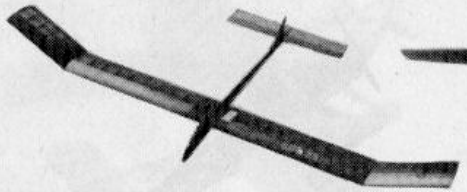
GLIDERS, A/1



AIGLET
By Martin Bridge
Refined high performance model to the popular class of small glider. Plan includes photo of finished model and complete instructions. Span 45½ in. U.S. Nationals winner and holder of several duration records.
G/643 * **25p (5/-)**

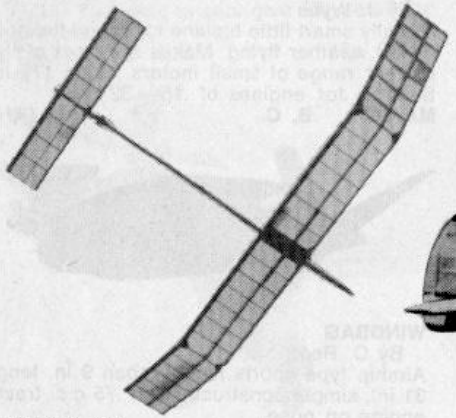


AMI
By A. Brocklehurst
A 54in. span glider to A1 specifications. The Model incorporates a fibre glass rod for the fuselage. A fine companion to No. 3 by the same designer.
G/1097 ** **20p (4/-)**



CORIOLIS
By K. Coman
This is a simple to build 45½ in. span A/1 glider, with a real contest pedigree, including two first places at the R.A.F. championships.
G/855 ** **30p (6/-)**

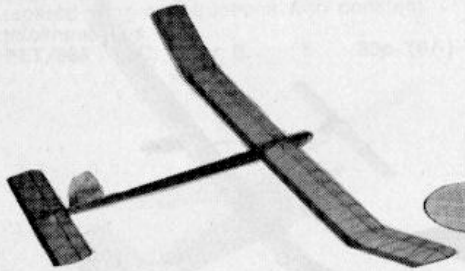
FOKA
By S. Zurad
Simple A/1 glider design of 50 in. span and semi-scale appearance.
G/1029 * **20p (4/-)**



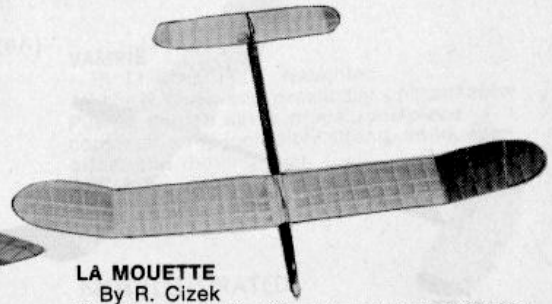
DOWNBEAT
An easy to construct A/1 specification glider designed to ensure fool proof construction, 44 in. span.
G/867 * **20p (4/-)**

GOLDEN WINGS
By Vic Smeed
Simple 44½ in. design to A/1 specification. Already very popular for Club "one model contests" this design is a certain success.
G/594 * **20p (4/-)**

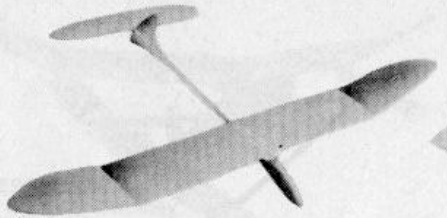
IVORY GULL
By R. F. L. Gosling
Probably the most popular glider in our range, many hundreds of this model have been built and successfully flown. First-class performance. Span 50 in.
G/148 ** **50p (10/-)**



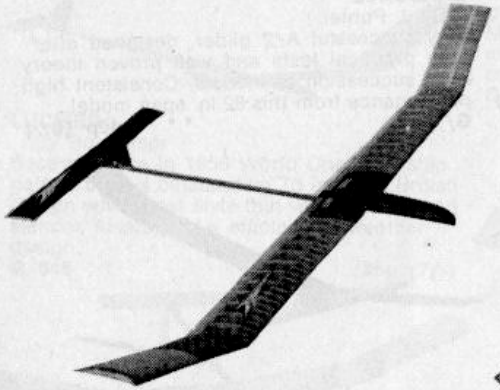
FLYING ENTERPRISE
By C. Campbell
A/1 class glider of 52½ in. span by a Scottish enthusiast. Simple structure, with even chord "W" brace wing rib pattern wing. Makes an ideal "second" glider in one's aero-modelling career.
G/786 * **40p (8/-)**



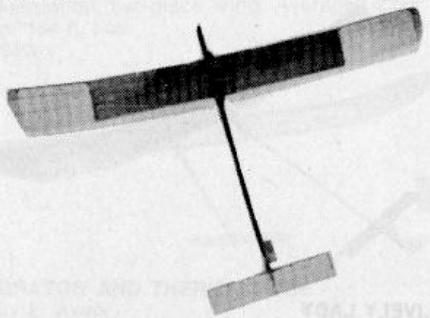
LA MOUETTE
By R. Cizek
Czech expert, Rad Cizek is renowned for his clever, high performance, contest models and this one is no exception. The A/1 class, which it meets admirably (Span 47 in.) is likely to become widely adopted. Already included in U.S.A. and European contests programmes, it will be a perfect event for La Mouette.
G/774 ** **20p (4/-)**



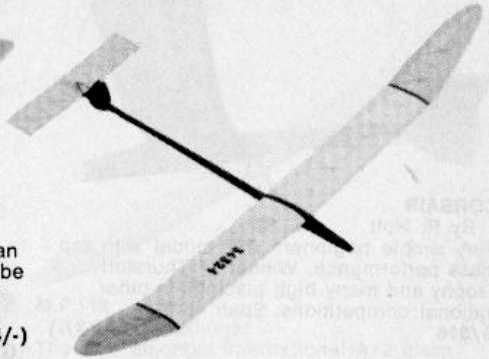
SIESTA
By P. Gasson
To A/1 specification, this novel 48 in. span glider has all-sheet construction and can be built ready to fly in an afternoon! Elegant lines and good performance.
G/696 * **20p (4/-)**



SPANISH FLEA
By C. Morris
51in. span A/1 glider of a very high performance. Plan details both a fibre-glass (fishing rod) fuselage and a built up balsa alternative.
G/1058 ** **40p (8/-)**



STROLLING BONE
By D. H. White
A simple A/1 glider with two piece wings of 50 in. span, designed by an expert for beginners but still capable of contest performance.
G/933 * **20p (4/)**

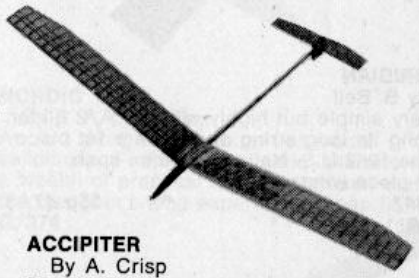


SYNCOPATOR
By P. Newell
A/1 Specification glider with elliptical wings and geodetic structure. A regular contest winner, span 55 in.
G/896 * **20p (4/-)**

NOT ILLUSTRATED

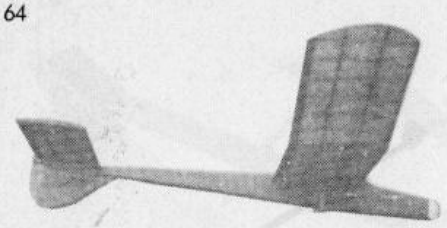
TELSTAR
By M. Pressnell
An easy to build A/1 glider of 49in. wingspan with an excellent performance.
G/1006 ** **20p (4/-)**

GLIDERS, A/2

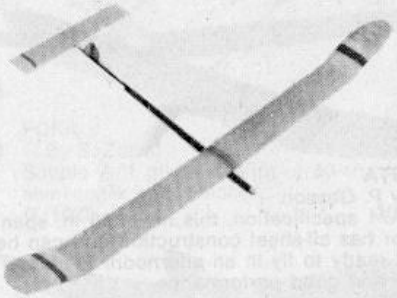


ACCIPITER
By A. Crisp
Developed over a long period of time, this top performing A/2 retains simple lines and straightforward construction. 73 in. span.
G/997 ** **40p (8/-)**

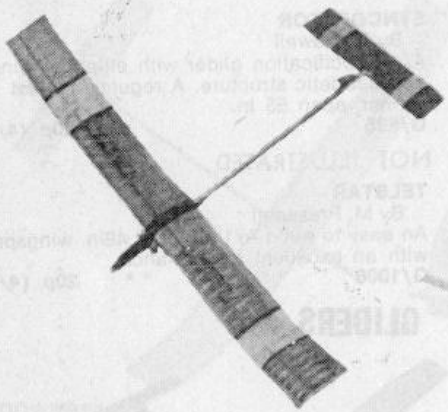
AURIKEL
By H. Hansen
An A/2 World Championship Winner with simple construction and high performance from Denmark. Span 65 in.
MA/171 * **40p (8/-)**



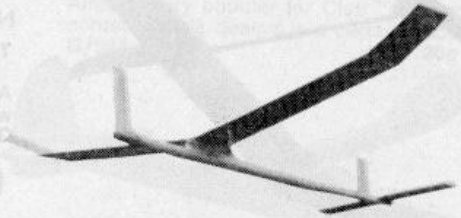
CORSAIR
By R. Holt
Very simple beginners A/2 model with top class performance. Winner of Thurston Trophy and many high placings in other national competitions. Span 48 in.
G/516 * **35p (7/-)**



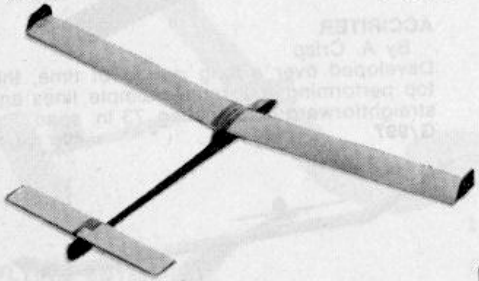
GRADUATE
By J. Punter
Very successful A/2 glider, designed after both practical tests and well proven theory on a succession of models. Consistent high performance from this 82 in. span model.
G/1044 ** **40p (8/-)**



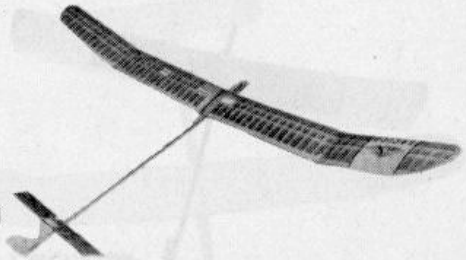
FLORIDIAN
By B. Bell
A very simple but highly efficient A/2 glider, among its long string of wins is a 1st place at the 1962 U.S. Nationals. 66 in. span. Two-piece wings.
G/847 ** **35p (7/-)**



HANGER
By T. Faulkner
A simple glider fuselage, specifically designed for magnet steering. Is suitable for almost any set of A/2 surfaces.
G/972 ** **20p (4/-)**



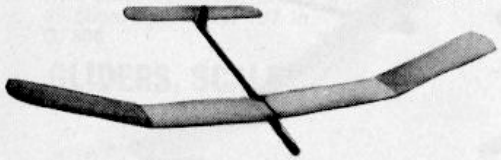
G.B.IX
By G. Brewin
Leading British A/2 design in 1957 U.K. Team Trials has sheet diamond fuselage, drooped T.E. section and tip fins for shallow dihedral on 66 in. two-piece wing.
G/676 * **30p (6/-)**



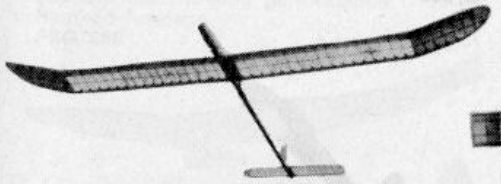
LIVELY LADY
By E. Drew
An elegant A/2 glider design by 1969 World Champ. Elton Drew. Careful construction is the keynote to success for this superb model, one of the finest ever produced in Britain. Span 81 in.
G/1073 *** **50p (10/-)**

LEPRECHAUN
By R. A. Twomey
This low-aspect ratio sailplane is remarkable for the astounding performance achieved straight from the design board. First flight was 20 min. 20 sec., and the original has more flights of over ¼ hour than under to its credit. Span 103 in.
G/370 *** **75p (15/-)**

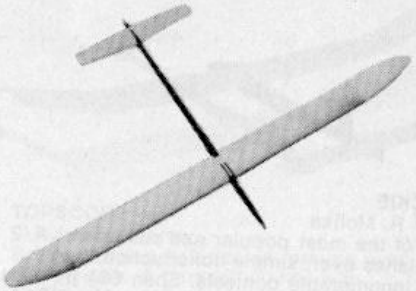
LUCIFER
By Bob Amor
Second place in 1956 World Championship gained by this outstanding 75 in. span British design with latest style thin wing section and slender fuselage. An efficient all-weather design.
G/645 * **35p (7/-)**



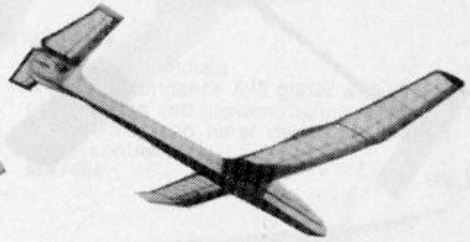
MEANDERER
By J. Baguley
96 in. span, large lightweight, can meet F.A.I. rules, has fine contest record, very simple construction, two-piece wing. Averages 2:50 from 164 ft. line.
G/683 ** **40p (8/-)**



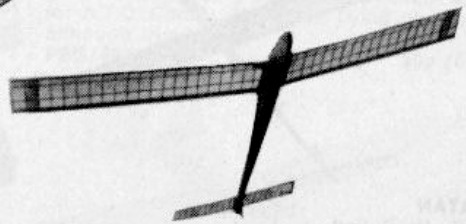
MIGRATOR AND THERMALNOSE
By E. Avory
A 74-in. span A/2 glider from Canada. Two versions on the same plan, both very easy to build. Thermalnose came second at the 1963 World Championships, losing the contest by a mere nine seconds and is a direct development of Migrator.
G/826 ** **40p (8/-)**



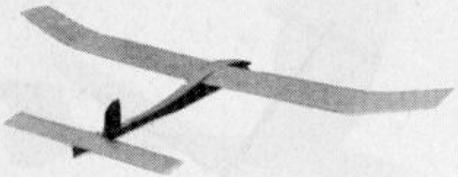
M.P. 12
By Max Hacklinger
The elite amongst International A/2 class gliders, this 86 in. span German design by Max Hacklinger will reward the conscientious modeller who likes intricate detail in construction. Has many novel features.
G/573 *** **50p (10/-)**



NORDIC TERN
By R. F. L. Gosling
An A/2 design by an expert at model sailplanes. Features automatic ailerons and a wealth of practical ideas developed during the designer's long experience. Span 66 in.
G/374 ** **50p (10/-)**

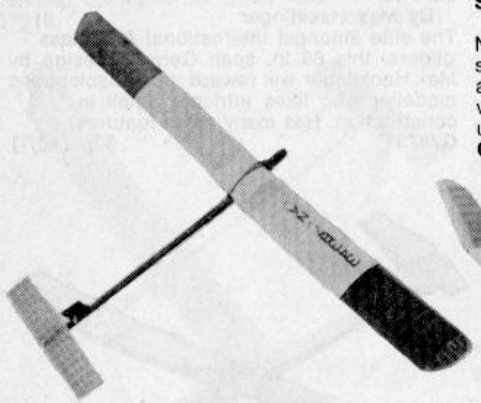


OMEGA
The 1955 Queen's Cup Winner, a very simple A/2 with excellent contest record. Constant chord wings make it suitable for beginners. Wing span 64 in.
G/614 * **30p (6/-)**

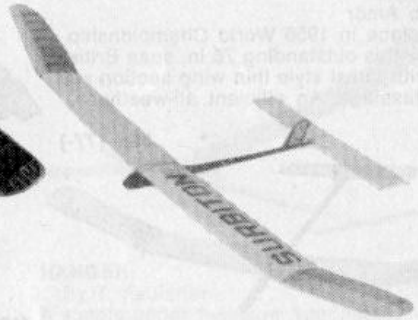


QUICKIE
By R. Monks
One of the most popular and successful A/2 sailplanes ever; simple construction, has won innumerable contests. Span 66½ in.
G/517 * **50p (10/-)**

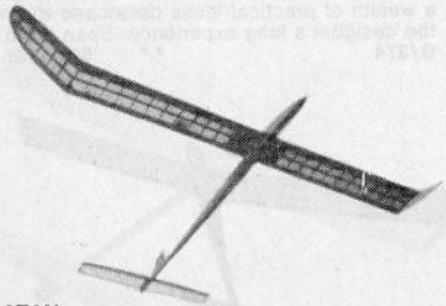
SANS EGAL
By R. Hyvarinen
Nordic countries Championship winner, a super job in all respects with admirable all-weather performance. 80 in. wingspan with detachable halves, hardwood wisely used for spars and longerons.
G/725 *** **40p (8/-)**



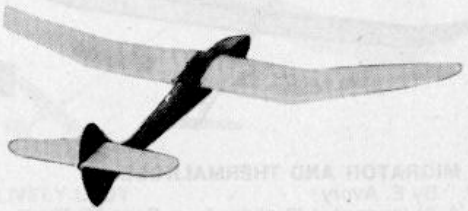
ROLLING STONE
By D. White
A top notch A/2 contest design with a tremendous contest record, multi spar wing spans 76 in. and is pylon mounted.
G/876 ** **40p (8/-)**



SHORTY
By J. Hancock
Ultra short nose A/2 for thermal snifting. Successes include several wins at big rallies; easy construction allows for breaking down to small parts for transport. 65 in. span.
G/583 ** **30p (6/-)**

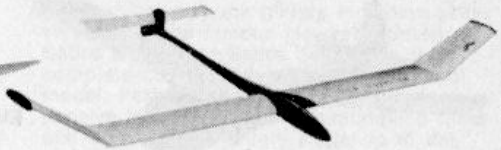


SATAN
By W. Pullen
Longer tail moment version of the famous 'Altair' with other features from 'Lucifer,' by another South Essex clubman. Simple to build and with two-piece wings measuring 76 in. span, it boasts high performance for little constructional effort.
G/717 * **30p (6/-)**

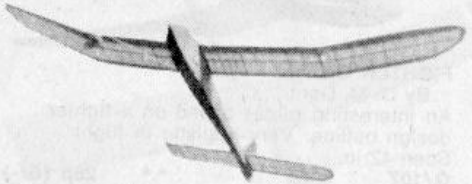


SUNCLIPPER
By A. J. Smith
Theory into practice. A simple high-performance design by the author of "Simple Aerodynamics." Span 60 in.
G/192 ** **35p (7/-)**

SUNSPOT
By R. Yeabsley
Outsize ultra-lightweight sailplane of easy construction, and holder of many contest honours. (Weight 2¾ lb.) Span 120 in.
G/283 ** **60p (12/-)**



TOPSCORE
By J. B. Hannay
British leading A/2 design, proven over many years. A contest winner with construction simple enough for beginners. Unusual tip fins on 73 in. wing with tongue and box attachment. Placed 8th in 1957 World Championships.
G/684 ** **30p (6/-)**



THERMALIST
By R. Minney
Largest size sailplane to F.A.I. limits. Cabin type slabsider, even chord wings with elliptical tips. Span 137 in.
G/306 ** **£1**

WICHITA—5
By M. Woodhouse
A high performance A/2 glider with simple construction and geodetic tailplane. Full auto rudder and timer details. Winner of many contests.
MA/404 ** **40p (8/-)**

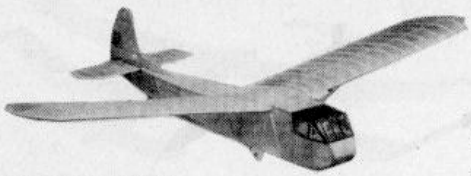
GLIDERS, SCALE

BREGUET 901
By A. Millon
Elegant French high performance sailplane with very high aspect ratio 67½ in. wing capable of surprising performance. Planked fuselage.
FSG/680 ** **30p (6/-)**

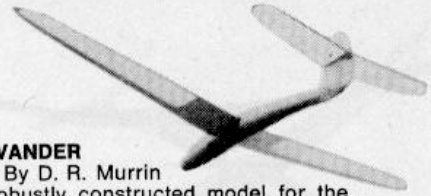
SLINGSBY (KIRBY) TANDEM TUTOR (T.31)
By J. Wilson
A 54 in. scale model of a popular training glider used in many clubs and by the R.A.F. for A.T.C. Cadets. Has good flying qualities although true scale.
FSG/692 ** **30p (6/-)**

D.F.S. REIHER
By P. M. H. Lewis
An unusual scale prototype. This 6 ft. 3in. wingspan glider has all the grace of the original.
MA/315 ** **40p (8/-)**

SLINGSBY T-21B
Slope soaring or towline scale model of the famous 'Sedbergh' or 'Barge' 56 in. wingspan.
FSG/1018 ** **20p (4/-)**



WACO HADRIAN
By O. J. Lee
A fine flying scale model of the famous troop-carrying glider, and with a superb performance. Span 50 in.
FSG/219 ** **25p (5/-)**

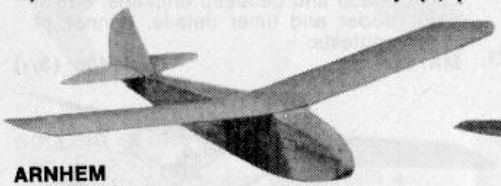


EVANDER
By D. R. Murrin
Robustly constructed model for the enthusiast. Has fine flying qualities. Span 66 in.
G/224 ** **35p (7/-)**

GLIDERS, GENERAL

ARCHANGEL
By L. Gabriels
A ruggedly-designed sailplane, ready to stand up to hard knocks in rough weather flying. High performance. Span 72 in.
G/368 ** **30p (6/-)**

FIGHTER GLIDER
By D. M. Dent
An interesting glider based on a fighter design outline. Very realistic in flight. Span 42 in.
G/107 ** **25p (5/-)**



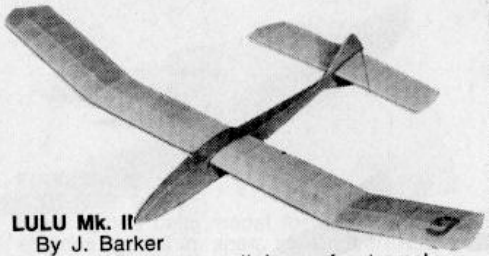
ARNHEM
By T. Hervey
Designed for the younger modeller, with all-sheet sides and simple construction, yet with realistic appearance. Span 30 in.
G/263 * **20p (4/-)**

HOVERKING
By P. Gilbert
Slope soarer by one of Britain's most expert sailplane builders. Simple structure, neat appearance, has been used with tow-line and R/C. Span 72 in.
G/379 ** **50p (10/-)**

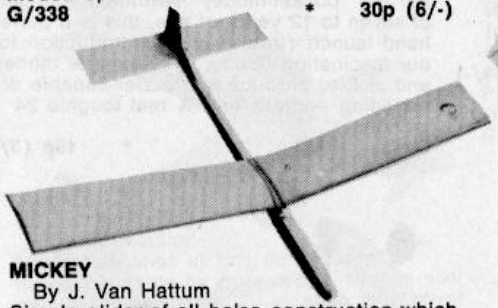
CHICK AND CZECK
Two full size all sheet gliders. Hours of fun and cheap to build.
G/905 * **20p (4/-)**

NOT ILLUSTRATED
CHUCK GLIDER TRIO
Three fine designs for all balsa chuck gliders.
G/958 * **20p (4/-)**

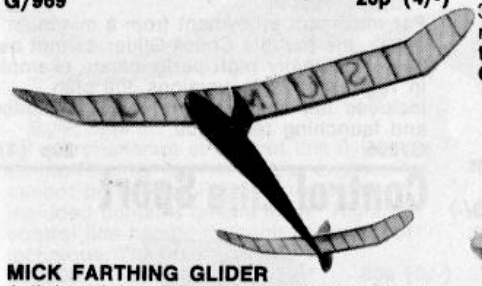
IGO
By G. W. W. Harris
An ideal machine for contest flying, the original made one flight of over 80 miles. Span 60 in.
G/222 ** **30p (6/-)**



LULU Mk. II
By J. Barker
A high-performance sailplane of extremely simple construction, and an ideal beginner's model. Span 50 in.
G/338 * **30p (6/-)**



