



**GORHAM MODEL PRODUCTS**

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**GORHAM**

# 1984 EXCLUSIVE COLLECTION

**hirobo**

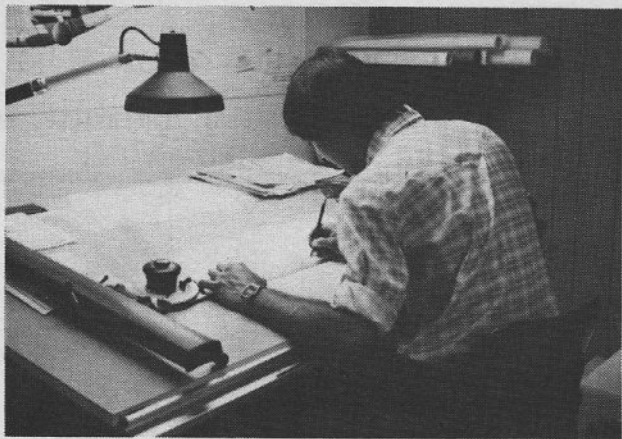
**19  
DIFFERENT  
MODELS!**



**heim**

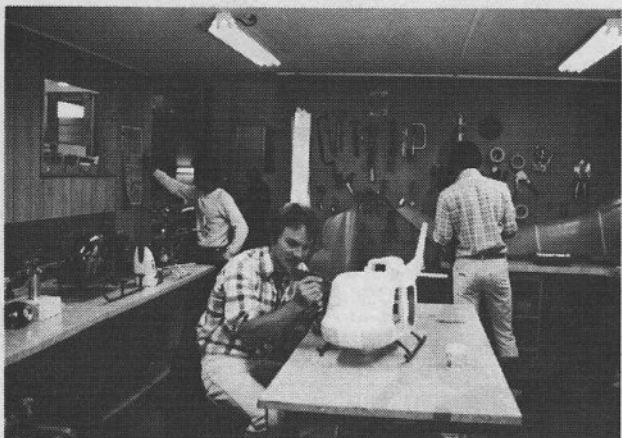
## THE WORLD'S FINEST RC HELICOPTERS AND ACCESSORIES

**Graupner**



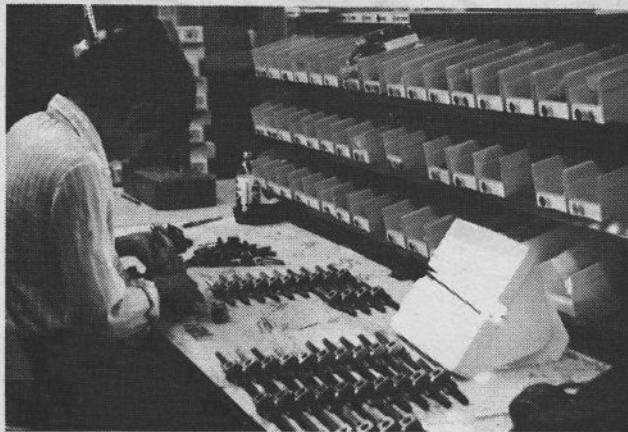
## DESIGN

Many of GMP's RC helicopters are designed and manufactured in the U.S.A. CRICKET, HUGHES, COMPETITOR and COBRA are either totally or partially designed by us. Joint design efforts with the leading Japanese manufacturer - Hirobo - are proving to be very successful. COBRA is a good example with roughly 50% design and manufacture in each country. GMP's design facilities are in-house and staffed by professionals. Additional efforts as needed are provided by top ranking industry consultants. Apart from continuing efforts to provide the modeler with the finest RC helicopters possible, GMP's talents are now being utilized by the the U.S. military to design and build large size target and drone helicopters.



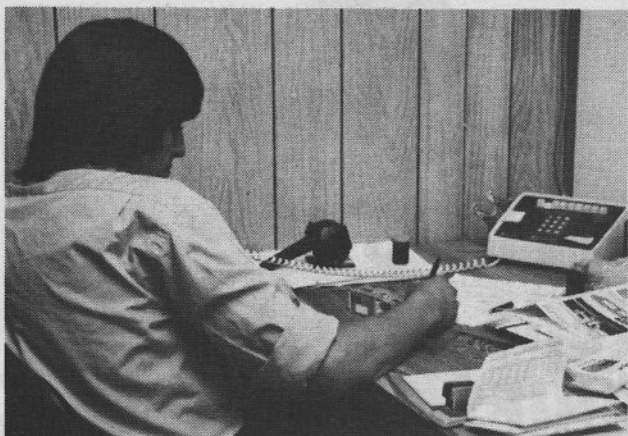
## R & D

No Hi-technology company such as GMP can survive and grow without continuous research and development. GMP has built and maintains special facilities to enable constant efforts to be expended in improving the design features of current machines and in preparing the prototypes for future production and sales to you - our customer. Problems which arise with our products are evaluated and solved in our R & D facilities. Design improvements are passed on to the design and production departments for the earliest incorporation in our kits. The GMP R & D group also provides test building and rigorous flight evaluation of all our products before they are released for production. As a result, GMP kits enjoy the reputation of having the finest building instructions and the best flight performance in the industry.



## MANUFACTURING

GMP possesses its own complete in-house machine shop facilities and manufactures all prototype helicopters for evaluation by its own design and R & D groups and other selected fliers. Sub-assembly of nearly all mechanical units used in production GMP Helicopters are performed in-house. Rotor blades are cut and drilled from stock. All vacuum formed plastic parts are produced in the GMP facilities. Large volume machined and sheet metal parts are designed and drawn in-house and then sub-contracted out to one of more than 40 sub-contractors which regularly manufacture/supply GMP parts. A double inspection technique is standard on the sub-assemblies and packing of GMP parts and kits.



## SERVICE

The seal of success on any kit manufacturer such as GMP is the quality and extent of its after-sales support. A plentiful and uninterrupted supply of parts calls for a very large and expensive inventory. GMP holds - inplant - a stock of over \$500,000 of parts for all its helicopters. Fast and friendly supply of parts is insured by the Eastern and Western USA depots. Each facility has several technicians/fliers who can quickly answer your problems. Parts are also now widely available in more than 700 hobby stores nationwide. These stocking hobby stores are growing daily. GMP has and will maintain the finest service in the industry.



