1991 Warld Championship



R

GOOD LUCK AND GOOD FLYING WE WISH ALL CONTESTANTS IN WE WISH ALL CUNTESTANTS IN THE 1991 WORLD CHAMPIONSHIPS Radio Equipment The Experts Choice A Personal Computer for the Model Enthusiast Simple User friendly programming for novice or expert

Ser friendly programming for novice or expert

Stored for instant retrieval with

Stored for instant retrieval with

Selectable modes of flight

Selectable modes of flight User friendly programming he stored for instant results of the stored for UP to 4 in-flight selectable modes of flight modes

Smooth Preset transitions for alleron-flandles for all alleron-flandles for alleron Up to 4 in-flight selectable modes of flight Smooth preset transitions between tlight modes

(programmable 0.6 - 30 sec.) for alleron-flap-elevator

(programmable models included to aid program set-up

18 outline models programmable 0.6 - 30 sec.) for alleron-flap-elevator 400 ald program set-up 400 included to aid program set-up 400 for 18 outline models included a F3R F3C and F3E wariable programs for F3A F3R variable programs for F3A, F3B, F3C, and F3E modules

or replaceable factory programmed Soft-ROM modules

or replaceable factory programmed Soft-ROM modules Variable programs for programs of tenlaces his factory programmed confidence of the programs for programmed confidence of the programs of the programmed confidence of the program of PROFI-ULTRASOFT-MODULE Order 4800/67 -Order 4800/68 French Order 4800/69 Graupner protect your investment whatever MC-18 Micro Computer the future holds programmable RC System with up to 18 JOHANNES GRAUPNER channels JUHANNES GHAUFNEH D-7312 KIRCHHEIM-TECK 35MHz - Order 4835 40 MHz - Order 4840 REMOTE CONTROL 7. 8. 8. MICROCOMPUTER EXPERT-SYSTEM MC

IMPORTER AND DISTRIBUTOR of:













Sponsored by Kraft

McDaniel R/C Inc.

- TORNADO -



MADE FROM GLASS REINFORCED POLYESTER AND NON-REINFORCED POLYESTER



FOURMOST PRODUCTS

Systems Australia



CARL GOLDBERG MODELS INC

Eddy and Helene Lo of Kraft Systems and their suppliers wish all contestants good fortune and good flying in their quest to achieve flying perfection.



For these products see your local hobby shop. If not available ask your local hobby shop to order direct from Kraft Systems

SYSTEMS

AUSTRALIA



50 PVPIE STREET CEELONG 2220 (052) 202 101 (2 LINES) FAY (052) 219 500 DO BOY 1240

Model Aeronautical Association of Australia



I warmly welcome you to this World Championship at Wangaratta, Victoria.

This is the fourth time the Model Aeronautical Association of Australia has had the pleasure of welcoming all of you to a World Championship; this time a triple event for F3A Aerobatics, F3C Helicopter and F3D Pylon Racing.

I am sure the Aeromodelling fraternity of Australia will do their utmost to ensure that you will enjoy a very good competition and a convivial social scene. Should you have any problems during your stay in our country please let me know and I will do my best to assist you any way I can. Wishing you all good manoeuvres and fast circuits.

Yours in Aeromodelling,

David H. Axon

President Model Aeronautical Association of Australia.

Victorian Model Aeronautical Association



To All Team Managers, competitors and supporters, welcome to Australia for the World Championships in Aerobatics, Pylon Racing and Helicopter. Considering the long distances travelled by competitors it is pleasing to see the large representation from many countries for these Championships.

The venue for this event is excellent with many practice fields within close proximity. The organizing committee have worked hard and diligently to ensure that every detail has been taken into consideration and organized correctly. In particular I wish to congratulate the Australian Pattern Association for their professional approach with the representation to CIAM and Internationally recognized ability to conduct International competitions making it possible for the CIAM to award this event to Australia. I hope that all our International guests in Australia have an enjoyable and memorable visit and on behalf of all Victorian aeromodellers I wish all competitors good fortune and performance to the peak of your ability. Yours in Aeromodelling,

Peter Harris. President of the VMAA



The organising responsibility of these World Championships was vested in the Australian Pattern Association. This organisation is a special interest group covering the interests of radio control aerobatic modellers in Australia. It has over two hundred members Australia wide and conducts most major aerobatic competitions in Australia. The Kraft Masters, an open international event held for the last fourteen years, was the proving ground for the organisation of these World Championships. Many of the world's top aerobatic competitors have competed in our Kraft Masters, the result of which has raised our competitive standard.

Yet it seems like only a few weeks ago that our committee was asked to host the event on behalf of the MAAA. We had submitted a bid for the 1993 Championships which would have given us more than two years to plan, but the offer for 1991 was a firm one and it took us only an hour or so to accept.

Brian Green who has been the driving force behind our bid warned us that the work load would be enormous but the chance to host a World Championship was too much to pass up. Brian immediately prepared the estimates of the likely financial result based on the number of contestants he expected would attend. It is great to look back now and see how accurate his forecasts were.

We thank Eddy and Helene Lo for their very generous sponsorship; they have been strong supporters of the APA and aeromodelling in general for many years and it was their assistance that enabled the APA to bring to Australia many of the biggest names in F3A aerobatics. The friendships and connections made during those visits provided Australia with the credentials to enable our bid to be successful. Planning for an event such as this has more to do with round table conferences, endless lists, phone calls late into the night and a myriad other things than it does with the hobby of aeromodelling. For the past nine months there has been committee meetings at least twice a month with each of us reporting his specific area of responsibility. Discussions ranged over every aspect of the organization and it was often after 1 am before we called a halt.

Brian Green is in overall charge and has the largest workload. He has the published phone and Fax numbers and virtually all the correspondence ends up on his desk. From there it is shared out to other APA committee members or if it relates specifically to the other disciplines it is handled by their CD's. Brian is also writing, editing and preparing for printing, the souvenir programme.

Henry Hutchinson is F3A CD and also in charge of all field preparation including the nine practice sites. Bey Hutchinson has the job of making up about four hundred supporter/contestant packages and also seeing to it that all the souvenirs are in place for the event.

Rob Clarke has looked after the accommodation and now probably knows more about the Motels in Wangaratta than the proprietors do. Rob will also look after the central administration area during the event. Colin Lane has produced all the International and local bulletins, created all the entry and information forms sent to every FAI affiliated National association world wide and has been of invaluable assistance to Brian, Rob, Henry and myself with the enormous amount of computer work that has been required. Colin will also be the editor of our World Champs News letter to be published on a daily basis.

I have responsibility for the finances, trophies etc and other jobs as they come along. Stephen Green has looked after publicity and has gathered advertising revenue for the official programme.

Members of the Wangaratta club have been great supporters, particularly Ray Stefaniak, Ray and Erica Pike, Bruce Riley and Caroline Foote. The contest site is three hours drive from Melbourne so having people close by has been of invaluable assistance with preparations for the event. I would like to add my personal thanks to all members who have worked tirelessly to ensure success.

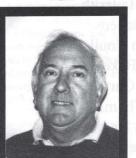
The Organizing Committee

Contest Director Brian Green.



Past National Champion in F3A Aerobatics, F3D Pylon Racing and Gliding and past Victorian State Champion in Helicopter. With thirty years of competitive experience including three times F3A World Championship competitor and a current Masters Class F3A competitor, Brian has been heavily involved in promoting F3A aerobatics in Australia. His philosophy as C/D is simply to apply the rules equally to all competitors and to ensure that all competitors, be they first time or the reigning World Champion, receive the same degree of attention and respect from all judges and officials.

F3A



Event Directors F3C



F3D



Henry Hutchinson operates his own plumbing business in Safety Beach, Victoria. He has been the Australian Pattern Association Contest Director for nine years during which he has C/D'd National Championships and Kraft Masters International events. Henry regularly competes in Expert Class F3A Aerobatics.

Barry Hendy is an Electronics Engineer and has been R/C modelling since 14 years of age and has been flying helicopters for the last six. During-that time Barry has been National, Trans Tasman, NSW and Victorian State F3C Champion. Barry also C/D'd the 1988 Trans Tasman F3C event.

Keith Harvey commenced aeromodelling in 1948 and started in R/C in 1954 with ED valve equipment. Keith has a long and distinguished competitive career in both Gliding and Pylon Racing. Represented Australia at the F3B W/C in 1981 and in F3D in 1987. Australian National F3D Champion in 1987 Keith just missed a place on this W/C F3D team.



Tom Bloodworth, President of the Australian Pattern Association is an Executive with the ANZ Bank. Ten years in Radio Control modelling with the last six years competing in aerobatics and an active Masters Class F3A competitor for the last three, Tom looks after the finances of these World Championships.



Robert Clarke operates his own Contruction Cost Estimating business and has been involved in Aerobatic competition for the last four years. Secretary of the DAC Club and the APA, Rob competes in Advanced Class Aerobatics. The W/C Administration Centre and Accommodation are handled by Rob.



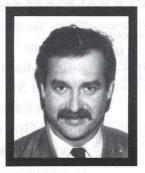
mation Officer and has been aeromodelling for five years, the last three as an aerobatic competitor. Colin is the Australian Pattern Association newslettereditor and competes in Advanced class Aerobatics. The W/C bulletins and the competion newsletter are under Colin's control.



Beverly Hutchinson is a Life Member of the Australian Pattern Association and with Henry participates in the organization of many APA contests. Souvenirs are handled by Bev.



John Hughan, active pylon competitor is a F3D representative on the committee.



Bruce Smith an active helicoter flier is a F3C representative on the committee. The F3A Aerobatic event is organized by the Australian Pattern Association.

The F3C Helicopter event is conducted by members of the Melbourne Radio Control Helicopter Club.

The F3D Pylon racing event is organised by the Victorian Minature Pylon Racing Association.

The se people have freely given up their time to contribute to the success of these World Championships.