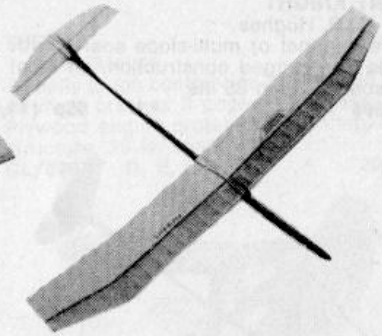
MICKEY
By J. Van Hattum
Simple glider of all balsa construction which is ideal for raw beginners. Small size, 23½ in. wingspan, keeps the model robust and safe to trim and fly.
G/969 * **20p (4/-)**



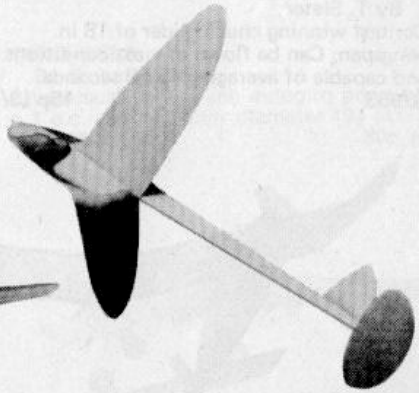
MICK FARTHING GLIDER
A lightweight glider by an acknowledged expert in this class. Span 40 in.
G/228 ** **20p (4/-)**

MOBY DICK
By E. Smith
Shoulder wing high-performance contest sailplane, utilising laminar flow wing section. Span 82½ in.
G/310 *** **75p (15/-)**

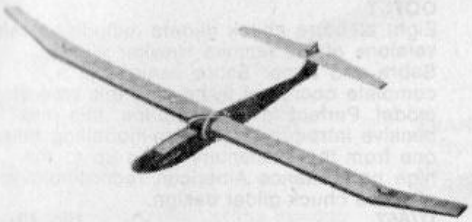
NOT ILLUSTRATED
OCTET
Eight all-balsa chuck gliders including scale versions of the famous Hawker Hunter, Sabre and Super Sabre designs in a complete course of flying with this type of model. Perfect for club groups, this inexpensive introduction to aero-modelling takes one from the elementary stage up to the high performance American record-holding all-balsa chuck glider design.
U/657 * **15p (3/-)**



PHOEBUS
By W. I. Barrett
30in. span sports glider, which will teach the novice all aspects of trimming and towing technique. Simple yet strong construction.
G/1052 * **20p (4/-)**

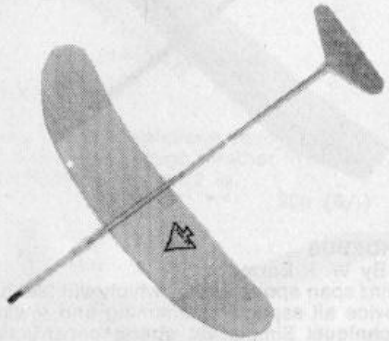


SAILAWAY
By Vern Clements
A 15 in. chuck glider in profile or pod and boom form, also a little glider for indoor work, only 6 in. span. An ideal plan to introduce the novice to this type of flying.
G/730 * **15p (3/-)**



SILENT KNIGHT
By D. R. Hughes
Single channel or multi-slope soarer with simple and rugged construction, an ideal first soarer. Span 85 ins.
MA/398 ** **55p (11/-)**

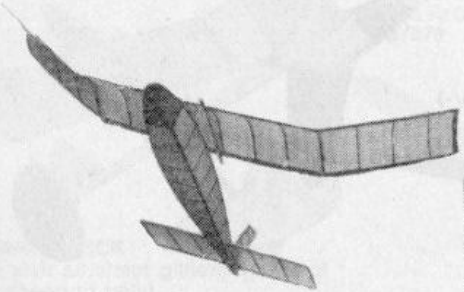
WHIZZLER
By Captain K. Laumer
For the "pocket-money" restricted youngster of seven to 12 years of age, this is a perfect hand launch (throw) glider introduction to our fascinating hobby. It takes little money and skill to produce a Whizzler capable of providing endless fun. A real toughie 24 incher.
G/791 * **15p (3/-)**



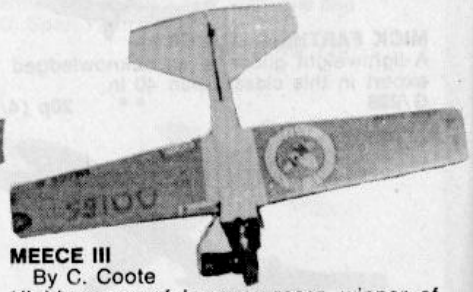
SLARMI
By T. Slater
Contest winning chuck glider of 18 in. wingspan. Can be flown in most conditions and capable of averaging 45-50 seconds.
G/953 * **15p (3/-)**

YELLOW BIRD 13 & 20
By A. Webber
For maximum enjoyment from a minimum outlay, the humble Chuck-Glider cannot be beaten. A really high performance example in 13 in. and 20 in. versions, the plan includes full building information, trimming and launching technique.
G/805 * **20p (4/-)**

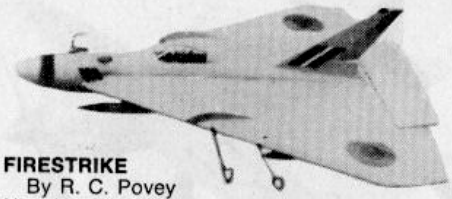
Control Line Sport



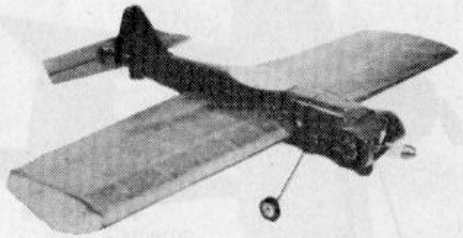
WALTHEW GLIDER
By R. Scott
A novice's first glider, this model has simple yet strong construction. Span 29 in.
G/341 * **20p (4/-)**



MEECE III
By C. Coote
Highly successful **mouse racer,** winner of the 1970 'Nats' event, yet is extremely quick easy and cheap to make. Ideal introduction to racing model aircraft using the popular high performance .049 cu. in. motors. Full details of Cox Golden Bee modifications and contest rules provided on plan.
CL/1091 **C, D.** * **20p (4/-)**

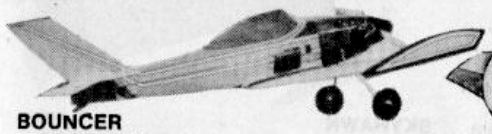


FIRESTRIKE
By R. C. Povey
Novel sports delta model for .5—.8 c.c. engines and 13 in. span. Ideal control-line trainer, and will fly in very strong winds.
CL/980 **C, D.** ** **30p (6/-)**



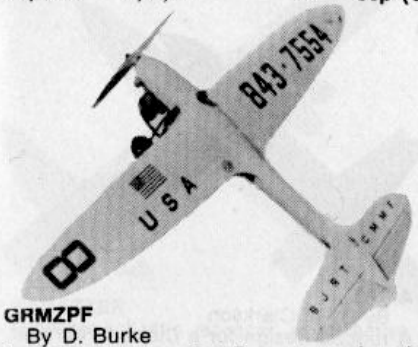
TUFFY
By M. Maude
A really tough control line trainer, will bounce off most crashes if covered in nylon. Plywood engine protector and simple structure, 28 in. span.
CL/829 **D, E, F.** * **20p (4/-)**

CUPID
By Ron Moulton
Near-scale lines of this small Racer make it suitable for pure sport flying as well as club contest work. 20 in. span, with novel wing construction in sheet, and neat u/c it flies at 70 m.p.h. with A.M.15.
CL/708 **D, E.** ** **30p (6/-)**



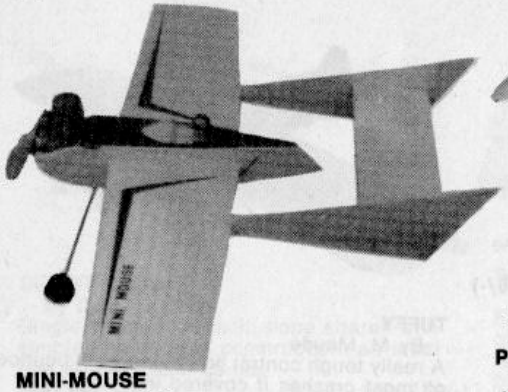
BOUNCER
By P. Moir
As a first attempt at control line flying this 24 inc htrainer for 1—1.5 c.c. engines cannot be beaten. Full instruction sheet included contains details for a "Rigidrist" control line handle to teach correct pilot technique. The ideal trainer.
CL/808 **D, E, F.** * **30p (6/-)**

TYRO GYRO
By D. Longman
An unusual control-line autogiro powered by a 1 c.c. engine. Rotor diameter 19½ in.
MA/139 **E.** * **30p (6/-)**

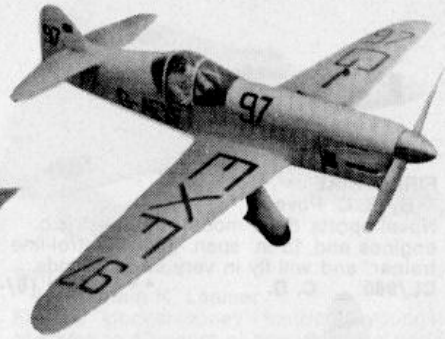


GRMZPF
By D. Burke
A 36 in. wingspan **Rat Racer** from America, fast, semi-streamlined.
CL/940 *** **30p (6/-)**

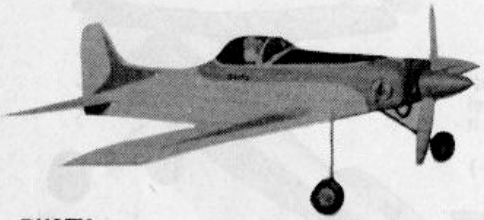
VEDETTE
By W. I. Barrett
An unusual C/L stunt/sport design featuring mid wing, vee tail and tricycle undercarriage to give distinctive appearance. Wingspan 30 in.
CL/975 **E, F.** ** **35p (7/-)**



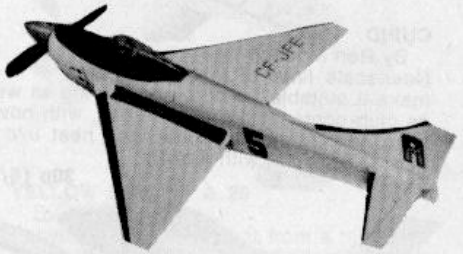
MINI-MOUSE
By K. A. Day
For the smaller engines 1.5 to 2.5 c.c. this **mini-rat-racer** fills the bill ideally for those who want quick (and cheap) results.
CL/825 E, F, G. * 30p (6/-)



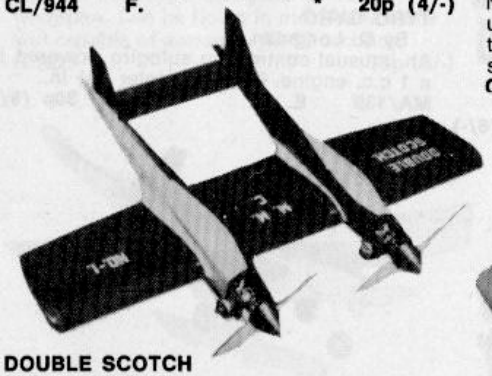
PERCIVAL MEW GULL
By H. C. Thomas
Accurate scale Racer, capable of 75 m.p.h. with a plain bearing engine. Wing span 24¾ in.
CL/600 G. * * * 25p (5/-)



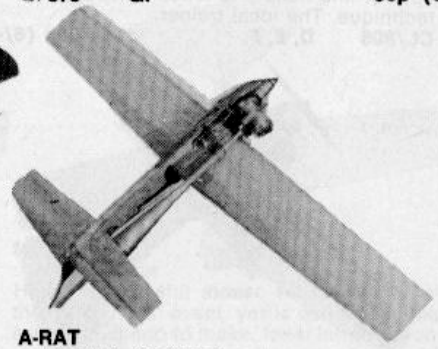
DUSTY
By I. Barrett
An unusual 26 in. wingspan C/L sports model combining good looks and detail for flour spraying by third line, together with simple construction. Very easy to fly.
CL/944 F. * 20p (4/-)



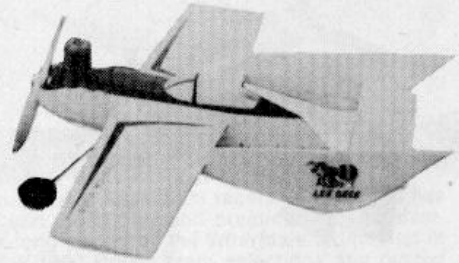
SKYHAWK
By L. Ellis
New look in delta wing from Canada, trike u/c and very simple construction, meets the S.M.A.E. Class A specification. 18 in. span.
C/679 G. * 30p (6/-)



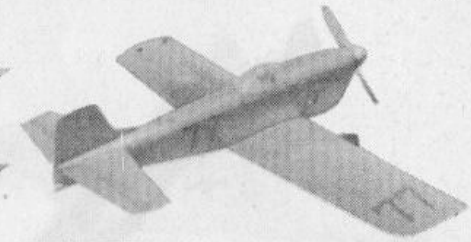
DOUBLE SCOTCH
By J. M. Davidson
An unusual twin engined stunt/combat model, to suit motors of 1.5 to 3.5 c.c. capacity. This 34 in. model is simple to build, yet is strong enough to withstand all the rough and tumble encountered in flying over several seasons.
CL/1069 2 engines F. G, H. * * 50p (10/-)



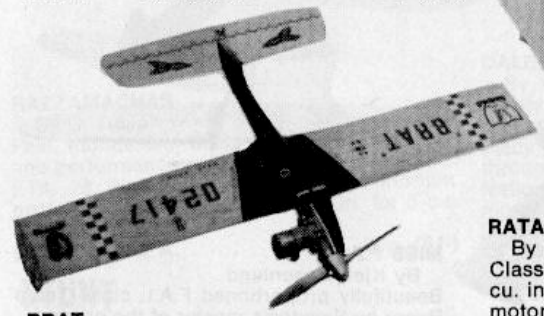
A-RAT
By D. C. Clarkson
A rugged design for a Class A rat-racer. 26 in. span. For 2.5—3.5 c.c. motors. Very fast.
CL/1074 G, H. 20p (4/-)



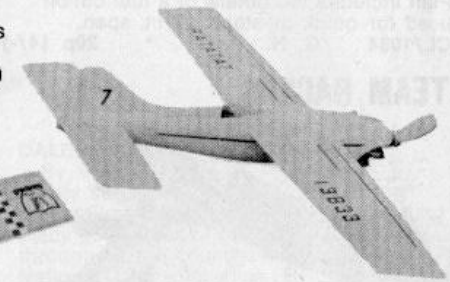
SUPERMOUSE
By K. A. Day
Rat Racing remains unhindered by detailed rules, and will appeal to the many individualists.
Top line performance does not necessitate "tuned" engines. Models are easy to build and fly. This larger version for .40 cu. in. is 27 in. span, flies at 90 m.p.h. or more.
CL/823 G, H, J, K. * * 30p (6/-)



SORCERER
By P. Cameron
Ten final placings in twelve major contests make this an outstanding Class "B" racer. Easy but rugged construction, fast and stable flight. Span 27½ in.
CL/544 J. * 30p (6/-)

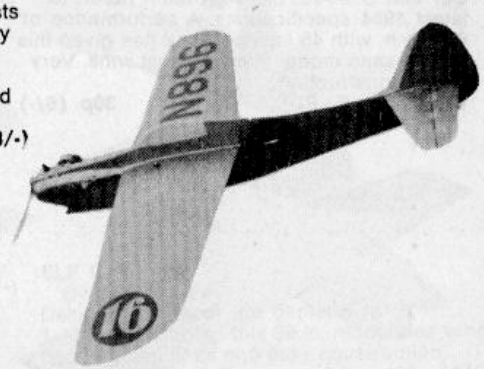


BRAT
By D. Rudd
The top Rat-Racer—has won more contests than any other design in this country. Very strong 33 in. span model uses high performance engines of up to .40 cu. in. Plan includes details of engine cut-off and pressure fuel system.
CL/999 H, J, K, L. * * 40p (8/-)

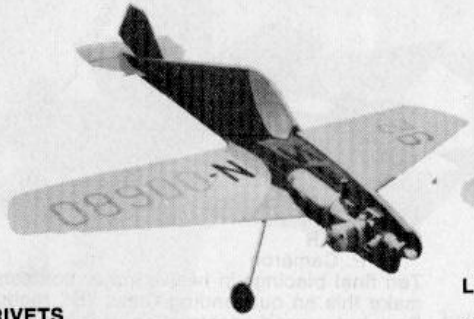


RATATAT
By F. Warburton
Class B Rat Racer for motors of .20—.40 cu. in., 5—6.5 c.c. (original used Fox motors). 30 in. wingspan.
CL/1014 J, K. * * 20p (4/-)

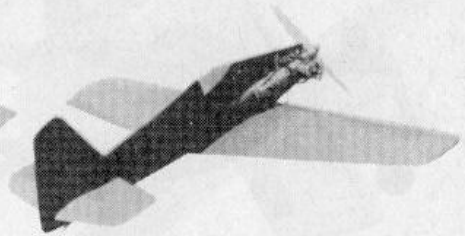
KARATTER
High aspect ratio rat-racer, of attractive appearance and strong construction. 36 in. span, for up to .40 cu. in. motors.
CL/1057 H, J, K, L. * 40p (8/-)



GREY GHOST & SHOESTRING
By J. Kloth
Two designs for the newly introduced profile **Goodyear** racing event for control line models—using 2.5 c.c. engines. Very easy to build and form an ideal introduction to contest flying.
CL/1034 G. * 40p (8/-)



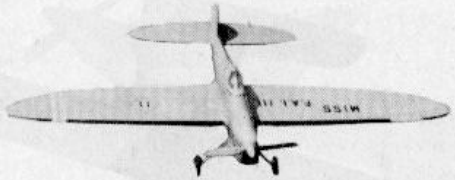
RIVETS
By J. Shaw
A profile **Goodyear Racer** with lightweight built up structure to suit 2.5—3.5 c.c. engines. Plan includes full details of a fuel cut-off used for quick pit-stops. 27 in. span.
CL/1084 G, H. * 20p (4/-)



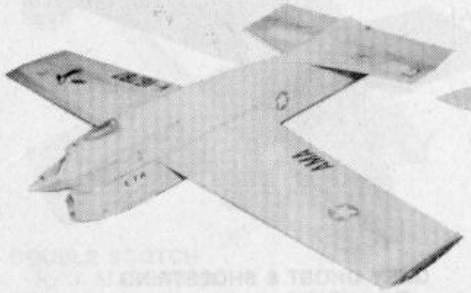
LONG MIDGET
By N. Webb
28in. span lightweight profile **Goodyear Racer,** featuring built up, sheet covered surfaces. Quick and easy to build, forming an ideal introduction to this newest form of racing.
CL/1085 G, H. * 20p (4/-)

TEAM RACERS

COUNTDOWN
By R. Place
Our first S.M.A.E. class ½A team racer, to latest 1964 specifications. A performance of 80 m.p.h. with 45 laps per tank has given this 25½ in. span model many contest wins. Very tough construction.
CL/833 E, F. ** 30p (6/-)



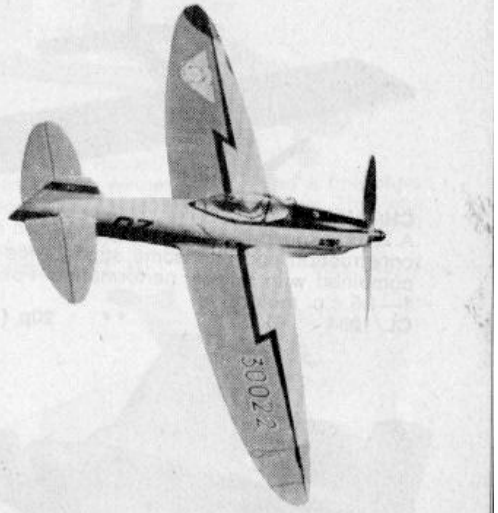
MISS F.A.I.
By Kjell Rosenlund
Beautifully proportioned F.A.I. class Team Racer by Sweden's master of the art and winner of the 1961 Criterium of Aces in Brussels. A genuine 100 m.p.h. plus racer. High aspect ratio, 35½ in. span elliptical wing.
CL/778 J, K. ** 30p (6/-)



JEFE-II
By H. Stockton and D. Jehlik
1965/7 European Champ. 1966 World Champ. Team Racer, simple yet the best, 28 in. for 2.5 c.c.
CL/932 G. ** 30p (6/-)

MISTRESS
By B. Turner
A top British F.A.I. team racer, of 38 in. wingspan. Simple and quick construction, yet with all the latest design features.
CL/943 G. ** 30p (6/-)

TIGRESS
By Ken Long
One of Britain's most successful current rule F.A.I. class team racers. The design has been thoroughly and practically tested over a long period by the Wharfdale team. First in the 1960 British team selections and placed 4th in 1960 World Championships, has beaten 5 mins. for the 10 kilometer distance many times. Span 38½ in. for 2.5 c.c. engines.
CL/741 G. * 30p (6/-)

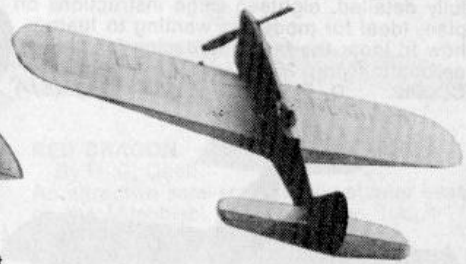


RAZZAMACHAS
By C. Taylor
Fast, monowheel Class B racer delivers top line performance with a standard unreworked ETA .29. Plan incorporates the all-important prototype tank detail. Span 30½ in. for 5 c.c. engines.
CL/803 J, K. ** 30p (6/-)

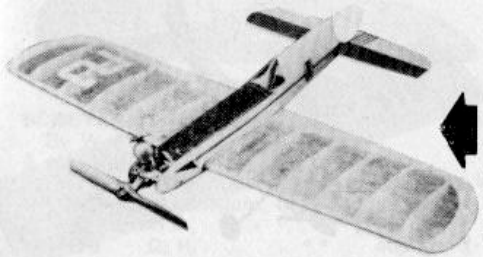
DALESMAN
By K. Long
A very successful S.M.A.E. class B team racer. First class contest record including placings in most of the big competitions throughout the country, and first in the 1960 National Championships. Embedded metal motor mount, and fuel tank detail. Span 33½ in. for 5 c.c. engines, particularly the ETA 29.
CL/763 J ** 30p (6/-)

STUNT

SKYBOLT
By C. A. Foss
A diminutive 18½ in. span control line stunt trainer to suit .5—.8 c.c. engines Ideal for the novice.
CL/908 C, D. * 20p (4/-)



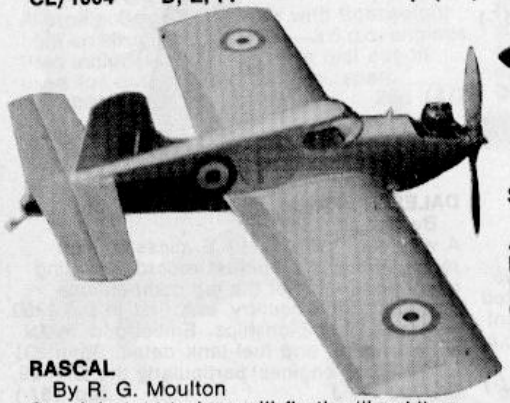
ELF CAT
By J. H. Bailey
Designed to meet the demand for a 1—1.5 c.c. stunter, this 32 in. model has wing flaps, racing lines and easy construction.
CL/703 D, E, F. ** 20p (4/-)



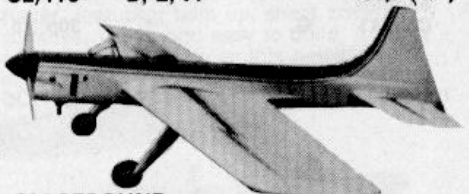
CHESHIRE KITTEN
By W. A. Pollard
Very easy to make and surprisingl yaerobatic despite the small engines it normally carries, this design is one of the most popular small stunters in our range. Only 21 in. span.
CL/693 B, C, D. * 30p (6/-)