# CRICKET

## THE STANDARD OF THE INDUSTRY



GMP (Gorham Model Products) was started in 1979 as a subsidiary company of Gorham Associates, aircraft design consultants to industry and government. John Gorham, a model airplane enthusiast all his life, discovered (like many others) the RC helicopter challenge in 1970. By 1978 he was convinced that a small, inexpensive, simple RC helicopter was needed if RC helicopter flying was to become widespread. John used the KISS (Keep it simple, stupid!) and the SAAL (simplificate and add lightness) principles in combination with his extensive engineering design experience and background. The result was CRICKET, which was introduced to modelers in 1979. Since then nearly 10,000 CRICKET kits have been sold and supported by a nationwide parts and technical service network.

GMP has now grown into a substantial model manufacturing company which earned a place on the 1983 INC '500' awards as one of America's fastest growing private companies.

To summarize, CRICKET is the perfect solution for the beginner who wants to start into RC helicopters but doesn't want to commit too much money. It is also an excellent choice for the expert who wants to have something a little simpler, or a little less costly, to 'mess' around with in his own home or on weekends or when he goes away for a family vacation. We think when you own a CRICKET you will be amazed at its simplicity and performance. We believe this RC 'chopper has set a new standard for small RC helicopters.

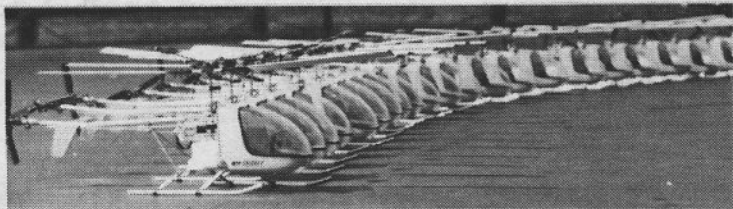
Quite apart from its design and manufacturing excellence, CRICKET also comes with two extra features which will enhance its value to you over other similar machines.

First, CRICKET parts are manufactured in the USA and the materials, tolerances and finishes are equal to those on full sized machines.

Second, and also vital to your successful learning and flying, technical advice is available nationwide. A network of dealers and technical service centers insure the support that the heli flier needs. CRICKET owners also receive service bulletins which cover all the problems which beginners have in learning to fly or in adjusting their machines.



The world's most popular trainer and sports RC helicopter - 25 powered, low cost, reliable and a fine performer. CRICKET even won the AMA National Championship against many much more sophisticated and expensive machines.



## HUGHES 300



A unique new small scale RC helicopter, the HUGHES 300C uses the reliable CRICKET transmission and controls in an entirely new scale arrangement. This new .25 to .28 model is available as a complete kit or as a conversion pack for CRICKET owners.



## GMP'S 1984 SUPER STAR (.40-.50 POWERED Helicopter)

**NEW**



**DISTINCTIVE STYLING  
HIGH RELIABILITY  
CONTEST WINNING  
PERFORMANCE**

### SPECIFICATIONS:

COBRA is a 40-50 powered, fully aerobatic RC helicopter, specifically designed to be suitable for beginner, intermediate and expert fliers. Hovering and forward flight stability is unsurpassed while aerobatic performance is nothing short of breath-taking. COBRA can perform all AMA and FAI aerobatic maneuvers. COBRA is the result of many years of design and development by the world's two top design teams: Hirobo and GMP. The final product exemplifies team development and state-of-the-art production—50% of COBRA in the USA, 50% by Hirobo in Japan. Quality, performance and after-sales support is the hall-mark of both companies.

WEIGHT	7 Lbs.	(3 Kgs)
ROTOR SPAN	48 inches	(122cm)
LENGTH	44 inches	(112cm)
HEIGHT	18 inches	(46cm)

### FEATURES:

- Top cone start
- Machined steel clutch with dual ball bearings
- Full collective pitch
- Bell/Hiller mixing
- 30 precision ball bearings
- Factory assembled main rotor head
- Heavy duty 10mm main shaft
- Main blade holders have dual precision ball AND hardened steel thrust bearings
- Tail blade holders fitted with ball AND thrust bearings
- Dual ball bearing tail pitch plate
- Main rotor blades finished and balanced Advanced design semi-symmetrical high-efficiency aerofoil
- Top quality ball joints and control rods included
- Space age look-low drag canopy
- 4 or 5 servo installation
- Step-by-step assembly, set-up and flying instructions—finest in the industry





## THE ULTIMATE FLYING MACHINE

The all-new, state of the art RC helicopter you can learn on and win with!

### CHOICE OF CHAMPIONS



1983 National Champion Robert Gorham has flown a GMP COMPETITOR for two years in the AMA Championships. He placed 2nd Expert Class in 1982 and became US National Champion in 1983.



COMPETITOR wins First Place in 1983 Tangerine Championships against many so-called 'superior' machines.

**Bob Belluomini,  
Eastern US Champion  
and Tangerine Inter-  
national Champion**

#### OTHER CHAMPIONS USING COMPETITOR

Canadian National Champion - Rene Dikkes  
East Coast Champion - Ralph Dalusio  
Junior National Champion - Tom Dalusio  
Intermediate National Champion - Ralph Geese

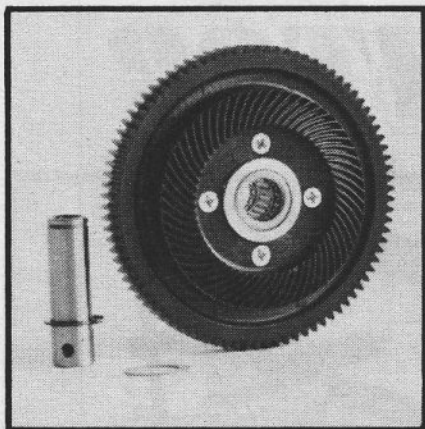
### FEATURES

The COMPETITOR 'PRO' RC helicopter has been backed by twelve months of intensive flight testing to provide the modeler with the most aerobatic and reliable RC helicopter possible. Final design and manufacture is a joint effort with the Hirobo company. COMPETITOR 'PRO' provides the ultimate in aerobatic capability with a stability and reliability attractive to the beginner. A wide range of engines and radios can be used.