Chris Greenwood John Harper Michael Chipchase Wally Schubach Geoff Ervin Brian Hickman Aen Saalfield Alan Swift Stephen Green Rex Pycock Gerard Power Rick Eastland Trevor Eastland Tom Wesley Grant Manwarring Graham Emery Frances Bennet Ivan Zivinivik Steve Vickers Beverley Turton Gary Hausler Bruce Riley Erica Pike Ray Pike Caroline Foot David Foote Ray Stefaniak Lesley Prosser Boz Student

Terry Moss

Tse-law Chan

Gary Schmedje

Steve Noonan

Brian McFarlane

David McFarlane
Dave Whitten

Bob Hurst Val Vickers

Anthony Tallock Philip Tallock Gavin Fitzhenry Brian Munns Rob Jones Rob Moore Norm Frencham Hans Litjens Clinton Weekes Harvey Tresize David Bevan Gavin Wallis Warren Leach Ross Wilson Cliff McIver Alan Turton Mark Schirmer Brian Williamson Jason Bruce Dorothy Green Mark Smith Ross Finocchiaro Ken Nichols Hans Heck Peter Van De Waterbeemd Don Hauser Gavin Dark Ian Anderson Ian McDonald Julian Clutterbug Terry Weatherson Bill Kent

Barry Austin Scott Lennon Trevor Collins Mike Christoph Alan Swift Rick Mailerlth Erni Stevens Warren Coull Geoff Baker David Garner Rick Thoms Keiran Harvey Eric Beilby Fay Beilby Paul Classon Gary Turna Gary Davidson June Carrol Jim Orenshaw **David Scott** Peter Jordan Lindsay Gilmour Lester Harris Greg Hinton Mark Giggens Peter Easdown Greg Voak Greg Anderson Cinzia Anderson Bernard McKay Mike Frizel Bob Hyde Andy Kerr Bruce De Chastel Chris Grosdas Ken Wright

Neil Bathie

A special thank you to Werner Groth for his valuable contribution.

Robin Maultby Michael Smith

Angelo Fayaloro

Steven Green

Kevin Cooper

G. Godden

World Championship History

	- Harantal			F3A A	erobatics ———			_	
1960 (First)									
1st E Kazmirski	TICA	Таата	Lat	IIV	1983 (Thirteenth)				
	USA	Teams					TT.		TICA
2nd G Saamann	Germany			USA	1st H Prettner	Austria	Teams		
3rd K-H Stegmaier	Germany		3rd	Germany	2nd B Lossen	Germany			Japan
1060 6					3rd D Brown	USA		3rd	Germany
1962 (Second) 1st T Brett	USA	Tooms	1 ot	UK	1985 (Fourteenth)				
		Teams			The second secon		T		0
1st H Brooks	UK			USA	1st H Prettner	Austria	Teams		Germany
3rd C Olsen	UK		3rd	Germany	2nd W Matt 3rd B Lossen	Liech. Germany			Japan USA
1963 (Third)					31d B Lossell	Germany		310	USA
1st R Brooke	USA	Teams	1 et	LISA	1987 (Fifteenth)				
2nd F Bosch	Germany	1 cuiiis		Belgium	1st H Prettner	Austria	Teams	1 et	Germany
							1 Callis		
3rd E Kazmirski	USA		3rd	S Africa	2nd W Matt 3rd B Lossen	Liech. Germany			Japan Austria
1965 (Fourth)					ord D Dossell	Germany		Sid	rustru
1st R Brooke	USA	Teams	1 st	LISA	1989 (Sixteenth)				
2nd C Teuwen	Belgium	Leams		UK	1st H Prettner	Austria	Teams	1 of	USA
							reams	1st	
3rd C Weirick	USA		3rd	Canada	2nd W Matt	Liech.			Japan
					3rd I Kristensen	Canada		3rd	Canada
1967 (Fifth)									
1st P Kraft	USA	Teams							
2nd P Marrot	France			Germany					
3rd K Bauerheiim	Germany		3rd	S Africa		- F3C Helio	copter -	_	
1969 (Sixth)					1985 (First)				
	Coulta	Tanna	1 of	Commons		Ionan	Tanma	1 at	Ionon
1st B Giezendanner		Teams		Germany	1st S Taya	Japan	Teams		
2nd P Kraft	USA			USA	2nd E Heim	Germany			USA
3rd J Wester	Germany		3rd	Switz.	3rd A Nakajima	Japan		3rd	Germany
1971 (Seventh)					1987 (Second)				
1st B Giezendanner	Switz.	Teams	1 ct	LICA	1st C Youngblood	USA	Teams	1 et	Ianan
		1 Callis		Switz.	_		Teams		USA
2nd W Matt	Liech.				2nd T Iyaba	Japan			
3rd P Kraft	USA		3rd	Germany	3rd J Brennsteiner	Austria		3rd	Germany
1973 (Eighth)					1989 (Third)				
1st T Yoshioka	Japan	Teams	1st	Ianan	1st Y Dobashi	Japan	Teams	1st	Japan
2nd W Matt	Liech.	Teams		USA	2nd K Sensui	Japan	Teams		USA
3rd H Prettner	Austria			Austria	3rd C Youngblood	USA			Germany
old in Flettilei	Austria		310	Austria	31d C Touligolood	USA		Siu	Germany
1975 (Ninth)									
1st W Matt	Liech.	Teams	1st	USA					
2nd H Prettner	Austria			Liech.					
3rd D Brown	USA			Germany	F	3D PYLON	RACING	-	
					1007 77				
1977 (Tenth)					1985 (First)	- Children I	by participation	100	
1st H Prettner	Austria	Teams			1st M Malina	Czech	Teams		Australia
2nd D Brown	USA		2nd	Japan	2nd R Phelan	Australia		2nd	Italy
3rd W Matt	Liech.		3rd	Germany	3rd G Matthews	Australia		3rd	USA
1979 (Eleventh)					1987 (Second)				
	Lingle	Та	1.04	TICA		TICA	Т.	1	TICA
1st W Matt	Liech.	Teams		USA	1st D Shadel	USA	Teams		USA
2nd D Brown	USA			Italy	2nd B Richmond	USA			Australia
3rd M Radeliff	USA		3rd	Germany	3rd D Jett	USA		3rd	New Zealan
1981 (Twelfth)					1989 (Third)				
lst H Prettner	Austria	Teams	1 et	USA	1st D Shadel	USA	Teams	1et	USA
ist II I tettilei	USA	Teams					Teams		
and D Brown			411U	Germany	2nd D Jett	USA		2110	Australia
2nd D Brown 3rd W Matt	Liech.			Japan	3rd B de Chastel	Australia		2.1	Japan

Description of Events

F3A Aerobatics

F3C Helicopter

Starting in 1960 and held every two years since, this is the seventeenth World Championships. Australia first entered a team in 1971 and has been continuously represented since then. Each competitor has four flights of a schedule of twenty-one manoeuvres, plus take off and landing. Each flight manoeuvre is awarded a score from zero to ten points by each of the five judges. This score is multiplied by a difficulty factor which ranges from one to five points. The scores for each competitor are totalled to provide a flight score. At the completion of four flights the lowest flight score is discarded with the three remaining flight scores totalled. The top twenty percent of competitors then have three more flights to determine the World Champion.

The models are constructed of balsa wood, fibreglass and polystyrene foam and weigh approximately 4 kilos. The engines used can be either a 10cc two stroke or a 20cc four stroke. The radio control systems used are computer controlled and have the capability of controlling up to ten functions.

The compulsory sequence of manoeuvres is:-Take Off Square Loop with Four Half Rolls Half Reverse Cuban Eight Four Point Roll Immelman Turn Reverse Top Hat One and a Half Turn Spin Square Horizontal Eight Top Hat with Quarter Rolls Avalanche Half Cuban Eight Triangular Rolling Loop Stall Turn with Half Rolls Cobra Point Roll Half Square Loop with a Half Roll Six Sided Outside Loop Split S Figure M with Half Rolls **Humpty Bump** Reverse Knife Edge Half Square Loop with Full Roll Three Turn Inverted Spin Landing

The pilot has ten minutes in which to complete the schedule, and manoeuvres must be flown in a continuous sequence.

This is the fourth World Championships for helicopters. In this event each competitor flies the machine through a set sequence of nine manoeuvres each of which is awarded between nil and ten points by each of the five judges. The lowest and highest judges scores are discarded and the remaining three totalled to provide a flight score. Each pilot will have four flights with their three highest flight scores totalled to produce the final result. The competitor with the highest score will be the World Champion.

The maximum engine size permitted is 10cc and is usually two stroke. The compulsory schedule of nine manoeuvres is:-Hovering M

Horizontal Eight Nose In Circle Top Hat 540 Degrees Stall Turn

Roll
Rolling Stall Turn
Autorotation with 180 Degree Turn

Once again, the pilot has ten minutes in which to complete the sequence of manoeuvres.

F3D Pylon Racing

As in Helicopter, this is the fourth World Championship for pylon racing and the second time the event has been held in Australia. Race distance is ten kilometres which is ten laps around three pylons marking the course. Up to four aircraft take part in each heat and racing can be fast and furious as the mechanics guide their pilots around the course. At these Championships each competitor will have fourteen races with the two slowest race times not counted in the result. The twelve remaining race times are totalled and the competitor with the lowest total will be World Champion.

The model aircraft weigh approximately 2.5 kilograms and are powered by a maximum capacity motor of 6.5cc spinning at over 25 thousand r.p.m. The aircraft reach speeds of 300 k.p.h. around the course

The computers used in administering this event are provided by **IBM** Australia.

Many thanks from the organisers to **IBM** Australia, Wangaratta.

