



1) Nearing completion, the Editor's Baron 60/Bell 222 Twin awaits mechanics to be installed, wing pods to be finished and painted and tail horizontal and vertical fins to be added before flying of into the blue yonder.

2) Another Baron 60/Bell 222 Twin from Kalt belonging to David Toh from the Island of Penang, Malaysia. Using the Blackhead 3 rotor head with weighted blades should make this model fly superbly. See the Spring issue for details and photos of the above models in flight conditions. Photo: Michael Ng.



THE TWIN BARON

In a two part review by the Editor, we look at the Kalt Baron / Bell 222 Twin for a scale evaluation.

There are many fullsize helicopters which have been produced in scale form in the radio controlled model, never mind the dearth of the „Airfix“ type plastic kits. Kalt of Japan have very kindly supplied me with a kit of the Bell 222 Twin. Designed to be used with their Baron 60 mechanics, I duly recieved this model along with an OS61H engine with rear exhaust, and retracting undercarriage.

Now I know that there are other manufacturers who have designed the 222 in their range of models. I would love to build, and fly each one of them individually! My request to Kalt was on the basis that I considered their Baron 60 mechanics to be of an exceedingly high standard and I particularly wished to do a review on the 222. Indeed, they were (i.e. the 60 mechanics,) high enough to win the first ever World Heli Championships.

I have always admired the 222 shape and as the fullsize is a very pretty ship, I thought it would be a good starting point for a series on building models purely for scale attitude/flying.

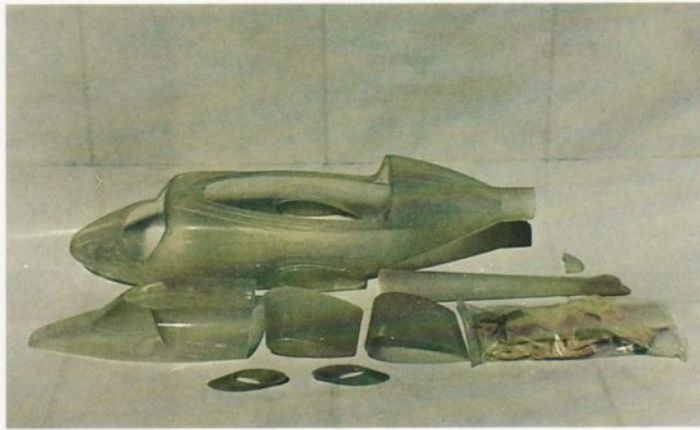
We will be having articles/reviews on other makes, namely Heim, Graupner, Schluter and the now deactivated! DC Labs.

I am certainly not in the league of model building like that of Len Mount or Ted Schoonard (see previous issue) but I do have a fair talent at building scale (I am yet to win a prize!?) however this review is to show the many modellers who are scared of building an expensive model with care and detail and then go fly it with the possibility of pilot/mechanical failure ever present.

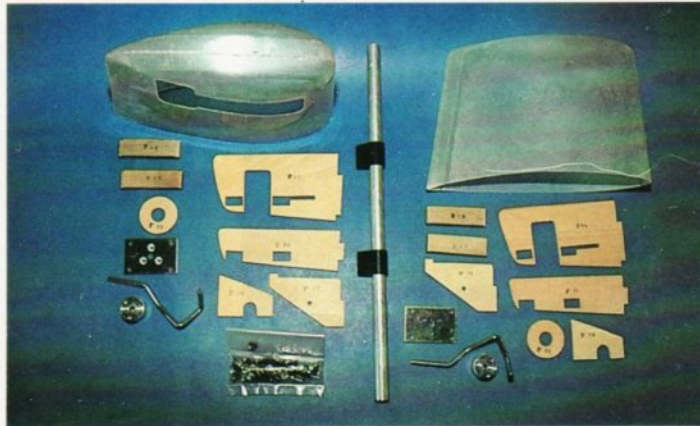
It is an awesome feeling I realise for many, to spend hours of their time and the money invested into an expensive model invested in this hobby to possibly see such a failure happen, but the enjoyment and excitement of actually flying the finished product is a most pleasing feeling. With care and aptitude, one can fly these models total scale continually without the knock knee effect and only have normal pre flight maintainance to worry about.

The Baron 60 was reviewed in it's pod and boom configuration in the Vol. 2 No. 1 issue by Gary Richardson. Here, as an introduction to the model are several photographs depicting the quality and aspect of building the fuselage. A more thorough detailed description of this will appear in the next issue along with the flying report and of the other equipment associated with this particular model, namely the retracts and onboard stability equipment.