CHIHUAHUA
A 29 in. wingspan stunter of simple construction and handsome appearance combined with a lively performance. For 1—1.5 c.c. motors.
CL/1004 D, E, F. ** 20p (4/-)

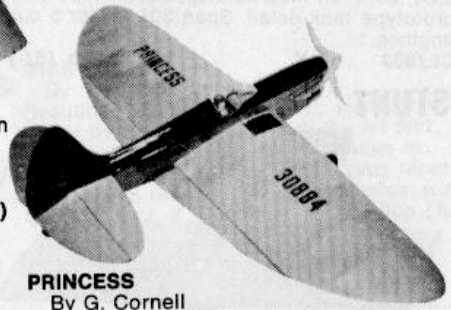
SIMPLE SIMON
By W. P. Holland
This 28 in. span model for 1.5 c.c. is fully stuntable, and also makes a neat, easy to build trainer with 1 c.c. Handsome, raked lines are in keeping with latest design trends and the semi-scale appearance lends itself to bright decoration.
CL/773 D, E, F. * 30p (6/-)



RASCAL
By R. G. Moulton
Special stunt trainer will fly the "book" on low power, uses new style thick section, fully detailed, eighteen stage instructions on plan. Ideal for modellers wanting to learn how to loop; the favourite design for 1 c.c. aerobatic flying. 26 in. span.
CL/660 D, E, F. * 25p (5/-)



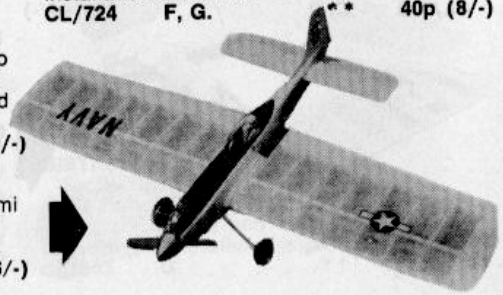
SPACEBOUND
By M. Constant
A snappy little 1.5 cc. 33½ in. span stunter based on the lines of "Spacehound" our other large Russian stunter.
CL/906 E,F. ** 35p (7/-)



PRINCESS
By G. Cornell
Elegant, lightweight and a beauty to fly, this 34 in. elliptical winged model is happy with 1.5 or 2.5 c.c. engines and will go really "square" in the S.M.A.E. Stunt schedule. Extensively detailed plan with many installation sketches.
CL/724 F, G. ** 40p (8/-)

SHARPOON
By K. Laumer
A 36 in. span aerobatic trainer for 1 c.c. to 1.5 c.c. engines (larger sizes can be used by experienced fliers) that combines good looks with simplicity. Trike undercarriage.
CL/806 D, *E*, F. * 30p (6/-)

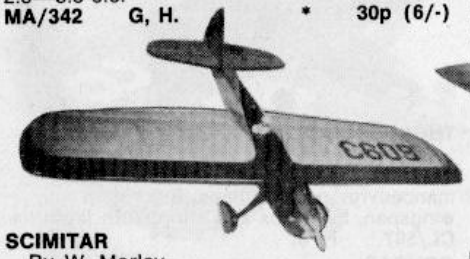
GRIFFON
By Dave Platt
A fully aerobatic sports-stunt model of semi scale lines for 1—1.5 c.c. engines. Span 32 in.
MA/292 F. * 30p (6/-)



WILDFIRE
By G. Stowers and E. Taylor
A good looking cabin stunt model. Ultra streamlined, resembles a fighter aircraft. Span is 27½ in., 133 sq. in. area.
CL/364 F, G. ** 20p (4/-)

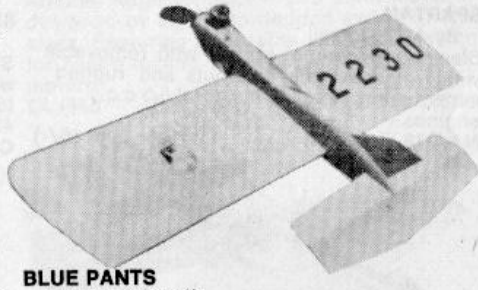
AMBASSADOR
By A. Hewitt
Probably one of the best known stunt models ever, and certainly one of the best performers. Span 35½ in. A Gold Trophy winner.
CL/457 G. ** 30p (6/-)

DRAGOON
By Hoh Fang-Chiun
A sleek stunt/combat model capable of exceptional performance with simple design and construction. Span 37 in. for engines of 2.5—3.5 c.c.
MA/342 G, H. * 30p (6/-)



SCIMITAR
By W. Morley
A stunt model for 2.5—3.5 c.c. engines, which will perform all the manoeuvres in the S.M.A.E. stunt schedule. Open cockpit racer lines. Span 45 in.
MA/270 G, H. ** 40p (8/-)

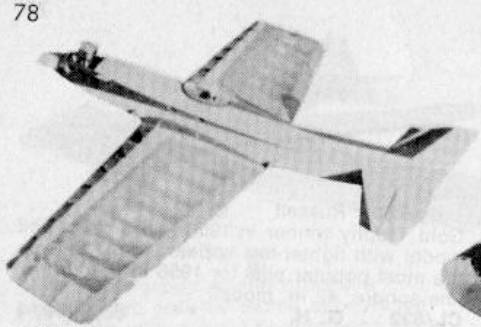
334G
By Peter Russell
Gold Trophy winner in 1956 and a fine stunt model with fighter-like appearance. This was the most popular plan for 1956 in the control line sphere. 42 in. model.
CL/632 G, H. ** 50p (10/-)



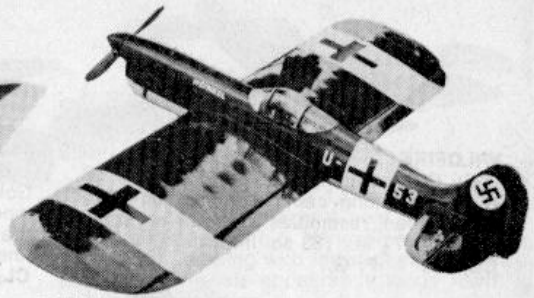
BLUE PANTS
By Henri Stouffs
Thick-wing stunt design flown to win the aerobatic class in the 1954 World (control-line) Championships at The Hague. Span 39in.
CL/574 G, or H * 30p. (6/-)

RED DRAGON
By H. C. Quek
An attractive semi-scale profile stunter based on the Mitsubishi A6M5 Zero-Sen, tough construction, 40 in. wingspan.
CL/842 G, H, J. ** 30p (6/-)

FLYING TIGER
By H. C. Quek
A very lively semi-scale profile stunt trainer or combat model, based on the Curtiss P.40 Tomahawk. 40 in. span.
CL/843 G, H, J. ** 30p (6/-)

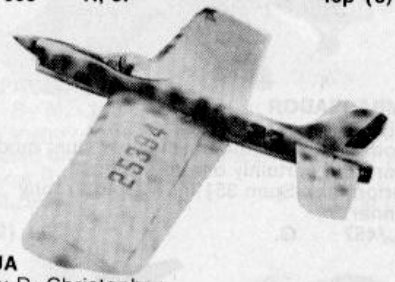


SPARTAN
By A. J. Dorrell
Sleek stunt/combat model, with removable wings, has external leadouts and rugged construction. Span 41 ins. for 2.5-5 c.c. engines.
MA/378 **G, H, J.** * **30p (6/-)**



SKIFFLER
By D. Platt
Streamlined semi-scale full aerobatic stunter with coupled flaps and thick wing section for square manoeuvres; 47 in. span, 420 sq. in. wing area.
CL/665 **H, J.** ** **40p (8/-)**

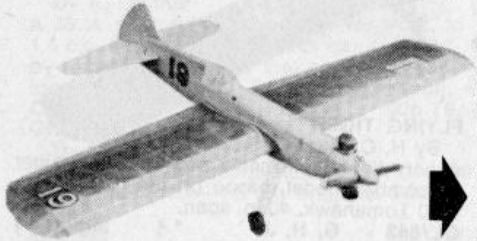
STALLION
By H. C. Quek
Profile fuselage 39 in. span flapped stunt trainer based on the Mustang W.W.2 fighter, an ideal basic trainer.
CL/865 **G, H, J.** * **30p (6/-)**



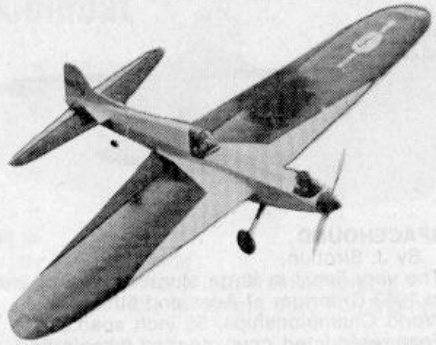
SKUA
By D. Christopher
Jet-like lines on the 47⅜ in. span stunter for 3.5—5 c.c. engines. Coupled flaps and elevators. Long nose for smooth manoeuvres. Follows the 1960 design trend for construction. Will "square" and fly in all conditions.
CL/771 **H, J.** ** **40p (8/-)**

WOLVERINE
By H. C. Quek
A 40 in. span stunt trainer with easy construction. Profile fuselage based on the F.W. 190, having wing flaps for extra manoeuvrability.
CL/866 **G, H, J.** * **30p (6/-)**

THUNDERBOLT
By W. Morley
Large stunter for those who like smooth manoeuvres on long lines. Big 48¾ in wingspan, has flaps and all modern features.
CL/587 **H, J.** ** **40p (8/-)**

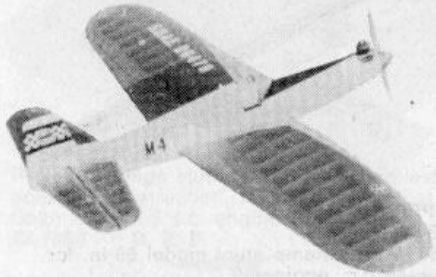


COUGAR
By T. W. J. Stoker
45 in. coupled flap design with easy sheet fuselage assembly and thick wing section. Ideal for stunt beginners.
CL/673 **H, J.** ** **30p (6/-)**

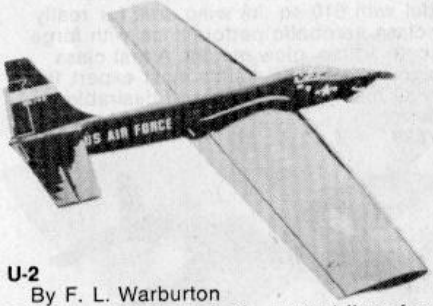


COY-KAT
By R. Brown
A contest-proven stunt design has won the Gold Trophy at the Nationals. Span 54 in. Suitable for 5—6 c.c. engines.
MA/344 **J, K.** ** **40p (8/-)**

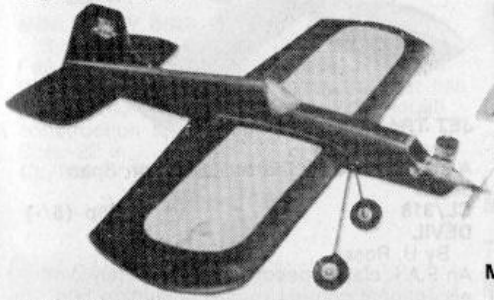
ZLIN 226
By F. Warburton Snr.
Another large semi-scale C/L stunt model designed by an acknowledged expert in the class. Featuring adjustable lead out position for final trimming. Span 50¾ in. for .35 cu. in. motors.
CL/955 **J, K.** ** **50p (10/-)**



COY LADY
By R. E. Brown
This 580 sq. in. stunter for 5 c.c. upwards will fly through all "square" manoeuvres in the latest stunt schedules, and has been designed to incorporate all latest ideas for smooth flying, wingspan 54 in.
CL/727 **J, K, L.** ** **40p (8/-)**

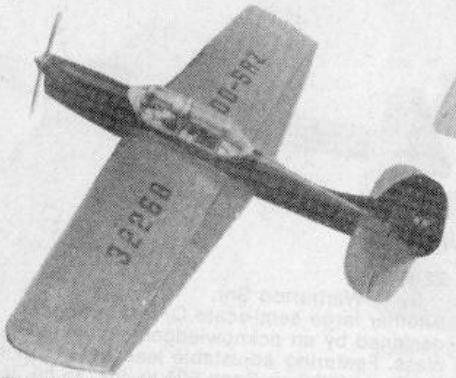


U-2
By F. L. Warburton
54 in. span full aerobatic control liner for 5 c.c.—8 c.c. engines, by one of Britain's leading aerobatic fliers, based on the headline making Lockheed U-2 aircraft to give a steady line pull throughout all stunt manoeuvres and smooth take-offs and landings.
CL/798 **J, K, L.** ** **50p (10/-)**



FOXSTUNTER
By J. W. Coasby
A fully flapped stunter capable of very tight manoeuvres and high speed stunting. Span 42 in. Area 350 sq. in.
CL/406 **J, K.** * **30p (6/-)**

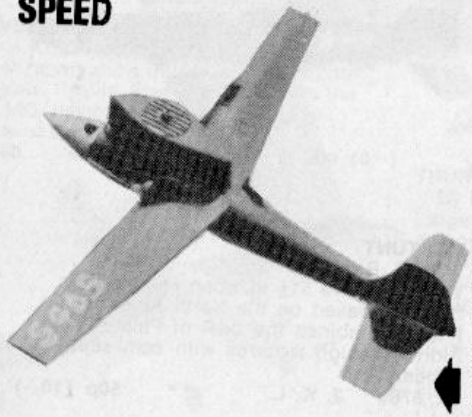
MUSTUNT
By E. Bjornwall
Very attractive 51½ in. span stunter from Sweden, based on the North American P-51B, combines the best of Palmer and Aldrich design features with semi-scale appearance.
CL/878 **J, K, L.** ** **50p (10/-)**



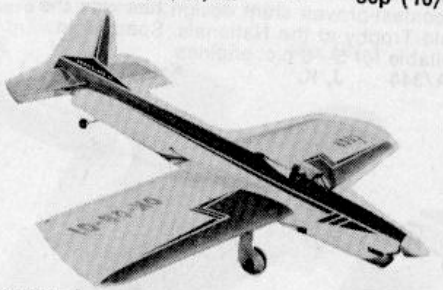
STAMPE MONITOR
By F. L. Warburton
56 in. span semi-scale control line stunt model with 610 sq .in. wing area for really top class aerobatic performance with large 5 c.c. to 10 c.c. glow motors. A first class design by one of Britain's most expert fliers with all the most modern and desirable features.
CL/820 **J, K, L, M.** *** **50p (10/-)**

HEINKEL He 100
Semi scale stunter designed to couple top aerobatic performance with an unusual, scale appearance. 54 in. span model performs best with a .35 cu. in. motor.
CL/1036 **K, L, M.** ** **75p (15/-)**

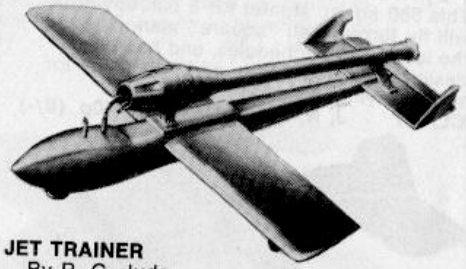
SPEED



SPACEHOUND
By J. Sirotkin
The very finest in large stunters, placed 2nd at 1963 Criterium of Aces and 5th at 1962 World Championships, 55 inch span. Features ducted cowl, spatted wheels and "jet lines."
CL/846 **K, L, M, N.** *** **50p (10/-)**



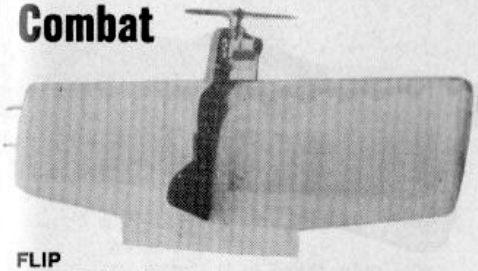
SUPERMASTER
By J. Gabris
1966 World Champ stunt model 55 in. for .33—.45 c.c. engines.
CL/930 **K, L, M, N.** *** **50p (10/-)**



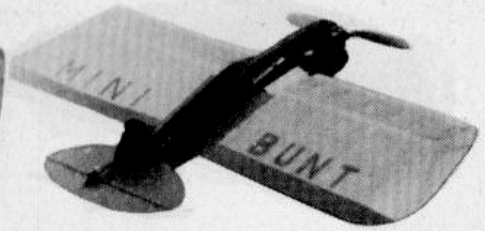
JET TRAINER
By R. C. Jude
A simply constructed basic trainer. Span 30 in.
CL/318 * **25p (5/-)**

DEVIL
By U. Rossi
An F.A.I. class speed model from Italy, with exceptional contest record, including first place at the 1959 Criterium of Aces in Brussels and 1960 World Championships. Model has done 145 m.p.h. Simple to build. Span 21¾ in. Engines 2.5 c.c. Based on the two line system.
CL/749 **G.** **25p (5/-)**

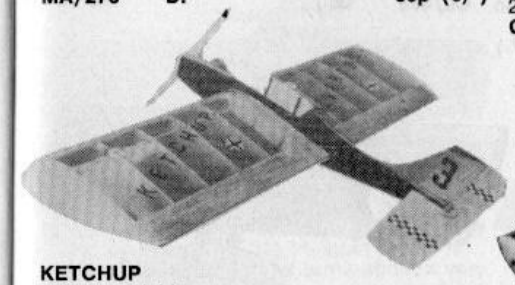
Combat



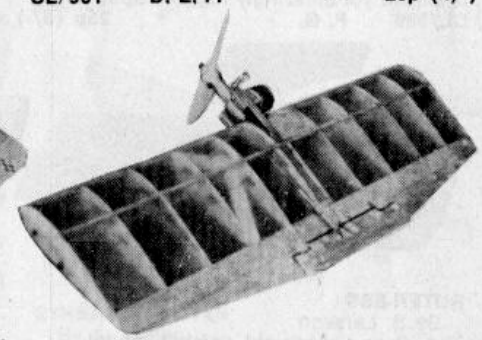
FLIP
By R. H. Warring
An ideal beginner's C/L trainer/combat model. Span 25½ in. length 9 in. For engines of 1 c.c.
MA/276 **D.** * **30p (6/-)**



MINIBUNT
Club type ½A Combat model, developed from "Stoo" Holland's "Flingel Bunt." Span 24 in.
CL/901 **D. E. F.** * **20p (4/-)**



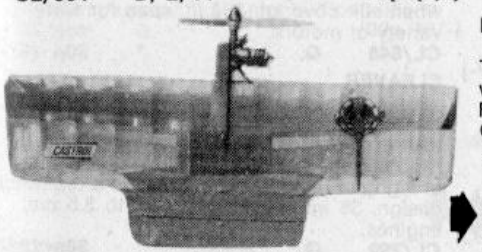
KETCHUP
By R. Walden
Profile fuselage stunt trainer with simplest possible construction, ideal novice model. Span 28 in. 1.5 c.c. engine.
CL/886 **D, E, F.** * **20p (4/-)**



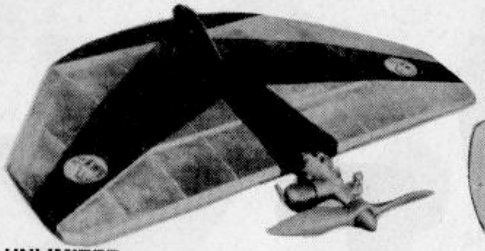
SPLATT
By M. J. Platts
A "½A Combat" design to meet the growing demand in club competitions, this little simpleton is 7 ozs. of zippy control liner for 1—1.15 c.c. engines. With 20⅜ in. span, it will fly at over 80 m.p.h. without a streamer.
CL/785 **D, E, F.** * **20p (4/-)**

MINI EARLY BIRD
By R. Wilkens
Full aerobatic ½A Combat model based on the sensational "Early Bird" model that has been so successful in contest. Extra tough construction and building instructions. Span 22 in.
CL/904 **D, E, F.** * **20p (4/-)**

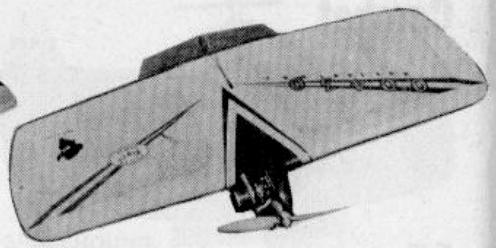
BLUE BAYOU
By B. R. Bumstead
Tough ½A combat model of 21 in. wingspan, with curvacious outline and flying elevator. For 1.5 c.c. motor.
CL/1005 **E, F.** ** **20p (4/-)**



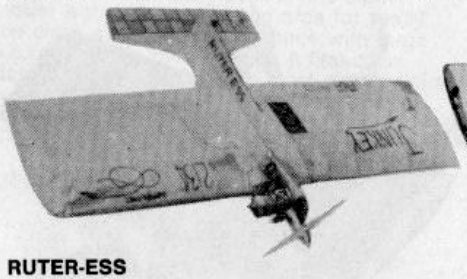
SLICK SCHICK
By D. Sparkes
A tough ½A Combat wing of 23 in. wingspan for 1—1.5 c.c. motors.
CL/968 **F.** * **20p (4/-)**



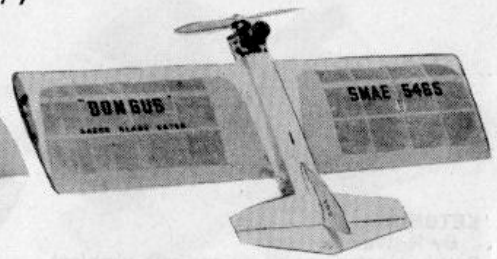
UNLIMITED
By R. Smith
This most unusual flying wing type of control liner has proven practically indestructible in the hands of absolute novices. Capable of all known stunts, the method of construction is simple yet amazingly rugged. Span 20 in.
CL/369 F, G. * 25p (5/-)



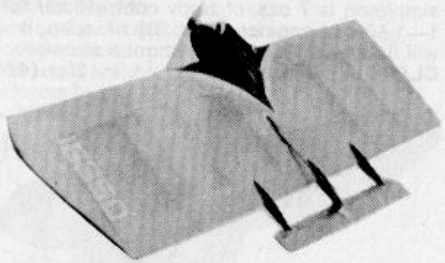
DOMINATOR
A 28 in. span fast flying combat wing 1965 Criterium of Aces winner and contest flier's favourite.
CL/893 G. * 20p (4/-)



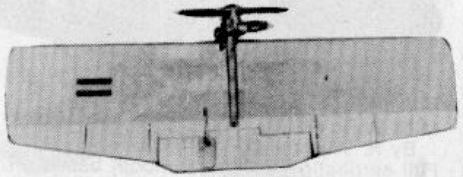
RUTER-ESS
By S. Larsson
Top class lightweight combat model featuring rather unconventional construction. Capable of very tight manoeuvres at a high speed. 34 in. span.
CL/989 G. * * 20p (4/-)



DONGUS
By G. Johnson & D. Pinckert
Join the Combat brigade with this hot design from two leading U.S.A.F.E. flyers. 30½ in. span for 2.5 motors, designed to be simple to build, but extremely strong.
CL/789 G. * * 30p (6/-)



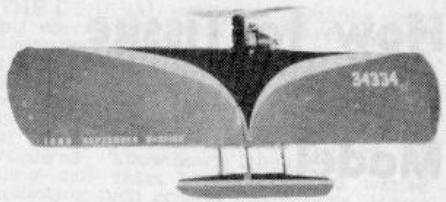
TURNCOAT
By M. J. Morris
29 in. top selling combat design for 2.5 c.c.
CL/926 G. * * 20p (4/-)



DUELLIST
By Adolpho Tristany
Spanish Combat Champ, will turn on a sixpence, cheap to make, indestructible when silk covered. 32¾ in. span for wide variety of motors.
CL/648 G. * 30p (6/-)

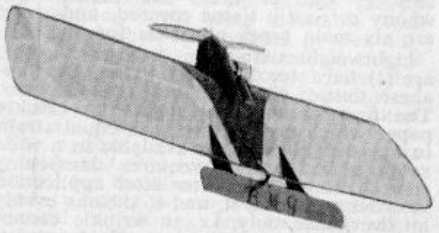
CLEAVER
By G. Copeman
Here's the combat model with more cuts to its credit than your modelling knife. High speed, manoueverability, smoothness of flight, efficient tank go to make a top-notch design. 35 in. span for 2.5 c.c. to 3.5 c.c. engines.
CL/799 G. * * 30p (6/-)

EARLY BIRD
By R. Wilkens
28¾ in. low aspect ratio flying wing type combat model with a great reputation. Extremely tough and manoeuverable.
CL/1022 G. * 20p (4/-)

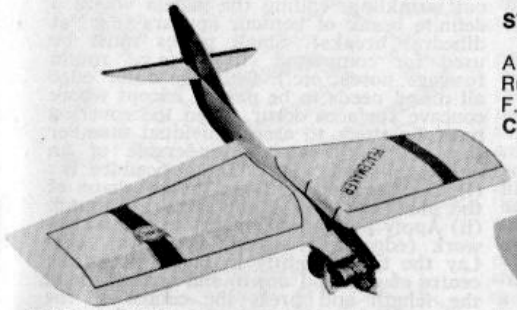


SEPTEMBER WARRIOR
By B. Bumstead
Class A combat model with sparless wing, laminated leading edge and all moving tailplane supported on piano wire outriggers. Tough and easy to construct.
MA/385 G. * 20p (4/-)

LIQUIDATOR
By F. G. Dowling
Really high performance combat wing by one of the top fliers. This 31½ in. span model is quick to build, strong and turns about a very small radius.
CL/998 G, H. * 30p (6/-)

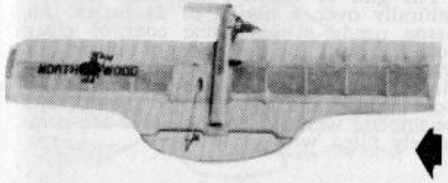


STREAMER EATER
By A. Ytreoy
All moving tailplane, flying wing from Norway. Rugged construction and tank details, meets F.A.I. regulations, 30 in.
CL/883 G. * * 20p (4/-)



PEACEMAKER
By G. Aldrich
Specially commissioned design for British combat by American champion stunt flyer, has amazing manoeuverability with radical design approach. Capable of all manoeuvres including square figure eights. Span 36½ in.
CL/687 G. * * 30p (6/-)

STREAMER SCREAMER
By D. Sparkes
A fast and highly manoeuverable combat/sports C/L model ideal for the beginner using a 3.5 c.c. engine or a .40 for Class B Combat.
CL/1096 G, M, J, K. * 40p (8/-)



RAZOR BLADE
By P. N. Tribe
Leading British Combat "Wing"—a fast flying and very manoeuverable model for the Class A contests. Will withstand loads of punishment. Span 32 in.
CL/729 G. * * 30p (6/-)

How to Tissue Cover your Model

THE COVERING of a model aircraft used to be one of the trickiest parts of the construction; modern materials have largely simplified the process but it still does constitute a major stage in the production of a model and one which, especially in the case of beginners, offers something of a headache. Of the three main covering materials, tissue, silk, and nylon, by far the greatest use is made of the first. Probably 99 out of every 100 models are wholly or partly tissue covered, and there are six main types of tissue for the job.