Programme - October 21st to 27th 1991

Monday 21st	F3D Practice area D	7:30	to	10:30
	F3C Processing	9:00	to	6pm
	F3D Processing	11:00	to	6pm
	F3A area A and B Official Practice	11:00	to	6pm
Tuesday 22nd	F3D area D Official Practice	7:30	to	10:30
	F3C area C Official Practice	9:00	to	6pm
	F3A area A and B Flight One	11:00	to	6pm
	F3A Seminar	8pm	to	10pm
Wednesday 23rd	F3D area D Rounds 1, 2, 3	7:30	to	10:30
	F3C area C Round One	9:00	to	6pm
	F3A area A and B Flight Two	11:00	to	6pm
	F3C Seminar	8pm	to	10pm
Thursday 24th	F3D area D Rounds 4, 5, 6	7:30	to	10:30
	F3C area C Round Two	9:00	to	6pm
	F3A area A and B Flight Three	11:00	to	6pm
	F3D Seminar	8pm	to	10pm
Friday 25th	F3D area D Rounds 7, 8, 9	7:30	to	10:30
	F3C area C Round Three	9:00	to	6pm
	F3A area A and B Flight Four	11:00	to	6pm
Saturday 26th	F3D area D Rounds 10, 11, 12, 13, 14	7:30	to	1pm
	F3C area C Round Four	9:00	to	6pm
	F3A area E Flyoff Round One	2pm	to	5pm
Sunday 27th	F3A area E Flyoff Rounds 2 & 3	11:00	to	4:30
	Area E Award Ceremonies	5pm	to	6pm
	Banquet Wangaratta City Hall	8pm		

Jury Members

The jury members represent the FAI and are responsible for ensuring the competition is conducted in accordance with the FAI Sporting Code. The jury also hear and adjudicate on protest appeals. At these World Championships there are three juries, one for each discipline. Each jury is composed of a chairman and two other members. The chairman has technical expertise in their respective discipline, while the other two members cover all disciplines.

Jury Chairman

F3A Aerobatics



Ron Chidgey from Pensacola, Florida, U.S.A. is the chairman of the CIAM F3A sub-committee. Prior to his retirement Ron was employed as an enginneer at Monsanto. Ron brings fifty years of aeromodelling experience and a distinguished competitive record to his jury duties.



Tony Aarts is retired after forty three years with the Fokker Aircraft Company. Technical secretary of the CIAM, fifty six years an aeromodeller, a board member of the Royal Netherlands Aeronautical Association, Tony brings extensive experience as a jury member at previous World Championships to this event.

F3C Helicopter



Horace Hagen from Red Bank, New Jersey, U.S.A. is an Electronics Engineer employed at AT&T Bell Labs. Chairman of the CIAM F3C sub-committee, AMA contest board and USA team selection committee plus a competitive history in helicopter competition and forty three years in aeromodelling more than qualifies Horace for chairman of the helicopter jury.

F3D Pylon Racing



Bob Brown, a teacher from Bradford, Pennsylvania, U.S.A. has thirty five years of aeromodelling experience. Chairman of the CIAM F3D sub-committee and Vice President of the Academy of Model Aeronautics, Bob is dedicated to the future growth of pylon racing.



Leo O'Reilly, through his own company, imports and distributes a range of model products. President of the South Australian Aeromodelling Association, Jury member at International competitions and with thirty Australian National Championship competitions more than qualifies Leo for jury member at this competition.

The Judges

The flight judges are chosen from an International list of approved judges. The judges on this list are nominated by their National Aeromodelling Association and a requirement is they have extensive experience in either flying or judging or both. Under the FAI rules only one judge from any country is allowed. At a World Championships, the judges experience a heavy work load as they have to concentrate on every competitors flight. Compared to a competitor who only concentrates on their own flight for about ten minutes, the judging task is a very demanding one.

F3A Aerobatics



Larry Barrett, an insurance consultant from London, Ontario, Canada is President of the local aeromodelling club and also the Canadian R/C pattern chairman. Three times World Championships Canadian team manager and C/D at many National Championships. With twenty years in aeromodelling Larry has judged at many contests including Canadian and US Nats. plus team selection trials.



Mike Johnson is a director of Johnson Rollers in New Zealand and has competed in aerobatics for the last ten years. President of his local club and a delegate to the NZ aerobatic technical committee, Mike is a very competitive F3A flier. Mike first judged internationally at the 1984 Asian Pacific competition. Mike is listed as the reserve judge for these World Championships.



Alex Goossens from Belgium is now retired from Sabena Airlines and devotes his time to advancing aerobatic and helicopter competition. Membership of the F3A sub-committee and alternate Belgium CIAM delegate also keeps Alex busy. Alex has judged at the 1983, 1985 and 1987 aerobatic World Championships.



Masahiro Kato is president of the Kato Model Aircraft Company in Japan. Masahiro first competed in a World Championships in 1962 in England. With fifty years of modelling experience there is very little in aeromodelling that Masahiro has not achieved including designing the first variable pitch propeller for R/C model use. His company's kits include many World Champion designs.



Erkki Haapanen, a technical director with Adco Oy in Finland has thirty-four years of aeromodelling experience. Erkki is the chief judge at Finnish aerobatic competitions.



Hans Kunze, a department head with DS-Metall in Bremen, Germany has been aeromodelling for thirty seven years. Hans is also a radio control manager in the aeromodelling section of the German Aero Club.



Tom Ivers, assistant general manager of Avis Rent a Car in Ireland has been aeromodelling for twenty five years. Treasurer of the Cork Model Aero club, at the International aerobatic judging school in Sweden in 1988 Tom gained a FAI judging Diploma.



Harry Nilsson, an engineer from Dala-Jarna in Sweden has sixteen years of modelling experience. Chairman of the local club and national F3A sub-committee, Harry has judged at the 1989 World and 1988 and 1990 European Championships.

The Judges

For aerobatics ten judges are used, five on each flight line. Each competitor will fly two flights in front of each set of judges. For the aerobatic final flyoff rounds all ten judges are used. One of the listed judges is a reserve. This covers the possibility of a judge becoming ill during the competition. For helicopters five judges are used and each competitor will have four flights judged.

F3A Aerobatics



Tom Prosser, a grazier from Parkes, NSW, Australia, has been aeromodelling for forty years. Tom has been a regular competitor in aerobatics from 1959 and also competes in the Oldtimer event.

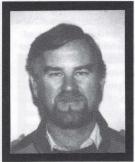


Shujun Ye is an aeromodelling coach with the Guangdong Huangcun Training Base in Guangzhou provice of China. With thirty nine years of modelling experience, Shujun is the deputy director of the coach committee.

F3A Aerobatics



Don Lowe from Altamonte Springs, Florida USA is president of the Academy of Model Aeronautics



Nick Csabafy has been modelling for fifteen years and operates his own helicopter sales business. Nick has won three Australian National Championships in F3C as well as a

F3C Helicopter

has won three Australian National Championships in F3C as well as a State title. Editor of the Melbourne Radio Control Helicopter Club newsletter, Nick is the Australian agent for Schluter/Robbe helicop-

F3C Helicopter



Rudolf Hadorn is a large systems data processing manager for Swiss Simmental Federation. With over thirty years of modelling experience, including a National Championship in aerobatics, Rudolph brings extensive International judging experience to these World Championships.



Sugaki Kiyokazu is president of the K&S company in Japan. With twenty years of modelling experience, Sugaki is both a helicopter instructor and examiner with the Japan Aeronautic Association.



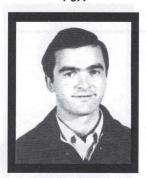
Bob Harris of La Plata, USA is a glass blower with NASA. A member of both AMA contest and team selections boards, Bob has twenty years of aeromodelling experience. Bob also has extensive judging experience at USA nationals and team selections plus judging at the last F3C World Championships.



Pierre Pignot has thirty five years of aeromodelling experience. Pierre is employed as an inspector with French Telecom.

Argentina

F3A



Quique Somenzini is a Mechanical engineering student and has been flying R/C models for fourteen years. In 1979 at the age of twelve, Quique was the youngest pilot ever to compete in a W/C. Winning ten National Championships, the Igo Etriche Cup in Austria and twice winning the Australian Kraft Masters International gives Quique the experience to do well at this event.

Daniel Falco a building engineer from Santa Fe City has been modelling since childhood, taking up R/C in 1970. Daniel has won the Argentinian, South American and Pan American championships as well as competing in three World Championships. He is flying his own design Falcon 2001, powered by YS 120 and controlled by a Futaba 1024 radio.



F3A

F3A



Austria

Hanno Prettner, an electrical engineer from Klagenfurt is the reigning F3A World Champion. His last victory made a record breaking six World Championship titles for Hanno. A European, Eight Tournament of Champions plus fourteen Austrian National Championships are included in Hanno's 300 plus competition victories. Hanno also holds the highest award in FAI model sports, the Gold C with 3 Diamonds as well as a decoration for his sporting victories from the Austrian Govern-

F3C team manager is Walter Freyman from Dorfgastein in Austria.



F3C



Leo Berger is a power plant electrician employed by E-Werk Wels AG in Traunleiten. With eleven years of modelling experience this is Leo's first World Championship competition. He is flying a specially constructed (for a four stroke engine) STAR FLY.

ment. Hanno is flying an E-Z

SUPRA STAR.

Harald Bingel is a model shop owner with twenty six years of aeromodelling experience. He is flying a STAR RANGER helicopter.





Heinz Kronlachner has seventeen years of modelling experience. A measuring and control engineer with Voest-Alpine in Linz, Heinz has competed in World and European Championships. Like his team mate Leo, Heinz is flying a STAR FLY.

Josef Brennsteiner a shop owner from Bramberg has twenty years of modelling experience. Fourteen times Austrian National helicopter champion plus a third in world and second at European Championships are among Josef's many competition victories. He is flying a SCHLUTER LONG RANGER helicopter.



F3A Aerobatics Team Manager



Bruce Walker, a mine surveyor with BHP Collieries has been aeromodelling for eight years. Bruce is a regular competitor in F3A competitions.

F3C Helicopter Team Manager



Simon Ventevogel from Melbourne is a printer with Opax-Spectron. President of the Croydon Aeromodelling Club and safety officer with the Melbourne Radio Control Helicopter Club, Simon has placed in the 1991 state and national helicopter championships.