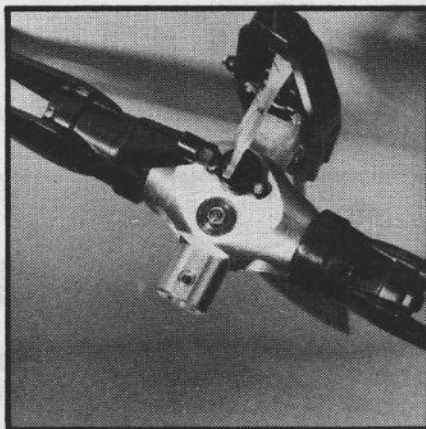
The 'PRO' is designed to offer every feature that the competition flyer would require to enable him to enter and win national and international RC helicopter aerobatic competitions.

In the COMPETITOR 'PRO' design there has been no reduction of quality to lower cost and you can be assured that you have the finest value that the industry has to offer when you buy and fly the GMP COMPETITOR. The 'PRO' can be obtained with a uniquely designed autorotation clutch and, when fitted with this advanced design of autorotation clutch, COMPETITOR can be autorotated (engine off) by the average RC helicopter flyer. The expert will now have a competitive autorotation capability which will enable him to hit the landing pad with remarkable precision. COMPETITOR includes the following features:

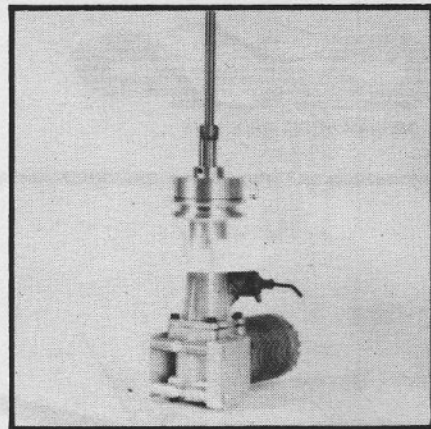
- Full Collective Pitch
- Bell/Hiller Aerobatic Mixing
- Top Cone Start
- Double Tail Rotor Bearings
- Precision Machined Rotor Head
- Triple Main Rotor Bearings - Fully Adjustable
- Light Weight Structure
- Fast Access Glow Plug and Engine Installation
- Autorotation - Optional



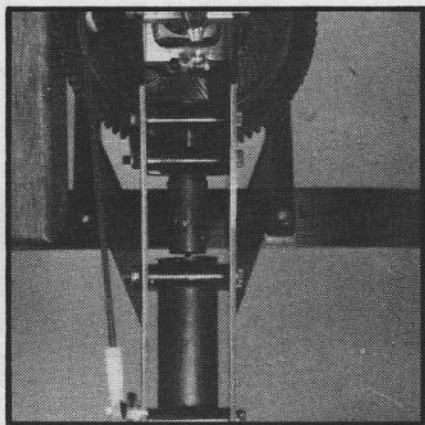
**Autorotations are easy with multiple bearing clutch.**



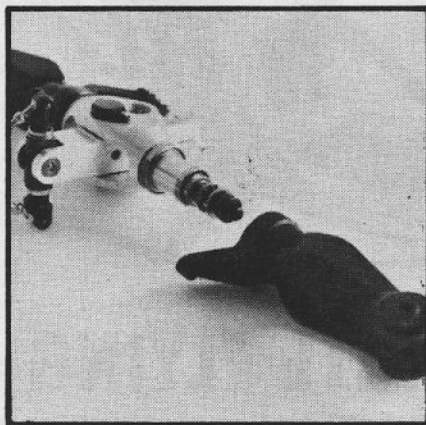
**Advanced rotor head provides precision aerobatics.**



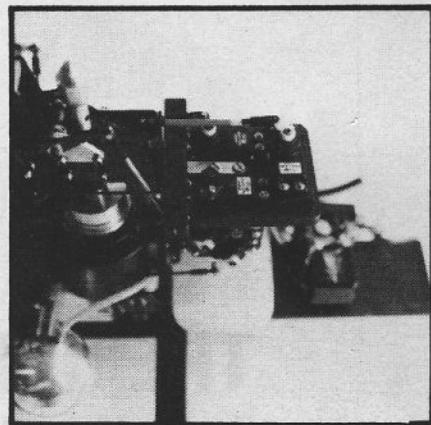
**Precision clutch and engine versatility.**



**Spiral gear drive system for longer life.**



**Triple, adjustable bearings for control power.**



**Compact and versatile radio installation.**

**AUTOROTATIONS ARE EASY WITH MULTIPLE BEARING CLUTCH**

The rotor blades of the COMPETITOR have a semi-symmetrical section and are generally heavier than most other 60 model rotor blades available today. This factor helps in ensuring COMPETITOR'S superior autorotation capability.

In fact, many flyers have reported the ease with which the COMPETITOR can be landed after an engine failure compared with other RC helicopters fitted with so called "autorotation". The GMP COMPETITOR autorotation gear is fitted with three bearings, rather than the single one used in some other 40 and 60 powered helicopters.

**ADVANCED ROTOR HEAD PROVIDES PRECISION AEROBATICS**

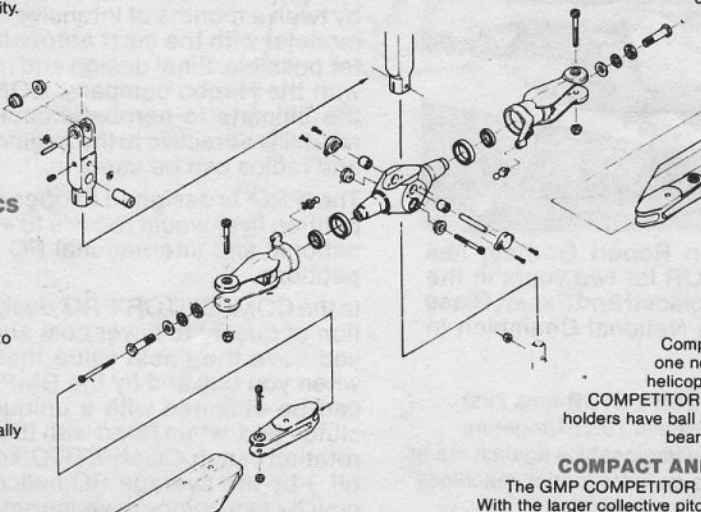
Because the quality of the controls of any flying machine will dictate the final performance, particular emphasis has been placed on the control system of the COMPETITOR. You will find many more ball and thrust bearings in the COMPETITOR than in other similar RC helicopters. The purpose of this is to provide a very "tight" control system so that all inputs from the transmitter will be immediately and fully available at the control surfaces. This is a prerequisite to fine quality performance in any flying machine, but especially in an RC model helicopter.

