

# KYOSHO CONCEPT 30 DX

## Beginners Test

Andrea Fox checks out the Concept from a beginners point of view

Having spent 16 years married to a heli-freak, I'd been trying for some time to suppress the nagging thought that I ought to have a go too. Then I saw Jean Sidebottom from Pontefract flying her husband's Heim 222 with all the confidence in the world and managing to make it look easy as well, so I thought I'd better support this blow for women's lib and get myself a helicopter. (Jean normally flies her own Schluter but it was in for a re-spray when I last saw her).

Now first of all I should stress that, believe me, no-one could be less mechanically-minded than I am! My husband con-

stantly uses me as an example when demonstrating the simplicity of any item he's selling — 'Well, my wife uses it and if she can, anyone can!' I'm sure you get the idea! So, as I'd decided to learn to fly a helicopter and also wanted to start from scratch, rather than buy a ready-made, second-hand model, the Concept 30 DX seemed to be just what I was looking for.

The bright red shiny box hinted at all sorts of goodies inside and I was not disappointed. Neatly packed in pre-formed polystyrene was a small selection of components which already resembled a helicopter — a great relief after looking in dismay at the apparently unrelated bags of bits contained in the majority of helicopter kits.

I could readily identify the

canopy, tail boom, blades, undercarriage, head and the biggest piece of all, the main frames containing the engine, clutch and cooling duct. Unlike my husband, I believe in reading the instructions first. (Jim only reads the instructions as a last resort, usually to find out where to put the piece he's got left over!) The Concept instructions are very comprehensive — in fact, there's so much contained in each section that a very careful initial reading must be followed up by a double-check at each stage to make sure you haven't missed anything. It is all there, but a quick scan of the page is not enough. However, it's all written in very easy language, nothing at all too technical. It's obviously been translated from the Japanese and the English is occasionally amusing but why should I criticise — it's better than my Japanese!

Assembling the Concept — I can't call it 'building', it's too simple — was an absolute doddle. After checking the balance of the stabilizer and the main rotor blades and attaching the undercarriage, it was time to fit the rotor head. All the control rods are factory-set at the correct length so there's no messing about there and the ball links can only be connected one way, with the name 'Kyosho' facing outwards, so there's no possibility of an ill-fitting link. The tail boom slots in neatly but I found it was easier with the clamping screws for the boom loosened off a touch, then tightened up after installation. It does say in the instructions to tighten up these screws after the tail boom is connected but it doesn't say to loosen them off first — I told you I wasn't mechanically minded!

At this point, all you superior males might also like to have a giggle about the fact that I had to ask Jim which way a nylon nut went — nylon insert onto

the bolt, or the other way round. Well, this is a beginners helicopter and I'm a total beginner! (The nylon goes on the outside — Ed.).

Next the servo installation. Now here's an example of what happens when you don't read all the instructions. I installed all the servos and even got them all facing in their correct directions and then as I screwed the last of the 20 servo mounting screws through its brass eyelet I noticed it said in one corner of the page 'brass eyelets are not used!' Well, I'm afraid I couldn't face the thought of doing it all again so the brass eyelets are still in there. It's had about half a dozen flights and none of the servos has dropped out yet, so that's the way it stays. I used five servos, simply because Jim bequeathed me his old JR PCM 9 set but instructions for a four servo system are also included.