Australia

The Pilots



Steve Coram is a self employed brick layer from Western Australia. Three times national and six times state champion, this is the second World Championship competition for Steve. He is flying an OS61H powered Aurora.



Eddie Edwards, a toy & hobby shop owner from Geelong is competing in his fifth World Championship. With many wins in state and national championships behind him, Eddie is competing with his own design Javelin 8.



Peter Goldsmith from Sydney is a graphic designer and partner in Kennedy Goldsmith Graphics. Various state & national wins and a place in the flyoff at the 1989 W/C are the highlights of Peter's competition record. He is flying a light weight Australian designed Slingshot.

The Pilots



Rob Barbuto from Melbourne is flying a Kyosho Concept 60 helicopter and is a service technician with the Gas & Fuel Corp. With four national and six state championship wins in his fifteen years of modelling, Rob is also the current Trans Tasman champion.



Fred Proos from Queensland is a self employed carpenter with twenty years of modelling experience. Fred is flying an Xcell 60 Longranger and is president of the Lockyer Valley Aeromodeller Club.



John Wessel, an airconditioning technician with Airmaster Australia is from Melbourne. John has added the current national championship to his previous national win and is flying a Kyosho Concept 60 helicopter.

Australia

F3D Pylon Team Manager



Ron de Chastel has represented Australia seven times in Pattern and Pylon. A National Scale Championship and five times Queensland Champion of Champions add to an impressive competitive record. Honorary life member of both BARCS and the MAAQ, Ron is currently newsletter co-editor and contest director of the Suncoast Model Flyers.



Roger Langham, a radio control technician with Kraft Systems Australia, holds the current Australian 1/2A record. Several times National Pylon Champion and coeditor of the VMPRA newsletter, this is Roger's second World Championships.



The Pilots

Ranjit Phelan is a fire fighter with the NSW State Fire Department. A long and distinguished competitive career includes a second individual F3D World Championship placing. Recognised as one of Australia's top engine tuners, Ranjit also has been inducted into the MAAA Hall of Fame.



Glenn Matthews is a radio technician with Rockwell Electronics. Placed 3rd and 4th at previous F3D World Championships and a member of Australia's 1987 W/C winnning team, Glenn has been inducted into the MAAA Hall of Fame and has established several Australian F3D records. Treasurer of the VMPRA, Glenn has the total support of wife Nerida.

The Mechanics



Malcom Holloway



Robin Gray

Stuart Maxwell

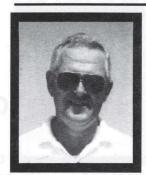
The Pilots

Canada

F3A Team Manager



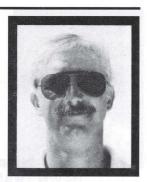
Cheryl Taylor is a self employed Career Counsellor. Cheryl has been involved with Radio Control modelling for six years with two World Championship, many National and International including the 1991 Kraft Masters competition attendances.



Ivan Kristensen is a self employed Property Manager and has been modelling for twenty-eight years. This is the eleventh W/C contest for Ivan during which Ivan gained a 3rd and 4th individual place. Eight Canadian and four US National Championship wins add to Ivan's competitive record.



Greg Marsden with sixteen years of modelling experience is an Electrical Engineer with Amdahl Communications. Current Canadian National and Kraft Masters International Champion, Greg has competed in three previous F3A World Championships and also placed third in the 1990 US Nationals.



Dave Patrick is the Vice President of Carl Goldberg Models and has been modelling for twenty years. A 1987 and 1989 Canadian World F3A Championships team member, Dave has won the Canadian National Championships on three occasions as well as two wins at the Tangerine International.

For a Championship finish use the choice of Champions

SOLARFILM The original low cost iron-on fuel proof polypropylene heat sensitive adhesive film available in thirty-eight colours. Roll sixe is 50" by 26" rolls.

A stronger tougher iron-on fuel proof polypropylene heat sensitive addhesive film available in fourteen colours including metal flakes. Roll size is 72" by 27".

SOLARSPAN

SOLARKOTE

A flexible fuel proof iron-on heat sensitive adhesive polyester film available in fourteen colours including pastels. The two roll size available are 2metre by 27" and 10metre by 27".

A fuel proof heat sensitive adhesive woven polyester ironon fabric covering material. Super tough for curves and shapes and available in 2metre by 700mm and 5metre by 700mm rolls. Eighteen colours including vintage and linen.

SUPERSHRINK SOLARTEX

SUPERSHRINK GLOSSTEX

SOLARTEX with a high gloss paint finish available in four colours and 2metre by 680mm and 5metre by 680mm rolls.

A super light fuel resistant iron-on polyester scrim which can replace tissue and dope. Used with BALSALOC or BALSARITE and available in nine colours with a roll size of 900mm by 500mm

LITESPAN

FIBAFILM

A super light fuel proof iron-on fibre reinforced polyester film that is used with BALSALOC or BALSARITE. Six colours including aluminum and a roll size of 1800mm by 735mm.

A water based emulsion super heat seal adhesive used to improve adhesion with all iron-on films.

BALSALOC

SOLARLAC

Thirteen colours in a fuel proof model aircraft paint that can be brushed or sprayed on. Colour matched to SOLARFILM and SOLARSPAN.

A clear gloss fuel proof finish which can be used as a base for SOLARLAC and most other paints.

CLEARCOAT

To all of our aeromodelling friends from throughout the World, Carl and the boys at DAWN TRADING wish you a great contest and a great time in Australia.

DAWN TRADING. 'The House of Hobbies'

17 Tenterden Road, Botany NSW. 2019 Phone (02) 666 4999, Fax (02) 666 3404

Belgium

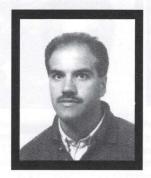
F3A Aerobatic Team Manager



Tom De Winter is an economics student from Antwerp and placed fourth in the Belgian F3A Championships and has ten years in aeromodelling.



Alexandre Degotte has seventeen years of modelling experience and is a hairdresser. Eight times Belgian Champion and a sixth at the 1990 European Championships.



The Pilots

Jozef Lenaerts is a Finishing Operator with Avery Specialty Tape Division and has been modelling for nineteen years. A 1987 and 1989 F3A World Championship team member and 1988 and 1990 European Championship competitor, Jozef places highly in the Belgian Championships



Jean-Pierre Zardini with sixteen years of aeromodelling operates his own Radio Control Model Shop in Mons, Belgium. Jean-Pierre is flying an MK kit of the Silent with a special paint finish.

F3C Helicopter Team Manager



Walter Vanbelle has been aeromodelling for fourteen years and has been the Belgian Coordinator for F3C since 1989.



Guy Vanderschelden is a technician with a telephone company and has been modelling for seventeen years. He has placed second in the Belgian Championships.

F3C Helicopter Pilots



Thierry Verbrugge is a Salesman and has been Belgian Helicopter Champion in 1989 and 1990. He has been modelling for seven years.

Chile F3D Pylon

Pilot is Juan Pablo Wenborne and his mechanic is Stephen M Rothwell.

There are twenty six Nations represented at these World Championships

China

F3A Team Manager



Wenzhang Lui with thirty-five years in aeromodelling is employed as a Coach by and is also the Deputy Secretary General of the Aero Sports Federation of China.



Min Fan is an Engineer with the Guiyang Radio Plant. With sixteen years of modelling experience, Min has won the Chinese Championships eight times and placed fifth in the 3rd European Championships. The Pilots



Aiqiang Liu with fifteen years in modelling is a teacher with the Henan Aero Sports School. Aiqiang has placed many times in the the top three in China.

Xuexiang Zhang is a technician with the Shenzhen Sanye Engine Company and is the 1990 Chinese National F3C Champion. Jianxing Ma is a student with the Shanxi Physical Sports Academy and has seven years in aeromodelling. Jianxing placed second in the 1990 Chinese National Championships

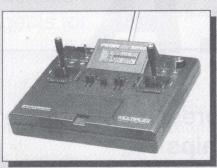
F3C Helicopter



PROFI mg 3030 and ALPINA magic ...for Australia's top model pilots!

ALPINA magic the modern high-performance sailplane with plug-in wingtip extensions for variable wingspan.

- MULTIPOXY fuselage
- ready-made MULTIWING wing panels



The PROFI me 3030 is the highlight of the MULTIPLEX range. Amongst its dozens of features are:

- Menu system for setting up the transmitter
- •15/99 model memories (depending on set)
- Various mixing and adjustment facilities for fixed-wing and helicopters
- Switchable PPM/PCM
- Convenient stopwatch
- •plus much more



ALPINA MAGIC

Wingspan 3800/4400 mm

MULTIPLEX

MULTIPLEX Modelltechnik GmbH · Neuer Weg 15 · W-7532 Niefern Öschelbronn · Germany

F3A Team Manager



Jean Claude Lavigne is a teacher with Education Nationale and has been modelling for forty-six years. He is Vice President of FFAM and has extensive experience as a Championship Contest Director and W/C Team Manager.

F3C Helicopter Team Manager



Francis Plessier with fortyfive years of modelling experience is a test pilot, is Secretary of the French Federation and President of his Aeroclub.

France





Christian Bossard with twentyone years in aeromodelling is an electrician with Electriciti De France. He has been Champion of France from 1980-1988



Laurent Lombard is an Automatician with Citroen. With nine years of modelling experience Laurent has placed second in the French and twelth in the European Championships



Christophe Paysant-leroux has been modelling for twelve years and is a Supervising Maintenance technician with Cogema. He has won a 1st place in the 1991 Low Land Cup and the 1987, 1989 and 1990 Champion of France.

- The Pilots -



Rodolphe Parisot is a Mechanic with the French Airforce and has been modelling for ten years. Rodolphe has gained a 2nd place in category 2 at the 1990 French Championships. Philippe Rose has twenty years of aeromodelling experience.



F3D Pilot



Gerard Weil is employed as an Engineer with ITT and has been modelling for twenty years. He has been in the French Championship team for six years and gained a second place in the F3C French Championships.