**PRECISION CLUTCH AND ENGINE VERSATILITY**

The standard starting system of the COMPETITOR is the top cone start now demanded by discriminating American modelers. This means extra expense in the design and manufacturing of the helicopter but the inclusion of this feature greatly eases the starting process and eliminates any problems which sometimes arise when starting with a starting belt.

Although the GMP COMPETITORS have been designed to be rugged, they utilize advanced and light construction techniques so they will fly with engines ranging through a .40 to .61 cu. in. Both the CUSTOM and the PROFESSIONAL model give excellent results with a .50 Schneurle or P.D.P. engine but can also be flown with the .45 or .60 size. A good .45 cu. in. Schneurle engine will fly the CUSTOM well and is, in fact, perhaps preferable for the beginner who is just transitioning into his first aerobatic helicopter. Don't forget that you can change the size of your GMP COMPETITOR engine at any time.

The clutch is a classic one-piece design, superior and reliable. This unit is many times more expensive to manufacture than other plastic and two-piece metal clutches available today but it gives smoother engagement and drive performance and will virtually last "forever".



**SPIRAL GEAR DRIVE SYSTEM FOR LONGER LIFE**

The main plastic drive gear itself is of a very sturdy construction and the tail drive gear track provides a very wide contact area because the tail drive steel pinion is of an advanced spiral hypoid design. This means less likelihood of damage to the gear. Should the gear be damaged, however, a replaceable plastic part can be easily fitted at a very low cost.

**TRIPLE, ADJUSTABLE BEARINGS FOR CONTROL POWER**

The blade holders and blade arms are integral and each holder rotates on two high quality ball bearings plus a thrust bearing (another first!). Compare with helicopters using one ball bearing and one needle bearing only. High centrifugal loads which helicopter blades experience need thrust bearings and COMPETITOR has them. In fact, both main and both tail blade holders have ball and thrust bearings. And, how about double ball bearings in the pitch plate of the tail control system!

**COMPACT AND VERSATILE RADIO INSTALLATION**

The GMP COMPETITOR is designed for either a 4 or 5 servo installation. With the larger collective pitch helicopters it is an advantage to use 5 servos since the high forces experienced in moving the collective pitch in the helicopter are best handled by a dedicated servo, leaving another one to operate the throttle. This is by no means necessary and, provided the servos are good enough, the COMPETITOR, like any other helicopter of its type, can certainly be flown well with 4 servos. Any of the inexpensive 4 channel radios available today will usually work well. When using one of the new helicopter radios, however, 5 servos are necessary if the full advantages and the features of the radios are to be used.

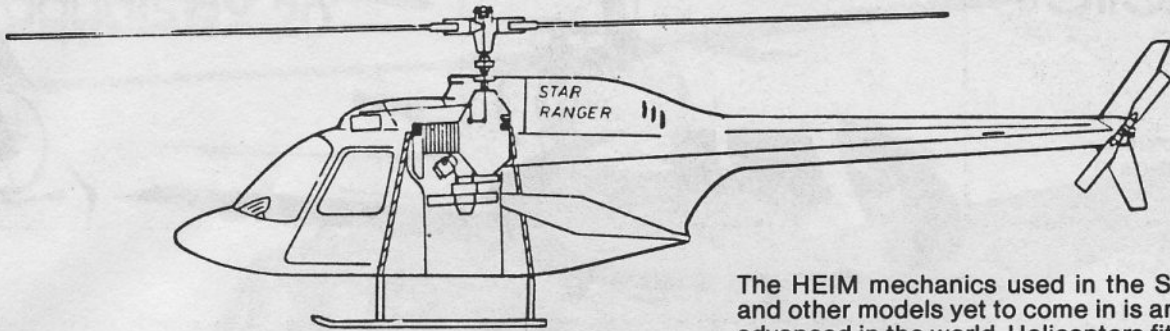
**TECHNICAL SPECIFICATIONS**

MAIN ROTOR SPAN	48 - 55 inches	WEIGHT READY TO FLY	8 1/2 pounds
TAIL ROTOR SPAN	10 - 11 inches	RADIO	4 - 5 channels
OVERALL LENGTH	50 inches	ENGINE	.40 - .61 cu. in.



# heim

## ★ STAR-RANGER ★



The HEIM mechanics used in the STAR RANGER and other models yet to come in is among the most advanced in the world. Helicopters fitted with these mechanics are potentially world contest winners. The maneuverability is nothing short of spectacular yet the helicopter remains stable and flies smoothly.

Designed and built by Ewald Heim, four time champion of the European circuit, the STAR RANGER offers great maneuverability and has been described by one European journalist as analogous to driving a Ferrari on the race tracks of Europe.

All this - plus Heim helicopters are now available exclusively in the USA from Gorham Model Products with parts backing and technical advise.

**Ewald Heim, (left) designer and builder of the prestigious Heim STAR RANGER. Heim is a 4 time European RC champion.**

Just look at the many First Places gained by the Heim 'Star Ranger' in 1983:

International Contest  
Intl. F.A.I. Contest  
Intl. F.A.I. Contest  
Intl. F.A.I. Contest  
German Freestyle

Switzerland  
Germany  
Switzerland  
Holland  
Germany

Schluter Cup  
German Championships  
Eurocup  
Schluter Cup  
Marbach Contest  
Swiss Championships

Austria  
Germany  
England  
Germany  
Germany  
Switzerland

## **Graupner** HELIMAX '60

The very latest RC helicopter from the well known firm of Johannes Graupner. The Helimax is fully aerobatic and has an excellent controls and autorotation system. It's aerobatic capability is insured by the use of the Heim rotor head. This machine offers an option for a variety of motors and a quick snap canopy which assures easy maintenance.