Due to not having recieved the radio set promised by the manufacturer mentioned in the previous issue, I have had to rethink what radio to now use. This radio review will appear in association with the second part of the review next issue.



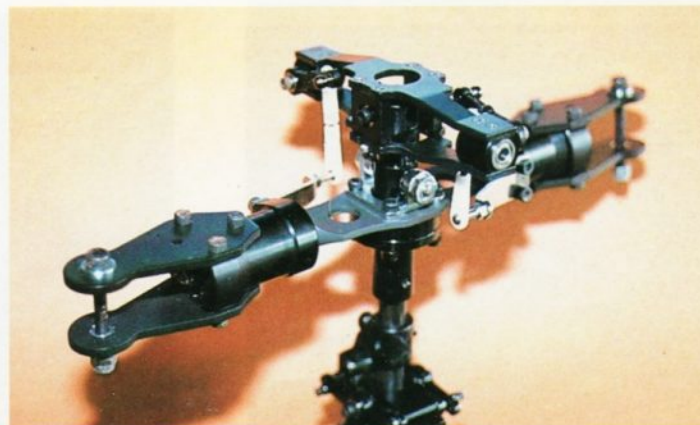
The fuselage as it comes out of the box. Beautifully molded it only requires a moderate skill to put the whole thing together with accuracy.



The wing pods showing retract / or fixed u/c with a very strong stable support / rollbar. This is an improvement on the earlier gearbox version as it promotes strength into the main gear where it needs it.



Fabulous pre cut woodwork. Ready to install without any modification and being light yet strong too.



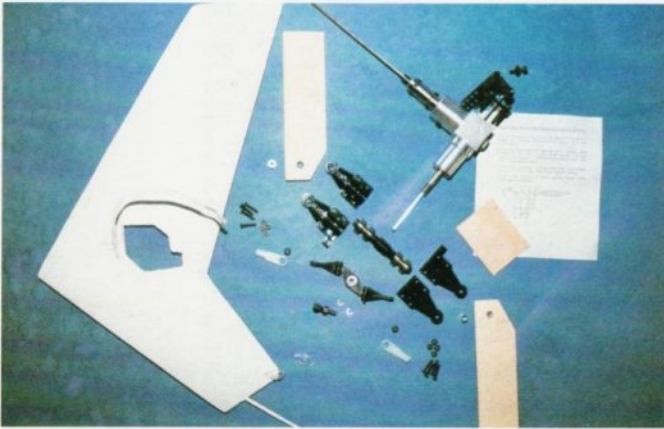
The immensely strong rotor head. Pre assembled, it is certainly an attribute to easy setting up and fast build completion. The instructions for the setting up the rod lengths between swashplate / mixer system to head could be improved.



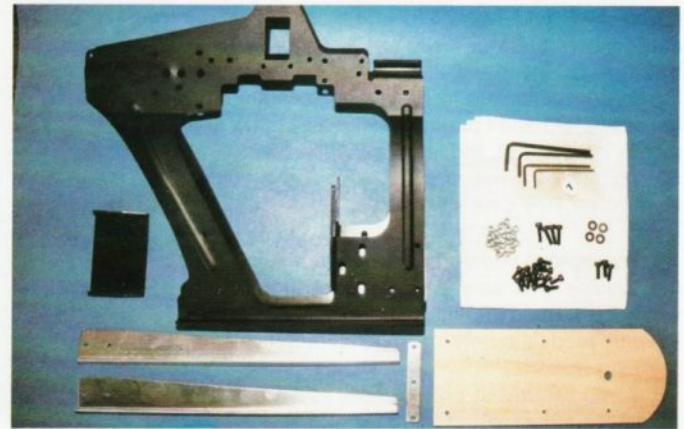
Clutch bell and shoes. Note the super thick clutch bell lining. The rubber strip gives four O rings which give different degrees of clutch pick up to the main gear drive.



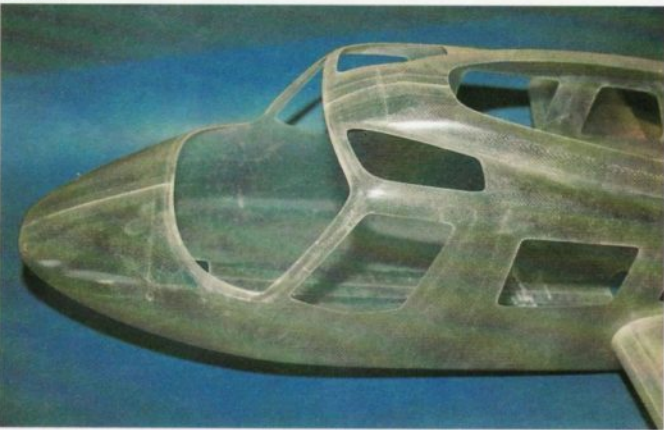
Main gear with steel tail gear insert. You won't strip this unless you plow in to the ground head first from a great height. Swashplate, mixer unit, and shaft are all high torsion steel and superbly crafted.