Guy Brouquieres is self-employed as a dentist and has thirty-one years in modelling. He is an Officer with the FFAM and has competed in Pylon since 1972.



BOLLY (O) PROPS

Australian design and manufacture of Supreme Quality and Performance Model Products

Quality hand made epoxy composite propellors- over 200 different types from 5x5" to 22x12" in 3 blades.

Made with genuine tip to tip continous fibres.

The safest prop available.

High QUALITY Glass/Foam Pylon Kits Models for FAI, QM 1/2A and Sports Pylon

Internally weighted Composite construction competition Boomerangs

Advanced Technology. Carbon Fibre exhaust systems. Over 30 of the most sophisicated quiet pipes, Power Pipes and Muffler Systems Available

An extensive range of associated accessories. Resin, glass, silicon joiners, headers and spinners.

Come and say 'GIDDAY' to Les at the Bolly Prop Display at the Admin Centre

Les Bollenhagen 11 McKinley St. Elizabeth Downs. SA 5113 Australia

Phone or FAX 08-255 9666 Mail order, Credit Cards O/K

TOP QUALITY KYOSHO.





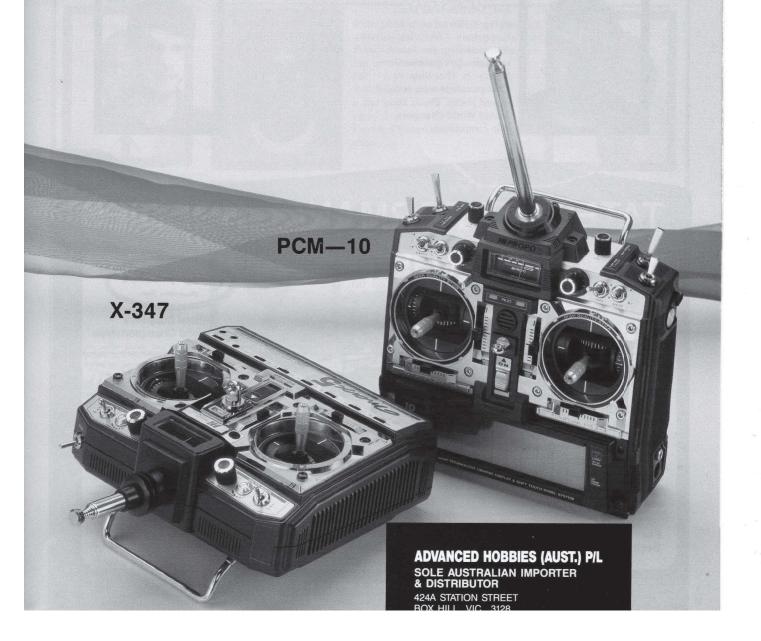








JR PROPO CHOICE OF CHAMPIONS



Finland

F3A Aerobatics



Team Manager and Pilot Tero Vallas was Scandinavian Junior Champion and five times Finnish Champion. With seventeen years in aeromodelling Tero is a Manager of overhauls with Valmet Aviation Industries.



Esa Eirola has been modelling for nineteen years and was three times Finnish Champion. A Sales Manager with STW Security OY Esa is also a CIAM F3A sub-committee member.



Tapani Kippo is a Local Manager with thirteen years of modelling experience. He has competed in competitions in Finland for ten years during which he has gained three third places.



F3C Helicopter -

Kari Porokka with ten Team Manager and pilot years of aeromodelling Jyrki Lehtinen is the Manwas three times Finnish aging Director of Hobbytech Oy Inc. Helicopter Champion in Aeromodelling for fouraddition to placing secteen years, Jyrki has placed ond twice. highly in the Finnish Championships with two



RMANCE HOBBIES

Ask top pattern flier Edwards for honest advice

We carry a large range of specialist competition products from: YS.....Engines and spare parts 61 Longstroke- 120 4 stroke HATTORI pipes and headers MK..... props, tanks, wheels control systems, retract systems rubber engine mounts. TETTRA.....Tanks, filters, Exhaust deflectors, sponge alloy wheels

and accessories PROPELLORS......by MK, APC, BOLLY, ZINGER, YOSHIOKA, ASANO, SUPERCOOL

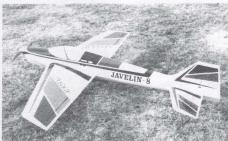


Machined from solid bar stock. Very accurate and light weight. As used by World Championships Team Members for Pylon and Aerobatics.

1 1/2" to 4" dia. from \$28.99

second places. This is his second World Championship competition..

> Designed and flown by Eddie Edwards



Length 66". Wingspan 67". Wing Area 880 sq inches.

Machined

Basic Kit: Foam wing, tail & turtle deck cores. Fuselage crutch almost complete, bulkheads & mount installed. Cowl sides cut out. \$199.99

Alloy Spinners Deluxe kit: Foam wing, tail & turtle deck cores sheeted in balsa, retract

All kits manufactured by Bob Hurst



Official Suppliers to the World Championships

The following additives are used: wetting agents, rust preventers, detergents and anti foamers, which give the fuel extra strength to withstand extreme pressures and provide extra lubrication

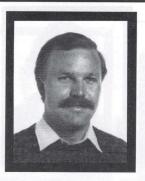
\$24.99 (3.8 ltr) 5% nitro synthetic 10% nitro synthetic \$26.99 (3.8 ltr) 15% nitro synthetic \$28.99 (3.8 ltr) 25% nitro synthetic \$32.99 (3.8 ltr) \$22.99 (3.8 ltr) 5% nitro syn/castor 10% nitro syn/castor \$25.99 (3.8 ltr) 15% nitro syn/castor \$27.99 (3.8 ltr) Synthetic oil \$12.99 (.9 ltr) Synthetic oil \$43.99 (3.8 ltr)

Special freight rates for fuel \$5.00 anywhere in Victoria (per 3 x 4 litre) \$7.00 anywhere in Australia (per 3 x 4 litre)

For the ■ Glider Package- Includes two channel R/C system and Glider Kit- from \$159.00 Beginner Engine powered aircraft- Includes four channel Futaba R/C, R/C Engine and Kit- from \$399.00

Germany

F3A Aerobatics



Team Manager and Pilot, Peter Erang is an Engineer with Mercedes Benz. He placed third in the 1988 and fourth in the 1990 European Championships. Peter also was a member of the European Team Championship in those years.



Bertram Lossen with nineteen years of modelling is a Diploma Engineer. He has placed in the top four in World Championships from 1981 to 1987 and has one first, two seconds and a third in European Championships.

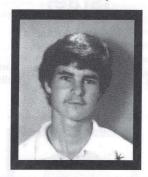


Peter Wessels is a self employed lawyer with fifteen years in modelling. He has been a team member since 1982 and World Champion winning team member in 1987, European team champion in 1986-1991 and also competed in the Las Vegas TOC.

F3C Helicopter -



Team Manager and pilot Volker Heine has been modelling for sixteen years and is a technical advisor to Robbe. Six times German and European 1986, 1988 Champion, Volker has competed in 1985, 1987, 1989 World Championships.



Oliver Graf is a student and has been aeromodelling for five years.



Joerg Roessner is employed by the VAG-Bank and participated in the 1988 F3C European Championships



Team Manager and pilot Edmund Graef is a student with twelve years of aeromodeling.



Hans Joachim Mueller with twenty-five years in modelling is employed by German Mail.



Hans Sagemueller is a driver with Gehring-Bunte and has twenty years in modelling.



Uwe Brommartz is a self employed Businessman and is the mechanic of Edmund Graef.

> Joachim Weirich is a Saw Mill electrician with 15 years in modelling. He is the mechanic for Hans Joachim Mueller.



Marco Sagemueller is an apprentice printer with Gundlach. Modelling for five years, he is mechanic to Hans Sagemueller.



Ireland

F3A Aerobatics



Team Manager Finbar Constant has been modelling for twenty-three years and is an Engineering Manager with the Irish Oxygen Company. Chairman of the Model Aeronautics Council of Ireland, he has also been F3A Team manager since 1983.



Noel Barrett operates a model shop and has been aeromodelling for over thirty years. President of the Cork Model Aeroclub, Noel has won five Irish Championships and represented Ireland at World Championships four times.



Ray Keane is a self employed Consulting Engineer with seventeen years in aeromodelling. A past Irish National Champion, Ray has represented Ireland in five World Championships and is Secretary of the Cork Model Aero Club.

Israel

F3C Helicopter

Team Manager is Moshe Kastiel with thirty years in aeromodelling.

Pilot Efraim Kastiel is a soldier and has been modelling for four years.

The AUSTRALIAN MODEL AERODROME

Sole Australian Agents for A S Performance Engines

Welcomes

Wenzhang Lui, Min Fan, Aiqiang Liu, Jianxing Ma, Xuexiang Zhang, and Yongliang Huang to Australia for the these World Championships and we wish good fortune and good flying to all contestants

THE AUSTRALIAN MODEL AERODROME

367 ST GEORGES ROAD, NORTH FITZROY, VICTORIA, 3068 Phone: (03) 489 8383; Fax: (03) 482 1240

South Korea

F3A Team Manager



Sung Kyu Kang with ten years in aeromodelling is a Trading Company President.

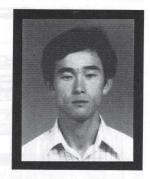
The Pilots



Soon Young Cho is a model builder with President. He has been modelling for twelve years.



Sung Nam Kim with twelve years in modelling is a model builder with President.



Seon Sang Yoo is a Model Airplane School teacher with fifteen years in aeromodelling.

F3C Helicopter



Seung Kil Kim is Team Manager and Pilot. Modelling for fifteen years, he is President of the C.S.K. Trading Company.



Young Jin Kim is the President of the MI RI NAI model shop. He has been aeromodelling for ten years.



Han Jun Park has been modelling for fifteen years. He is President of Jun Products.