Lightweight tissues, in order of weight, are (i) hard (or Swedish) tissue, (ii) Japanese tissue, (iii) Lightweight Modelspan. The first of these is a smooth, crackly paper which can be torn with equal strain in any direction and is available in a wide range of colours. It requires dampening (not soaking) with water after application in order to shrink it, and it shrinks evenly all over once only, i.e., a wrinkle cannot be removed by a second, local shrinkage. Only a small amount of dope is required for air-proofing, and a glossy finish is fairly easy to achieve.

Japanese tissue is nowadays only available on rare occasions: In a good range of colours, it can be distinguished by a visible stripe which runs in one direction through the sheet, and has a definite grain. It will tear fairly easily down the grain but only with reluctance across; in the same way it shrinks more across the grain than along it, so that for best results the grain should always run along the longest length of the area being covered. Shrinking and doping is as for hard tissue.

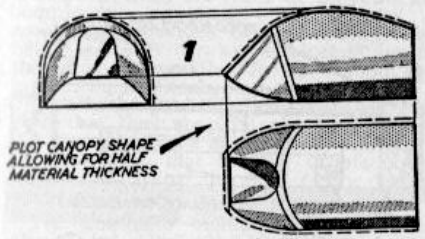
The first really specialised British covering paper, Modelspan, appeared in a limited range of colours soon after the war and is now extensively used throughout the world. Fibres running in all directions identify the paper, and it will tear (before doping) at any angle. Shrinkage is even in all directions, but local shrinking can be induced after initial shrink. So great is the potential contraction that water-spraying or steaming is entirely unnecessary, and the covering need only be doped to produce a smooth, wrinkle-free surface. Getting a gloss is not difficult.

The only medium weight tissue available is known as rag tissue, and is obtainable only in white' It looks alarmingly weak before doping. and is soft and non-rustling: its appearance is very much like paper handkerchiefs. Water-shrinking is definitely undesirable. but shrinkage is considerable and strength astonishing after doping.

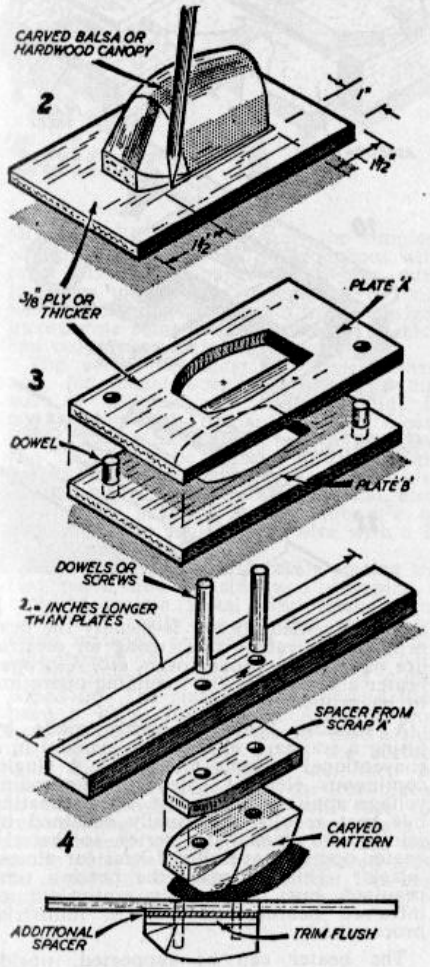
Two heavyweight tissues are obtainable, Burmese (white only) and heavyweight Modelspan, which can be had in five colours. Both these materials are tough, opaque papers, slightly rough to the touch when undoped. Water-shrinking is advisable before doping, and it is not really easy to obtain a high-gloss finish without adding a fair amount of weight.

All of these tissues may be attached with the same adhesives and the technique of application is generally similar. The most popular adhesive is white photo-paste, such as Gripfix or, in tube form, Tissue Paste. The limitation of this material is that it is soluble in water, and trouble can thus arise when a concave surface, e.g., wing undercamber) is water-shrunk; the paste is loosened by the water and the tissue pulls away as it shrinks. In such cases a waterproof adhesive is required, and Tissue Cement, a thinner, slightly slower setting cement than is used for balsa, caters for this. Many builders use this cement for all covering work. Gum or mucilage is also employed, while the use of thick clear dope is becoming more widespread, especially with the more porous papers. Flour paste is sometimes used, but tends to make the tissue soggy and locally weak.

The secret of covering is to use as large a panel of tissue as can be attached without wrinkling, ending the panels where a definite break of contour appears (e.g., at dihedral breaks). Small pieces must be used for compound curves (e.g., round fuselage noses, etc.). Only the outer edge all round needs to be pasted, except where concave surfaces occur, when the covering must be stuck to each individual member (e.g., each rib on the underside of an undercambered wing). The procedure is : (i) Cut a panel of tissue to the shape of the part, allowing 1 in. extra all round. (ii) Apply paste (or cement) to the framework (edge only, except as above). (iii) Lay the tissue lightly in place, press the centre of one end down, and stretch along the length and press the centre of the other end down. (iv) Stretch the tissue to the full width at the centre of the sides and press down, then work from this point to each end, adjusting the tissue so that all wrinkles are worked out. (v) Trim off to within $\frac{1}{8}$ in. of the edge and paste the edge down. Completely cover a frame before shrinking, and always cover all woodwork, even sheeting. If water-shrinking is to be used, spray the water on with a Flit gun or similar, and allow to dry naturally over a period of 24 hours. All tissue needs at least one coat of clear dope, except in the case of ultra-light frameworks, when banana oil is used to airproof the covering without shrinking it. Colour dope and fuel proofer should only be applied when the tissue pores are completely filled with clear dope.



Plastic Moulding



THE GENERAL method of moulding cockpit covers, etc., from transparent plastic sheet has been described many times in the past. The process of heating the sheet to a "plastic" state and then forcing over a suitable male pattern (or forcing the mould into the heated sheet) is capable of giving excellent results. Without the required "know-how", though a lot of time—and sheet plastic!—can be wasted following such general instructions. Hence we are describing this specific method of obtaining first-class mouldings which can be made at least equal in quality to commercial mouldings, and usually better.

Starting point, as in other methods, is to draw out a full size pattern of the shape required (1). This must be slightly undersize to allow for the thickness of the sheet material forming the moulding. On a typical canopy "draw", the thickness of the moulded part is usually half the original thickness of the plastic sheet—this thinning down being inevitable since the original sheet is expanded in **area** during moulding and since it does not change in volume, must lose **thickness.** Bear this in mind when deciding what thickness of canopy you want and start with sheet twice as thick.

The pattern can be carved from balsa or hardwood. The former material is quite suitable for drawing one or two off. Hardwood is better where a fair number of identical mouldings are required. This pattern need **not** be finished perfectly smooth and free from grain marks for ordinary mouldings.

The next step is to cut two identical ply plates appreciably larger than the base of the pattern (2). Plate B, which becomes the bottom plate, is cut out to take the pattern with a clearance all round equal to the plastic sheet thickness. Plate A is cut out in similar fashion, but with a more generous clearance. The clearance on plate B is not critical provided a moulding "tight" to the bottom edge of pattern is not required, but it must be large enough not to jam the sheet in the final moulding process. In other words, it can be oversize without giving trouble, other than an exaggerated "draft" on the bottom edge of the moulding. The two plates are conveniently located and locked together with a couple of dowels (3).

If the material is too rigid to form properly at stage (10), then most probably the heating time has been too short. Some improvement may result from preheating the pattern by aying on top of the heater. The same is true if the moulding tears. If the finished moulding has bubbles in it, or has a rough surface, then the plastic has been overheated. If the material looks overheated but is very difficult to mould (i.e. requires extreme pressure at stage (10)), then increase the clearance on plate B. If the bottom of the moulding (top when removed from the mould) has a rough or flattened surface, check that there is sufficient clearance

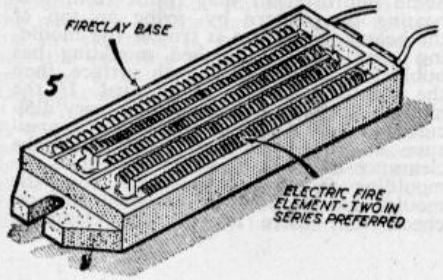
between plate B and the table and that the moulding is not actually being forced into contact with the table surface.

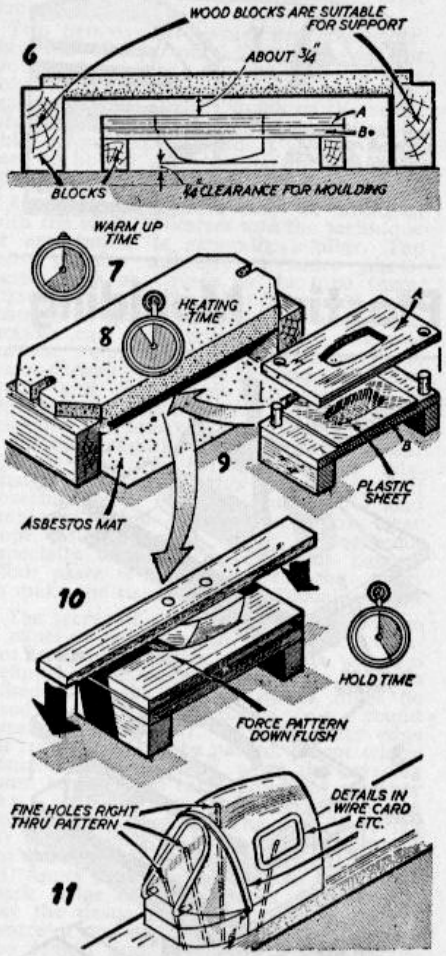
The other thing to remember is that the best mouldings will only result from using plastics **suitable for pressure moulding.** Not all plastic sheet moulds well, or gives satisfactory results. Celluloid, and standard acetate sheet, is not easy to mould in deep draws, as the heating time is quite critical. If overheated, it bubbles, if underheated it may draw, but will also go milky white in patches. So try to get acetate sheet, or similar, specified for pressure moulding. Perspex sheet will break or tear if underheated; or bubble if overheated. Flexible PVC is easy to mould, but tends to go cloudy (and, of course, gives a flexible moulding). Rigid PVC is an excellent material for opaque mouldings.

For really detailed mouldings, the same technique can be used with some reworking of the pattern (11). In this case the pattern **must** be finished perfectly smooth as every surface mark will show up. Details such as frames, etc., can be added by fitting wire, card, thin ply strips, etc. (11). Each panel area should then be ventilated by drilling with a very fine hole. In practice, it is easiest to drill a number of larger holes through the back of the pattern assembly and link up to these with the fine holes drilled through the actual pattern surface. The holes must be small as otherwise they will show up as small 'pips' on the final moulding.

The pattern itself is increased in depth by the thickness of plate A (the cut-out piece from plate A can be trimmed down for this spacer). A balsa pattern is best assembled with hardwood dowels (4). With a hardwood pattern, woodscrews can be used for assembling on the pressure bar. The latter is any convenient size of hardwood strip some 2 to 3 inches longer than the plates so that it overlaps each end when the pattern is laid in the mould plates. If the final moulding has to be trimmed flush with the bottom edge of the pattern, another spacer (about 1/16 in. thick) should be fitted to give an extra depth of draw. This will eliminate the chance of getting a curled edge at the bottom of the trimmed moulding.

Various methods of heating the plastic sheet can be used but for consistent results **uniform** heating is essential. Hence





a specially made heater is usually the best proposition, rather than using an electric fire or gas fire, cooker oven, etc. A proper heater also enables the moulding operation to be properly timed.

A suitable heater is easily made by fitting a standard electric fire element in a conventional ceramic mount (5). A single, continuous element rated for the mains voltage applicable will give strong heating but best results are usually obtained by joining two elements in series, so that the heater operates at dull red heat (or almost 'black'). This increases the heating time required but is virtually equivalent to infra-red heating, as used in industrial processes.

The heater can be supported, upside down, on wooden blocks (6) or on any suitable stand. Leads should be taken out well away from the front of the unit and completely insulated. The height of mounting is decided by first finding what height plate B has to be blocked up for the finished moulding to have about a ¼ in. clearance. Blocks can then be fitted to plate B to give this clearance, making sure that they are well clear of the cut-out portion. Then arrange the height of the heater so that the top of plate A is about ¼ in. below the level of the heating elements.

The complete moulding cycle is then shown in steps (7), (8), (9) and (10). First of all the heater must be switched on and sufficient time allowed for it to heat up to maximum, uniform temperature. With twin elements this may take up to twenty minutes.

The plastic sheet is cut to size and sandwiched between the two mould plates A and B (9). The sheet should overlap at least one inch all round the cut-out. Make sure, too, that the sheet is clean and free from scratch marks. When sure that the heater has reached constant temperature, slide the plates underneath and start a watch to check the heating time (8).

The heating time required will depend on both the type of plastic and its thickness. It is best determined by experiment with a few trial runs. The plate unit can be withdrawn at regular intervals and the state of the plastic observed. It is ready for moulding when it is showing definite signs of deformation or slight sagging, or is plastic enough to be pushed out of shape readily with a blunt piece of wood. As a rough guide, heating time required is usually of the order of 1 to 1½ minutes with 30/1,000 in plastic with 'dull' heating, and proportionately longer or shorter for thicker or thinner material, respectively.

How to Solder

MOST MODELS call for only the simplest of tools and can be built throughout with razor blade, glass-paper and pliers—until it comes to soldering. Even if it be only wheel retaining washers, most designs incorporate some metal-to-metal join which can only be made by solder.

The secret of soldering is cleanliness, and, for model work, the use of a flux such as "killed spirits" (Baker's fluid), in conjunction with tinman's solder. Cleanliness means filing, scraping, or abrading the metals to be joined until they are bright and free from grease, and also using a clean soldering bit. Essential, also, is an iron suitable for the job—it's no good trying to solder 10 g. wire with a 10 d. instrument iron!

Soldering doesn't just mean placing the two parts side by side and dropping a blob of molten metal over them. When the bit is really hot—so that the solder melts instantly on contact, but not so hot that it runs off—it should be damped with a little flux and a small amount of solder wiped on. The cleaned parts should then have a little flux applied and the iron used to tin them; this means that a thin coat of solder is run on to the surface with the iron. The parts can then be placed together, fluxed and the iron placed in contact, when its heat will fuse the two tinning coats together and leave a clean, sound joint. It will be obvious that to do this the parts being soldered must be a good fit together, and that the heat applied to tinning must be sufficient to form a good bond between the surface of the metal and the solder.

The function of the flux is rather complex, but, briefly, it is this. Solder "sticks" metal by melting into its surface, i.e. by forming a very thin skin of alloy between the metal and the body of the solder. The solder cannot fuse with the oxide of the metal, and the surface to be handled is always oxydised (a) by the action of the air (hence cleaning off thoroughly) and (b) by the heat from the iron. The flux is an agent which, broadly, enables the metal oxide to fuse with the solder, rather in the same way as soap enables a certain mixing of grease and water to take place. Understanding this simple principle is a big aid to sound soldering.

When binding a joint, thin copper wire or 15 amp. fuse wire should be used, and this also should be cleaned thoroughly. The parts to be joined should be tinned before assembly, then bound and heated. To form a fillet of solder, the iron should be held beneath the work and the solder stick applied on top. To localise heat, lay the work on heavy metal blocks, but don't attempt to solder actually over a block, as too much heat is conducted away. Use a wooden support at the point of working. Heat shunts, to prevent heat travelling to another previously soldered part, or damaging a delicate radio part, can be metal clips, wet rag wrapped round, blocks of metal clamped on, etc.—anything that will absorb heat and prevent it from travelling. Always clean a joint thoroughly after using a flux as mentioned above, and do not use this type of flux for electrical joints; these should be made with Fluxite or other non-corrosive flux. For long joins cover a little anhydrous zinc chloride with methylated spirit and paint on. The meths. will evaporate to leave an even coat of zinc chloride. Do not use anything but methylated spirits with this chemical.

Doping and Finishing

MANY OTHERWISE excellent models are ruined by a poorly-doped covering job,and some even refuse to fly because of over-enthusiastic application, especially of colour. The normal covering materials require, as a rule, no more than three coats of thinned clear dope and nothing further. In many cases two coats are sufficient, and when hard or even Japanese tissue is used, one coat is frequently enough.

Dope has two main functions, increasing the efficiency of the model and adding to its aesthetic appeal. Clear dope adequately fulfils the first of these, which may be subdivided into, in order of importance, (i) air-proofing, (ii) strengthening, and (iii) tightening the tissue. Note that the shrinking effect of dope is least important.

Air-proofing of the covering is essential for good performance and the application of dope accomplishes this by depositing over the pores and fibres of the material a thin skin of cellulose, rather on the lines of a celluloid film laid over the orginal covering. This film prevents air passing through the material, slightly increasing lift but decreasing drag to an astonishing extent.

Colour dopes are used purely to improve a model's appearance and should be used very sparingly. A coloured model is visible further away, both in the air and on the ground, if the right colours are chosen. A model embodying large areas of colour should use coloured tissue, which is considerably lighter than a doped finish but requires a fraction more care in application. Red, yellow, and orange are the best for visibility, and flying surfaces of this colour with a darker (black, blue, etc.) fuselage are normal practice. Coloured tissues thus improve efficiency. Coloured dopes are pigmented and thus increase weight tremendously, besides tending to make tissue a little brittle. When used, three thin coats are much better than one "treacly" one, and it is advisable to limit the application of colour to a little decoration, or to the fuselage only. To give depth of colour, it pays to use the nearest-coloured tissue for the covering which is to be doped.

Alternative (and lighter) means of colour-trimming are to cut the trim shapes from coloured tissue and dope them in position, or to use transfer sheets. Banana oil may be used to protect transfers, etc., and also to give a general gloss to a model, although, again, weight increase is very marked. Fuel-proofer also carries its weight penalty, but is advisable (with glow-plug engines essential) especially around the nose.

Good, soft brushes and a bottle of thinners are essentials for a good finish—a few coppers saved here may ruin an otherwise first-class model. Dope should be flowed on fairly thin, and the brush passed over the surface only once. Allow each coat to dry thoroughly before further applications. When no "pin-holes" or pores can be seen on the tissue surface no further dope is needed.

A concours finish is usually obtained by (i) tissue covering, (ii) clear doping one coat, (iii) applying up to four coats of sanding sealer and rubbing down with the finest flour paper, (iv) applying up to seven coats of thin colour, rubbing down every other coat, (v) rubbing down with metal polish and finally applying a coat of car polish. A sprayed finish offers no real advantage over brushwork when this technique is followed. Trimming is done with ruling pen, compasses and fine brushes, making use of masks. Cellophane tape is excellent for masking; make sure the edge is pressed really well down by running the thumbnail along it. (Some experts even go so far as to clear-dope the edge to prevent colour from creeping.)

International Model Requirements

THE FEDERATION Aeronautique Internationale (F.A.I.) is the international governing body for control of model flying and issues certain specifications to which all models entering international contests or claiming World Records must comply. These specifications are detailed in the F.A.I. Sporting Code, Section 4, Aeromodels.

Wing Area (Total projected area of the horizontal or oblique Wing and Tail surfaces) must be less than, or equal to, 150 dm^2 (16.142 sq. ft.).

Weight.—The total weight in flying trim must not exceed 5 kgs. (11.023 lbs.).

Loading.—The loading on the supporting surfaces, as defined above must be between . . . 3.93 oz., per sq. ft. and . . . 16.38 oz. per sq. ft., except for control-line models, the maximum being 32.76 oz. per sq. ft. and Radio Control models, the maximum being 24.51 oz., per sq. ft.

Motive Power Permitted.—Rubber Mechanical engine or direct Reaction. In the latter case the weight of the engine should not exceed 0.5 kg. (17.63 ozs.) and the total weight of the model including fuel, 1 kg. (35.27 ozs.).

How to cover with Silk

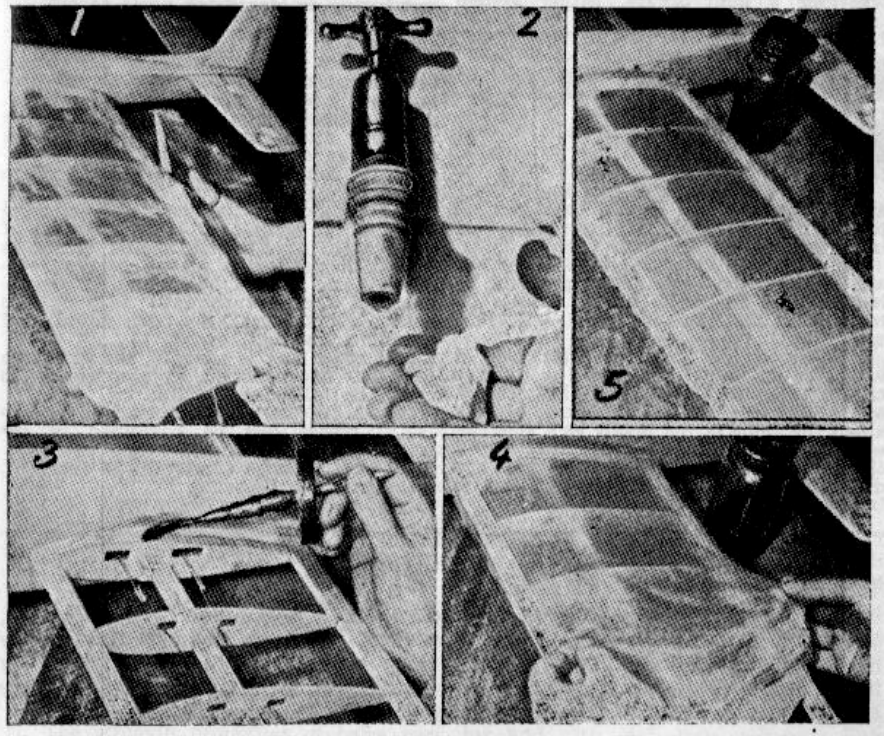
THERE IS no other form of model covering that approaches the strength/weight ratio of silk or nylon, yet very few modellers appear to take advantage of this fact. First thoughts must certainly be for economy in use, and the raw silk is placed over the area to be covered, then trimmed to shape with a pair of sharp scissors, as in picture **1**. The overlap allowance need only be a matter of ¾ in. all round, since when applied wet, the silk will be pulled larger than when dry.