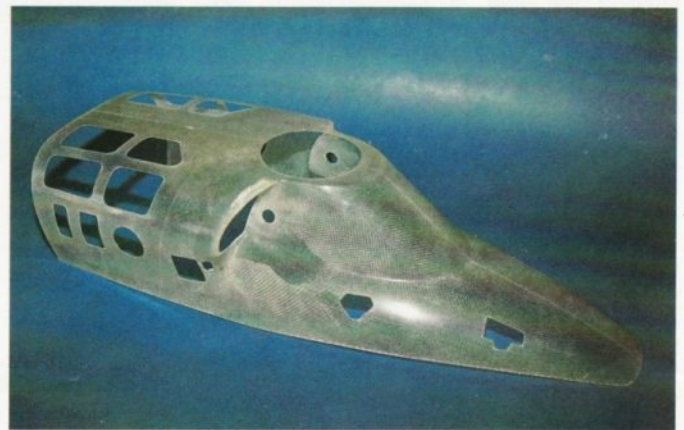
Tail drive. New alloy block with fully ball raced 90° gearing system and ball raced tail blade holders and pitch change plate ensure total positive control with superb inherent strength. Vertical fin was wired with tail beacon.



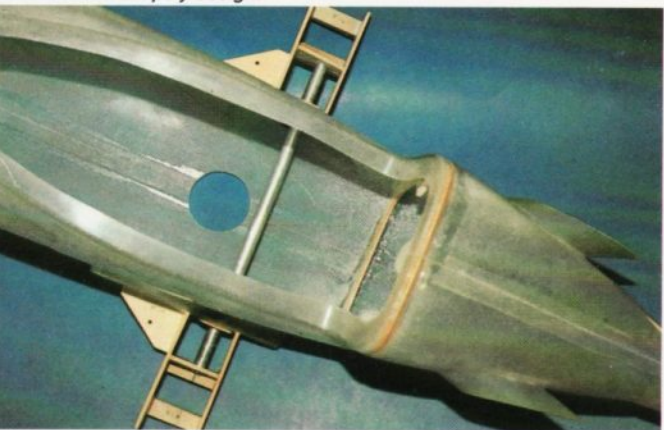
Light weight but immensely strong side frames with forward tray carrier for gyro and receiver makes into nice neat unit.



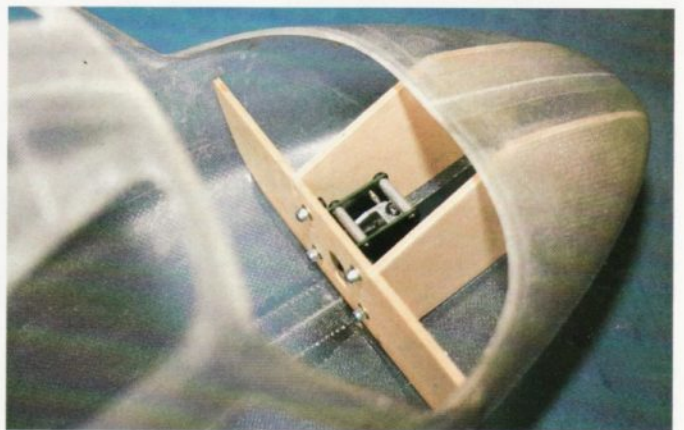
After cutting out all the windows the fuselage starts to take it's very beautiful and shapely design.



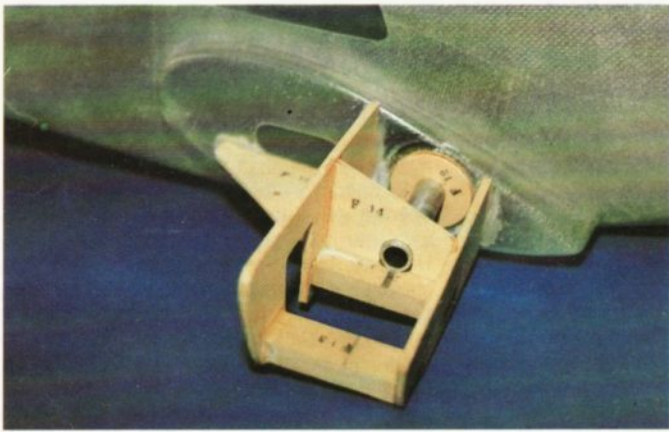
Top housing prior to the alloy gauze being lined over the air in lets.