Liechtenstein

F3A Team Manager



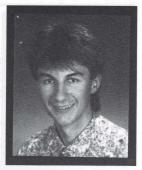
Sigmund Beck is a Technical Assistant with Hilti AG. He has five years of aeromodelling experience.

ling for twenty-eight years. He has twenty years is employed by F. won more than two hundred and Frick AG. He placed eighth in the fifty International competitions in- 1975 World Championships. cluding two firsts and five seconds World Championships. Wolfgang is also a member of the CIAM Sub-committee for F3A and F3C. He is employed with the National Bank of Liechtenstein.

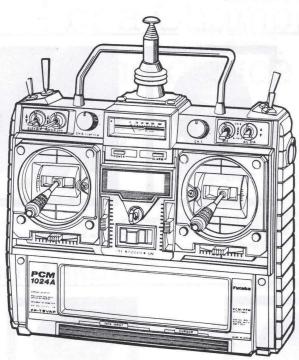
The Pilots



Wolfgang Matt has been model- Norbert Matt, aeromodelling for



Roland Matt is a Bank Employee with the Private Trust Bank Corp. With seven years in modelling, Roland has placed twentythird in the 1989 World Championships, eighth in the 1990 European and first in the Swiss Championships.



Futaba BROPORTIONAL

DIGITAL PROPORTIONAL RADIO CONTROL

PCM 1024A

PULSE CODE MODULATION SYSTEM

Since 1962, Futaba has marketed radio control equipment. The evolution of this equipment now gives RC enthusiasts around the world, the most advanced radio control electronics available. **P.C.M. 1024** is an excellent example of the sophistication and development in Pulse Code Modulation. With the creation of Futaba's new 10-bit micro-processor, incorporated into 3, 5, 7 and 9 channel systems, **P.C.M. 1024** offers twice the servo resolution of the original P.C.M. systems.

Advances in reliability and assembly are also evident. S.M.T. (surface mount technology) and plated-through PC boards used in the new servos and receivers virtually eliminate vibration related problems and further reduce the size of these components.

In addition to electronic superiority, Futaba also leads the way in ergonomics, the science of human engineering. They pioneered many of the advances in transmitter customizing features... slantable gimbals that are adjustable for length and spring tension, steering wheels adjustable for lock-to-lock throw to personalize your system. You'll find the case designs of the new Futaba Transmitters provide the most comfortable and efficient operation possible, with all controls positioned at your fingertips.

World's most complete selection

Futaba's World Leadership extends to the most extensive line of systems, from 2 channel all the way to the 9 channel **P.C.M. 1024**, the most advanced RC equipment available. A full range of servos, receivers, electronic speed controls, gyros and other accessories are also available for all the components, from RC cars, boats, yachts, right through to sophisticated aircraft and helicopters. Futaba also leads the way with MOS/FET electronic speed controls for electric models, including the remarkably lightweight and compact MCR-4A integrated receiver/speed control for electric planes.



Australian Agents:

Toy Traders. 36-38 Boorea Street, Lidcombe, N.S.W. 2141. Phone (02) 749 1733

F3A Team Manager



Kentaro Iioka with fifty years of aeromodelling experience is the Director-General of the Japan Model Aeronautic Association.

Japan

The Pilots



Yoichiro Akiba is a Service Engineer with the Futaba Co. Ltd. In his twenty-five years in modelling he has placed 9th in the 1981, 6th in the 1983 and 7th in the 1989 World Championships.



Hajime Hatta



Giichi Naruke is a Sales Engineer with the Futaba Corporation. He has been 12 times including the 1991 Japanese National Champion and placed fifth in the 1989 World Championships.

-F3C Helicopter -



Yukihiro Dobashi is the reigning F3C Helicopter World Champion and is entitled to compete in these World Championships as an Individual entry. A Sales Engineer with the Futaba Corporation, Yukihiro has been aeromodelling for seven years. He also placed first in the 1988 and 1989 Japanese National Championships.

F3C Team Manager



Shin Abe owns a Model Shop and has been aeromodelling for thirty-one years.



The Pilots



Tetsuo Ikeda is a Sales Engineer with the Futaba Corporation. With fifteen years in modelling he won the 1986, placed seventh in 1987 and third in the 1989 and 1990 Japanese National Champi-



Kazuyuki Semsui is employed in his father's Model Shop and has been modelling for eleven years.At seventeen years of age he won the 1987 Japanese National Championship after placing second in 1985. Kazuyuki placed second at the 1989 World Championships and is the current Japanese National Champion.



Seiji Suwabe is employed in the R&D Division of Hirobo Limited. The 1981 and 1982 Japanese National Champion he placed second in the 1989 and 1991 Nationals. He also placed second in the USA 1990 National Championships. Seiji has been modelling for twenty-four years.

F3D Pylon Team Manager

Japan



Sato has aeromodelling for forty-five years. He is the President of the Japan Minature Pylon Racing Association and F3D Assistant Commissioner of the National Aero Club.



Nobuyuki Chujo is employed at the Heiwa Aluminum Works. With twenty-eight years in modelling, Nobuyuki has been the 1984-1988 Japanese Pylon Grand Champion. He placed fifth in the 1987 and eighth in the 1989 World Championships.



Yoshinori Sato has been aeromodelling for twenty years and is a R&D Engineer with Honda. He years in aeromodelling. He won the 1989 Japanese Pylon ranked first in the Japanese F3D Championship and makes his own Points ranking for 1990. racing engines.



Kiyoshi Soeda is a self employed Rose Grower with twenty-two

The Japanese Pylon Racing Mechanics are: Fujio Noji, Kunihide Kawaoku and Yasufumi Sugawara.

F3A Team Manager

Rom Bakker

Netherlands

The Pilots





Dennis van der Toorren is employed by Oracover and has ten ling for fourteen years and has years of aeromodelling experience.



Danny van Vliet has been modelbeen National Champion three times. He has participated in three European and one World Championship.

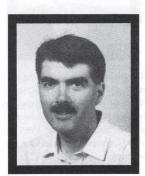


Jan van Vliet has been modelling for twenty-nine years, has won nineteen National Championships and is competing in his sixteenth World Championships.

F3C Helicopter -



Jan Verhagen has twenty-seven years of modelling experience, has placed second in the National Championships and is a member of the Board of the National Radio Control Helicopter Association.



Kees Verplanke is a Technical Manager with Fundex and has been aeromodelling for eighteen years. He is the Netherlands National Champion and was sixth in the last European Championship.

F3A Team Manager

Noeline Craighead is an Accounts Controller with Airborne Express and has twelve years of modelling experience. She competed in the 1987 NZ Nationals and won first place in novice aerobatics. Noeline also competed in the 1987 Australian Nationals and 1987 Kraft Masters International. She was team manager for the 1986, 1988, 1990 TransTasman and 1989 World Championships.

New Zealand

The Pilots



Ross Craighead is a self employed Contractor and has been modelling for twenty years. He won the New Zealand National Championship from 1984 to 1990 and has competed in the 1989 World Championship. Ross also competed in the 1984 Asian Pacific Competition. Ross is chairman of the NZMAA Aerobatic Technical com-



Stephen Johnson with eight years in modelling is a soldier with the Director of his own company New Zealand Army. He won the NZ novice aerobatic championship in 1986, the intermediate in 1988 and was third in F3A at the 1989 Nationals.



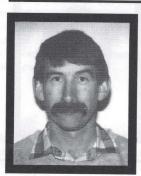
Paul Stairmand is the Managing and has been aeromodelling for eight years. He won the New Zealand novice championship in 1988, was first in sportsman at the 1988 Kraft Masters International and finished third in the 1990 F3A aerobatic National Championships.

F3C Team Manager

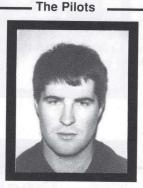


Graham Knot with twenty years of modelling is the Managing Director of CadCam Services Ltd. He is a Counsellor with the NZMAA, secretary of the Scale technical committee and a member of the Pylon technical committee.

F3C Helicopter -



Alan Campbell is a Dog Handler John Knox has been aeromodelling is secretary of the NZMAA Heli- Board. copter technical committee and is a committee member and heli instructor with the Wellington MAC.



with the NZ Police and has been for fifteen years and is a Mechanimodelling for seventeen years. He cal Engineer with the Energy



Bruce McKay is an Electrician with Honeywell Controls and has been modelling for fifteen years. He is President and Newsletter Editor of the Northern Heli Modellers Club

To all competitors, good luck and good World Championship flying. To all our visitors, a pleasant stay in Australia. To all F3A competitors, I'll be the friendly guy with the noise meter.

Cliff McIver from the

Hawthorn Hobby Centre

733 Burwood Road, East Hawthorn 3123 Please ring (03) 882 7521

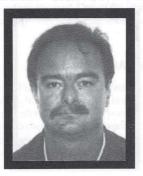
If I can't supply it you can't get it!

F3D Team Manager

New Zealand



Neil Baxter is an Engineer with Britannia Brands. He was second in the 1988 and Champion onship. President of his modelling club, Neil is also Secretary of the NZ Pylon technical committee and a NZMAA counsel-



John Richard Danks has been modelling for twenty-five years and is in the 1989 NZ Open Pylon a self employed Motor Mechanic. Championship and second in He is the holder of two NZ records the 1989 overall R/C Champi- in F3D since June 1990 and is Treasurer of the NZ Pylon technical committee.



The Pilots

Tony Thompson with seventeen years in aeromodelling is a Sales Rep with Dunlop. Having competed in two Trans Tasman F3C and been a two time F3C National Champion, this is Tony's first World Championships.

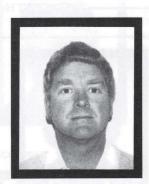


Rob Whalley is an Electrician with Taranaki Polytech. With thirty-one years in modelling, Rob was the 1983 Gliding and 1985 NZ National Champion. He placed ninth in the 1987 F3D World Championships.