Next, take the silk to a tap and get it thoroughly wet **2**. Then squeeze (do not wring out) the excess moisture by compressing in the palm of your hand, and then spread the dampened silk out flat and hang over a chair-back.

In **3** we are using our favourite pickle jar brush preserver, wherein the brush is permanently mounted in a Bakelite jar top, and the bristles always dope filled in the contents of the jar which are replenished from the less convenient tins sold in the model shop. We have now made the framework thoroughly gooey—and flop—on goes the root end of the covering as in **4**. Support the rest of the damp silk off the frame, then apply, panel by panel, pulling more spanwise than chordwise. When a couple of rib bay panels are done, pin the silk at the root to stop it slipping, and when the last wrapping around the tip is to be made, pull hard spanwise to remove any sag. This will give spanwise wrinkles which are soon removed by working the silk over leading and trailing edges. Application of extra dope here and there, enables one to move the silk quite easily while it is still water-damp.

Final effect is soon observed as in **5**, and any white "blushing" soon disappears when the first heavy coat of shrinking dope is applied to fill the pores. Thereafter, use two or more extra coats of clear dope, as for a tissue covered model.

The frayed edges left when trimming down to final size are easily glass-papered off after the first coat of dope. Successive coats of clear dope should be applied until no pin holes appear in the covering, when colour dope may be applied and rubbed down as detailed above. Silk or nylon, applied properly, are virtually crash-proof.



Take care of your Plans

WITH OUR Plans Service continuing to expand there must always be new builders taking advantage of our wide range, many of whom may not have worked from a plan before and who may therefore be unaware of the odd hints which make the work much easier. These notes are written for such modellers, but old hands may find them useful.

General Use

Most builders like to preserve their plans, and since many parts are actually built over the drawing there is always the danger that the cement used will run and stick the plan to the framework. Even if a modeller doesn't mind his plan getting into a mess, the bits of paper have to be sanded off the model, so that it is a good idea to prevent this adhesion if possible. Covering the part of the plan in use with waxed paper or polythene is one method; alternatively, the drawing can be rubbed with a stump of candle or a piece of soap wherever a joint occurs. Either system means that the completed framework can be lifted off cleanly and easily. A separate board for cutting out parts is also useful; it need only be a small sheet of ply and it will save the plan from being cut.

Tracing

There are several ways of transferring drawn-out parts to the wood from which they must be cut. These are (i) lay tracing paper over the plan and carefully trace the outline with a soft pencil, ensuring that the plan is lying on a smooth, hard surface. Turn the tracing paper over on to the wood and go over the lines from the back which will transfer the original tracing. (ii) Clip carbon paper under the plan and align the material by feel; go over the drawing very carefully with a hard pencil. (iii) Place the wood under the plan and pin-prick carefully round the outline, remove the plan and connect up the marks in the wood with a hard pencil. (iv) If you do not require the plan to be kept in good condition, cut out the drawn parts and paste them direct on the wood. This is not recommended for components longer than 12 inches since distortion occurs during paste-down. When several identical pieces are required (e.g., wing ribs), paste make a template. Time can be saved by numbering or identifying parts as cut.

How to start a Model Club

There are two ways of starting a Club, and you should give careful consideration to the way you think will prove the best in consultation with your friends.

One way is to arrange a public meeting, and through the local newspaper and by letter, invite anyone to attend who is interested in the formation of a Model Aircraft Club.

If it is decided to adopt this plan it would be advisable to secure a well known citizen to act as chairman of the meeting, and to secure an able speaker to talk about the value of the hobby as a splendid way of occupying leisure. The SMAE should be approached if you find any difficulty in securing a speaker able to talk authoritatively on the subject.

After the speech, and time devoted to open discussion the Chairman should propose that a Model Aircraft Club be formed, and he should put the motion to the vote of those attending the meeting. If it is carried, as doubtless it would be, a provisional committee should at once be formed to go into ways and means.

The second way is much simpler, and leads to the same end. The originators of the idea to form a club should decide to regard themselves as the provisional committee, and leave the public announcement of the venture until a later date when headquarters have been found, and the Club formed.

Whichever way is adopted, the first step for the newly-formed Committee is to elect the following officers:

(a) A Secretary and Treasurer (the two offices can be combined in the early stages)
(b) A Chairman (preferably a senior)
(c) A Press Secretary
(d) A Competition Secretary.

Balsa Wood and how to use it

BALSA (or balsawood, whichever you prefer to call it), has been the standard material for model airframe construction since it first became available commercially in suitable cut sizes—some thirty-five years ago in this country and even earlier in America. Although, botanically at least, balsa is only about the fourth or fifth lightest wood in the world it is the first of all the woods which combine strength with lightness. On a strength/weight basis, in fact, balsa compares favourably with most other woods—even oak. This is one of the main reasons why it is so suitable for aeromodelling, where strength is required with minimum weight. Many other materials which are as light as, or lighter than balsa, also fall down on this question of combining strength with lightness and cannot be used in small sections — expanded polystyrene, for example.

The other great advantage of balsa is the ease with which it can be cut or carved, and jointed with quick-drying cement. Having a fairly open structure, balsa cement impregnates and adheres strongly to balsa with the result that properly made glued joints are as strong or stronger than the wood itself. With balsa readily available in a wide range of sheet, strip and block sizes, very few tools are required for working balsa, either in solid form or for the assembly of built-up frames, etc.

At the same time, however, there are disadvantages. The balsa tree is very fast growing, reaching a height of 15 feet or more within a year and growing to between 60 and 90 feet within the next six to ten years. After that time the tree begins to deteriorate and rot. As a result both the density and quality of the lumber obtained by felling balsa trees can vary enormously.

The actual density of balsa can vary from as little as 4 lb./cu. ft. to as much as 24 lb./cu. ft. (which is about the same as obeche). Practically all the commercial balsa available, however, falls within the range of 6 to 16 lb./cu. ft. with the overall average tending to run about 9-10 lb./cu. ft. The strength properties of balsa vary directly with density—the heavier the wood the stronger it is.

Balsa is normally graded by density, although the actual descriptions are largely arbitrary and not alway identical between different suppliers, or different model designers specifying grades to be used. The most general commercial classification is "light," "medium" and "hard," as under—

grade	light or soft	medium	hard
density lb./cu. ft.	6-8	9-12	12-16

The more expert modellers adopt a wider range of grading, typically as shown below—

grade	ultra-light	light	light medium	medium	medium hard	hard	extra hard
density lb./cu. ft.	6 or under	6-8	8-9	9-10	10-12	14	16

Logically one selects the lightest grades for the lightly stressed parts (e.g. block wing tips, sheet fill-in, etc.) and the heavier grades for spars and longerons. Even here, however, practice can differ. Some modellers prefer to use very hard balsa for longerons and spars and keep weight to a minimum by reducing the actual size of the sections used. Others prefer to use a lighter grade and compensate for strength by using a larger section.

Both systems have their advantages and disadvantages. The use of hard grades and small sections actually gives the best overall strength to weight ratio (**see Table 1**).

TABLE 1. STRENGTH/WEIGHT FIGURES FOR VARIOUS WOODS

wood	stiffness	bending	compression
Balsa 8lb. Density	90	78	84
10lb. Density	100	100	100
14lb. Density	112	115	136
Spruce	82	93	103
Basswood	100	111	111
White Pine	87	101	113
Douglas Fir	80	97	114
Oak	62	90	6

Note: The strength/weight ratio of 10 lb. cu. ft. Balsa is rated at 100 and the strength/weight ratios of other woods calculated accordingly. Thus a figure of less than 100 shows a performance inferior to 10 lb. balsa on a strength/weight basis; and a figure of over 100 a superior performance.

On the other hand, the smaller size spars may be more difficult to handle for building and also lack local stiffness. Using

larger sizes normally gives greater stiffness and local strength, although it is also easy to add excess weight as well unless the grade is carefully selected. Also if too light a stock is chosen in the interests of saving weight, the resulting structure may be weak. For most purposes, however, **Table II** can be used as a guide for balsa grade selection.

In practice, grade selection can only be made with reference to actual weights of individual sheets or strip lengths.

A tip to remember here is that as far as grading is concerned, suppliers of cut balsa tend to favour selection of the harder grades for the smaller sizes (or thickness) of strip and sheet as being easier to handle. Thus one is more likely to find mostly "hard" grade in 1/16 in. sq. for example, and more medium to soft in ⅜ in. sq. Similarly, the proportion of "soft" is likely to be higher in ⅜ in. and ¼ in. sheet than in 1/32 in. or 1/16 in. sheet.

In point of fact "cut" is more important than appearance in the case of sheet stock since this largely controls the rigidity, or strength of the sheet. And cut depends on the way the original lumber is cut from the log and then finally machined. If the "cut" is such that the annular rings effectively run **across** the thickness of the sheet (tangent cut) the sheet will be fairly flexible, edge to edge. If, on the other hand, the cut is such that the annular rings run across the thickness of the sheet (radial or quarter-grain sawn), the sheet will be rigid. It will also be appreciated that a piece of lumber cut from either section **A** or section **B** of the log can have a **final** cut for turning into sheet which is **either "tangent" or "quarter-grain,"** depending on which face the cut is made from. If the section of lumber is "random cut" the grain direction is less clearly defined and irrespective of the direction of final cut the sheets will have intermediate properties between "tangent cut" and "quarter-grain."

TABLE II. RECOMMENDED APPLICATIONS OF BALSA GRADES

Grade	Application(s)
ULTRA-LIGHT	Indoor free flight model airframes Indoor hand-launched gliders (all sheet) Solid (block) wing tips (all free flight models)
LIGHT	Sheet fill-in on built-up fuselages Semi-solid or hollow log fuselages (control line and radio control) Sheet covering (fuselages and wings) Wing leading edge sheeting Folding propeller blades All-sheet wings Cowling blocks
LIGHT-MEDIUM	Sheet fill-in on larger models Large section leading and trailing edges All-sheet tail surfaces Solid sheet wings (gliders) Sheet-box construction (e.g. fuselages)
MEDIUM	Spacers on box fuselages stringers on streamlined fuselages Trailing edges Solid sheet wings (control line models) Longerons of generous section
MEDIUM-HARD	Wing spars of generous section Auxiliary wing spars Longerons Small section trailing edges Carved (freewheeling type) propellers
HARD	Main wing spars Longerons of small section Auxiliary spars of very small section
EXTRA-HARD	Inset leading edges on side sheet wings Wing mainspars of small section Building jigs

It is difficult to distinguish between random cut and tangent cut by appearance, or even by simple bending tests, but quarter-grain shows up quite clearly by the speckled appearance of the surface. True quarter-grain sheet, in fact, would be too stiff to bend to even moderate curvatures without splitting — and quite impossible to roll into a tube shape as can be done with carefully selected light density tangent cut stock.

The stiffness or otherwise of spars is best judged by actual test—e.g. to obtain a pair of matched spars select two of equal weight and appearance. In this manner, and in the latter case in particular this may mean examining and testing a considerable number of individual strip lengths in order to arrive at a set of four more or less identical pieces. Many experienced modellers, in fact, prefer to cut longerons and spars from **sheet** stock in

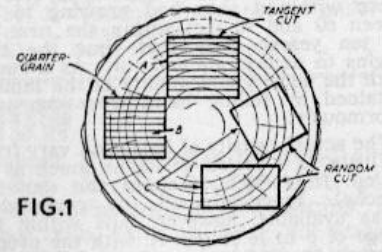
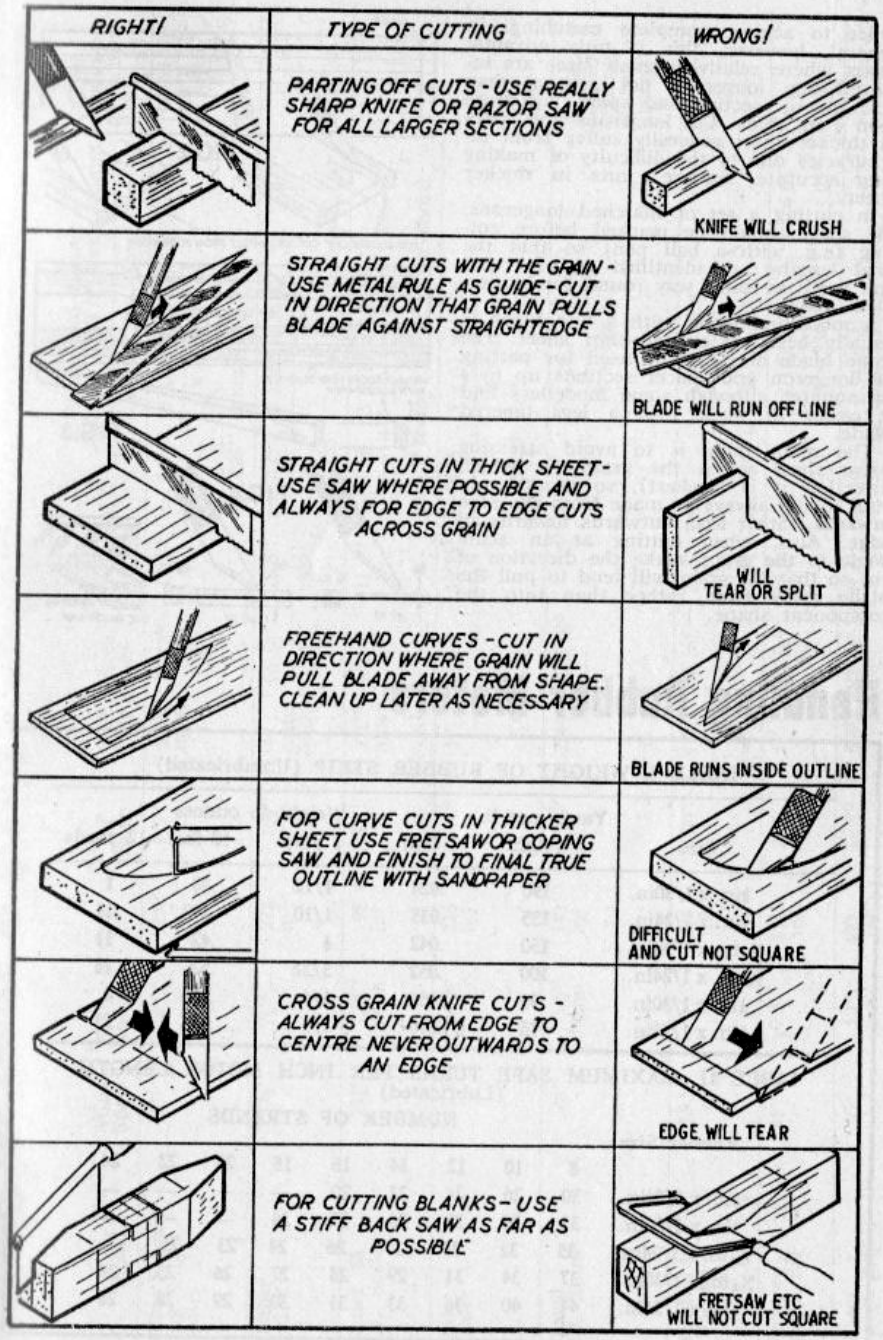


FIG.1



order to achieve complete matching. In general, however, this is only advantageous where relatively small sizes are involved—e.g. longerons not greater than 5/32 in. sq. section and spars not more than ⅛ in. thick. Cut longerons and spars in thicker sheet generally suffer from inaccuracies due to the difficulty of making long accurate "square" cuts in thicker sheets.

In cutting a set of matched longerons, the sheet should be marked before cutting (e.g. with a ball pen) so that the final lengths are identified end for end and used the same way round for a complete match.

A modelling blade with a fine taper is usually best for cutting thin sheet. The same blade may also be used for parting off longeron and spacer sections up to ¼ in. square; although some modellers find it easier to work with a less tapered blade.

The main thing is to avoid stressing balsa sheet across the grain (in which direction it is weakest), so cross grain cuts should always be made from the edge inwards, rather than outwards towards an edge. Also, when cutting at an acute angle to the grain, make the direction of cut so that the grain will tend to pull the blade away from rather than into the component shape.

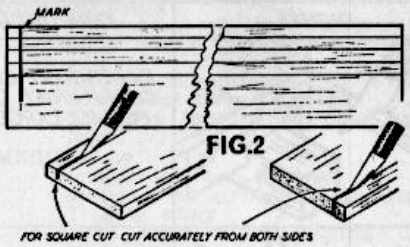


FIG.2

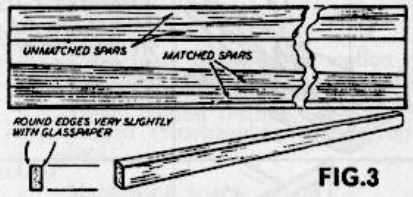


FIG.3

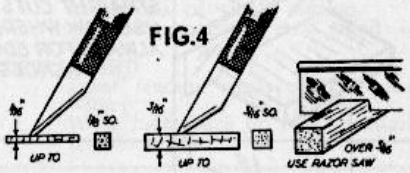


FIG.4

Handling Rubber Motors

TABLE I. WEIGHT OF RUBBER STRIP (Unlubricated)

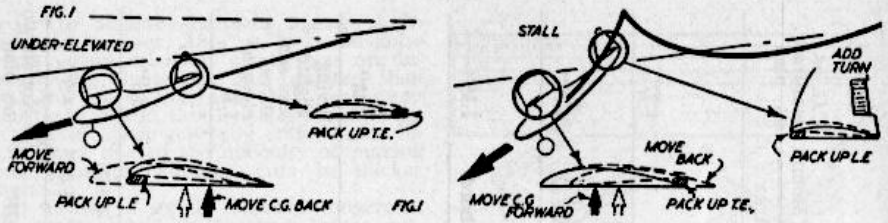
Size	Yards per lb. weight	1 foot	Weight in ounces 1 yard	10 feet	12 yards
¼in. x 1/30in.	190	.028	1/12	.28	1
¼in. x 1/24in.	135	.035	1/10	.347	1¼
3/16in. x 1/30in.	130	.042	⅛	.42	1¼
3/16in. x 1/24in.	100	.052	5/32	52	1¾
⅜in. x 1/30in.	96	.056	1/6	.556	2
⅜in. x 1/24in.	75	.070	1/5	.695	2½

TABLE II. MAXIMUM SAFE TURNS PER INCH MOTOR LENGTH (Lubricated)

Rubber Size	NUMBER OF STRANDS 8	10	12	14	16	18	20	22	24
¼in. x 1/24in.	30	26	24	22	20	—	—	—	—
¼in. x 1/30in.	33	30	28	26	25	24	—	—	—
3/16in. x 1/24in.	35	32	29	27	26	24	23	21	—
3/16in. x 1/30in.	37	34	31	29	28	27	26	25	24
⅜in. x 1/24in.	44	40	36	33	31	30	29	28	26

Finding the centre of gravity

Model	Wing Span	Wing Chord	Area in²	T/P Span	T/P Chord	Area in²	Moment Length as measured between ¼ chords	C.G. = Formulated Answer 3xT/P Area x Mommt / 8 x Wing Area	C.G. as measured on plan
Miles Student Free Flight Scale	22"	4.2"	92.4 in²	9.5"	2.95" mean	28 in²	12.3"	$= \frac{4.2}{7} + \frac{3 \times 28 \times 12.3}{8 \times 92.4}$ $= .6 + 1.45$ $= 2.05$" behind L.E.	1.97"
Timber S/C R/C	37½"	7½"	272 in²	16½"	4" mean	66 in²	18.8"	$= \frac{7.25}{7} + \frac{3 \times 66 \times 18.8}{8 \times 272}$ $= 2.755$"	2.70"
Comet 88 C/L Scale	29½"	3.35" mean	98 in²	8.1"	2.1" mean	17 in²	11.1"	$= \frac{3.35}{7} + \frac{3 \times 17 \times 11.1}{8 \times 98}$ $= 1.2$ from L.E. at mean chord	1.15"
Pluto Glider	45.5"	4.75"	215 in²	17"	3"	51 in²	19.25"	$= \frac{4.75}{7} + \frac{3 \times 51 \times 19.25}{8 \times 215}$ $= .68 + 1.74$ $= 2.42$"	2.48"
Rascal C/L Stunt	26"	5.5" mean	143 in²	12"	2.44"	29.2 in²	9.5"	$= \frac{5.5}{7} + \frac{3 \times 29.2 \times 9.5}{8 \times 143}$ $= 1.5$	giving slightly less sensitive elevator 1.3"
Woodford Special (Glider)	55.5"	5"	278 in²	20"	4"	80 in²	22.8"	$= \frac{5}{7} + \frac{3 \times 80 \times 22.8}{8 \times 278}$ $= .714 + 2.46 = 3.175$"	3.3"
Stomper Comp F/F	48"	7.0"	330 in²	26.5"	5"	130 in²	27.5"	$= \frac{8.25}{7} + \frac{3 \times 130 \times 27.5}{8 \times 330} = 1 + 4.05$ $= 5.05$"	4.9"
Gasser Comp R/C	40"	10"	400 in²	16.8"	5.4"	91 in²	21.6"	$= \frac{10}{7} + \frac{3 \times 91 \times 21.6}{8 \times 400} = 3.27$"	Not shewn on plan



How to Trim Free Flight Models

All models will require a certain amount of individual adjustment, and for early success it is important that we go about this in a particular order.

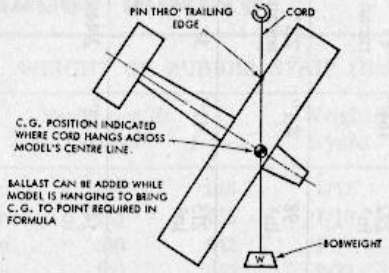
STAGE 1

Failing information about the balance point (C.G. location) marked on the plan, the position can safely be worked out by the following simple formula :— ▲ or ●

$$\text{C.G. Distance in inches Measured from the Wing Leading Edge} = \frac{\text{Wing Chord (Ins)}}{7} + \frac{\text{3 x Tailplane Area x Moment Lgth.}}{\text{8 x Wing Area}}$$

Moment length = Length between ¼ chord of wing and ¼ chord of tailplane.

Ensure that the C.G. comes at the point given in the formula, either by adding a small amount of ballast or by shifting some internal object such as batteries in the case of an R/C model. In all models we can take the C.G. more forward of the point indicated in the formula, and this is often done with the control line trainer in order to make the elevator control less sensitive. There is little advantage in doing this on F/F or R/C models. On no account must the C.G. be taken much further aft than this point. An accurate check on C.G. position can be made by suspending the model by one wing as shown.



STAGE 2

Changes in setting the wing and tailplane angle (trim changes) basically cause changes in flying speed. The model's flying speed should be chosen, not only to suit the class of model, but also to fit in with the wing loading. The greater the wing loading, the greater the flying speed.

As a rough guide to speed the following table should be useful :

WING LOADING (Total weight divided by wing area)	TYPICAL SLOWEST FLYING OR GLIDING SPEED	
	Span 3ft. or less	Span 3ft. 6in. or over
4 oz. per square foot	15 m.p.h.	12 m.p.h.
8 oz. ,,	18 ,,	14½ ,,
10 oz. ,,	19½ ,,	16 ,,
12 oz. ,,	21 ,,	17½ ,,
16 oz. ,,	24 ,,	20 ,,
20 oz. ,,	27 ,,	22½ ,,

In practice the model must be made to fly slightly faster than these speeds.

Choose a calm day for initial flights and test glide over grass. Launch the model as steadily as possible **slightly downwards** at a speed somewhat faster than that given in the table. If the model dives, increase the wing incidence or reduce the tailplane incidence by packing. If the model 'zooms' up and stalls, try launching a little slower. If it still appears to stall, reduce the wing incidence or increase the T/P incidence. See diagram.