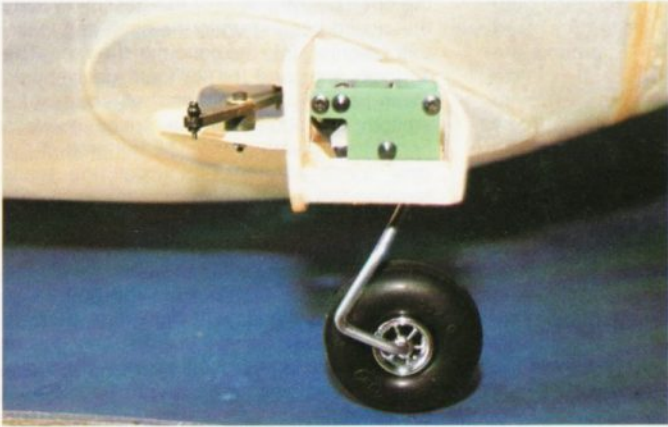
Showing the wing pod wooden supports in place with the roll bar/wing pod supports.



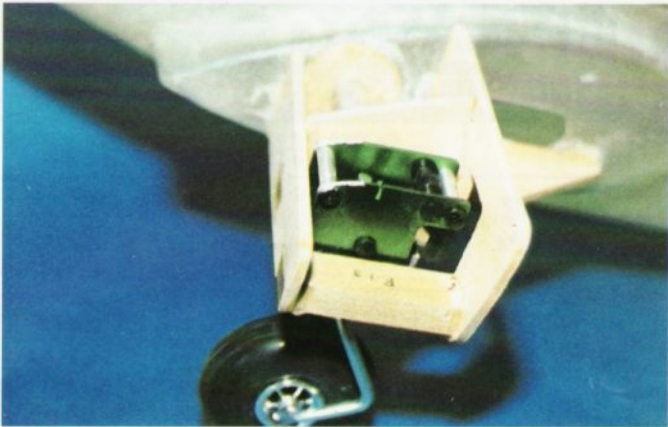
The nose showing the front gear assembly in place. When finished i.e. with mechanics in etc, there is plenty of room to scale the cockpit area fully.



The wing pod supports. Clearly marked and with care can be aligned and installed with relative ease. Cyno was used throughout all assembly.



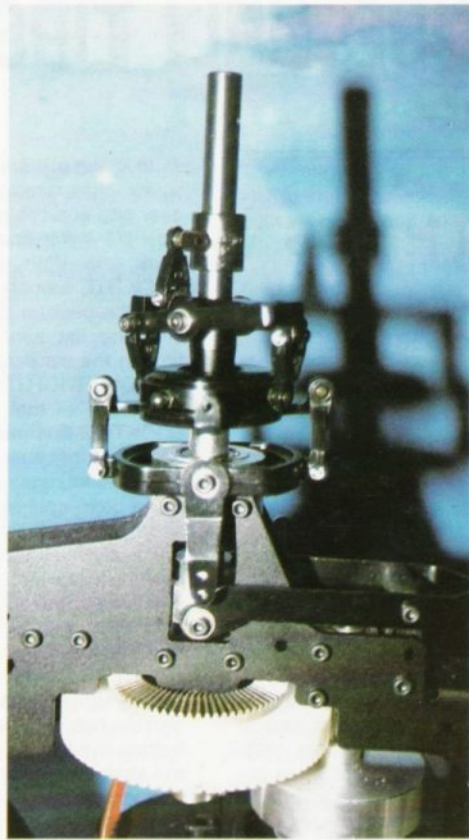
Gear installed showing how trailing edge requires to be filed down so as not to obstruct fairing.



After filing down fairing will slide on and off without any problems.

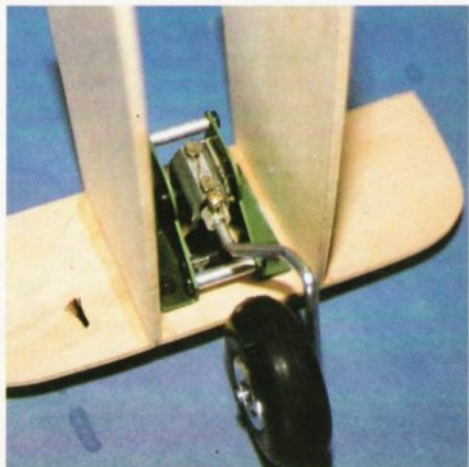


Main body after first coat of primer. Although some pinholes showed up in the gel coat of the fuselage, these were easily filled with powder and paint mix.



