

MH-DESIGN

CARBON

NEWS

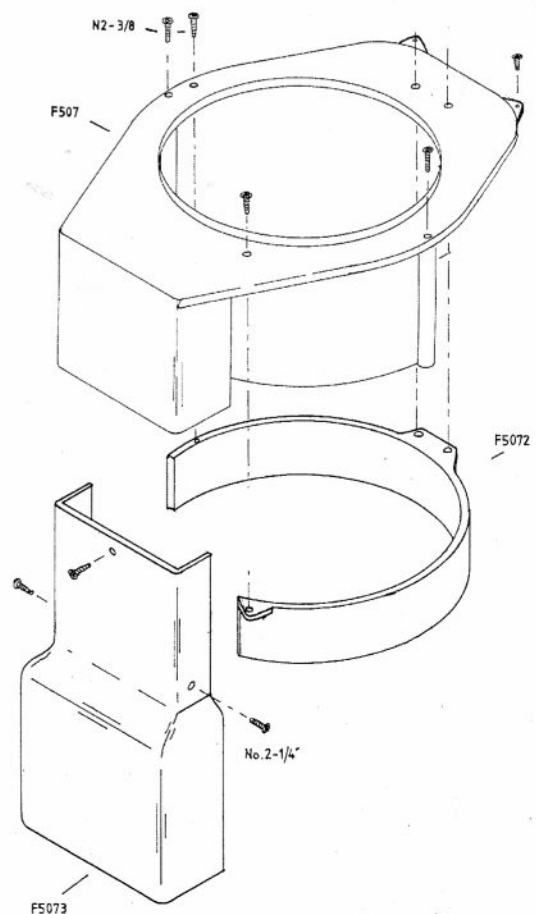
JUNE 1996

This years Sandown Park Model Show provided the venue for the launch of our biggest and best new model helicopter, the *F1 Carbon*.

This model is the first 60 size sports helicopter ever produced in the UK and will be a serious contender to the imported machines from Japan, Germany and the USA. Modern 60 size helicopters are well known for their impressive performance but are equally renowned for their high purchase and repair costs, the *F1 Carbon* breaks new ground by bridging the gap between 30 size trainers and 60 size performance helicopters.

The *F1 Carbon* features an impressive carbon fibre airframe offering great strength and durability as standard (not an expensive upgrade) and spare parts prices that are comparable with 30 size trainers. The control system utilizes the sophisticated and precise electronic Cyclic - Collective Pitch Mixing (CCPM) similar to that used in the world renowned Vario helicopters from Germany. Many modern computer radios now have the CCPM feature as standard but this need not be a problem if your transmitter doesn't, our new "on-board" CCP mixer is now available to convert even simple 4 channel systems at minimal cost !

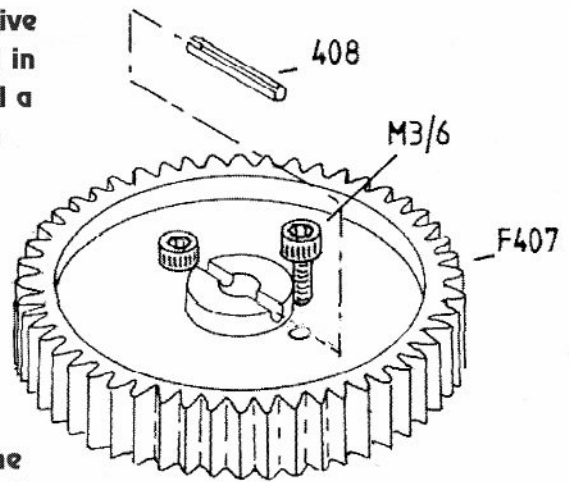
The *F1 Carbon* is definitely NOT just a bigger *Maverick*, numerous detail changes have been made, the only part of the basic airframe that has NOT been revised or changed completely is the large plastic base moulding ! Many parts of the transmission have been "beefed up" to cope with the extra horsepower, cooling capacity has been increased significantly by the addition of a fan duct inner "Volute". This new volute alone has shown up to 42% increases in airflow in bench tests and can now be retrofitted to the standard *Maverick* and *Maverick XR* models. A tough new injection moulded cylinder head extension suitable for motors with large heat-sink heads is also available to replace the original vacuum formed ones of the *Maverick*. For a full cooling upgrade for your *Maverick* or *Maverick XR* order parts No.s F507, F5072 and F5073



