

Hirobo

Bell AH-1S Tow Cobra

by the Editor

Part II



And so, here we are – ready for ‘Nap of the Earth’ flying once again. You will remember the previous issue where I had replaced the damaged head, blades and rod ends, and the machine hovered beautifully. Well, considering the fracture to the tail boom under the exhaust stack which was quite severe, vibration was at a minimum, and had I gone into forward flight across the long grassed field, I am positive the flight would have been successful.

Being more realistic, I of course landed right away and went home and carried out the necessities. We have been in the hangar these past several weeks and with continuous checks on everything in air frame repairs and mechanical tests, JG-3401 was soon ready to take to the skies.

The Kit: Upon opening the smaller of the two boxes, which contains all the mechanical assembly, one cannot fail to be impressed with Hirobo’s talent of ensuring that all items are easy to see and find. With a few exceptions (and I would say that it is more than likely down to transit problems – being shaken up from Japan to prospective shop) all the pieces were as stated and in the correct recess in the plastic packing trays. If not, then a careful study of the instruction booklet will soon sort them out. And you will want to study the instructions carefully. Although the translation is reasonably good from Japanese to English – it is advisable to familiarise yourself with the instructions and the excel-

lent rolled up blueprint type – full size drawing/plan.

Assembling the engine, OS MAX 61 FSR-H, and the transmission is relatively painless. However, do ensure that everything is aligned 100 per cent. When assembling the mission/gearbox case, both sides need to be lightly sanded with fine ‘wet and dry’ to ensure a positive flushness, then lightly epoxied and bolted together. Epoxy each bearing in place also and pack grease lightly around the gears. (When the model is finished – prior to starting the engine – the gear box oil should be added!)

Assembling the pitch up mechanism is also straightforward. (see * later). Here again, bearings must be epoxied into place – do remember though, that small amounts are sufficient and do be careful. Oh yes, all set-screws and bolts need to be locktited where necessary, unless locknuts are used.

Assembling the rotor head – IS NOT a piece of cake – and for your model to fly superbly, the greatest time, care and consideration must be taken when at this stage. Those little appendices – pivot bolt arms/pitch arms on the blade holders, need to be filed down to a perfect level to meet the pitch armband/rod end totally flush. The stress point here is very great, so ensure that the pitch arm ball, screws in and meets perfectly – and yes it needs to be locktited in also – but don’t over-tighten, or it will break off and you will become a rather frustrated modeller! It means purchasing a new blade holder. (If only someone would develop a miniature torque wrench.)

All the wooden parts are very easy to install, however care must be taken to match up their respective positions before epoxying into place. Tail assembly is relatively straightforward – do file the tail holder and epoxy into the balsa surround which in turn is epoxied to the tail fin end. The drive and control guide pipes should be installed prior to the tail section being epoxied into position on the tail end of the fuselage. The horizontal tail fin requires shaping and can be installed later. The vertical tail fin cap needs to be cut out to fit the tail drive unit and should securely attach to the tail end section. You will need to file away some of the inside epoxy resin for a close fit. The antenna can be drilled and epoxied into place with rubber grommets from servo trays.

The kit supplies the standard tail blade holders – however, optional blade holders utilising superior bearings and fittings like tail pitch plate, are recommended. Undercarriage skids are normal and use rubber damping supports. Epoxy the skid bands in place when their position is certain, and self-tap screw in place.

Radar sight, gatling gun, tow launcher, sponson and rocket bomb pods are all built fairly easily with care. The canopy and cockpit housing are also straightforward. However, be careful with the canopy. The hard plastic could crack or craze whilst you are trimming it

to size as it is quite brittle. The two pilots need to be trimmed, and although oxygen masks are not used in this specific helicopter – they do still look quite good.

Returning to the pitch up mechanism*, when this has been assembled partially on the engine and gearbox mounting plates, this is then installed in the model. Then the remaining pitch levers and link arms are installed. If you install the whole assembly before, it will not go into the fuselage.