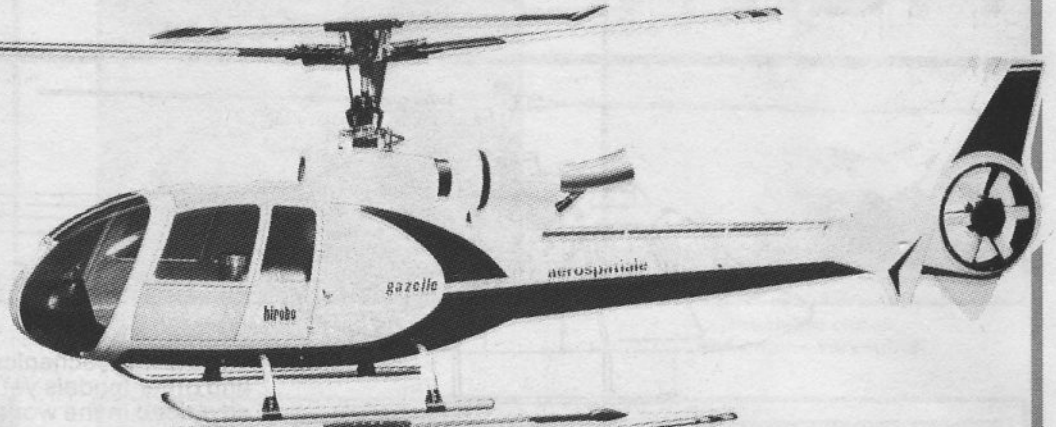


# hirobo

# THE WORLDS FINEST SCALE HELICOPTERS

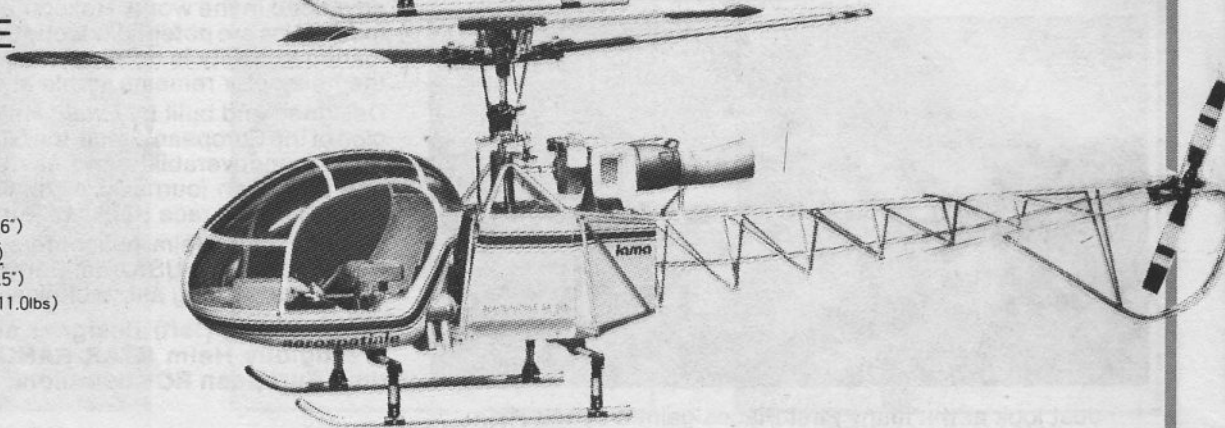
## AEROSPATIALE SA-341G *gazelle*

- Main Rotor Span/1,560mm(61.4')
- Fuselage Length/1,420mm(56.1')
- Full-equipped Weight/5,200g(11.4lbs)
- Engine/60-61class
- Radio/4ch.
- Tail/DUCTED FAN/φ130mm(φ5.1')



## AEROSPATIALE SA-315 *lama*

- Main Rotor Span/1,510mm(59.6')
- Tail Rotor Span/280mm(11.0')
- Fuselage Length/1,380mm(54.5')
- Full-equipped Weight/5,000g(11.0lbs)
- Engine/49-50class
- Radio/4ch.



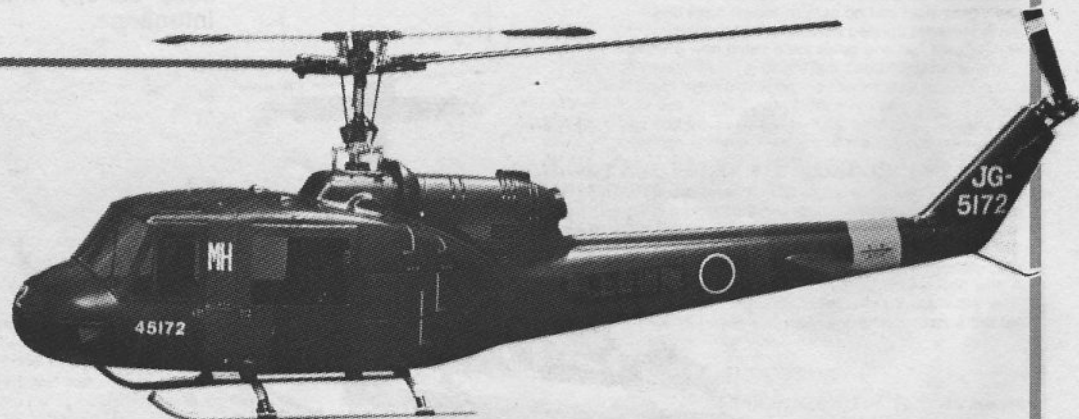
## BELL-206 *JetRanger*

- Main Rotor Span/1,560mm(61.4')
- Tail Rotor Span/310mm(12.2')
- Fuselage Length/1,410mm(55.7')
- Full-equipped Weight/5,200g(11.4lbs)
- Engine/60-61class
- Radio/4ch.



## BELL UH-1B *iroquois*

- Main Rotor Span/1,560mm(61.4')
- Tail Rotor Span/310mm(12.2')
- Fuselage Length/1,400mm(55.3')
- Full-equipped Weight/5,200g(11.4lbs)
- Engine/60-61class
- Radio/4ch.



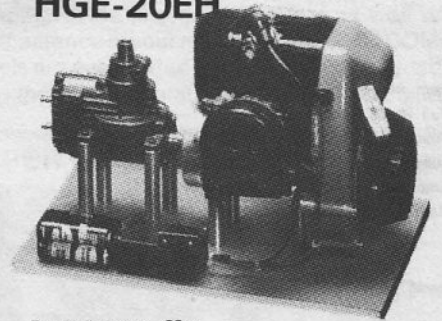
# hirobo

## GASOLINE ENGINE HELICOPTERS

BELL UH-1B  
**iroquois GX-20**



**HGE-20EH**



For Helicopters 20cc  
Spark Timing Automatic Adjustment With Throttle.  
(Built-in Pull Starter And Clutch.)