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Another useful detail change is the revised 1st stage drive gear, the drive pin on this component is normally glued in place on the Maverick and often makes routine removal a little difficult. The F1 Carbon uses a modified gear with reinforced screw holes either end of the pin which makes fitting and removal easy as well as improving drive pin reliability. Order Part No. F407 + M3x6 sc

A major upgrade developed for the F1 Carbon is the new heavy duty tail drive transmission. Both the 1st stage and tail gearbox gears have been completely revised, gear type, tooth form and material specification has been changed to cope with the increased demands of a 60 size engine installation. The 1st stage shaft is supported with an additional ballrace within the transfer gearbox to ensure positive gear mesh, although the shaft used in the F1 is longer than the Maverick, a upgrade shaft for the Maverick and Maverick XR is now available. A full tail drive transmission upgrade for your Maverick requires the following part - 406(F), 411(F), F4061, F4062, F409, F410, F1007 - F205 & F206.



If you want to see any of the Morley Helicopters range of machines and accessories why not visit our showroom !

Open 9am - 6pm Monday to Friday and Saturday 10am - 4pm.

Demo flights of the new F1 Carbon or even a "hands on" test can be arranged by prior appointment.

● Call Mark Baker for further details and bookings.

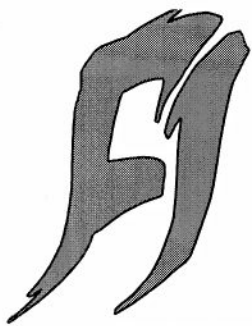
NEW

This new item is a **MUST** for every flyer, helicopter or fixed wing. If you have looked at the price of modern radio receivers you will have noticed that the small black box strapped into your model will cost any where between £70 and £140 to replace should it be subjected to a heavy "arrival". Many receivers are fitted on the front radio tray of helicopters and often without any protection, can you really trust that RX after a crash, will it be the cause of your next one ?

For just £3.95 you can protect your RX from even to most violent crashes with our new "Black Box" RX Protection case. This new accessory is manufactured from glass-filled nylon, is lined with polyester foam and has rubber protected outlets for both aerial and servo leads. The two piece case is held together with four high tensile steel socket screws and provides a safe and clean environment for your RX. Another benefit of this great new accessory is that the box itself can be used as a hard level surface for the mounting of gyros, switches, batteries or mixer units instead of the usual rubber band and foam set-up ! Suitable for all models, 30 size and upward, helicopters, fixed wing, cars & boats !

Order Part No. ACC/BBOX

MH-DESIGN



CARBON

F1KIT **F1 CARBON** Helicopter kit 399.95

ROTOR HEAD

F100.....	Complete rotorhead pack.....	69.95
F101.....	Central hub.....	4.95
F102.....	Main blade holder.....	4.95
F103.....	Flybar cradle / head button.....	3.50
F104.....	Threaded end flybar.....	3.50
F105.....	Flybar operating arm.....	1.25
F106.....	Flybar operating balls (pair).....	2.95
F107.....	Flybar ball control links (pair).....	0.95
F109.....	Flybar paddles (pair).....	3.95
F110.....	Steel feathering spindle.....	3.95
F1101.....	Hollow steel feathering spindle.....	4.95
F111.....	Teeter damper rubbers (pair).....	1.25
F112.....	Upper mixer arms + bearings (pair).....	2.25
F113.....	Lower mixer arms + bearings (pair).....	2.25
F1131.....	Double ballraced mixer unit.....	19.95
F114.....	Lower mixer slider + bearing.....	1.95
F115.....	Upper mixer arm steel bushes (pair).....	1.50
F116.....	Lower mixer arm steel bushes (pair).....	0.95
F117.....	Flybar ballrace plastic bushes (pair).....	0.50
F118.....	Swashplate driver arms (pair).....	0.75
F119.....	Swashplate driver arm pins (pair).....	0.95
F120.....	Mixer slider guide pins (pair).....	0.75
F121.....	Main blade brass root bushes (pair).....	1.25
F122.....	Conical shim spacers (pair).....	0.50
F123.....	Conical safety washers (pair).....	0.50
F124.....	Symetrical blades - 64cm.....	26.95
F1242.....	NHP Carbon blades - 64cm.....	57.95
F125.....	Blade covering (pair).....	1.95
HST60.....	Heat-shrink blade covering (wide).....	1.75
F1014.....	Rotor head thrust race set (pair).....	15.95