Solid, accurate and ultra reliable swashplate and mixing system. (See next issue for full details)

**PART TWO
OF THIS
REVIEW WILL
BE IN THE
NEXT ISSUE**



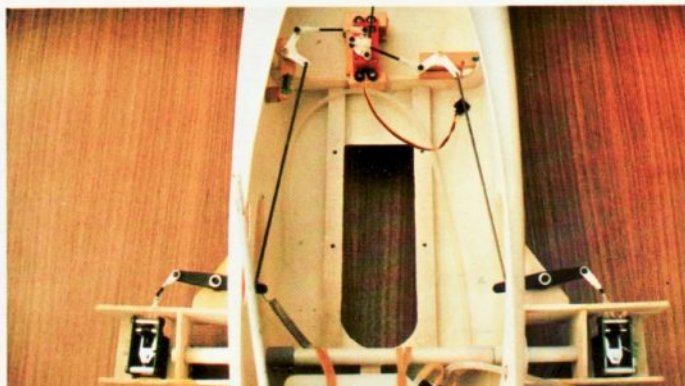
Front gear which locates easily into position. (See next issue for servo linkage and control)

KALT'S BARON 60/222

PART TWO OF
A REVIEW ON THIS
LOVELY MODEL



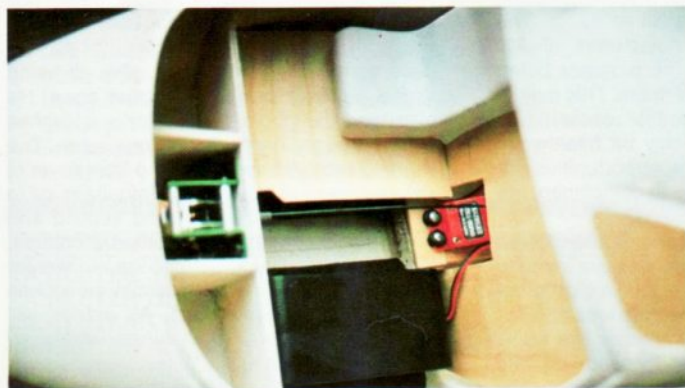
Excuses, Excuses!! Here with the second part of this review of Kalt's Baron 60/Bell 222. As mentioned in my leader, due to what I can only term as atrocious weather, the flying of this model is yet to take place. As a result of this terrible Situation, and to save getting realms of scathing letters, the following photos will I hope keep you at bay. The full build up and flying review will be in the early summer issue as space was also limited in this issue for what has so far been written. The flying review will also include part two of the „Multiplex“ radio review seen in this issue as it is the system used in this model due to not having recieved the „Airtronics“ system initially destined for use with this model. It is hoped that the „Airtronics“ set will have been recieved for review in the early summer issue also. Let's wait and see!



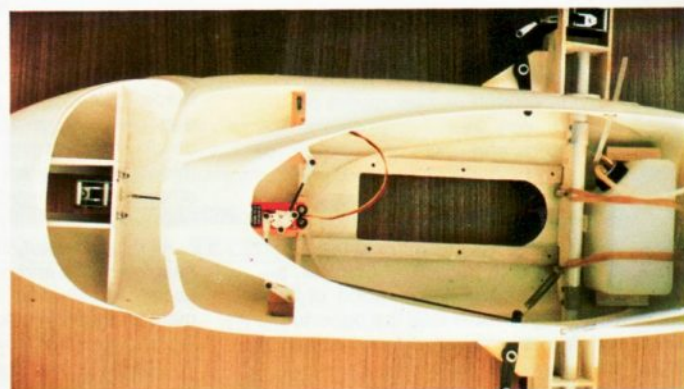
Showing the layout for the retractable U/C. (Note this is the editors version, and it works.)



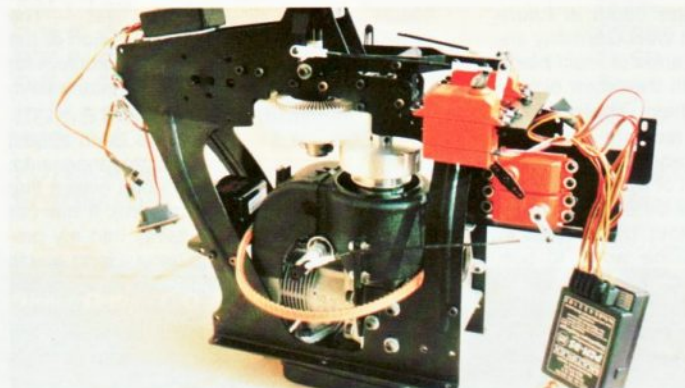
Close up showing retract gear.