Make all test changes in small amounts and observe results carefully and learn! Do not try to fly the model slower than the above speeds, it won't. On **no account** shift the C.G. position more than a small amount aft of that calculated in Stage 1.

STAGE 3—FOR POWER MODELS

For first power flight use just enough fuel to get the model airborne 30-50 ft. (10-15 seconds) for sports F/F or 50-100 ft. (20-30 seconds) for single channel R/C. It is only from this height that one can judge the glide properly. Do not be too mean on the power. A model that just hovers at launch height can be a danger to many. Remember that low engine revs. don't mean a low flying speed, but rather a low rate of climb.

FOR GLIDERS

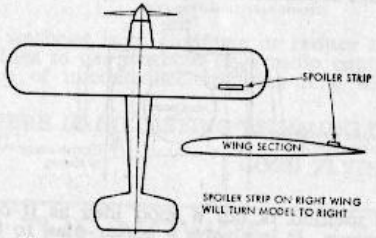
For the greatest endurance the wing and T/P incidences will not be set for the slowest speed (where the model is just below the stalling point) unless there are terminals about. This set up, in spite of slow forward speed, will result in a high rate of sink due to a poor gliding angle. A slightly faster trim should be adopted, i.e. less wing incidence or slightly more T/P incidence, where the gliding angle will be appreciably better.

Causing the model to turn, either by (i) a little rudder deflection or, (ii) a small aileron type trim tab can easily aid endurance and troubles caused by over elevation.

Make the aileron type trim tab of the upturned variety on the wing we need to drop rather than a downturn tab on the rising wing, i.e. to induce a left turn place upturned tab on trailing edge of left wing and not a downturned tab on the right wing.

A piece of thin aluminium or thin stiff card attached with Evo-stick can often make an excellent trim tab.

Another method of trimming a turn on the model and an alternative to the other two is to use a spoiler. The spoiler can take the form of a piece of ¼ inch square strip situated on the upper surface of the wing between mid-chord and threequarter-chord position.



The spoiler not only yaws the model slightly due to increased drag on that particular wing, but also destroys some of the lift of that wing. This causes the model to bank and so turn smoothly. This third method for adjusting a turn is perhaps one of the easiest.

As an example: a spoiler 3 in. long and ¼ in. square is sufficient to cause quite a steady turn on the average 5 ft. span model.

STAGE 4

Most power models will need some engine downthrust and sidethrust if a well balanced flight is to be maintained.

Downthrust is needed to 'kill' or reduce power stalling. Excess downthrust results in a higher flying speed while the motor is running and should only be used if this is required.

Sidethrust is used to balance out the turning effect of motor torque. The final angle required for both sidethrust and downthrust must be determined with the engine running at its peak revs. on the particular propeller being used.

On the F/F model the left turn produced by torque is often not completely neutralised by the full quota of sidethrust. The aim being a gentle circling turn to the left under power.

Some short-nosed models such as many scale models and most that have little or no dihedral will require a large sidethrust angle, perhaps 5-10 degrees, whereas the long-nosed types may only require say, 1 or 2 degrees. The greater the wing dihedral or wing sweepback the less sidethrust will be needed. Some low winged models, due to the lower dihedral effect present, will often require fairly large sidethrust angles.

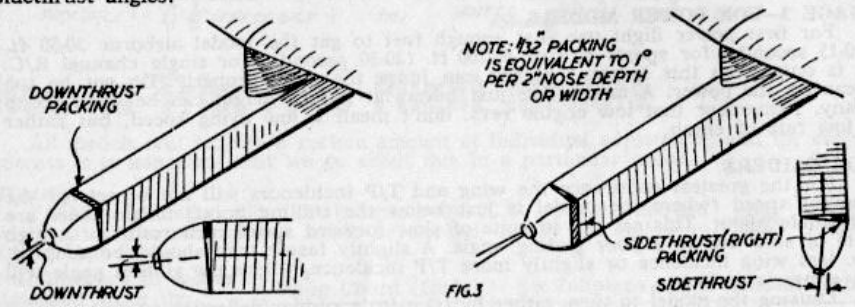
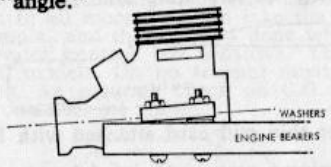


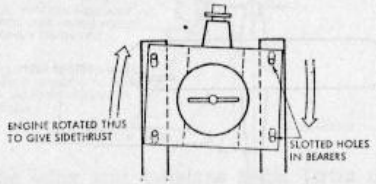
FIG.3

We obtain downthrust and sidethrust on the rubber model by packing the propeller nose block.

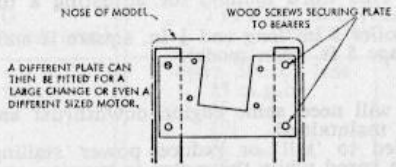
On the power model washers can be placed under the engine mounting lugs to introduce a downthrust "angle."



For small angles of sidethrust the bolt holes in the engine bearers can be elongated, so allowing the engine to be slewed round in its mounting. Undersized "sloppy" bolts can also give a similar effect.

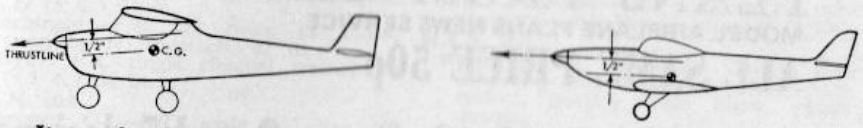


For large angles this method is not a good idea as it considerably reduces the strength of the engine bearers. It is always a better plan to fix the engine bearers to the sides of the fuselage and mount the engine on a fibre board or aluminium plate with an angled cut-out for the engine. This is screwed to the bearers by wood screws.



Downthrust does not necessarily manifest itself as an angle of engine tilt. It does, however, show up as a thrust line passing somewhere above the C.G.

Usually a distance of about ¼ in. is sufficient for all sizes of model. On the low-wing model, the C.G. comes low down and hence little or no downthrust angle is needed.



It can thus be seen that another way of producing downthrust effect is to lift the engine higher up. On the model with a very high mounted engine it may even be necessary to point the engine upwards in order not to increase the thrust off-set too much.

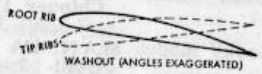
STAGE 5

The model should now be able to fly well, in which case settings can be left alone. However the F/F or R/C model, although at first appearing O.K. on short flights, may subsequently develop a tighter and tighter turn on the longer flights. This terminating in a spiral dive in either direction. The cure for this is to increase the dihedral or REDUCE the size of the fin. Remember an over large fin is conducive to spiral instability. This applies to all models.

Once a satisfactory glide has been achieved leave the C.G., wing and tailplane incidence alone. Do all adjustments to the power on state by altering the engine as stated in stage 4.

FURTHER NOTES

On some models, mainly gliders and similar types with high aspect ratio wings, wing WASHOUT is used. Washout refers to the twisting of the wings in such a way so as to produce less incidence, or angle of attack, at the tips than at the root of the wing, i.e. the same effect as lifting the trailing edge of the wing at the tips only.



The idea behind washout is to eliminate or reduce the risk of wing tip stalling. It is always a good idea to use washout on a radio controlled glider or slope soarer to reduce the chance of uncontrolled spinning if a wing tip stall is accidentally induced.

REMEMBER, THERE IS NO LASTING TRIMMING CURE FOR A BADLY BUILT OR WARPED MODEL.

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M.A.N. 10A
Dizzy Bug:—C/L F.A.I. speed model .15 (2.5cc) 21¾ in.
Wakefield Trainer:—F/F three quarter size trainer 20 in.
The Big D:—F/F open indoor microfilm 31 in.
Long Gone:—C/L class 'B' team racer .29 (.5cc) 29½ in.
The Hot Canary:—F/F pylon model .010—.020 (.2—.32cc) 33 in.

M.A.N. 11A
Whittman Super Tailwind:—F/F scale home built .049 (.8cc) 32 in.
Topkick:—F/F high performance A/1 tow-line glider 47½ in
Twin's Special:—C/L proto speed winner .29 (.5cc) 36 in.

M.A.N. 14A
U-Name-It:—C/L stunt "newlook" model .35 (.6cc) 55 in.
Fluff:—F/F ultra simple ½A model .049 (.8cc) 48 in.

M.A.N. 18A
X-80:—F/F high thrustline .049—.09 (.8cc—1.5cc) 47½ in.
Convair XP 31:—C/L scale .15—.19 (2.5—3.5cc) 29 in.

M.A.N. 20A
F.A.I. Viking:—F/F high thrustline F.A.I. power .15 (2.5cc) 65 in.
Target:—C/L Flying saucer 8 in. diam. .010 (.2cc)
Bulls-eye:—C/L flying saucer 19 in. dia. .15 (2.5cc)

M.A.N. 22A
Weekend Wonder:—C/L easy construction stunter .29 (.5cc) 38 in.
Red Coat:—F/F Wakefield Rubber 50 in.
Hi-Lo-Duo:—F/F pair of rubber models indoor or out 20 & 19 in.
Moonbeam:—F/F tractor pusher rubber flier 20 in.

M.A.N. 24A
Two-Ber:—F/F Wakefield or open rubber model 44½ & 56½ in.
Chameleon:—R/C single channel semi scale .06—.09 (.1cc—.5 cc) 38 in.
Papa Tapa:—C/L F.A.I. team racer .15 (2.5cc) 37 in.

M.A.N. 25A
Hughes H1 Racer:—C/L scale model, throttle control .60 (10cc) 44 in.
Corby:—F/F semi scale sports flier .020 (.32cc) 26½ in.
Aeronca Defender:—F/F scale rubber 27 in.

M.A.N. 30A
Raunchy:—C/L combat model .35 (6cc) 35½ in.
Mauler:—C/L Carrier deck landing .35 (6cc) 29 in.
Poncelet Vivette:—F/F semi scale sports .020 (.32cc) 30 in.
Dadson:—C/L foam wing sportster .049 (.8cc) 24 in.

M.A.N. 37A
O.K. Two:—0.2 R/C twin engine .020 (.32cc) single channel 38 in. (2.5-3.83cc) 61 in.

M.A.N. 38A
Swamp Box:—R/C single channel .09—.15 (1.5—2.5cc) 48 in.
Li'l Duster:—C/L ½A speed model .049 (.8cc) 8½ in.
Chipper II:—F/F sports, all sheet, .020 (.32cc) 30 in.

M.A.N. 42A
U-All- 2:—R/C "Galloping Ghost" .020 (.32cc) 50 in.
Belly Dancer:—F/F Wakefield rubber 48½ in.
Two Tube:—C/L twin boom sport .049 (.8cc) 27½ in.

M.A.N. 45A
Morane Saulnier:—R/C aerobatic glider 56½ in.
Grabber:—F/F Wakefield or open rubber model 50½ in.

M.A.N. 50A
Santa Maria:—R/C single channel scale .09 (1.5cc) 42 in.
Sundowner:—F/F open power .15—.23 (2.5—3.83cc) 61 in.
Blue Bonnett:—C/L open speed .15 (2.5cc) 16½ in.

M.A.N. 56A
Lockheed Vega:—R/C detailed free flight scale for .049 (.8cc) engines. Suitable for single channel. Span 43 in.
Traveller:—Indoor microfilm covered flier 18 ins. span by Bud Tenny.

M.A.N. 57A
Ryan PT-22:—C/L scale trainer easy to fly .35 (6 cc) 50 in.
Ringer:—F/F ½A contest model .049 (.8 cc) 42 in.

M.A.N. 59A
Viper II:—C/L proto speed, mono line .29 (5 cc) 24 in.
Harbinger:—F/F A/2 twice in U.S.A. team by N. Ingersoll, 82 in.
Mayfly: R/C single channel trainer .09 (1.5 cc) 36 in.

M.A.N. 60A
Aeronca C-3:—R/C scale s. chan .09 (1.5 cc) 53½ in.
Pat-I:—C/L basic trainer .049 (.8 cc) 24 in.
Javelin JC:—F/F R.O.W. ½A pylon .049 (.8 cc) 50 in.

M.A.N. 61A
Plane Jane:—R/C low wing multi .60 (10 cc) 70 in.
Furstep:—F/F cabin rubber trainer 24 in.
Little Pronto:—C/L basic trainer .049 (.8 cc) 18 in.

M.A.N. 65A
Road Runner:—C/L stunter .35 (6cc) 54 in.
Stratolark:—F/F open rubber, contest model 52 in.

M.A.N. 66A
Oily Bird:—R/C rudder and elevator control .29-.60 (5-10cc) 56 in.
Prop Busters:—C/L profile trainer .15-.29 (2.5cc) 27 in.

M.A.N. 67A
Hoptee:—C/L hot rat catcher .29-.40 (5-6.5cc) 27 in.
Demoiselle:—F/F scale sport .20 engines, 29½ in.
Daddy Rabbit:—R/C multi aerobatic .60 (10cc).

M.A.N. 69A
Trailblazer:—F/F ½A pylon contest .049 (8cc) 46 in.
Bitty Viper:—C/L Proto speed model .049 (8cc) 18½ in.
Oscillator:—R/C single channel aerobatic .19 (3.5cc) 47 in.

M.A.N. 72A
Rearwin Sportster:—1/10th scale R/C sportster 42 in., .049 (.8cc).
GRMZPF-8—Rat racer, 36 in. .040 (6.5cc).
Small Wonder:—Jetex 50 pusher, twin boom, 17 in.

M.A.N. 73A
Nova Too:—Multi-motor, multi R/C 58 in. .15-.45 (2.5-7.5cc).
DH 85 Leopard Moth:—Rubber scale, geared motor 42½ in.

M.A.N. 75A
Rodney Riser:—Stick type rubber model 35½ in.
Mox-Nix:—Sports C/L, twin fins. 38½ in. .19-.25 (3.2-4.5cc).
Fairchild P.T.19:—R/C scale trainer, multi or single 43 in. .15-.25 (2.5-4.5cc).

M.A.N. 76A
Kwik-Fli:—1967 Phil Kraft's World multi champion 60 in. for .60 cu in. (10cc) motor.

M.A.N. 76B
Northrop A17A Nomad:—C/L scale Army dive bomber 46½ in. 35-.45 cu. in (6-7.5cc).
Sophisticated Lady:—Chuck glider 19½ in.

M.A.N. 77B
C/L Chipmunk:—Semi-scale 56 in. span stunter by Jim Van Loo for 0.35 (6.5cc).

M.A.N. 78A
Witch Doctor 800:—Jim Clem's high thrusting Clas C. (for hot .40's) U.S. record holding free flight power design.
Origo:—Shoulder wing sports R/C single for 1 cc by Hoh Fang-Chiun (two plans on one sheet) 10/- incl. post.

M.A.N. 81A
Yak P or PM:—R/C scale model of Russian aerobatic aircraft, for .60 cu. in. (10cc motors).

M.A.N. 81B
All American Eagle:—Modern styled C/L stunter for .35 cu. in. motors. By D. Clarke.
Dixie Special:—Quarter Midget R/C pylon racer for .10-15 cu. in. motors (1.5-2.5cc).

M.A.N. 82B
FA 200 Aero Subaru:—Semi scale multi R/C for .60 cu. in. (10cc) motors.
De Havilland Mosquito:—C/L profile scale for two .049 cu. in. (.8cc) motors.

M.A.N. 83A
Bonzo:—U.S. Nats winning free flight scale of famous racer.
Kestrel:—Single or multi R/C soaring glider.

M.A.N. 85A
Nemesis:—Sleek multi aerobatic model of 74 in. wing span for .45-.60 cu. in. motors featuring a foam wing.
Ryan ST:—A free-flight profile fuselaged version of the famous Army trainer, using .020-.024 engines with a wing span of 30 in.

M.A.N. 87
Curtiss Triad:—C/L scale, .15 (2.5cc) 44 in.
Piper Pawnee:—C/L scale .19-.29 (3.5-5cc) 36 in.

M.A.N. 87A
C.47:—Control line profile version of this twin-engined transport aircraft. Wingspan 35in., and using two .049 cu. in. motors.
A/1:—48 in. span A/1 class glider, featuring all sheet surfaces.
Top Cat: IV:—Indoor rubber powered, tissue covered model. Winner of 1967 U.S. Nationals. 27 in. span.
Little Pro:—½A Proto speed model of 18 in. span using mono-line control.

M.A.N. 88A
Mirage III:—55½ in. span streamlined control line stunt model for .35 cu. in. motors.
Seapprentice:—Details for modifying the 'Apprentice' to rise-off-water.

M.A.N. 89A
Lil Doozey:—40 in. span seaplane for single channel R/C using elevator and rudder for .049 cu. in. (8cc).
Morane-Saulnier MS. 1500:—Rubber powered scale model of 24 in. wing span.

Lark 95:—Scale control line model for .75-1cc motors. Easy to build and fly.

M.A.N. 90A

Phantom:—Class 'B' free-flight power model of 82 in. span, for .29-.40 cu. in. motors.

Skipper:—Airscrew driven boat for R/C, for .09 cu. in. (1.5cc) engines. Overall length 24 in.

M.A.N. 90B

Continental 600:—58 in. span Formulae II prototype R/C pylon racer for .40 cu. in. engines, 600 sq. in. wing area.

Curtis XP-55 Ascender:—Control-line profile version of this unusual canard aircraft, for .049 cu. in. (.8cc) motors, 20 in. span.

M.A.N. 91A

Thermus:—R/C glider of 99 in. wing span, with optional power pylon for .09 (1.5cc) engine.

Shorthorn:—Class 'A' free-flight power model of 66 in. span, for 2.5cc engines.

M.A.N. 92A

Fokker D VIII:—31 in. span control-line scale model for .19-.23 cu. in. engines.

Osprey:—79 in. span, high aspect ratio glider with anti-vortex tips.

M.A.N. 94A

Eyeball:—Hot R/C multi aerobatic model for 10 cc engines, and featuring a foam wing.

Martin-Baker MB. 2:—Control-line scale model of 23 in. span, for 1.5-2.5 cc engines.

Stratomax:—Unlimited rubber duration model of 47½ in. span.

M.A.N. 96A

Bellanca 300:—Semi scale control line stunt model of this attractive aircraft. 53in. span, for .35 cu. in. motors.

Porterfield Collegiate:—39in. span, scale free-flight version of 1940 American light aircraft. Uses .049 cu. in. engine (.8cc).

PROVISIONAL CONTROL LINE GOODYEAR RACING RULES

OBJECTIVE

To provide a simplified form of Team Racing by racing models conforming to a simple specification in heats, against the clock.

MODEL SPECIFICATION

(a) Models must be of an actual Goodyear Racer, to a scale of 1½" = 1'0". The plan and side elevation outlines must be within plus or minus 5% of true scale.

(b) No engine cowling permitted.

(c) Tail area may be increased up to a maximum of 25% of the wing area.

(d) One or two wheel undercarriages may be used.

(e) Models must be finished in a scale like manner, including racing numbers, and S.M.A.E. number.

(f) Maximum engine capacity 3.5 c.c.

(g) There are no restrictions with regard to the type of fuel tank used.

(h) Distance between centre of control handle and centre line of model shall be 52'3" plus/minus 3". Minimum line dia .012".

CONDUCT OF CONTESTS

(a) All models, complete with control lines and handle, shall be required to pass a general safety inspection immediately prior to flying in a race. All mechanics must wear protective headgear.

(b) The pilot shall be the entrant, and there shall be a maximum of two mechanics per model.

(c) The number of laps flown shall be:—

Heats and semi finals - 80 laps

Finals - 160 laps

Models must make a minimum of one pit stop in heats and semi finals, and a minimum of three pit stops in finals.

(d) Prior to each heat a two minute warming up period shall be allowed.

(e) All races shall have a Le Mans start, with all pilots and mechanics standing at the centre of the flying circle.

(f) When flying all pilots shall walk around within a 5ft radius circle. No whipping shall be permitted

(g) During all pit stops models must be attended to at any one of the segment marks, on the outer circle of 19.6 metres radius

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Plugs vary in construction, even come integral with the cylinder head, and the most common means of fitting the wire element is to have it in a tightly wound coil of about 5 to 7 turns, Platinum-Iridium wire of about .015 diameter. Current drain on the booster battery is high, being around 2 to 5 amps, so it is better to remove the battery terminal connection as soon as the engine fires, or for any period when the engine is not actually being flick started. Dry batteries of the large bell-cell type, arranged in parallel pairs, are satisfactory.

To set the engine ready for starting, mount it securely in a test stand, arrange a fuel supply with the tank on a level with the crankcase, and fit a prop at the "quarter to three" position as on a clock-face, securely tightening the prop-nut. Now blow through the fuel supply tube with it connected only to the needle valve body, and adjust the needle valve control until a steady hiss is heard at the jet in the centre of the intake tube.

Next remove the plug and connect with the battery. One lead to the top of the plug, the other to the plug body, or earth if the plug is left resting by its body on the engine cylinder head. There is no need for concern over polarity, just as long as one lead cannot touch the other, and that the alligator clips are safely spaced on the plug, then the element should glow bright orange. Dull red will indicate a poor contact, low battery or current leak in the circuit. If the plug glows rapidly to white heat, disconnect immediately as it is most probable that there is too much current going through the element and there is a danger of blowing out and fusing unless a resistance is fitted. American plugs on lead acid accumulators are specially susceptible. Once satisfied that the glow is present, we should inject a little of the special fuel through the plug hole, fit the plug and flick over a few times without connecting the plug. A drop of fuel in the intake also helps this way to free up the engine ready for a quick start and the lubrication helps to seal the piston fit.

When thoroughly prepared and ready to start, connect the fuel line to the tank which should be filled,—do not choke the carburettor—and then hook up the plug immediately prior to flicking over. Now flick hard: the engine should fire, continue to run, sucking fuel through the tube from the tank and giving the impression of running rich. Allow to pick up for five seconds or so, disconnect the lead off the top of the glowplug (the other can be more or less permanent for test purpose on a mounting lug or other convenient earthing point), then watch the characteristics.

The engine should be rather rich for the first run, not two-stroking but nevertheless operating smoothly with copious fumes from the exhaust and lots of noise. To get the engine to two-stroke, simply lean out the mixture by screwing the needle valve into its body, quarter turn at a time and waiting a moment between adjustments to check the effect in revolutions per minute. To stop the engine, simply screw the needle valve fully home and the effect will be that the engine speeds up to a peak speed, dies off and stops fairly abruptly through the fuel starvation. This will give the experience needed to identify too lean a fuel setting

Run the engine rich for the first 30 minutes of its life, and after the first minute or so, stop it and tighten the head bolts while still warm.

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BOWERS

2830	Fly Baby	J	10p

CHANCE VOUGHT

● 2774	Corsair F4U-1	A & J	20p
2668	Crusader F8U-1	B & L	20p
2723	Crusader F8U-3	B & L	20p
2658	Cutlass F7U-3	B & L	20p

CHESTER

2726	Jeep Racer	E & H	20p

CONVAIR

2653	YF-102 (prototype)	L	10p
2226	F102 (production)	B	10p
2821	XFY-1	A & J	20p

CURTISS

2671	Cleveland	A & F	20p
● *2698	Hawk P6E and Goshawk F11C-2	A & F	20p
● 2884	Kittyhawk I, III, IV	AH	35p
●*2739	JND4 Jenny	A & F	20p
2755	Navy Racer CR1, 2, 3	J & U	20p
2832	Sparrowhawk	A & J	20p

DOUGLAS

● 2783	DC-3 Dakota	N & T	20p
● 2872	Dauntless	S & H	35p
2856	D558 Skyrocket	A	10p
2876	Havoc (Turbinlite)	A & O	20p
2445	F4D-1 Skyray	A & J	20p
● 2649	Skyhawk	A & J	20p
*World	Cruiser	A & F	20p
2778	World Cruiser Dimensions		35p

ERCO

2446	Ercoupe 415G	A	10p

FOLKERTS

2771	SK. 3 Jupiter	A & H	20p

GENERAL DYNAMICS

2920	F-111E	A,L,O	50p

GRANVILLE

● 2789	Gee Bee R1	J & H	20p

GREAT LAKES

*2748	(Harold Krier's)	A & F	20p

GRUMMAN

2683	F9-F8 Cougar	A & J	20p
*2706	Gulfhawk & F3F-2	A & F	20p

MEYER

2701	Little Toot	A & K	20p

LOVING WAYNE

2707	Love	A & K	20p

LOCKHEED

2657	F94 Starfire	A & J	20p
● 2757	F.104	A & J	20p

McDONNELL

2747	F4H-1 Phantom II (Prototype)	B & L	20p
2922	F4K & M.Phantom	S & H & T	50p

NORTHROP

2738	N.156 Freedom Fighter	B & L	20p

NORTH AMERICAN

2647	Harvard	A & J	20p
● 2766	Mustang P.51D	A & J	20p
2491	F.100A Super Sabre	B & L	20p
●*2717	F.100D Super Sabre	S & T	20p
● 2489	F.86E Sabre	A & J	20p

PESCO

2745	(Roscoe Turner's)	J & F	20p

REPUBLIC

● 2793	P.47 Thunderbolt	S & H	35p
● 2713	F.105B Thunderchief	B & L	20p
● 2700	Thunderstreak	S & T	20p
2822	Thunderjet	J	10p

RYAN

2688	'Spirit of St. Louis'	L & F	20p

SPECIALS

2762	Cosmic Wind & Long Midget	A & J	20p
2734	Pearson-Williams Mr. Smoothie	1/32 & J	20p
2913	Spinks Akromaster	A & 1/12	45p
● 2887	Thomas Morse S-4C	A & J	20p
*2732	Wright Flyer	A & F	20p

AUSTRALIAN

2841	Victa Airtourer 100	A & J	20p
2878	Victa Airtourer 210	J & H	20p

BELGIAN

● 2711	Hanriot HD.1	A & J	20p
2721	Tipsy Tipper	K & J	20p
2805	Tipsy Junior	J	10p

BRITISH

AIRMARK

2905	Cassutt Racer	1/12 & K	50p

ARROW

2801	Active II	J	10p

A.N.E.C.