TAILROTOR

F200.....	Tail blades (pair).....	2.95
F201.....	Tail blade holders (set of 4 halves).....	2.95
F202.....	Alloy centre hub.....	5.95
F203.....	Gear case top.....	2.75
F204.....	Gearcase base.....	2.75
F205.....	3/16" input shaft + steel gear.....	5.95
F206.....	6mm output shaft + steel gear.....	5.95
F2061.....	Hollow stainless steel output shaft.....	6.95
F207.....	Plastic drive coupling (set).....	2.95
F208.....	Control bellcrank + bearing + bush.....	1.95
F2081.....	Double ballraced bellcrank set.....	6.95
F211.....	Control yoke + slider + ballrace set.....	3.95
F212.....	Steel bellcrank bush.....	0.65

SWASHPLATE

F300.....	Main ring with ballrace.....	9.95
F301.....	Brass centre swivel ball.....	2.95
F302.....	Centre ring.....	2.95
F303.....	Anti-rotation pin + nut.....	1.50
F304.....	Anti-rotation pin guide / slider.....	1.95
F305.....	Complete swashplate + fittings.....	19.95
F306.....	CCPM brass bushes (set of 3).....	1.50

TRANSMISSION

F400.....	Standard main drive gear.....	5.95
F4001.....	Lightened main drive gear.....	6.95
F4011.....	Steel pinion gear (11 tooth).....	5.95
F4012.....	Steel pinion gear (12 tooth).....	5.95
F4013.....	Steel pinion gear (13 tooth).....	5.95
F402.....	Main rotor mast + C-clip.....	9.95
F403.....	Mast C-clips (pair).....	0.75
F404.....	Mast locking collar.....	1.95
F405.....	Assembled autorotation unit.....	19.95
F406.....	1st stage drive shaft + steel gear.....	8.95
F4061.....	1st stage shaft bearing spacer.....	1.25
F4062.....	1st stage "O"-ring seal (pair).....	0.75
F407.....	1st stage plastic gear + lock pin.....	3.95
F408.....	Locking pins (pair).....	0.75
F409.....	1st stage gear case / fan shroud.....	4.50
F410.....	Tail drive take-off gear case cover.....	2.50
F411.....	Tail drive take-off shaft + steel gear.....	5.95
F412.....	Tail drive take-off alloy coupling.....	3.95
F413.....	Gearbox & coupling grease pack.....	0.75
F414.....	Lower mast bearing retainer.....	1.95
F415.....	Upper mast bearing hold-down.....	1.50

CLUTCH & FAN

F500.....	Plastic clutch bell / gear + bearing.....	4.95
F501.....	"Tufnol" lining ring.....	2.95
F502.....	Steel clutch / flywheel unit.....	6.95
F503.....	Steel clutch centre pillar (1/4" shaft).....	3.95
F5031.....	Steel clutch centre pillar (8mm shaft).....	3.95
F5032.....	Steel clutch centre pillar (5/16" shaft).....	3.95
F505.....	Brass split collet (3/8").....	1.95
F5051.....	Brass split collet (8mm).....	1.95
F5061.....	Cooling fan (3/8" bore).....	3.95
F5062.....	Cooling fan (8mm bore).....	3.95
F507.....	Cooling fan top shroud.....	4.50
F5071.....	Cooling fan duct enclosure.....	2.95
F5072.....	Cooling fan duct inner volute.....	2.95
F5073.....	Cooling fan duct extension.....	3.95
F508.....	Plastic clutch spacer ring.....	0.75
F509.....	Deep engine nut (1/4" UNF).....	2.75
F5091.....	Deep engine nut (5/16" UNF).....	2.95

CHASSIS & UNDERCARRIAGE

F600.....	Chassis base moulding.....	6.95
F601.....	Carbon fibre lower side frame.....	16.95
F602.....	Carbon fibre upper side frame.....	15.95
F603.....	Carbon fibre engine frame.....	9.95
F604.....	Carbon fibre front frame.....	8.95
F605.....	Carbon fibre front frame brace.....	1.95
F606.....	Engine mounting blocks (pair).....	7.95
F6061.....	Engine mount load washers (set 4).....	1.95
F607.....	Upper chassis side spacers (pair).....	1.95
F6071.....	Lower chassis side spacers (pair).....	1.95
F608.....	Chassis spacer / tail clamp (pair).....	2.95
F609.....	Long chassis tie bars (pair).....	2.25
F610.....	Short chassis tie bars (pair).....	1.95
F611.....	Black undercarriage strut (each).....	4.95
F6111.....	Black skid end cap set (4).....	1.50
F613.....	Alloy skid tubes (pair).....	3.95
F614.....	Front chassis frame tie bar.....	1.95
F615.....	Front chassis frame spacers (pair).....	0.75
F616.....	Exhaust pipe mounting pylon.....	1.50