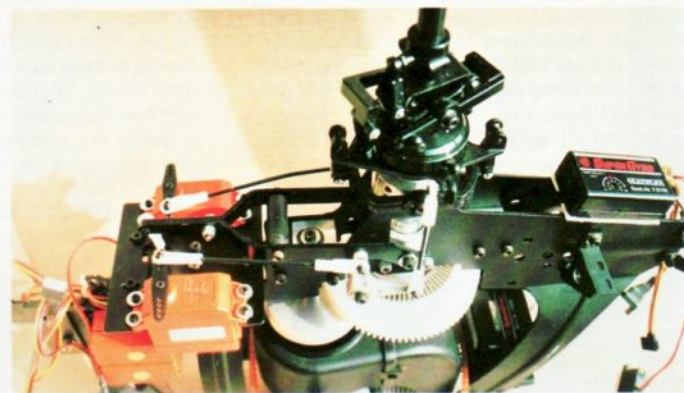
Nose area showing retract/servo and battery packs, which fit under the floorboards.



General view of U/C layout, and the new position for the fuel tank.



Lovely mechanical and radio layout — a pleasure to build.



The gyro sits aft of the engine on a platform, with the control box on top of the frames. Tail servo still to be installed.



Another view of the mechanical assembly. This unit drops into the fuselage, is mated with the tail drive and then bolted to wooden bearers. A fairly simple task.



The K3SB Black Head with 2mm plate. Twin ballraced blade holders and ballraced flybar ensure positive response.



Tail unit /blades. This is totally slop free, and very smooth in operation.



Although the cockpit has some detail, it is not fully scale at the moment.



Looking down onto the rotor head.



— The elegant lines of this very pretty helicopter can be seen here in these two photographs. The Metropolitan Police Badge/transfer is left to be done, along with a little more fine scale detail.



KALT'S BARON 60/222 REVIEW

KALT'S BARON 60/222

PART THREE OF
A REVIEW ON THIS
LOVELY MODEL



▲ Michael Ng's exceedingly pretty Baron 60/Bell 222. The beautiful lines of this „lady“ are well dressed with Michael's paintwork which puts this model in „vogue“.
Photo: Michael Ng



The Editor's Baron 60/222 coming into land. ► Colourscheme is that of the London Metropolitan Police. The transfer on the side has still yet to be applied.



◀ David Gore's Baron 60/222 modified into „Airwolf“ design and colourscheme. The modifications are of own design.

Photo: Editor

These three photos certainly display the popularity of this very lovely model.

FROM THE WORKBENCH TO THE AIR

In the final part of an ongoing review, the Editor gives his appraisal on this lovely model that is best treated like a lady — in more way's than one

The Bell 222 in it's full size form is a pretty expensive helicopter. Currently on the market for around £ 1,000,000 or \$ 1,500,000 it certainly means that operating this nicely curved lady will require a fairly deep pocket to pay for it's preflight and annual cosmetic dues. Well, if you are going to run this particularly fine rotary wing form it must be assumed that you can well afford it. Admittedly, this sleek lined figure of a heli is generally run by business consortiums or organisations that require this smart but effective image of a helicopter. It has the operating range necessary for the job, and the stamina to go with it. After all, aren't all ladies effective in both these spheres. Whether being used as an executive means of transport — private or commercial or an organisation power house for the likes of the Metropolitan Police Force in the UK, the Maritime Defence Force in Japan or some special secret agency in the U.S.A. where they disguise it and change it, and call it Airwolf!, it support's it's well manicured body effectively.



The kit laid out prior to assembly.

The Kalt Baron 60/Bell 222 is virtually similar in all aspects. Fortunately, however, the cost of this particularly fine model is not prohibitive. The running costs will also not make you feel you are supporting some well heeled startlet!!

As a kit, the model is everything you expect from a recognised and successful manufacturer. The Baron 60 mechanics lend themselves to this design favourably, although if wishing to scale the cockpit area, certain changes are necessary, and these will be pointed out later.