- Main Rotor Span/1.800<sup>m</sup>(70.8')
- Tail Rotor Span/310<sup>m</sup>(12.2')
- Fuselage Length/1.570<sup>m</sup>(62.0')
- Fuselage Width/345<sup>m</sup>(13.6')
- Full-equipped Weight/7.050g(15.5lbs)
- Engine/20cc
- Radio/4ch.5s. (for Helicopter)
- Big size perfect 1/7.4 full scale model.
- Hirobo gasoline engine HGE-20EH with auto-rotation built-in new main transmission gear box.
- Totally new flexible spiral shaft for tail gear drive.
- Utmost realistic cockpit instrument panel, sliding side doors, pull open cockpit doors.



**BELL 47G-2**

- Main Rotor Span/1.800<sup>m</sup>(70.8')
- Tail Rotor Span/310<sup>m</sup>(12.2')
- Fuselage Length/1.580<sup>m</sup>(62.4')
- Full-equipped Weight/6.950g(15.3lbs)
- Engine/20cc  
(Hirobo 20cc Gasoline Engine HGE-20EH)
- Radio, 4ch.5s.

# hirobo

## SUPER STUNT HELICOPTERS

60 CLASS  
SUPER STUNT ORIGINAL HELICOPTER

### Corvette-SST

- Main Rotor Span/1,560<sup>mm</sup>(61.4)
- Tail Rotor Span/310<sup>mm</sup>(12.2")
- Fuselage Length/1,425<sup>mm</sup>(56.1")
- Full-equipped Weight/5,100g(11.2lbs)
- Engine/60-61class
- Radio/4ch.5s.(for Helicopter)



60 CLASS  
SUPER STUNT HELICOPTER

### JetRanger SST

- Main Rotor Span/1,560<sup>mm</sup>(61.4)
- Tail Rotor Span/310<sup>mm</sup>(12.2")
- Fuselage Length/1,410<sup>mm</sup>(55.7")
- Full-equipped Weight/4,800g(10.5lbs)
- Engine/60-61class
- Radio/4ch.5s.(for Helicopter)



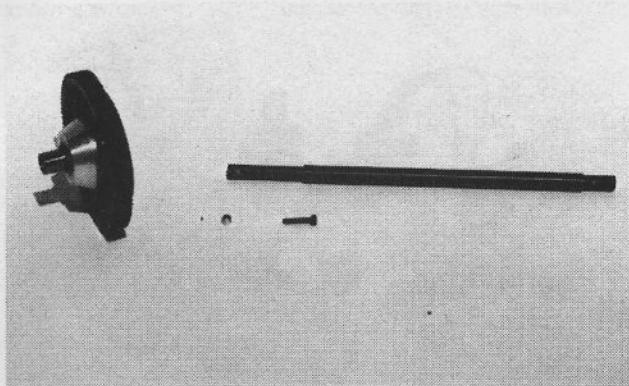
### SST MECHANICAL ASSEMBLY

- Gear Ratio  
Engine:Main Rotor/10.357:1  
Main Rotor:Tail Rotor/1:5.187
- Total Weight/2,500g  
(5.6lbs)  
Including Rotor Head, Engine, 4 Servo & Gyro



# ACCESSORIES

## AUTOROTATION



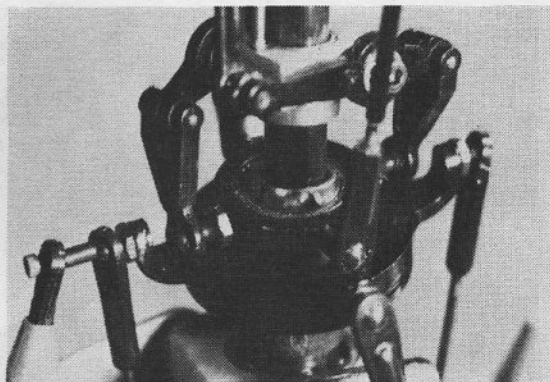
This superb triple bearing autorotation unit is available for COMPETITOR and COBRA helicopters. A slightly different version can be fitted to all Hirobo scale helicopters. The use of this unit enables true autorotations to be made by an average flier. In some cases a main shaft change is also required.

## COMPETITOR SIDE PANELS



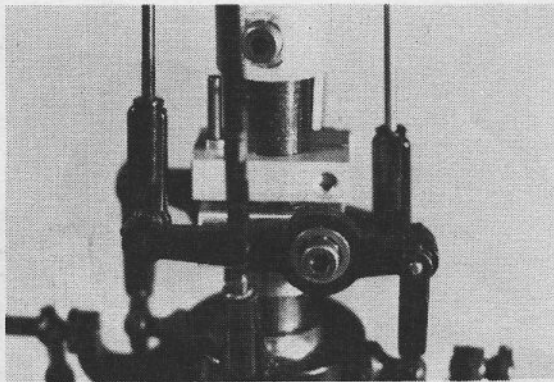
These stylish side panels are available as an option for your COMPETITOR. They provide improved visibility as well as 'dressing up' the appearance of your machine. The 'GMP' COMPETITOR side panels are easily fitted and removed as needed. They add about 6 ounces to the total weight of your machine.

## SUPER SWASHPLATE



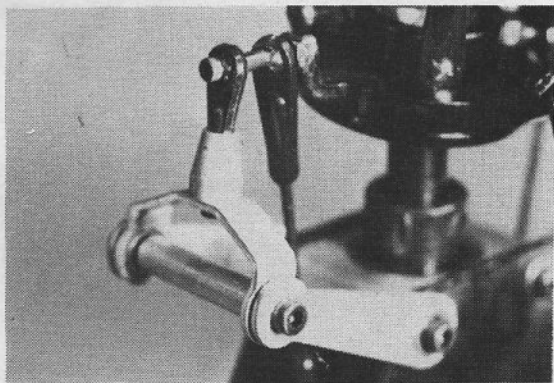
This new 'in-line' machined swashplate will fit COMPETITOR and COBRA (and other helis, too) which have 10mm main shafts. The 'super' swashplate precisely aligns input and output movements and thus provides more accurate control.