2007	Missel Thrush IV	H	10p

ARMSTRONG WHITWORTH

2736	AW 650 Argosy	N & M	35p
2818	FK8	A & J	20p
2780	FK10 Quadruplane	A & J	20p
2651	Meteor NF.14	A	10p
2014	Siskin	A & J	20p

AUSTER

2018	Ambulance B.4	A & J	20p
2016	Autocar J.58	A & J	20p

AVRO

● 2781	Lancaster I & III	NST	35p
2758	Rota (Cierva 30)	1/18 & J	20p
2702	Shackleton MR.III	N & M	20p
● 2759	Vulcan II	M or N	20p
2675	504K	A	10p
2023	707A	A & J	20p
2744	748 Airliner	O & T	20p

BEAGLE

2823	B206	J	10p
2890	Pup 100 & 150	J & H	20p

BLACKBURN

2743	Airedale	A & J	20p
2868	Buccaneer S Mk. 2	S & T.	20p
2806	Lincock III	J	10p
2052	Monoplane 1912	A	10p
2842	N.A.2	H & J	20p
2855	Shark 1, 2, 3	A	10p

BOULTON PAUL

2803	Balliol	A & J	20p
*2689	Overstrand	B & L	20p
2055	P.111	A & J	20p

BRISTOL

2845	Bloodhound	A	10p
2060	Brabazon I	M	20p
2116	Brittania	M & N	35p
2709	Brittania 312	N & O	35p
● 2718	Bulldog IIa	A & F	20p
●*2692	F2B Fighter	A & F	20p
2838	Monoplane XII	J	10p
● 2792	Scout D	A & J	20p
2809	173 Belvedere	L	10p
2117	171 Mk.4 Sycamore	A & J	20p

CHILTON

2119	D. W.1a (Trainer)	J & K	20p

CURRIE

2788	Currie Wot	A & H	20p

DART

2124	Kitten II	F	10p
2125	Pup	J & K	20p

DE HAVILLAND

● 2833	D.H.2 Fighter	F & J	20p
●*2735	D.H.4	A & F	20p
● 2765	D.H.5	A & J	20p
2852	D.H.9A	A & J	20p
2791	D.H.34	J & F	20p
*2708	D.H.60 Moth	A & F	20p
2144	D.H.75A Hawk Moth	F	10p
● *2681	D.H.82A Tiger Moth	A & F	20p
2149	D.H.88 Comet	A	10p
● *2690	D.H.89A Rapide	A	10p
2834	D.H. 94 Moth Minor	J	10p
2167	D.H.106 Comet I	N & M	35p
2840	D.H.108 Swallow	J	10p
2168	D.H.110	B & L	20p
● 2163	D.H.115 Vampire	A	10p
● 2752	D.H. Comet 4B	N & C	35p
● 2861	D.H. Mosquito II, IV, VI	S & T	35p
†2680	D.H. Venom, Series	S & T	20p
2164	T.K.4	K	10p

HESTON

2804	Phoenix	A	10p

EDGAR PERCIVAL

2696	E.P.9	A & L	20p

ENGLISH ELECTRIC

2171	Canberra 2	B & L	20p
● †2704	Canberra B (1) 8	S & T	35p
● †2785	Lightning R. Mk.1a	S & T	20p
2916	Lightning F.6 (B.A.C.)	A & J	35p
2851	T.S.R.2	1/60th	10p

FAIREY

2857	Battle	A	10p
● 2914	Battle B. Mk.1	J & F	50p
2656	Fairey F.D.2	A & J	20p
2672	Fantome	A	10p
2900	Firefly	A & J	20p
2763	Fox	J & H	20p
2664	Gannet T1 & A.S.1	B & L	20p
● *2795	Swordfish 1 & 111	L & F	20p
2859	111D	A	10p

FARMAN

2864	Shorthorn	B & L	20p

FOLLAND

2196	Midge/Gnat	A & J	20p

GLOSTER

2798	Bamel	J	10p
● 2205	Gamecock	A	10p
● *2714	Gladiator	A & F	20p
2214	Grebe I	A	10p
● 12670	Javelin Mk. 1	S & T.	20p
2217	Javelin G.A.5	B & L	20p
● 2221	Sea Gladiator	A & J	20p
● 2220	Meteor VIII	A	10p
2225	IVB Seaplane	A	10p
2742	VI Racer	A & J	20p

HANDLEY PAGE

● 2882	Halifax	NST	50p
● *2677	Heyford	L	10p
2234	Victor B1	M & N	20p

HAWKER

● *2727	Fury (Biplane)	A & F	20p
● *2729	Hart	A & F	20p
2892	Harrier GRI & T2	STH	50p
● 2731	Hurricane	S & T	20p
†2663	Hunter V	L & B	20p
2241	P.1067 Hunter	A & J	20p
2824	Nimrod (Biplane)	H & J	20p
2850	P.1127	A	10p
2241	P.1067 Hunter	A & J	20p
● 2808	Typhoon	S & H	35p
2049	Woodcock	A & J	20p
● 2250	N7/46 Sea Hawk	A & J	20p

ISAACS

2786	Fury I	A & H	20p
2888	Fury II	A & H	20p

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† AEROMODELLER "Aircraft Service"

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LUTON

2256	Minor	J & K	20p
2247	Buzzard	J & K	20p

MARTIN BAKER

2889	MB5	J & H	20p

MILES

2889	Hobby M13	J & H	20p
2813	M.20	A	10p
2063	M.21 Hawk Speed 6	A & J	20p
2292	Sparrowhawk	A & J	20p

HUNTING-PERCIVAL

2894	Mew Gull E3H	J & H	20p
2301	Mew Gull P.6	A	10p
2300	P.56 Provost	A	10p
2837	Proctor V	A	10p
2661	Jet Provost II	A & J	20p

PRESTWICK

2302	Pioneer II	A & J	20p

ROYAL AIRCRAFT FACTORY

*2716	B.E. 2e and 12a	A & F	20p
2669	F.E.2b	F	20p
● *2703	RE8	A & F	20p
● *2694	S.E. 5a	A & F	20p

ROLLASON

2901	Condor	A & 1/16th	35p
2925	Beta	A & 1/12th	50p

SAUNDERS-ROE

2831	S.R. 53	A & J	20p
2724	S.R. 177	A & J	20p

SHORT

2307	S.A.6 Sealand	B & L	20p
2317	Seamew	A	10p

SLINGSBY

2812	Sky	A & J	20p

SOPWITH

2320	Buffalo	A & J	20p
● 2699	Camel	A & J	20p
● 2754	Dolphin	A & J	20p
● 2844	Pup	A & J	20p
● 2686	Snipe	A & J	20p
2751	Tabloid	A & J	20p
● 2741	Triplane	A & J	20p
● 2779	1½ Strutter	A & J	20p

SUPERMARINE

2335	Sparrow	1/48	10p
● 2896	Spitfire Mk. 1 1/16	S & T	50p
● 2347	Spitfire Vb and Vc	A & J	20p
● 2749	Spitfire IX & XVI	L & H	20p
2807	Seagull	A & J	20p
2355	Swift F4 & 5	A	10p
2048	Tyne 541 Swift	A & J	20p
2764	S5	J & H	20p
● 2331	S6B	A	10p
2828	N.113	A & J	20p
2356	508	A & J	20p
2357	510	A & J	20p
2359	525	A & J	20p

VICKERS

2810	Gun Bus FB9	A & J	20p
● 2360	Valiant	M & N	20p
2730	Vanguard	N & M	35p
2879	VC10 (R.A.F.)	O & 1/192	35p
● 2722	Vimy	B & L	20p
● 2358	Viscount 700 & 800	M & N	20p
2725	Stranraer	B & L	20p
● 2659	Walrus	A & J	20p

WESTLAND

● 2873	Lysander	S & H	35p
2854	Wessex Trimovan	A	10p
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2848	Widgeon II & III	A	10p
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GLIDERS

2682	R.A.F. Training Gliders, Cadet 1, 2, 3, Eton, Prefect and Sedburgh	N	20p

GENERAL

2909	Bessonneau Hanger	J & N	20p

CANADIAN

2633	Avro Canada CF. 100B	B & L	20p
2820	D.H.C. Beaver	J	10p
2652	D.H.C. Otter	B & L	20p

CZECHOSLOVAKIAN

2902	Avia BH33	A	20p
2839	Super Aero 45	A & J	20p
2923	Broucek	A & H	35p

DANISH

2637	KZIII Lark	A	10p

DUTCH

FOKKER

2662	D.23	A & J	20p
2802	F-III	A & J	20p
2875	F.VII A	A	10p
2636	F.VII A	B & L	20p

FRENCH

2797	Antionette Monoplane	A	10p
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2814	Bleriot XI	A & J	20p
2782	Caudron 460	J & H	20p
2924	Caudron CR714	A & H	50p
2750	Dassault Mirage III	B & J	20p
2799	Deperdussin Racer	J	10p
2648	Druine Turbi	K & J	20p
2655	Druine Turbulent	K & J	20p
2811	Dewoitine D510	A	10p
2646	Jodel Bébé	J & J	20p
2899	Jodel D117	A & H	20p
2886	Jurca Sirocco	A & H	20p
2885	Jurca Tempete	A & H	20p
2665	Leduc 021	A & J	20p
2769	Mignet Flying Flea	J & H	20p
2853	Morane Saulnier B	A	10p
2685	Morane Saulnier Parasol	A & J	20p
2908	Morane Saulnier EP2	J & H	35p
2693	Mystere Series	S & T	20p
● 2728	Nieuport 17c	B & L	20p
● 2776	Nieuport 28	A & J	20p
2695	Nord Griffon	A & J	20p
2897	Piel Emeraude CP30	A & H	20p
2911	Potez 25	A & F	35p
2720	SE. 5003 Braudeur	A & J	20p
● 2679	Spad XIII	H	10p
2817	Spad Berlina	A & J	20p
2645	Sud-Ouest Vautour	B & L	35p
2915	Sepecat Jaguar Variants	J & F	50p

GERMAN

● 2746	Albatros DII	A & J	20p
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2705	Albatros C-III	A & J	20p
2815	Arado AR68G	A	10p
2816	Brandenburg Sea Monoplane	A & J	20p
2712	Bucker Jungmeister	A & F	20p
2919	DFW. CV	J & F	35p
2917	Dornier DO X	O	35p
● 2895	Dornier Do17Z	A & J	20p
2749	Dornier Do 28	A & J	20p
2756	Etrich Taube	A & J	20p
● 2865	Fieseler Storch	A & J	20p
2883	Focke Wulf FW44 Stieglitz	A & F	20p
2869	Focke Wulf Stosser	L & F	20p

● 2761	Focke Wulf 190, A5, A8	B & H	20p
● 2678	Fokker DRI Triplane	J & F	20p
● 2691	Fokker DVII	A & J	20p
● 2667	Fokker DVIII	A & J	20p
● 2849	Fokker EII & EIII	A	10p
2836	Halberstadt Scout	A & J	20p
2773	Halberstadt CL-2	A & J	20p
2737	Hanover CL-3a	A & J	20p
2846	Hansa Brandenburg CI	A & J	20p
● 2819	Heinkel HE162 Salamander	S & F	35p
● 2926	Heinkel HE111	NST	50p
2880	Junkers D1	K & J	20p
● 2687	Junkers Ju87D & G	L & B	20p
2563	Klemm L25/1A	A & J	20p
● 2790	Messerschmitt ME 109e	J, B & H	35p
● 2881	Messerschmitt Me.110	S & T	35p
● 2907	Messerschmitt Me.163	A & H	35p
● 2891	Messerschmitt Me. 262	A & J	20p
● 2898	Messerschmitt Me.410	A & J	20p
2860	Moeller Stomo 3	A & H	20p
2697	Pfalz Dr.1	A & J	20p
● 2787	Pfalz D-111	A & J	20p
● 2874	Pfalz DXIII	F & J	20p
2829	Phoenix C.1	J	10p
2719	Roland DVIb	A & J	20p
● 2796	Roland Walfisch	J	10p
2826	Siemens Schuckert D4	F & J	20p
2580	Zaunkönig	F & J	20p

SWEDISH

● 2858	Saab J29	A	10p
2660	Saab 32A Lansen	A & J	20p
2775	Saab 35 Draken	S & T	20p

ITALIAN

● 2674	Fiat CR42	A	10p
2715	Fiat G91	A & J	20p
2863	Macchi MB 326	A & J	20p
2800	Macchi Castoldi MC 72	A & J	20p
2847	Piaggio PC7	J	10p

JAPANESE

2768	Mitsubishi S-00 Zero 52	B & H	35p
● 2843	Kawasaki Nick 1	A & J	20p

POLISH

● 2733	PZL P11c	B & H	20p
2910	PZL Wilga 32, 35	J & 1/20th	35p
2784	PZL 101 Gawron	1/25th & J	20p
2862	PZL 104 Wilga	A & H	20p
2871	RWD 8	A & H	20p
2866	SZD 19 'Zefir'	J & H	20p
2927	Kania-3	J & H	20p

RUSSIAN

2912	Antonov An-2 Colt	A & F	35p
● 2906	Ilyushin 11-2M3	A & J	20p
● 2921	Lavochkin LA-5FN & LA7	J & H	45p
2644	Mig 15	A & J	20p
2827	Mig 21 (Fishbed)	B & L	20p
2893	Polikarpov Po-2	SH	35p
● 2767	Polikarpov I 16 (Rata)	F & J	20p
2877	Sukhoi Su7m	B & L	20p
2825	Tupolev TU104	O	10p
2928	Yak 9	J & H	45p
2918	Yak 18PM-PS	A & H	20p

SPANISH

2835	Hispano HA-1109 'Buchon'	K & J	20p

THE 'X' LIST

VINTAGE, UNORTHODOX, NOVEL

Plans marked with the suffix 'X' are not illustrated in the catalogue but are still available on delayed delivery. These are out-dated vintage designs. The date of original publication is quoted for example - **8/40** means **August 1940.** This is for information only, back numbers are not available for more than the past three years

IF THE DESIGN IS NOT LISTED HERE WE CANNOT SUPPLY IT

CODE PREFIX MEANS:

FSR	Flying Scale Rubber.	CL	Control Line.
FSP	Flying Scale Power.	PET	Power Free Flight.
MA	Model Aircraft Plan.	D	Duration Rubber Power.
U	Unorthodox.		
G	Glider.		
WP	Waterplane.		

A.B.C.Robin	FSR/239X	40p	8/-	7/46
A.B.C.Robin	FSP/564X	50p	10/-	9/54
Able Gull	CL/836X	50p	10/-	4/63
Ace of Diamonds	U/707X	50p	10/-	8/58
Achilles	PET/543X	50p	10/-	3/54
Aegeus	G/106X	40p	8/-	1940
Aeolus	G/102X	30p	6/-	1940
Aero Commander	MA/286X	50p	10/-	7/58
Aeronca C-3	MA/285X	40p	8/-	7/58
Altagerra	MA/354X	40p	8/-	9/61
Altair	G/602X	50p	10/-	9/55
Angular Angel	MA/328X	25p	5/-	5/60
Anita	MA/320X	40p	8/-	1/60
Apollo	PET/819X	40p	8/-	5/62
AP6	G/103X	60p	12/-	1940
Aquila	G/681X	50p	10/-	3/58
Arrow Active	FSP/691X	75p	15/-	3/58
Arrowhead	D/584X	40p	8/-	5/55
Ascender	U/436X	50p	10/-	7/51
Atakee	PET/577X	50p	10/-	2/55
Atlanta	G/105X	30p	6/-	1940
Atlantis	PET/747X	45p	9/-	12/59
Auster B-4	FSP/531X	50p	10/-	i1/53
Auster B-4	FSP/148X	30p	6/-	3/53
Austin Whippet	FSP/480X	50p	10/-	1952
Avro Athena	MA/312X	30p	6/-	7/59
Avro Avis	FSP/937X	20p	4/-	8/67
Baby Micro-Film	I/108X	30p	6/-	1940
Baby R.O.G.	I/109X	30p	6/-	1940
Bad Pyrmont	G/358X	40p	8/-	1949
B.A.Swallow	FSR /110X	40p	8/-	1941
Bazooka	D/348X	40p	8/-	2/50
Beatnik	MA/325X	40p	8/-	6/60
Beginners Bi-Plane	D/113X	25p	5/-	1941
Bell Airacobra	FSR/100X	30p	6/-	1940
Bellança Cruise-master	MA/208X	40p	8/-	1/57
BE 2c	FSR/215X	50p	10/-	12/43
Bev	MA/228X	20p	4/-	1/56
B.G.44	G/498X	50p	10/-	1/53
Big Stuff	D/114X	75p	15/-	1941
Bim-Bam	D/575X	40p	8/-	2/55
Bi-Plane Sports	D/112X	30p	6/-	1941
Bi-Play	PET/582X	30p	6/-	4/55
Bittern	D/259X	40p	8/-	3/47
Black Chiffon	CL/486X	40p	8/-	11/52
Black Ghost	MA/295X	30p	6/-	10/58
Bluebottle	CL/526X	45p	9/-	9/53
Boeing XL15	FSP/395X	50p	10/-	10/50
Boom	PET/714X	40p	8/-	2/59
Borderline	D/512X	45p	9/-	5/53
Boulton Paul D111	J/548X	45p	9/-	5/54
Bowden Contest	PET/225X	60p	12/-	11/55
B.M.I.	WP/365X	40p	8/-	1/49
Brevity	MA/46X	30p	6/-	7/49
Bristol 77 Racer	FSR/216X	45p	9/-	10/44
Bucks Duck	PET/337X	60p	12/-	10/59
Buhl Sport Air Sedan	FSP/899X	20p	4/-	4/66
Bullet 1	PET/626X	40p	8/-	5/56
Bumblebug	CL/437X	45p	9/-	7/51
Buzzard 11	U/298X	40p	8/-	8/48
Byrdie	U/601X	40p	8/-	9/55
Cabin Bi-Plane	D/115X	25p	5/-	8/41
Cabin Monoplane	D/116X	25p	5/-	1941
Candy II	CL/269X	60p	12/-	9/47
Cannellard	D/335X	30p	6/-	10/49
Celestial Horse-man	G/118X	£1	-	1947
Cessna Airmaster	MA/308X	50p	10/-	5/59
Cessna C-34	FSP/753X	50p	10/-	3/60
Changi	PET/743X	40p	8/-	10/59
Cheetah	CL/313X	30p	6/-	4/49
Cherpaa	U/618X	50p	10/-	3/56
Chunky	PET/768X	30p	6/-	9/60
Cicada	PET/927X	30p	6/-	4/67
Class 'B' Indoor Model	MA/341X	30p	6/-	2/61
Clot	MA/189X	40p	8/-	7/54
Cloudline	D/122X	40p	8/-	1946
Cloudpin	MA/313X	30p	6/-	10/59
Clwyd Queen	U/630X	45p	9/-	7/56
Clubman	PET/419X	40p	8/-	3/51
Cobra	G/317X	40p	8/-	5/49
Coccincelle	PET/752X	50p	10/-	3/60
Compact	MA/347X	30p	6/-	5/61
Comper Swift	FSP/464X	50p	10/-	2/52
Consul	PET/474X	50p	10/-	6/52
Copland's Wakefield	D/121X	50p	10/-	12/46
Coquette	PET/384X	40p	8/-	7/50
Courier	PET/662X	40p	8/-	6/57
Crackerjack	CL/303X	30p	6/-	10/48
Cracow	G/119x	40p	8/-	1945
Cue-dot	G/909X	30p	6/-	6/66
Curtiss Jenny	MA/197	50p	10/-	10/54
Cutlass	U/559X	40p	8/-	9/54
Cyrano	PET/760X	40p	8/-	7/60
Daedelus	D/124X	40p	8/-	9/42
Dart Pup	FSP/620X	45p	9/-	2/56
Dart Pup	FSP/621X	50p	10/-	2/56
D.B.12	G/320X	50p	10/-	6/49
Delanne	FSR/472X	50p	10/-	5/52
Deltik	MA/382X	30p	6/-	8/63
Demon King	CL/347X	40p	8/-	3/50
Destroyer	CL/471X	50p	10/-	5/52
D.H.5	FSP/879X	40p	8/-	10/65
DH 84 Fox Moth	FSP/654X	40p	8/-	4/57
DH Heron	MA/236X	75p	15/-	5/56
DH Tiger Moth	MA/269X	50p	10/-	12/57
Dizzy	I/249X	30p	6/-	9/46
Dizzy Diesel	PET/276X	40p	8/-	12/47
Django	MA/329X	20p	4/-	5/60
Dolphin	PET/315X	60p	12/-	4/49
Don Quixote	G/356X	25p	5/-	1949
Dorland	D/248X	30p	6/-	9/46
Doughnut	U/524X	50p	10/-	9/53
Douglas 046A	FSR/518X	50p	10/-	7/53
Dragonette	U/885X	30p	6/-	AMA/65
Dragonfly	U/562X	50p	10/-	10/54
Dream Bogey	G/330X	50p	10/-	8/49
Dream Weaver	PET/653X	50p	10/-	4/57
Dryad	WP/230X	50p	10/-	2/46
Duck Foot	WP/611X	45p	9/-	12/55
Dunne Type Tailess	U/652X	30p	6/-	3/57
Dusty Mk.VIII	D/233X	40p	8/-	4/46
Edgar Percival EP 9	FSP/722X	50p	10/-	3/59
Effie Eye	MA/360X	40p	8/-	1/62
Elf Axe	PET/473X	50p	10/-	5/52
Elfin Mk.2	PET/289X	40p	8/-	5/48
Ellipitas	MA/356X	30p	6/-	10/61
Elmira	G/127X	40p	8/-	1946
Endeavour	PET/769X	40p	8/-	10/60
English Electric Wren	FSP/466X	50p	10/-	3/52
Eros	PET/280X	£1	-	1/48
Estrellita	D/616X	40p	8/-	1/56
Eureka	PET/711X	40p	8/-	10/58
Everest	G/706X	45p	9/-	9/58
Executor	MA/379X	50p	10/-	5/63
Fairy Swordfish	FSP/535X	50p	10/-	12/53
Fairy Swordfish	MA/178X	40p	8/-	3/54
F.A.I.Team Racer	MA/361X	30p	6/-	1/62
Fantasm	MA/164X	30p	6/-	10/53
Farthing Micro-Film	1/223X	25p	5/-	1947
Feather Weight	1/309X	40p	8/-	1/49
Fevair	MA/ 336X	40p	8/-	10/60
Fifteen	PET/521X	50p	10/-	8/53
Filibuster	D/257X	30p	6/-	3/47
Fillons Champ	G/260X	£1		3/47