The fuselage will need light sanding down, prior to painting. I used aluminium undercoat, and then lightly sanded that down, prior to adding glue rivets. The final coat was a mixture of Non-specular Sea Blue (matt), white and black (gloss) from the Humbrol range. As I sprayed it, I thinned it down to the required consistency. This final finish, along with the supplied transfers gave the model that authentic scale look in the colour scheme of the Japanese Ground Self Defence Force. The small colour picture in the centre spread and that at the top of page 23, in the first issue, show the final model in flight. It is a superb machine and looks fabulous in the air. See page 29 for another colour photograph of this fantastic model.

Before I go into the flight test, I understand that Hirobo are thinking of discontinuing this model. I hope not, as I personally regard it as the most attractive in the scale range. I shall keep you up to date on their decision, but until then, maybe it would be wise to go and get one for yourself, now, while they are still readily available. They may discontinue the model, but spares will always be available. (I think they are having trouble producing the fuselage – I will let you know.) Anyway, I hope that this review may encourage them to continue with it.

Screaming about the sky is not what I consider helicopter flying. Most models are capable of doing this – the aerobatics, the loops, the rolls, and the Cobra is no exception if it is set up correctly. In my opinion it is not a pleasure to watch! Scale flying is the requirement of accurate manoeuvres related to the specific full size machine, and as a result this is what my flight test relates to, and how I feel the Cobra is at its most impressive.

The engine, as always, needs to be run on the slightly rich side. Utilising a fuel cut off, (this is needed as the tank is higher than the carburettor) I have only experienced one poor start due to flooding. Otherwise, starting is no problem.

My first reaction when out flight testing, (besides physically carrying it) was how heavy it was, for its size. Mind you, I like that solid stable feel, just as you give throttle. Psychologically it is as though you can feel the model lifting off. Great! Going into the hover at about eighteen inches was reasonably smooth, the gyro holding the tail absolutely straight, and even with fluctuating throttle/collective response in the gusty wind, there was no yaw. Head response was slow, but smooth, and by remembering this at all

times, control was always positive and accurate whilst doing circuits. Transition to forward flight from take off to hover height at three feet, was superbly smooth, the model dropping slowly for a short while before curving up to a height of about fifteen feet. Utilising a little more power and forward cyclic put the model into a lovely charging flight at about twenty feet. Again, though the model felt slow in response, I felt part of the machine.

As I utilise a gyro for tail yaw, I found the model flew positively and exceedingly smoothly. This has also been commented to me by others who have flown this type of model. After lengthy flights, the only thing I would advise is that you check the temperature of the silencer (muffler) to ensure that it is not getting too hot, or, as previously mentioned, it can burn the fuselage. There is *no need* to cut out holes in the side for extra cooling – all that will do is ruin the looks of a superb scale model. Constant checks and a slightly rich engine, will ensure it all remains under control and reasonably cool running.

With the optional tail blade holders and pitch plate, response was far better than the original. At the end of all the checks and settings of the trims on the tail and head, in a slight wind the model would just sit there, in ground effect or out of it, waiting for a command from its master – the pilot.

A superb kit, a beautiful scale model, an absolutely fantastic flying machine. A challenge to build and fly with scale accuracy. 'Nap of the Earth' becomes a 'thrill a second' with this machine. If you are intending to do this type of flying, just as the full size machine does it, and I think the model should too, then my advice is to use a .61 size engine. This gives the extra power needed to lift this heavy model easily. If you want to go jumping over hedges and skimming over long grass/corn at almost zero height, then it is a must.

My final words are that this is not a model intended for a novice or a beginner. It requires a fair amount of experience – not only in the flying, but also in building the kit. It is also quite expensive, and this, added to the man hours needed in construction makes it a helicopter to aim for, when one has gained experience. It would be a tremendous loss in the event of the inability to control it!

The kit is sold in several shops around the world that stock Hirobo. As a guide, its approximate price in the USA is \$525.00 and in the UK £345. The kit does not include the engine, or of course, the gyro or radio equipment!

Stop Press: Having just had a conversation with Mr. Fujita of 'Hirobo', I can say that I was correct in their having trouble with the fuselage. It seems that they lost the gentleman who made the mould and as a result are having to have a new one made, but getting the quality is difficult. He assured me they would continue with this kit. Excellent news!

See photographs in Issue 1 for kit breakdown.