THE KIT

There is little point in explaining much more than the fact that it comes as one box which holds the fuselage in three major parts, with all the woodwork, fus., and wing pod supports/sponsons.. An inner bubble pack tray holds all the mechanical assembly in individual compartments. This certainly aids assembly time, making it a neat and easy to find operation. Additionally

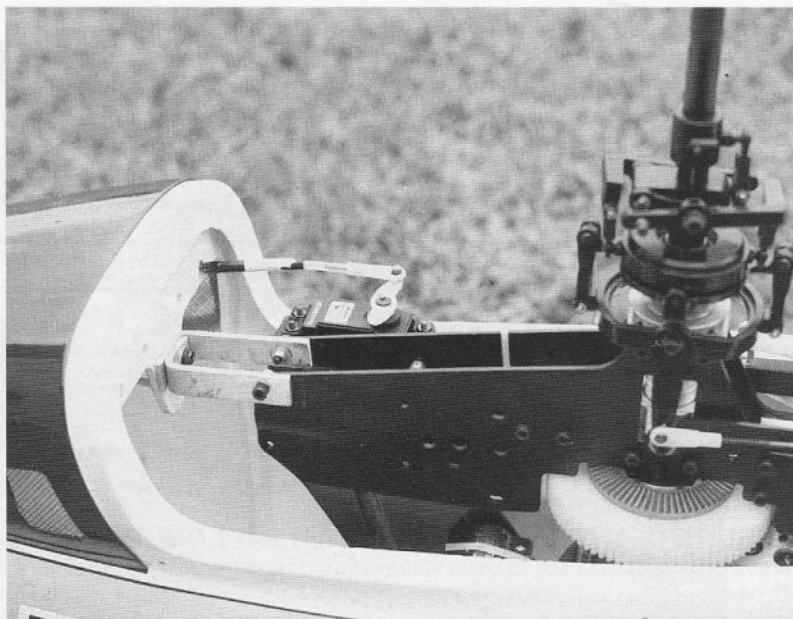
there is a full size blueprint and what I can describe as only a very moderate instruction booklet. Although easy to understand, it lacks information which the builder may not have or be able to obtain readily, except by contacting the local dealer. The rotor head comes in a separate box with it's own instruction booklet — this too could be improved upon, particularly with respect to setting up the control rods/linkages etc.

SHAPING THE FIGURE

The quality of the fuselage is very high indeed, installation of the accurately die cut woodwork being a relatively painless task. Cutting out all the windows, apertures, grills etc was easy as the main body shell is quite stiff and by the time the work is completed the end result should be a nice firm figure. Throughout assembly I used the Cyno glues, fast and slow with accelerator when necessary. Some people frown upon this method of assembly — I can only presume this to be because they have not actually tried it themselves. I have always found the results perfectly acceptable and have had no failures to date with this method. In some areas I do also add a smidgeon of epoxy glue — mainly on the main frame bearers, as that is where the most strength is needed.

THE FRAMEWORK

As I wished to try to make the cockpit scale like, I had to remove the two forward metal bearers and wooden tray — the part that the radio gear normally sits on when in the pod and boom configuration. This does not detract from the inherent strength of the mechanical frame at all. I made a forward bulkhead



Solid, accurate and 100 % slopfree.

APPLYING THE MAKE UP

As with any of the glass fibre fuselages available — either as kits or separate — it is imperative to sand the fus with very fine „wet and dry“ paper. Of course, the join lines ie the place where the two halves were joined together have to be sanded down and filled with paste. When this has been done and the windows cut out, and after a good and thorough sanding, the body is ready for its first layer of make up! There are ways and ways to do this (see articles on preparation and spraying in this issue). I myself spray the body with white undercoat, as this shows up any remaining pinholes and blemishes. Sure enough I spotted some, so had to duly fill them in. (I would be very surprised if any manufacturer could produce a fuselage without a few pinholes — maybe someone would care to send me one to prove me wrong.)

The body was again finely sanded and, when dry and gone over with tack cloth, the base foundation was applied. Lastly the highlights of rouge, lipstick etc were put on — body stripes, secondary colours etc. Like any lady I have known, if you rush this part, it means you will have to start all over again, so be warned. Take your time and, with care and patience, the final coat will reward you with a sparkling glamour that you will be proud to take out and show off. Final scale touches like door handle plaques, transfers, hatch cover plates etc should be fixed before the final coat of lacquer-Tufkote etc. is applied.