The Mechanics



Trevor Henderson is an Architect with thirty years in aeromodelling. He competed in the 1984 Controlline World Championships and is a member of the NZMAA Pylon technical committee.



Dick Willard is a Chemist with twenty-five years in modelling. Twice New Zealand Control-line Champion he has been active in Pylon for eight years. A Counsellor with the NZMAA, he is also Club Captain of the Wellington MAC.

Singapore

F3A Aerobatic Pilots



Teck Sin Yong (Johnny) operates Singapore Hobby Supplies and has twenty years in aeromodelling. He has competed in several regional F3A competitions including the 1982 and 1988 Guanzhou F3A contest.



Patrick Chan with forty years in aeromodelling is a Dealers Representative with OUB Securities Pte Ltd. He has competed in several regional F3A competitions including the 1988 Guanzhou F3A contest. Patrick also was the Organizing Chairman for the 1986 and 1989 Singapore regional Contests which included entries from many countries.



Chek Koon Mok is a Manager with Hewlett Packard. With thirty-eight years in aeromodelling, Chek Koon has competed in many regional F3A Competitions.

F3A Team Manager

Bob Skinner is a Graphic Design Studio Manager with the SBBW Advertising Agency. With twenty-five years in aeromodelling, Bob is a CIAM F3A sub-committee member, Vice-Chairman of the SA Model Aircraft Association and was the Team Manager for the 1989 World Championships.

F3D Team Manager



John Murray is a self employed farmer and Architectural Draughtsman. With forty-five years in aeromodelling, John is Chairman of the Zululand Aeromodelling Club and competes regularly in Pylon competitions.

South Africa

The Pilots



John Calefato with forty-one years in modelling owns Topflyte Hobbies. A regular place getter in National F3A Championships, John was a member of the SA free flight team in 1969, 1967 and 1971. He has been a many times Regional/ provincial F3A Champion and is a life member of the Tygerberg M.F.C.



ling for sixteen years. A Retail aging representative with Shave Hobby Chain Store manager with & Gibson has been modelling for Hobby Magic, Greg has seven con-nine years. A past Novice and secutive F3A National Champion- Expert class Champion, Gerhard ships to his credit and is a multiple was second in the team selection SA Masters Champion.. He also process for these World Chamcompeted in the 1989 World F3A Championships.



Greg Casson and has been model- Gerhard Venter, a print and packpionships. He is Chairman of the Transvaal Pattern Association.

The Pilots



Graeme Cox has been modelling for seventeen years and is a Director of the Kitchen Unit Firm, Coxcraft.. Graeme was three times National Champion in Standard and Quickie 500 Pylon Racing.



Dean Mitchell with nine years in aeromodelling is an Apprentice with Hendler & Hart. Placed first in the 1991 team selection trials, Dean has several Provincial Championship wins to his credit.



Peter Sherliker is an Engineering Insurance Manager with the SA Eagle Insurance Co. National F3D Champion in 1984, 1986, 1987, 1990 and 1991, Peter is a CIAM F3D sub-committee member.

F3A Team Manager



Joaquin Rojo has twenty-three years in aeromodelling and is an Economist with Square D Co. Spain. He was the event director for the last three F3A Spanish Championships.

Spain

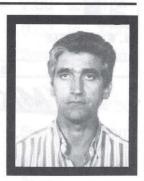
The Pilots



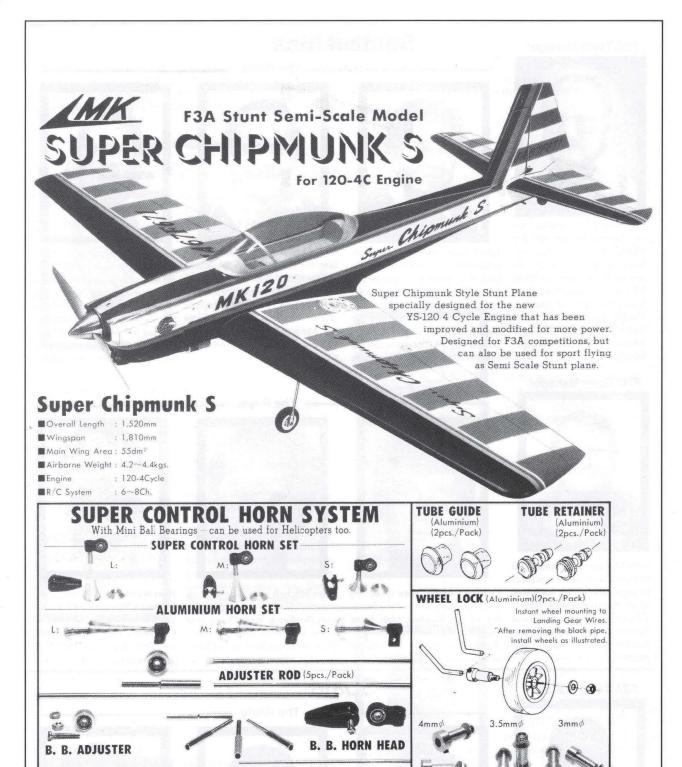
Jose Anguera is a self employed Decorator with twenty-eight years in modelling. He regularly places in the top four at the Spanish National Championships.



Christobal Rombaut with ten years in aeromodelling is a Gynaecologist at the Gral. Catalunya hospital. He won the Spanish National Championship in 1989.



Mariano Vivas is a Jewellery shop Manager and has been modelling for eight years.





ADJUSTER JOINT (4pcs./Pack)

KATO MODEL AIRCRAFT CO., LTD.

SOLE AGENT FOR YS ENGINE

No. 8-1, Esaka-cho, 2-chome, Suita, Osaka, 564 Japan

EXCLUSIVELY DISTRIBUTED OUTSIDE OF JAPAN BY:

S. Kosaka Corporation

P.O. Box 10, Abeno, Osaka, Japan Tel: 81 6 628 3631 Fax: 81 6 628 4133

Switzerland

F3A Aerobatic Pilots



Hans Emmenegger is a Foreman with Schafer & Co and has been modelling for fourteen years. He placed third in the 1990 Swiss F3A Championships and also competed in the 1988 and 1990 European Championships.



Emil Giezendanner has been aeromodelling for twenty years and is a School Counsellor with the State of Zurich. He has been a Swiss World Championship team member since 1971 and was a member of the second placing 1971 Swiss Team. Emil also has been Swiss National F3A Champion on two occasions.



Hugo Peyer is a Product Manager with Cinerent-Tecnic. With twenty-five years in modelling, he has been a World Championship team member for ten years and has won the Swiss National Championship several times.

F3C Helicopter

F3C Team Manager



Peter Oberli is a Mechanical Engineer with the University of Berne. He has been aeromodelling for forty years and is a member of the CIAM F3C sub-committee. Peter has been Swiss F3C Team Manager for eight years.

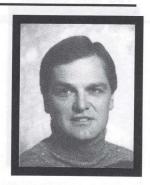


Daniele Graber, aeromodelling for twenty-five years is a Civil Engineer with Sciarini-Vira. Eight times Swiss National Champion he also was Euopean Champion in 1988.



The Pilots

Heinz Gasser is a Mechanical Engineer with USM Switzerland and has been modelling for nineteen years. Since 1987 he has placed fourth or higher in the Swiss Championships and other competitions.



Ueli von Niederhausern has been aeromodelling for twenty-one years and is a Computer Operator with SFV Switzerland.He placed third in the 1989 Swiss National Championships and is Secretary of the Model Club of Riggisberg.

Thailand F3A Aerobatic Pilots



Chaiphat Tubthong is a Student and has been aeromodelling for twelve years.



Praphon Techavipark is the Deputy Managing Director of Poly Trade Co. Ltd. Modelling for fifteen years, he competed in the 1979, 1985 and 1989 World Championships.



Prathug Vongprasert is the Advertising Sales Manager with Amarin Printing Group Co Ltd. He competed in the 1985, 1987 and 1989 World Championships and has been model-

F3A Team Manager



Ray Brotherston, a retired Fire Fighter has been modelling for twenty years. He is a foundation member of the Great Britain R/C Aerobatic Association, was a team helper at the 1989 World Championships and managed the team at the 1990 European Championships.

F3C Team Manager



Len Bliss is self-employed and has been modelling for fortyseven years. He has achieved a British National Championship, is a member of the CIAM F3C Sub-committee and Chairman of the British R/C helicopter Association.

United Kingdom

The Pilots



Ken Binks with thirty-five years in modelling is an Electrical Process Engineer with Seeboard PLC. Eight times National Champion, six times Masters Champion and a seventh in the European Championships are among his achievments. Ken is also a member of the CIAM F3A sub-committee and has extensive experience in flying for movies..



Richard Hirst is an Electronics Engineer with the Holdene Group Plc. With sixteen years in aeromodelling Richard placed third at the 1989 and 1990 British Nationals and was reserve team member for the 1990 European Championships.



Andy Nicholls is a Senior Scientific Assistant with Smithline Beecham Pharmaceuticals. He was British season champion in 1989 and placed second at the 1990 British National Championships.

The Pilots



Len Mount is self-employed and has been aeromodelling for thirtyfive years. He has been Champion of England, Scotland, Ireland and New Zealand. He is flying his own design helicopter.



Colin Bliss has been modelling for Alastair Newman is self-emtwelve years and is self-employed. ployed and has fifteen years of A national Champion he flew a model Esquirrel helicopter across the English Channel for charity.



aeromodelling experience.

Norway

F3C Helicopter



Rune Nessen is a Mechanic with Suzuki and has been modelling for nineteen years. He has achieved several Norwegian National Championships as well as placings in both Scale and F3A Aerobatics.

Radio Control Model News

Australia's leading radio control magazine will carry an extensive coverage of these World Championships.

Subscribe and recieve by Airmail your copy withall of the competition details.

Four issue subscription rate. USA, Canada \$38.00 Europe \$40.00 \$35.00 Japan

See Beverley at the Souvenir stand.