## SUPER WASHOUT UNIT



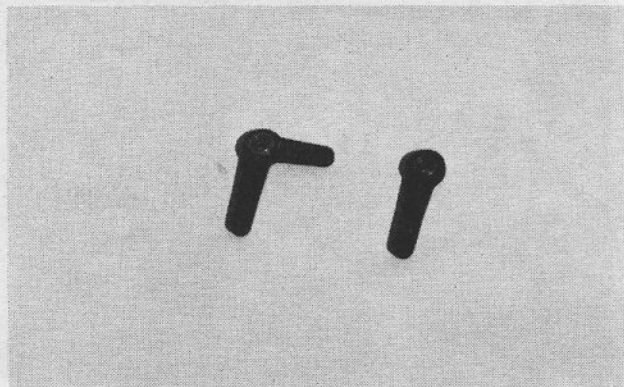
In order to maintain an accurate cyclic pitch 'paddle' position while collective pitch changes are made, a 'washout' mechanism is used. The standard design is made of molded nylon and works well. For the super builder we now offer as an option for COMPETITOR and COBRA a fully ball bearinged machined washout unit.

## SUPER RADIUS ARM



Methods of restraining swashplate rotation vary from machine to machine. Nearly all have the disadvantage of mechanical 'slop' or unwanted rotation of the swashplate as it moves up and down. The new super radius arm eliminates all these qualities and provides the perfect solution.

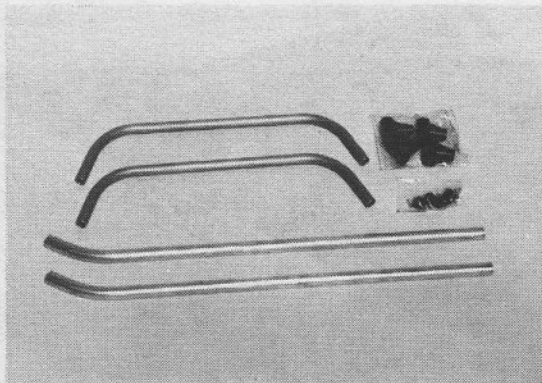
## SUPER 'L' AND 'I' LEVERS



The control levers on most modern RC helicopters are well made and work well. For the super fastidious builder and fliers we offer 'L' and 'I' levers which are each fitted with dual flanged sealed ball bearings. How much more perfect can you get!

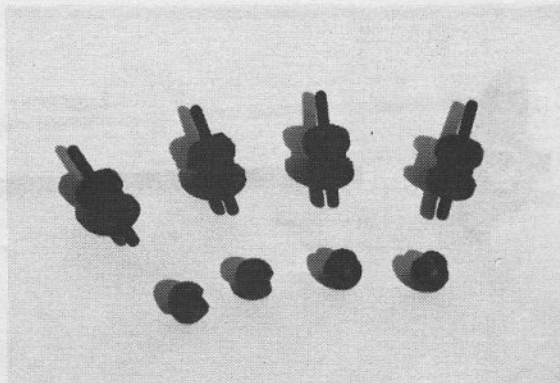
# ACCESSORIES

## TUBULAR LANDING GEAR



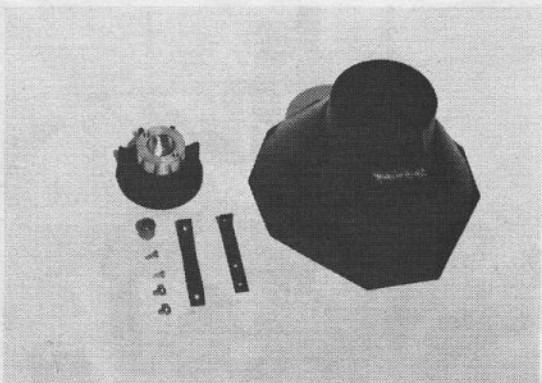
Want a really slick looking landing gear for your **COMPETITOR** or your own custom scale ship? This gear is made of aluminum tubing and provides your model with a 'professional' appearance.

## LANDING GEAR DAMPERS



If you do a lot of hard landings this damper set is for you. The four shock isolators mount between your landing gear and the main frame. Many experts use these dampers to 'soften' their autorotation landings and increase the life of the rest of the machine. Also shown are rubber skid plugs (set of 4) to dress-up your landing gear.

## COOLING SYSTEM



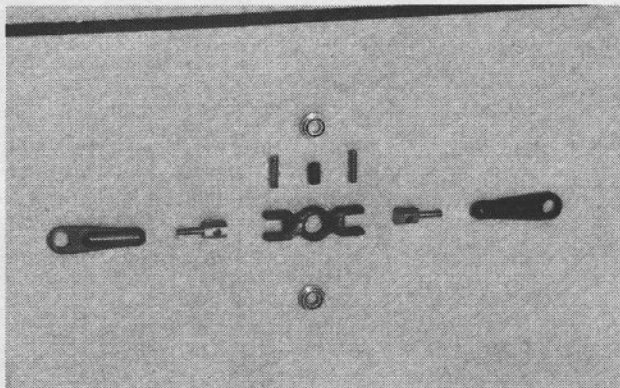
For the **CRICKET** flier who wants the additional luxury of forced air cooling, the cooling system designed for the **GMP HUGHES 300 C** is available as a retrofit kit. Easy to install and provides that extra insurance against overheating on those 'hot' summer days. This cooling system kit can also be used with your own design.

## CARRYING CASE



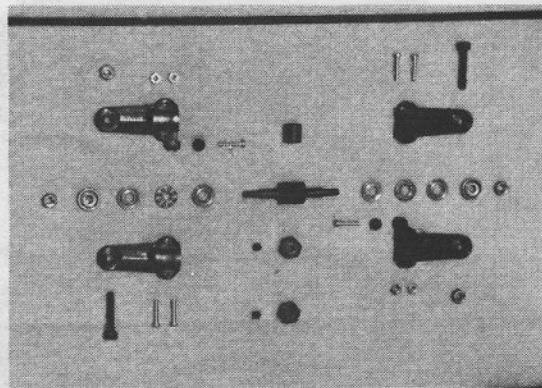
If you are a **CRICKET** fan and want to take it everywhere, this vinyl carrying bag is for you. Side pockets for transmitter and glow battery are provided. Now you can fly wherever and whenever you want to.