RETAIL

PRICE LIST No.1

TAILBOOM

F700.....	Carbon fibre tailboom tube (760mm)	19.95
F701.....	Carbon fibre tail fin	9.95
F7011.....	Tail fin locking peg	0.95
F7012.....	Tail fin spacers (set 4)	0.95
F702.....	Carbon fibre tail plane	9.95
F703.....	Tailboom / tail plane fixing clamp	1.95
F704.....	Tail drive wire brass guide tube	1.95
F705.....	Tail control wire alloy guide tube	1.95
F706.....	Carbon fibre inner boom supports (4)	4.95
F707.....	Tail drive wire (2mm o/d)	1.95
F708.....	Tail control wire (16 guage)	1.95
F709.....	Tailboom support stays + ends	5.95
F7091.....	Support stay ends pack (set 4)	1.95

CONTROL SYSTEM

F800.....	Upper servo mount bracket	2.75
F801.....	Lower servo mount rail	1.95
F802.....	Servo spacer - short (pair)	0.95
F803.....	Servo spacer - long (pair)	0.95
F804.....	Servo screw retainer (pair)	0.65
F805.....	Carbon fibre switch plate	2.95
F806.....	Carbon fibre servo frame	2.95
F807.....	Front radio tray	4.95
F808.....	Tail servo wire connector set	1.15
F809.....	Front swashplate links (pair)	1.95
F810.....	Rear swashplate link	1.00
F811.....	Blade pitch control link (pair)	1.75
F812.....	Flybar operating links (pair)	1.75
F813.....	Throttle control link	1.00
F814.....	Throttle arm spacer bush	0.75

CANOPY, FUEL TANK ETC.

F900.....	Plastic canopy set - complete	19.95
F9001.....	Glass fibre canopy set - complete	49.95
F901.....	PVC canopy screen	3.95
F902.....	Canopy decal set	3.95
F903.....	Canopy nose mount	2.50
F904.....	Alloy canopy mount pylons (pair)	1.95
F905.....	Rubber canopy mount grommets (4)	0.75
F9051.....	Canopy sponge seating tape	0.75
F906.....	Fuel tank set - complete	8.95
F907.....	Fuel tank brass & alloy tube set	1.75
F9071.....	Fuel tank cap & rubber set	1.75
F9072.....	Fuel tank silicone & clunk pickup	0.95
F908.....	Fuel tank mounting rubber set	1.95
F909.....	F1 CARBON assembly manual	7.95

BEARINGS

F1000.....	3mm x 5mm oilite (pair)	1.50
F1001.....	4mm x 7mm oilite (pair)	1.50
F1002.....	10mm x 13mm oilite	1.75
F1003.....	10mm x 14mm oilite (auto unit)	1.75
F1004.....	14mm x 18mm oilite	1.95
F1005.....	4mm x 7mm ballrace (optional)	2.95
F1006.....	3/16" x 1/2" ballrace	2.95
F1007.....	6mm x 13mm ballrace	2.95
F1008.....	6mm x 19mm ballrace	2.95
F1009.....	8mm x 16mm ballrace	3.95
F1010.....	8mm x 22mm ballrace	2.95
F1011.....	10mm x 26mm ballrace	2.95
F1012.....	Roller clutch bearing (auto unit)	5.95
F1014.....	Rotor head thrust race set (pair)	15.95

F1 ACCESSORIES

ACC/CCPM.....	Electronic "on-board" CCP mixer	39.95
ACC/F1EX.....	F1 complete exhaust system	64.95
ACC/F1M.....	F1 exhaust manifold	24.95
ACC/F1P.....	F1 short tuned pipe	39.95
ACC/F1EJ.....	F1 exhaust silicon joiner + clips	3.95
ACC/F1PM.....	F1 exhaust rear mount clamp	3.95

FASTENERS

M2

M2X8.....	M2 x 8 pan head screws (10)	0.60
M2x10.....	M2 x 10 pan head screws (10)	0.60
M2x12.....	M2 x 12 pan head screws (10)	0.66
M2X12SC.....	M2 x 12 high tensile socket screw (5)	1.95
M2x16.....	M2 x 16 pan head screws (10)	0.95
M2N.....	M2 plain nuts (10)	0.46
M2NLN.....	M2 nyloc nuts (10)	3.95
M2FW.....	M2 flat washers (20)	0.50