Finnair	G/672X	45p	9/-	9/57
Firefly	D/128	30p	6/-	1942
Firebrand Mk.II	CL/380X	40p	8/-	6/50
Flamingo	PET/377X	50p	10/-	5/50
Flanders Flyer	PET/354X	40p	8/-	1949
Flash	CL/375X	40p	8/-	4/50
Fledgeling	PET/451X	30p	6/-	11/51
Flicka	CL/363X	40p	8/-	1949
Flip Flop	D/463X	40p	8/-	2/52
Flutterbus	D/797X	30p	6/-	8/61
Flying Bomb	G/357X	20p	4/-	1949
F19 Swiss	PET/353X	50p	10/-	10/49
Fokker Duration	D/130X	40p	8/-	1942
Fokker DXVIII	CL/712X	40p	8/-	11/58
Footprint	CL/589X	40p	8/-	6/55
Forwarder	G/483X	50p	10/-	9/52
Fried Fritter	PET/563X	50p	10/-	10/54
Fugitive	G/258X	40p	8/-	8/47
G.B.2 Flying Boat	WP/134X	50p	10/-	12/41
G.B.8	CL/502X	40p	8/-	2/53
Geisha Girl	MA/324X	40p	8/-	3/60
G.H.20	D/217X	40p	8/-	6/44
G.H.27B	D/281X	40p	8/-	1/48
Ghoul III	U/435X	45p	9/-	7/51
Gigi	PET/872X	20p	4/-	12/64
Ginmill	CL/828X	30p	6/-	10/62
Glenelg	PET/229X	60p	12/-	10/46
Globe Swift	CL/484X	40p	8/-	9/52
Gloster Gladiator	MA/322	30p	6/-	2/60
Goldwinga	D/900X	30p	6/-	3/66
Gook	CL/501X	40p	8/-	2/53
Gossamer	PET/327X	40p	8/-	7/49
Greengage	D/561X	50p	10/-	AMA 54/5
Gullie	MA/375X	40p	8/-	1.65
Gull Flying Boat	WP 137X	50p	10/-	1943
Gutteridge Trophy Winner	D/138X	50p	10/-	7/41
Handley Page Halifax	FSR/140X	50p	10/-	5/43
Happy Harold	CL/342X	30p	6/-	12/49
Harpie	PET/439X	45p	9/-	8/51
Harlequin	CL/557X	50p	10/-	8/54
Hatchetman	G/666X	40p	8/-	7/57
Hawker Hart	MA/374X	50p	10/-	12/62
Hawker Typhoon	FSR/205X	50p	10/-	12/44
Heatwave	PET/686X	60p	12/-	1/58
Helides 7	PET 401X	40p	8/-	12/50
Hells Bells	PET/438X	45p	9/-	7/51
Hi-Ball	PET/271X	40p	8/-	10/47
Hi-Liner	PET/793X	50p	10/-	7/61
HKI	FSP/637X	40p	8/-	1956
H.M.300	MA/213X	40p	8/-	6/65
Horsa II	PET/332X	50p	10/-	8/49
Hot Canary	PET/525X	30p	6/-	9/53
Humbug	PET/959X	20p	4/-	2/68
Hussie	PET/440X	30p	6/-	8/51
Icarus Jnr.	CL/421X	45p	9/-	4/51
Icarus Snr.	CL/422X	50p	10/-	4/51

Invicta	G/270X	40p	8/-	10/47
Iolanthe	G/296X	50p	10/-	7/48
Iota	PET/452X	30p	6/-	AMA/51
Itzme	D/147X	40p	8/-	1/42
Jabberwocky	CL/514X	30p	6/-	6/53
Jaded Maid	PET/427X	50p	10/-	5/51
Jader 60	G/475X	50p	10/-	6/52
Jay	D/151X	25p	5/-	11/42
Jinx	G/314X	50p	10/-	3/49
Joss Stick	MA/282X	25p	5/-	5/58
Juggler	CL/389X	40p	8/-	9/50
Jum Bux	PET/1008X	20p	4/-	MA'65
Jumpin' Bean	PET/572X	45p	9/-	1/55
Junior Miss	D/449X	30p	6/-	10/51
Kapitan	PET/247X	40p	8/-	6/47
Karin	MA/373	30p	6/-	11/62
Karoro	PET/496X	45p	9/-	1/53
Khamseen	G/610X	40p	8/-	11/55
King Falcon	G/154X	50p	10/-	1942
Kingfisher	FSR/218X	40p	8/-	8/45
Kirby Kite	G/155X	40p	8/-	1942
Kittiwake	WP/757X	50p	10/-	5/60
Kolibrik	PET/245X	40p	8/-	8/46
Komet	PET/508X	50p	10/-	5/53
Ladybird	D/287X	40p	8/-	4/49
Ladybird Special	PET/408X	40p	8/-	AMA/50
La Paloma	D/639X	40p	8/-	10/56
Last Resort	MA/326X	30p	6/-	5/60
Lavengro	G/405X	50p	10/-	AMA/50
Lazybones	I/157X	25p	5/-	3/42
Lazybones III	CL/387X	40p	8/-	8/50
Lazy Daisy	CL/428X	40p	8/-	4/53
Leander	G/156X	40p	8/-	19/42
Lil Abner	CL/478X	40p	8/-	7/52
Lil Aud	PET/446X	45p	9/-	9/51
Lil Zowie	CL/339X	30p	6/-	11/48
Lindy	CL/412X	25p	5/-	1/51
Linnet	PET/537X	45p	9/-	1/54
Little Stinker	J/413X	40p	8/-	2/51
Little Vagabond	PET/136X	40p	8/-	3/45
Man O'War	CL/383X	40p	8/-	7/50
Manx Arrow	U/407X	25p	5/-	1/51
Martinsyde Buzzard	MA/327X	50p	10/-	4/60
Max Holste MH 152	PET/593X	50p	10/-	7/55
Mayflower	PET/928X	30p	6/-	11/66
Merlu	D/344X	40p	8/-	12/49
Mermaid	WP/162X	60p	12/-	1942
Meteor	CL/397X	50p	10/-	11/50
Miles M.35	FSP/576X	50p	10/-	2/55
Miles Student	J/629X	40p	8/-	6/56
Minicano	PET/882X	30p	6/-	6/65
Mini Egal	G/822X	30p	6/-	8/62
Missel Thrush	FSP/404X	50p	10/-	12/50
M.T.Sportster	MA/239X	40p	8/-	6/56
Nakajima B5NI	MA/372X	75p	15/-	10/62
Natzneez	PET/221X	50p	10/-	11/44
Nebula	G/552X	50p	10/-	7/54
Nimbus	G/304X	50p	10/-	11/48
No 96A	G/814X	75p	15/-	2/62
Nord 2	G/409X	50p	10/-	1/51
Number Eight	G/566X	50p	10/-	11/54
Number Nine	MA/366X	40p	8/-	4/62
Olympian	PET/789X	50p	10/-	6/61
Pander EG100	FSP/738X	50p	10/-	9/59
Paragon	PET/753X	40p	8/-	4/60
Pathfinder	PET/513X	50p	10/-	6/53
Patron	MA/403X	40p	8/-	
Patches	G/817X	50p	10/-	4/62
P.D.Q.	I/647X	40p	8/-	2/57
Pee Wit	PET/779X	40p	8/-	2/61
Pegasus	U/396X	40p	8/-	11/50
Pelican	G/622X	50p	10/-	3/56
Penumbra	U/739X	75p	15/-	8/59
Percival Mew-Gull	FSR/170X	25p	5/-	1942
Percy III	D/171X	30p	6/-	8/42
Peregrine	PET/547X	45p	9/-	5/54
Peres I	G/242X	60p	12/-	8/46
Pete	D/172X	30p	6/-	7/42
Pete's Plank	U/429X	40p	8/-	5/51
Phoenix	PET/414X	50p	10/-	9/58
Picador	CL/640X	50p	10/-	11/56
Pjerri	G/767X	50p	10/-	9/60
Pluto	G/723X	40p	8/-	3/59
President	PET/393X	40p	8/-	10/50
Preston	CL/481X	40p	8/-	8/52
Prop Secret	PET/604X	50p	10/-	AMA/55
Pteranodon	U/624X	50p	10/-	4/56
Pussyfoot	PET/482X	40p	8/-	8/52
Pylonius	PET/402X	40p	8/-	1/50
R.A.F. V.	D/253X	40p	8/-	1/47
Rebel	PET/394X	40p	8/-	1/50
Revenge	G/415X	50p	10/-	2/51
Riot Act	CL/956X	30p	6/-	1/68
Rocketeer	D/234X	40p	8/-	6/46
Roplano	G/782X	50p	10/-	3/61
RWD 8 Polish Trainer	FSP/174X	75p	15/-	8/44
R.T.P. Pusher Streamline	1/180X	30p	6/-	1944

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Sailplanes	G/558X	35p	7/-	8/54
Saracen	PET/830	40p	8/-	12/62
Scalded Kitten	PET/352X	40p	8/-	AMA/49
Scamp	MA/173X	40p	8/-	1/54
Schooler	MA/299X	30p	6/-	1/58
Scramble	CL/454X	30p	6/-	11/51
Scylla	G/246X	40p	8/-	12/46
Seagull	WP/190X	40p	8/-	1944
Sea King	WP/689X	75p	15/-	3/58
Sea Nymph	WP/542X	45p	9/-	3/54
Seraph	G/533X	35p	7/-	12/53
Short Scion	FSR/193X	50p	10/-	1944
Shrike	CL/634X	40p	8/-	9/56
Shrimp	PET/300X	30p	6/-	9/48
Silver Patrol Mk. 1a	G/277X	40p	8/-	12/47
Skylark II	D/273X	25p	5/-	11/47
Slick Stick	PET/550X	50p	10/-	6/54
Smokey Joe	J/399X	40p	8/-	AMA/50
Snark	G/469X	50p	10/-	4/52
Snorky	PET/424X	40p	8/-	4/51
Sokol	G/199X	75p	15/-	1944
Sorcerors Apprentice	CL/515X	30p	6/-	6/53
Speed King	CL/284X	40p	8/-	2/48
Sporty	PET/367X	40p	8/-	2/50
Stability Gremlin.	U/252X	40p	8/-	12/46
Star Dust	PET/667X	50p	10/-	7/57
Stuntster	CL/362X	40p	8/-	AMA/48
Sugarfoot	PET/381X	40p	8/-	6/50
Sugden 2.5 Eng.	U/588	40p	8/-	
Sugden Castings	U/588A	50p	10/-	
Sultan	PET/477X	50p	10/-	7/52
Sunstreak	MA/245X	40p	8/-	8/56
Sup	G/863X	40p	8/-	7/64
Super Saint	CL/465X	30p	6/-	2/52
Susie	PET/737X	40p	8/-	8/59
Swallow	G/265X	30p	6/-	7/47
Sweep	MA/368	30p	6/-	6/62
Swift	FSR/301X	40p	8/-	9/48
Swiss Miss	PET/571X	50p	10/-	12/54
Sword	CL/674X	40p	8/-	10/57
Splitter	WP/635X	40p	8/-	AMA/56
Tailless Record Holder	MA/64X	30p	6/-	12/49
Tadpole	G/519X	50p	10/-	7/53
Tandem Mono-plane	I/202X	25p	5/-	1944
Tantivvy	CL/530X	30p	6/-	AMA/53
Tass 130	D/355X	40p	8/-	AMA/49
Taurus	CL/360X	50p	10/-	AMA/49
Taylor Cub	FSR/196X	30p	6/-	1944
Thataway	U/897X	40p	8/-	2/60
Thermal Queen	D/378X	50p	10/-	5/50
Thistledown	1/278X	30p	6/-	12/47
Time Traveller	CL/642X	25p	5/-	12/56
T.K.4	CL/411X	40p	8/-	1/51
Tonto II	G/500X	50p	10/-	2/53
Topsy	D/420X	50p	10/-	3/51
Tototol	PET/598X	50p	10/-	8/55
Tribute	G/200X	50p	10/-	1944
Troyka	FSP/549X	50p	10/-	7/54
Trump Card	D/430X	45p	9/-	6/51
Tubby	MA/358X	30p	6/-	1961
T.V.T.8 Strijkplank	U/345X	40p	8/-	12/49
Twizzler	J/448X	30p	6/-	10/51
Tyro Mk.III	MA/384X	30p	6/-	9/63
Tyro Trainer	CL/295X	30p	6/-	7/48
Tzigane	MA/393X	40p	8/-	7/64
Upstart	D/556X	50p	10/-	8/54
Ursa	G/450X	50p	10/-	10/51
Valerie II	MA/401X	40p	8/-	4/65
Veronica	G/459X	40p	8/-	1/52
Vickers Viking	RTP/237X	60p	12/-	1946
Vickers Viking Motor	RTP/238X	50p	10/-	1946
Vindscreen Viper II	J/467X	45p	9/-	3/52
Virago	CL/350X	40p	8/-	1/50
Vulcan	PET/206X	£1	-	1944
Vultan	U/538X	50p	10/-	1/54
Walthew A/2	G/426X	40p	8/-	5/51
Walthew Rubber	D/390X	40p	8/-	8/50
Warrings Light-weight	D/294X	40p	8/-	7/48
Welshman	U/443X	45p	9/-	8/51
Windrush II	G/442X	50p	10/-	8/51
Windy A'int it?	PET/329X	50p	10/-	8/49
Winged Serpent	FSR/286X	40p	8/-	3/48
Winter Queen	D/827X	40p	8/-	AMA/62
Wishbone	G/859X	50p	10/-	4/64
Witch Mk.I	D/371X	40p	8/-	3/50
Woodford Special	G/491X	40p	8/-	11/52
Woomera	MA/316	35p	7/-	1959
½A Wunda	MA/345X	40p	8/-	4/61
Wyvern	PET/431X	45p	9/-	6/51
X.F.S. Co Axial	D/212X	40p	8/-	4/53
Yardstick	D/529X	45p	9/-	10/53
Yoicks	CL/334X	40p	8/-	10/49
Zephyr	J/292X	30p	6/-	6/48
Zeus	G/213X	40p	8/-	1944
Zombie V	D/316X	50p	10/-	4/49

INDEX

TO ILLUSTRATED PLANS IN THIS HANDBOOK

See pages 118 - 121 for designs in the unillustrated 'X' list.

Leprechaun	G/370	75p	65
Liquidator	CL/998	30p	83
Little Auk	WR/685	30p	46
Little Mavis	D/890	20p	44
Little Twister	MA/387	20p	50
Lively Lady	G/1073	50p	64
Lockheed Lightning	FSR/158	20p	39
	FSR/159	30p	39
Lockheed P2V-7 Neptune	CL/783	50p	34
Lockheed P38 Lightning	CL/671	40p	34
Lockheed Sirius	CL/328	20p	34
Loening OL-9	WP/650	50p	20
Long Midget	CL/1085	20p	74
Lucifer	G/645	35p	65
Luscombe 8A "Sky Pal"	FSP/503	50p	20
Lulu Mk II	G/338	30p	69
Luton Minor	FSP/534	30p	21
Luton Minor (Prototype)	FSP/697	25p	21
Macchi Castoldi MC-72	CL/788	40p	34
Madcap	PET/470	50p	57
Mam'selle	PET/612	30p	57
Mandy	PET/861	30p	57
Meanderer	G/683	40p	65
Meece II	CL/1091	20p	70
Mercury IV	PET/504	£1	57
Merry Miller	MA/212	30p	50
Messerschmitt Me 109	CL/709	30p	34
Messerschmitt Me 109F	MA/355	40p	21
Messerschmitt Me 109F	FSP/1017	20p	21
Messerschmitt Me 210	MA/395	50p	34
Messerschmitt Me 262	CL/1047	20p	34
Meteor IV	J/293	20p	47
Mick Farthing Glider	G/228	20p	69
Mickey	G/969	20p	69
Migrator & Thermalnose	G/826	40p	65
Miles Hawk Speed Six	FSP/434	50p	21
Miles Sparrowhawk	FSP/1089	50p	21
Miles M.48	FSR/CL/243	30p	39
Mig 15	FSP/603	30p	21
Mini Clown	PET/974	20p	57
Mini Early Bird	CL/904	20p	81
Mini-Mouse	CL/825	30p	72
Mini Tutor	D/988	20p	45
Minibunt	CL/901	20p	8
Mini Weaver	PET/1012	35p	52
Miranda	WP/605	25p	47
Miss F.A.I.	CL/778	30p	74
Mistress	CL/943	30p	74
Mitsubishi Type 10 Wright Martin M5	RTP/942	35p	27
Moby Dick	G/310	75p	69
Morane Parasol	FSP/924	20p	22
Moses	PET/995	40p	58
Moss Trooper	PET/962	35p	57
Mpunku	PET/1001	20p	57
M.P.12	G/573	50p	65
Mudhopper	PET/705	30p	58
Mustunt	CL/878	50p	79
Nakajima Tenzan (Jill)	MA/268	40p	35
N.A. Navion	FSR/264	25p	39
Nieuport 17	FSP/951	35p	22
Nig-Nog	PET/781	50p	53
Nikolina	D/873	20p	43
Nordic Tern	G/374	40p	65
North American O.V. 10A	CL/912	50p	35
North Star	MA/338	30p	44
Northrop P61 Black Widow	CL/1092	75p	35
Octet	U/657	15p	69
O. High O.	D/726	30p	43
Omega	G/614	30p	65
Pamyscaphe	D/880	25p	42
Pandora	D/755	30p	43
Peacemaker	CL/687	30p	83
Pee Wee Creep	PET/732	30p	53
Pepe	PET/835	25p	58
Percival Mew Gull	CL/600	25p	35
Peril	PET/921	30p	58
Pfalz DIII	FSP/775	50p	22
Phoebus	G/1052	20p	69
Piaggio P.166	CL/824	60p	36
Pinky	PET/813	30p	58
Piper Apache	CL/756	40p	36
Piper Comanche	CL/790	50p	36
Piper Comanche	MA/317	30p	22
Piper Pawnee	MA/348	20p	40
Piper Super Cruiser	FSP/832	35p	22
Pipette	PET/1009	20p	58
Pitts Little Stinker	MA/98	30p	36
Poppet	MA/334	20p	59
Popsie	PET/460	50p	59
Potez 75	FSP/581	25p	40
Pou du Ciel	FSP/1040	20p	14
Prestwick Pioneer II	FSP/425	50p	22
Princess	CL/724	40p	76
Pulteri	PET/764	40p	53
Pushy-Cat	PET/528	50p	59
P.Z.L. P-24 Fighter	FSP/487	50p	22
Quartet	U/595	15p	41
Quickie	G/517	50p	66
Rake	MA/377	40p	50
Rambler	PET/1011	20p	59
Rascal	CL/660	25p	76
Ratatat	CL/1014	20p	73
Razor Blade	CL/729	30p	83
Razzamachas	CL/803	30p	75
R.E.8	FSP/418	30p	23
Red Admiral	D/718	20p	44
Red Dragon	CL/842	30p	77
Republic Sea-Bee	FSP/319	50p	23
Rivets	CL/1084	20p	74
Roaring 20	PET/695	30p	59
Ro-Dart	U/456	20p	50
Rolling Stone	G/876	40p	66
Rumpler C.V.	MA/402	40p	23
Rumpler Taube	MA/168	30p	23
Ruter-ess	CL/989	20p	82
Ryan NYP	FSP/663	30p	23
Ryan P.T.20	FSP/554	35p	23
Saab Safir	CL/966	35p	36
Sailaway	G/730	15p	69
Sans Egal	G/725	40p	66
Satan	G/717	30p	66
Savoia Marchetti SM 81	FSP/1077	40p	23
Scimitar	MA/270	40p	77
Seal	WP/849	50p	47
Seamew	CL/1061	75p	36

September Warrior	MA/385	20p	83
S.E.5	FSR/274	25p	40
S.E.5a	FSP/682	25p	23
Shackleton MR3	CL/746	50p	28
Sharpoon	CL/806	30p	76
Sharp Scooter	PET/804	30p	59
Short Seamew	MA/218	35p	24
Shorty	G/583	30p	66
Siesta	G/696	20p	63
Silent Knight	MA/398	55p	70
Siskin	CL/742	30p	28
Simple Simon	CL/773	30p	76
Skeeter	U/532	25p	51
Skiffler	CL/665	40p	78
Skua	CL/771	40p	78
Skybolt	CL/908	20p	75
Skyhawk	C/679	30p	72
Skyranger	D/541	25p	45
Skytale	PET/636	75p	60
Slarmi	G/953	15p	70
Slick Schick	CL/968	20p	81
Slingsby (Kirby) Tandem Tutor (T.31)	FSG/692	30p	67
Slingsby T-21B	FSG/1018	20p	67
Snowflake	J/772	20p	48
Snow White	PET/585	30p	60
Sopwith Camel	FSP/441	50p	24
Sopwith Pup	FSP/305	50p	24
Sopwith Pup	FSP/750	40p	24
Sopwith Schneider	FSP/1019	20p	24
Sopwith Snipe	MA/339	50p	24
Sopwith Swallow	FSP/625	50p	25
Sopwith Tabloid	FSP/810	50p	25
Sopwith Triplane	CL/361	30p	36
Sopwith Triplane	FSP/545	50p	25
Sopwith 1½ Strutter	CL/651	50p	36
Sopwith 1½ Strutter	FSP/907	40p	24
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Spacehound	CL/846	50p	80
S.P.A.D. S-7C1 Scout	FSP/373	50p	25
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Spartan	MA/378	30p	78
Spinner	D/1042	20p	45
Spitfire	CL/776	50p	37
Spitfire LF XIV	FSP/607	30p	26
Spiteful	MA/183	30p	37
Splatt	CL/785	20p	81
Stomper	PET/499	30p	53
Stallion	CL/865	30p	78
Stampe Monitor	CL/820	50p	80
Streamer Screamer	CL/1096	40p	83
Streamer Eater	CL/883	20p	83
Strolling Bone	G/933	20p	63
Sunclipper	G/192	35p	66
Sunspot	G/283	60p	67
Supermarine Spitfire VB	MA/376	30p	25
Supermaster	CL/930	50p	80
Supermouse	CL/823	30p	73
Sure Flyer	D/800	30p	45
Sycamore & Hoverfly	U/713	25p	51
Syncopator	G/896	20p	63
Taylorcraft Auster	FSR/195	25p	40
Telstar	G/1006	20p	63
Tempest II	CL/336	30p	33
Terrier	PET/553	30p	60
The New A/M Cabin Duration	D/494	20p	46
Thermalist	G/306	£1	67
Thomas Morse S4C	FSP/1102	50p	25
Threesome	D/658	15p	41
Thunderbolt	CL/587	40p	78
Tiger Moth	FSP/555	50p	16
Tigress	CL/741	30p	75
Tipsy Junior	(CL/321	25p	37
	(CL/322	30p	37
	(CL/323	40p	37
Tipsy Nipper	FSP/731	30p	25
Tomboy	PET/398	35p	60
Topscore	G/684	30p	67
Trio	U/656	15p	41
Trip Stick	D/818	35p	45
Tuffy	CL 829	20p	71
Turncoat	CL/926	20p	82
Tutor	D/954	20p	45
Twiddler	J/702	15p	51
Twosome	U/655	15p	41
Typhoon 1B	FSP/372	30p	19
Tyro Gyro	MA/139	30p	71
Unlimited	CL/369	25p	82
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Upbury	MA/392	30p	46
Upburys Convertible	PET/G/1010	20p	60
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Vedette	CL/975	35p	71
Venture	PET/391	50p	61
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V.A. Walrus	FSP/661	40p	26
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Waco Hadrian	FSG/219	25p	68
Waco YQC-6	FSP/844	75p	27
Walthew Glider	G/341	20p	70
Wee Snifter	MA/340	30p	61
Westland Lysander	FSR/161	45p	40
Westland Lysander	FSP/160	50p	26
Westland Widgeon III	FSR/P/211	25p	26
Westland Widgeon III	FSR/211	20p	40
Whippet	MA/309	20p	61
Whizzler	G/791	15p	70
Wichita-5	MA/404	40p	67
Wildfire	CL/364	20p	77
Windbag	MA/386	20p	61
Wolverine	CL/866	30p	78
Workmaster	FSP/RC821	35p	26
Xernes	TG/394	40p	51
XL 56b	D/690	40p	43
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Y-Bar	PET/590	30p	54
Yellow Bird 13 & 20	G/805	20p	70
Zaunkoenig	FSP/392	35p	27
Zeus	PET/841	35p	54
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½A Train	PET/994	40p	51
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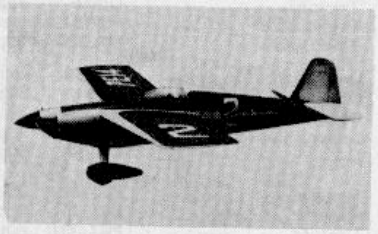

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