## BALL BEARING TAIL PITCH PLATE



This dual ball bearing tail rotor pitch plate system can up-grade your **CRICKET** or **Hirobo** scale helicopter. Tail control is smoother and less likely to become 'sloppy' with wear. This item is standard on **COMPETITOR** and **COBRA**.

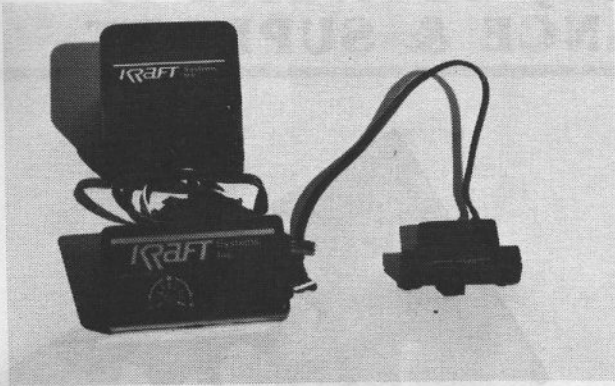
## DUAL BEARING TAIL ROTOR SYSTEM



Any single tail rotor ball bearing **GMP** helicopter can be up-graded to a dual ball bearing system with this kit. Tail rotor control will be smoother and bearings will last longer. This item is standard on **COMPETITOR** and **COBRA**.

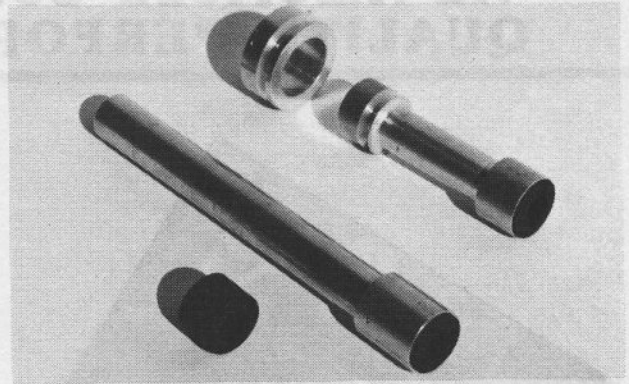
# ACCESSORIES

## GYROS



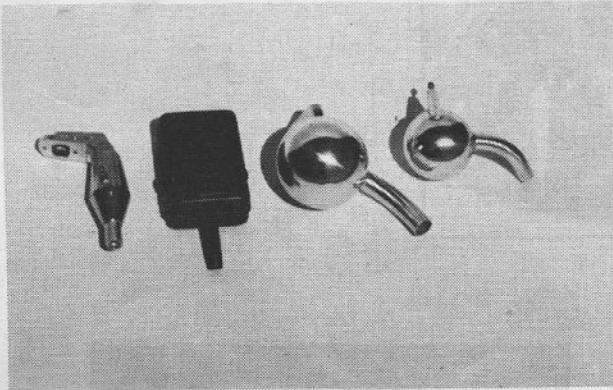
Now nearly everyone uses them. The 'yaw' gyro is widely available and is used by nearly all 'club' and 'expert' helicopter fliers. The yaw rate gyro is inexpensive, simple to fit and certainly helps to control that twitchy tail.

## STARTER EXTENSIONS



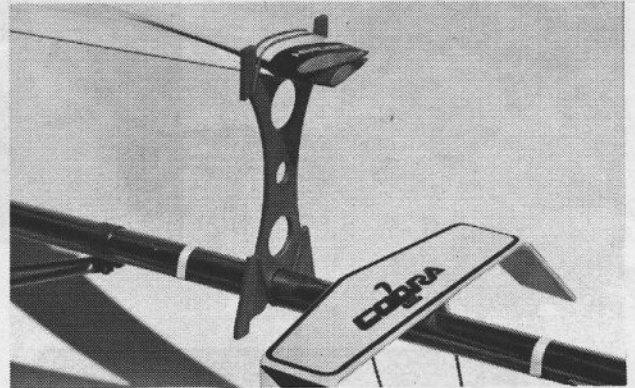
Two different starter adapters are manufactured by GMP for use on any/all cone start helicopters. The adapters fit onto the Sullivan starter in place of the one which comes with it. The 'long' starter is for COMPETITOR and COBRA and the short one for CRICKET. The short adapter can also be fitted with a pulley unit for use with boats or helis which have a belt start.

## MUFFLERS



Mufflers of many varieties are available from GMP dealers. Special mufflers for rear exhaust engines, the famous and very efficient 'MACS' ball for all engine sizes and a new range of compact mufflers for use in scale ships.

## TRANSPORT CONVENIENCE



Don't damage your rotor blades and linkages when you transport your RC 'chopper'. Fold your rotor blades back and use a GMP rotor blade holder rack. Made of precision die cut plywood they can be painted or used as they come.

## SHIRTS, HATS AND PATCHES



GMP 'T' shirts are available in orange or white cotton/polyester blend and come in sizes small, medium, large and extra large. Hats and patches are also available.

## BOOKS



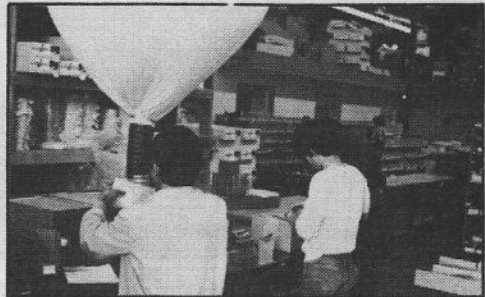
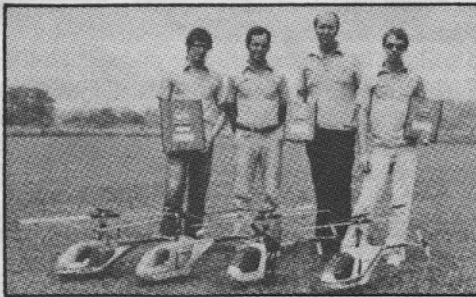
There are now an increasing number of technical books written especially for the RC heli-flier. These include: "Radio Control Model Helicopters" by J. Drake; "RC Helicopters for the Practical Model Flyer" by W. Snitjer; "Radio Control Model Helicopter Handbook" by D. Lodge. A package of reprints of John Gorham's "Give It A Whirl" columns is also available.



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**THE WORLD'S FINEST RC HELICOPTERS**