M3

M3x3ss.....	M3 x 3 socket set screws (5)	0.50
M3x6sc.....	M3 x 6 socket cap screws (5)	0.87
M3x8sc.....	M3 x 8 socket cap screws (5)	0.87
M3x10sc.....	M3 x 10 socket cap screws (5)	0.87
M3x12sc.....	M3 x 12 socket cap screws (5)	0.87
M3x12LA.....	M3 x 12 Light alloy screws set (13)	2.75
M3x16sc.....	M3 x 16 socket cap screws (5)	0.87
M3x16BH.....	M3 x 16 button head screws (5)	0.87
M3x20sc.....	M3 x 20 socket cap screws (5)	1.25
M3x25sc.....	M3 x 25 socket cap screws (5)	1.50
M3x35sc.....	M3 x 35 socket cap screws (5)	1.50
M3x40sc.....	M3 x 40 socket cap screws (5)	1.50
M3N.....	M3 plain nuts (10)	0.51
M3NLN.....	M3 nyloc nuts (10)	0.77
M3FW.....	M3 flat washers (20)	0.50
M3LFW.....	M3 large flat washers (20)	0.75
M3xSW.....	M3 star washers (20)	0.46

M4

M4x4ss.....	M4 x 4 socket set screws (5)	0.66
M4x6ss.....	M4 x 6 socket set screws (5)	0.66
M4x10ss.....	M4 x 10 socket set screws (5)	0.87
M4X10BH.....	M4 x 10 button head screws (5)	1.50
M4X14sc.....	M4 x 14 socket cap screws (5)	1.50
M4X16sc.....	M4 x 16 socket cap screws (5)	1.50
M4x20sc.....	M4 x 20 socket cap screws (5)	1.50
M4x35sc.....	M4 x 35 socket cap screws (5)	1.95
M4X45sc.....	M4 x 45 socket cap screws (5)	1.95
M4N.....	M4 plain nuts (10)	0.56
M4NLN.....	M4 nyloc nuts (10)	0.82
M4FW.....	M4 flat washers (20)	0.66
M4SW.....	M4 star washers (20)	0.46

MISC

M5x16sc.....	M5 x 16 socket cap button screws (5)	1.95
ST0.....	No.2 x 3/16" self tapping screws (10)	0.46
ST.....	No.2 x 1/4" self tapping screws (10)	0.46
ST1.....	No.2 x 3/8" self tapping screws (10)	0.46
3/8W.....	3/8" x 5/8" flat washer (5)	1.00
PLS.....	Brass pull-ert fixings (10)	1.95

ALL PRICES INCLUDE VAT AT 17.5%

PRICES AND SPECIFICATION SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

GENERAL ACCESSORIES

ACC/SIM	TRU-FLITE computer simulator	179.95
ACC/SIMI	TRU-FLITE "interface" version	117.95
ACC/EXD	45 degree silicon exhaust deflector	1.95
ACC/KSP	K & S paddle alignment gauge	7.50
ACC/HIP	HIGH POINT precision balancer	25.95
ACC/PITCH	ROBART deluxe blade pitch meter	37.95
ACC/POW1	MFA electronic power panel + pump	24.95
ACC/POW2	MACGREGOR power panel	20.95
ACC/PUM1	Hand operated fuel pump	8.95
ACC/PUM2	High powered electric fuel pump	9.95
ACC/STARB	12 volt 7AH sealed starter battery	24.95
ACC/STARC	12 volt battery mains charger	10.95
ACC/STAR1	12 volt economy electric starter	24.95
ACC/STAR2	Hi-tork electric starter	34.95
ACC/STAR3	DYNATRON Super 12/24v starter	54.95
ACC/STARR	Replacement starter rubber	1.95
ACC/TR30	30 size training undercarriage	14.95
ACC/TR60	50-60 size training undercarriage	16.95

ACCESSORIES

ACC/BALL	Brass control balls (pack of 10)	1.50
ACC/BBB	Ballraced blade balancer & stand	22.95
ACC/BBS	Carbon fibre blade balancer stand	7.95
ACC/BBOX	Receiver protection strong box	3.95
ACC/BJV	Vari-length ball eyes + brass balls (8)	2.95
ACC/CAD2	Main blade caddy	3.50
ACC/CLK	Fuel tank pick-up 'clunk' weight	0.75
ACC/FT3	Colour coded fuel tube (3 metres)	3.50
ACC/FV	One-way re-fuelling valve	8.95
ACC/GLOW	'Dayglow' rotor tip tracking tape (pair)	1.75
ACC/GPLS	Remote glow-plug lead & socket	5.95
ACC/HFF	High flow fuel filter	4.50
ACC/MFLTS	40-60 size training/marine float set	29.95
ACC/FLTS	30 size training/marine float set	19.95
ACC/NBSET	Assorted box of fasteners (600+)	19.95
ACC/NLS	'Nil-Load' starting system	24.95
ACC/TAPE3	3mm double sided mounting tape	0.89
ACC/TAPE4	4mm double sided mounting tape	0.99
ACC/WRAP	Pack of small cable wraps (20)	0.75