A HIVE OF ACTIVITY

The rotor head came fully assembled, and is of superior design. Fully ballraced, including fly bar, it certainly looks impressive. My only complaint here is that there is insufficient detail to assist the average pilot in setting up the correct rod lengths, whether for pitch rods or cyclic control/flybar rod/rods. I feel a proper diagram showing this set up would help immensely, and I do hope that Kalt will be doing something to remedy this. After all, everything else is superb — so this should be too. It is, though, a small point, as anyone who is not familiar with setting up should take the model to their Kalt dealer or local expert, who should be more than willing to help. (In the UK Slough R/c will help, plus any other Kalt stockist should be capable of providing this service.) Still, if Kalt could provide a little more info on this, it would help those of you that cannot easily get to a Kalt expert, and so avoid frustration caused by lack of experience.

THE FINE CONTROL

The radio gear should not produce any problems, irrespective of make, and again there are a variety of ways that it can be installed. If you are not sure — ASK. I have used the Multiplex Royale set and have been very pleased with it's fine control. (See next issue for final review on this radio and it's use.)

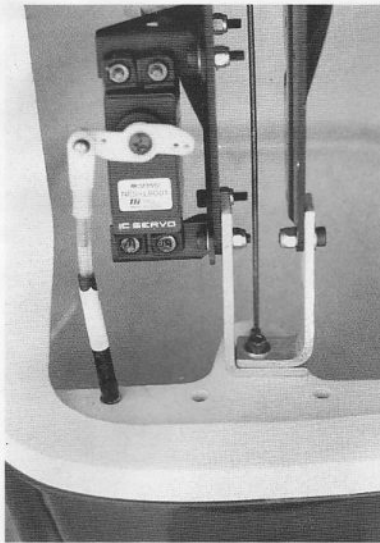
The frame of the mechanics has a platform behind the engine on which to sit the gyro. I find this placing both satisfactory and convenient. I used one retract servo for all three wheels and found it powerful enough to do the job.

The receiver was fitted on the bulkhead, facing the mechanics and all the leads were neatly tie wrapped into one bundle to make a clean spaghetti free layout. Rx and gyro switches were mounted in the cockpit.

DO I HAVE A DATE WITH THIS LADY?

A lady can either be responsive and forgiving, or not, depending how much praise and sweet talking you give her. Treat her wrongly, and you just might not get that next date. Well, I thought I had really laid the red carpet, and the foundation for a long and lasting relationship. I had lavished love, times and money on this little lady, but my ego got well and truly hit when I tried to get her started. It was my own fault for not having taken the time to run in the ABC OS 61 engine. Would she kick over. No way, until eventually after much swearing (no way to treat a lady!) I got her going. Now she is run in there's no problem and I got my date with this lady to go flying. And so to the air, at long last. The Kalt Baron 60/222 lives up to everything its manufacturers claim it to be. Magical. This gorgeous helicopter always is best looking in my eyes, when flying in scale formation. However, this lady of the skies is also very capable of aerobatic flying. I found that in the hover she performed exquisitely and in slow circuit flying she was graceful and smooth. The rock solid response of the cyclic/collective control was sheer delight, and when you ask her to fold up her legs, well the sight of the smooth bare bottom is dynamite!

So, if you take the plunge and ask this fine lady to go home with you, take your time, lavish care and attention, and you know you will end up with a lady to be really proud of.



Tail rotor servo which gives positive control.

behind the pilot seats as per the fullsize, where the Rx would normally be mounted. I also made a cockpit floor to hide the 2 1200 Mah battery packs. I installed two, as it helped sort out the C. of G. problem due to the fuel tanks, new location being positioned aft of the main frame assembly. Also as the Tx had dual battery packs it would offer much longer flying time. All that is needed to be done after the expiry of one battery pack, is to change terminals.

With the installation of the retract servos and the mount for the retract servo this virtually completed the framework. (See the photos in Volume 3, No. 3 and no. 4 for further details.)

With regards to the installation of the retracts and the way they operate, I can only say that there are different ways to do this lengthy job. Do spend time on this to ensure the unit operates smoothly and that the wheels lock in both up and down positions.

THE HEART OF THE BODY

Building the mechanics is a very straight forward operation — really nothing to tax the brain here. By taking time and being precise the complete package will operate as smooth as silk. I had one small modification to make which was on the mixer unit. It needed filing down on the main block so that the mixer arm didn't rub against it. Maybe I had a mixer block that happened to be a few thou out!

The heart of the matter — the engine, clutch, main gear and tail rotor drive gear — meshed beautifully. The smoothness and the operation of collective arrangement which is 100% slop free impressed me no end. By the time I had got this far I was really getting excited and wanted so much to get this lady flying. This, however, was something that took a lot longer than I had expected — only due to lousy weather conditions in the UK and the resultant pressures incurred in a move from the Virgin Islands where I started to build the kit, back to the UK.