F3DTeam Manager

Marcus Griggs is a self-employed Electrician and has been modelling for thirty-nine years. He twice won the British F3D National Championships and has achieved high placings in F3D contests in Europe. He is Chairman of the British Minature Pylon Racing Association.

United Kingdom

The Pilots



Paul Board is self-employed in the Keith Reid is a Company motor Trade and has seventeen years in Radio Control. The 1990 a W/C team member since 1986. He also holds the British Annual Championship for 1987,1988 and 1990.



Directorand has twenty-eight years in aeromodelling. He competed in British National Champion and the 1989 World Championships 1987 record holder, Paul has been and also placed third in the 1990 European Championships. Keith also placed in the 1987, 1988 and 1990 British Championships. He regularly attends F3D competitions in Milan, Czechoslovakia and Germany.



Alan Laurie has been modelling for forty-two years and is a selfemployed fisherman. Alan has been entering competitions since 1958 and first entered Pylon in 1970. He is still racing some twenty-one years later and is also treasurer of the FAI Pylon Racing Association.

The Mechanics



John Merril is a Company Director and although he has no experience in aeromodelling he has enjoyed many successes in Motor Cycle Racing.



Edwin Woolley is a farmer with thirty years experience in aeromodelling. He has competed for several years in Aerobatic, F3D and Club 20 Pylon racing competitions. He is also an examiner for the B.M.F.A. achievment scheme.

RESTAURANT



BYO and FULLY LICENSED

JAKE'S WELCOMES THE WORLD AERO MODELLING CHAMPIONSHIP'S TO WANGARATTA

We look forward to your company at Jake's We are locally owned & operated providing: -

- : Extensive a la carte menu
- : Large selection local wines & imported beers
- : Friendly efficient service
- : Pleasant, relaxed atmosphere
- : Private function room with fully enclosed courtyard
- : ALL MASTER CREDIT CARDS ACCEPTED

OPEN: Monday-Saturday 6.30 p.m. SUNDAY BY APPOINTMENT

For Bookings — Phone (057) 21 4551

JAKE'S RESTAURANT 9 CUSACK STREET, WANGARATTA (Opposite Hermitage Motor Inn)

U.S.A.

F3A Team Manager

John Britt, an Aerospace Engineer with Allied Signal Aerospace has been modelling for twenty-three years. Manager of the winning 1989 World Championship F3A team, John also placed third in the 1990 US Nationals. He has competed in the past eight F3A team selection trials

The Pilots



Chip Hyde has been modelling for fifteen years and is a Student. He is the current and and 1984, 1988, 1989 US National Champion. Chip was also a member of the Winning W/C Team in 1987 and 1991.



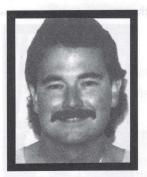
David von Linsowe is an Experimental Model Maker with AC Rochester. He has been modelling for thirty years during which he has placed second in the US Masters and Nationals and first in the 1990 and 1991 Cajun Nationals...



Bill Cunningham ownsa and operates the Ultimate R/C company. Modeeling for twenty years, Bill was a member of the 1985 US W/C team and has placed in the top four at the US Masters and National Championships.

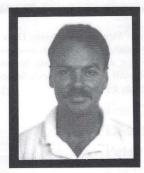
F3C Team Manager

Tom Unger



Kenneth Mann is a Press Operator with the Stamp Mfg Co. and has been modelling for eleven years. Duing this time he has won fourteen F3C competitions and placed second in the 1990 US Nationals.

The Pilots



Robert Gorham has been aeromodelling for eleven years and is a self-employed Consultant. He has won the US National Championships three times and this is his fifth World Championship competition.

Curtis Youngblood

Milawa Bakery

Hand Crafted Breads, Pastries and Cakes Baked on site using only the freshest natural and local ingredients.

Enjoy coffee, croissant, danish and pies by our open fire this winter.

Open Thursday to Sunday 8.00am to 5.00pm Phone (057) 27 3619 Recieve a free cup of coffee on presentation of this advertisment. Milawa Country Clippers
Phone Jill
on 273 531
for Professional Hair Care.

Both at the Milawa Homestead, just ten minutes from Airworld on the Snow Road.

F3D Team Manager

U.S.A.

The Pilots



Wayne Yeager is retired and can now add to his fifteen years in aeromodelling. President of TURN, the United Racing Network, Chairman of the AMA R/C race board, Wayne was F3D Event Director at the 1985 and 1989 World Championships.





Lyle Larson is a self-employed Builder with twenty-nine years of aeromodelling experience. A long time competitor in Pylon racing, Lyle first tried F3D in the US W/C Team Trials and placed second. This is his first World Championship competition.



Henry Bartle has been modelling for thirteen years and is the Owner of California Corvettes Inc. He started flying R/C at the age of twelve, found out about girls in 1973 but came back to us in 1985. Since then Henry has been President of the NMPRA and has placed highly in many racing competitions including the Nationals.



Dub Jett is Vice President of Baker Hughes Inc. and has been modelling for thirty-five years, the last eleven in Pylon..This is Dub's third World Championship and in 1989 he reworked all of the winning USF3D Team's engines. With John Shannon, Dub's engine designs are now used worldwide.

Mechanic

John Shannon with thirty-four years in aeromodelling is an Engineer with Texas Instruments. He won his first National Championship in 1960, was a member of the winning 1989 W/C F3D team and is the principal designer of the DJS racing engine.



Dave Shadel is a self-employed R/C flier with thirty-three years in modelling. Dave won the World Championship crown in 1987 and 1989 and thus is the reigning F3D World Champion.

Dave's Mechanic is Jim Shinohara from Chula Vista, California.





總代理商



永利模型公司 永聯企業公司附屬機構 WINNING Model & Hobby Supplies

九龍尖沙咀柯士甸(小)路2-2A號

2-2A, Austin Ave, Tsimshatsui, Kln. Hong Kong

電話 Tel: 3691028 (3 Lines)

電訊 Telex: 50905 WLENT

電報 Cable: 5625 HONGKONG

傳真 Fax: (852) 7237365

Poland

F3A Team Manager



Pawel Wlodarczyk is a teacher with the Aero CLub of Poland and has been aeromodelling for thirty-one years. Fifteen times Champion and Vice-Champion of Poland in F1B and F1C, Pawel is the Secretary of the Polish Aeromodelling Committee of theAero Club of Poland.

Pilot



Jerzy Kosinski has been modelling for forty years and is a Technical Mechanic with the Aero CLub of Warsaw. He has been twenty-six times Champion and Vice-Champion in F3A and F1B and also World Vice-Champion in F1B.

The International Supporters

	Argentina	Mrs Sancho Falco Mario Somenzini	Germany	Hartmut Mrowczynski RhinoPiro	Poland	Piotr Kruk Dorota Putrzynska
		Clin D. I.		Rudy Sontag	C:	K.W. Chan
A	Australia	Shirley Barbuto John Chadd	Ionan	Hirotoshi Dei	Singapore	Wong Hong Cheong
		Irene De Chastel	Japan	Sadami Hara		Lindsay Gray
		Neil Frazer		Youichi Konno		Mr Sthipan
		Caroline Goldsmith		Makoto Kuni		Wii Stillpali
		Nerida Matthews		Yoshiaki Kurokawa	Spain	Carmen Curto
		Julie Phelan		Ginichi Miyamoto	Spain	Carlota Roca
				Yoshiaki Nagatsuka		Carlota Roca
		Max Tandy Liz Ventevogel		Hiroshi Nakamura	Switzerland	Willi Boeni
		Chris White		Yoshiji Naruke	Switzeriana	Gabriela Gasser
		Chris white		Masahiko Nishimura		Marinella Graber
		A size Description		Masaru Sato		Richard Horath
	Austria	Anita Berger		Eiji Sensui		Irene von Niederhausern
		Franz Brennsteiner		3		Florencia Oberli
		Josef Jobstl		Miko Simizu Naohisa Yamada		Piorencia Obern
		Martina Kronlachner		Naonisa Tamada	U.K	Tom Anyon
		Klaus Pagitz	17	Dala Wil Dana	U.K	Susie Binks
		Hans Prettner	Korea	Bok Kil Bang		Doreen Brotherston
		Mrs Dede Takamatsu		Ji Soo Jung		Vera Laurie
		Mr Tom Takamatsu		Woo Su Kang		vera Laurie
		Mr Yukata Ueda		Ji Tae Kim	U.S.A	Donna Bartle
	3.71			Jung SoKwak	U.S.A	Carol Britt
	Belgium	Fernand De Gotte		Byung Jun Park		Baron Guss
		Francine Goossens		T ' D - H		
		Sven Lobbestael	Liechtenstein	Toni Boeller		Merle Hyde Chris Lakin
		Luc Van Nieuwenhove	N 7 1 1	D 14		Dianne Lakin
		EtienneVan Nieuwenhove	New Zealand			
	- 196 I			Peter Ball		Diane Melton
	China	Yongliang Huang		Neville Beetson		Roy Pinner
				Ann Brown		Rocky Pinner
	Finland	TuomoHotakaien		Peter Brown		Kim Pollard
		Kirsi-Marie Pitkanen		Chris Campbell		Ted Schoonard
		Benita Sjovall		John Clarke		Celia Schoonard
				Alan Dennis		Mrs Shade
	France	Marie Bossard		Brian Dooley		Donna Shannon
		Mr Fischer		Liz Henderson		Darlene Thomas
		Mrs Fischer		Shelley Knox		Bill Thomas
		Mr Gosselin		Jeremy Madley		Mrs Unger
		Rene Lombard		Mike McCormack		Margaret Von Linsowe
		Jacques Paysant Leroux		Angus McDonald		Janelle Von Linsowe
		Nicole Rose		Rene Redmond		John Von Linsowe
				Robin Reid		Karen Yeager
	Hong Kong	B.L. NG				David Youngblood

FOCUS Series by hites



THE

0.8.

Tradition of Excellence continues..









Established in 1936, O.S. is the world's leading manufacturer of superior model engines.