ADHESIVES

G101	Super thin cyanoacrylate 1/2 oz	2.50
G103	Super thin cyanoacrylate 2 oz	6.95
G106	Gap filling cyanoacrylate 1/2 oz	2.50
G108	Gap filling cyanoacrylate 2 oz	6.95
G111	Extra thick cyanoacrylate 1/2 oz	2.75
G113	Extra thick cyanoacrylate 2 oz	7.50
G151	Cyanoacrylate accelerator spray 2 oz	4.50
G201	Quick-Cure 5 min epoxy 4 1/2 oz	5.95
G203	Mid-Cure 15 min epoxy 4 1/2 oz	5.95
G205	Slow-Cure 30 min epoxy 4 1/2 oz	5.95
G207	Ex Slow-Cure 2 hr epoxy 4 1/2 oz	5.95
G301	Cyano' extenda tips (pack of 6)	1.25
GPROOF	"Aerokote" fuel proofer 150ml	2.95
GLOCK	"Pacer" Z42 thread locker	1.85

VIDEOS & BOOKS

VID3	Intro' to R/C helicopters (Part 1)	9.95
VID4	From the ground up (Part 2)	9.95
VID5	Beyond the hover (Part 3)	9.95
VID6	All about helicopters (Full-size)	9.95
BOOK2	Ray's complete helicopter manual	14.95

TOOLS

TLS/BHEX	Ball ended M3+M4 socket drivers	4.95
TLS/DS13	13 piece HSS drill set 1.5 - 6.5mm	8.95
TLS/HEX	Straight ended M3+M4 socket drivers	3.95
TLS/KEY	Allan key set (2,2.5 & 3mm)	0.99
TLS/NF10	10 piece needle file set with handles	7.95
TLS/PLS	Ball link fitting and removal pliers	4.95
TLS/S6	6 piece precision screwdriver set	3.50
TLS/S11	11 piece precision screwdriver set	5.95
TLS/SPN3	Set of 3 spanners (M2,M3 & M4)	9.95
TLS/SPN10	Set of 10 spanners (M2-M11)	14.95
TLS/SKT	Small socket set+ratchet+driver	19.95
TLS/TAP	Thread tapping set (M2,M3 & M4)	14.95
TLS/16P	16 piece model knife set	15.95

GLOW PLUGS

OS8	O.S. No.8 glowplug	4.35
ENYA3	Enya No.3 glowplug	3.95
FP2	Fire Power No.2 glow plug	2.95
FP3	Fire Power No.3 glow plug	2.95
FP4	Fire Power No.4 glow plug	2.95
FP5	Fire Power No.5 glow plug	2.95
FP6	Fire Power No.6 glow plug	2.95
FP7	Fire Power No.7 glow plug	2.95

RADIO

ER/10BJ	1000 mah rx nicad battery - JR	21.95
ER/17BJ	1700 mah rx nicad battery - JR	24.95
ER/12BF	1200 mah rx nicad battery FUTABA	19.95
ER/17BF	1700 mah rx nicad battery FUTABA	27.95
ER/SXJ	Servo extension lead - JR	4.25
ER/SXF	Servo extension lead - FUTABA	2.50
ER/SHJ	Switch harness with chg lead - JR	7.80
ER/SHF	Switch harness with chg lead - FT	5.50
ER/OBC	"On-board" nicad battery checker	17.95

ENGINES

OS61SFN	O.S. 61 SFN Heli engine (Ringed)	171.70
OS61SFNA	O.S. 61 SFN Heli engine (ABC)	175.15
TT61ABC	TT Pro 61 Heli engine (ABC)	139.99

ORDERING DETAILS

POSTAGE *Min* £1.50 (£3.00 on canopy parts)

EXPORT *Min* £2.50 + cost

PAYMENT ACCEPTED BY CHEQUE,

POSTAL ORDERS, MASTERCARD & VISA.

TEL & FAX

01276 856292