Step 10, Installation of Prop-

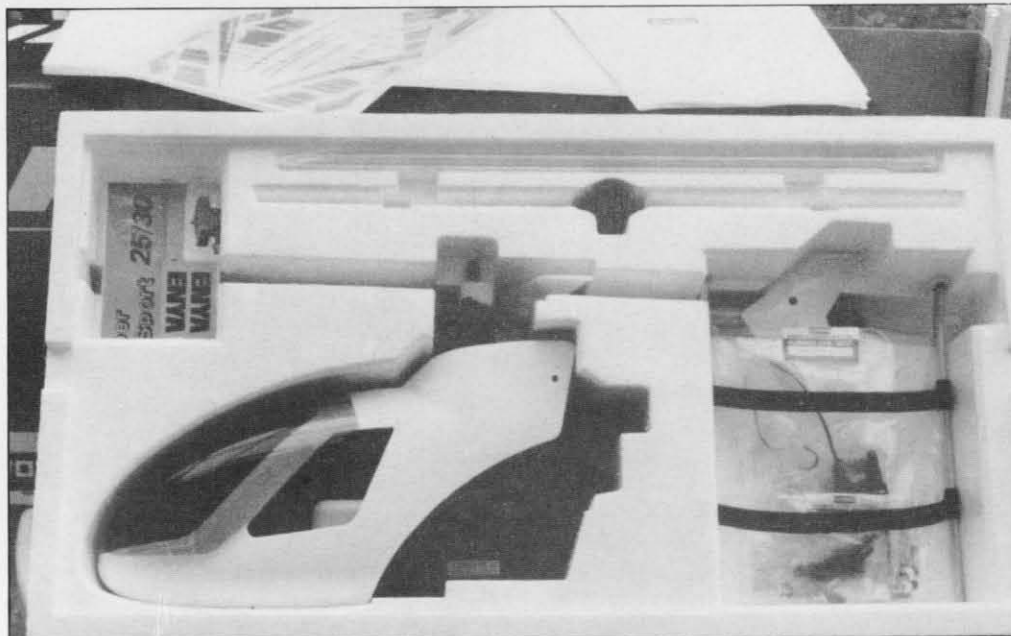
Andrea Fox proudly showing off her new acquisition complete with Yorkie training aid.



ortional Radio system and Gyro, looked at first sight like a plate of spaghetti, but turned out to be not so bad. I particularly liked the neat way all the wires can be snapped into the plastic wire clamp. The only hiccup that occurred was that I had planned to use a Futaba 154 Gyro and here a problem cropped up. There is a neat little switch mounting plate included in the kit for the receiver switch and the gyro switch and the problem was that the Futaba gyro switch was too short to fit between the mounting holes. Also the space reserved for the gyro is obviously designed for a single box type gyro, i.e. without a separate gyro and amplifier, and so I changed to a JMW gyro (more expensive but I knew there had to be some benefits to having a model shop!) However, I should think this problem can be overcome if you're prepared to fiddle about a bit; for instance the switch could be glued to the bottom of the servo instead of being mounted in the switch holder and gyro amplifier could be attached quite neatly with double sided tape to the bottom of one of the other servos.

Another small problem was that I had used a JR 505 servo for the pitch control and these are a few millimetres deeper than most of the latest servos, and the extra depth of the servo

This is Andrea showing Jim how it should really be done.



What you get for your money when you slide the tray out of its carry case.

plus the thickness of the switch meant that the canopy would not fit snugly. So I swapped that servo for a JR 507 and after that I had no trouble with the canopy.

I managed to fit all the control linkages myself but had to leave the final adjustments to Jim. I think this is probably something that all beginners would need to have checked over. I was a bit miffed that I spent quite a while fitting the, to me, fiddly engine control linkage with its little brass pin, only to have Jim mutter, "metal-to-metal contact" and whip it off to replace it with a nylon quick-link! I understand that this is because the Erya engine has a metal throttle arm and the brass pin through it could have caused radio interference. Perhaps the instructions omit to mention this because the writer had in mind the plastic throttle lever of the OS engine?

Then came the finishing touches. I was a bit nervous about fitting the front screen but I needn't have worried. It's obviously been well thought out — the decal round the screen holds it in place while you drill the holes for the four screws. All the other decals went on like a dream; the instructions recommend attaching the centre part of a decal first and working outwards and this really works well in practice — no air bubbles and no creases.

I like the main rotor blades, very neat and no need for covering. Only one niggle — I never did find the pitch gauge which the instructions promised me was included in the kit. Luckily, I'm married to a man who's never short of a pitch gauge or two, so that saved waiting for the shops to open!

It took me about five hours to assemble the Concept and Jim then spent about another one and a half hours setting it up, i.e. balancing blades, re-checking the head and stabilizer balances, adjusting linkages where necessary, etc. That's not bad, is it, from box to flying condition in six and a half hours? And perhaps in even less time if you already know a nyloc nut from your elbow!

Jim test flew the Concept for me and his comments follow. I've had four ten-minute flights to date (well, 'flights' is too strong a description — 'hops' would be more like it!) and it's still in one piece. I find it easier to handle than I thought a helicopter would be and being a nice compact machine it's not at all intimidating. The rear cone start certainly makes life easier than a belt start would have done. All in all, I can't think that anyone could have a better introduction to helicopter flying than the Kyosho Concept 30 DX.

And now a few words from my sponsor!

### Flying the Concept

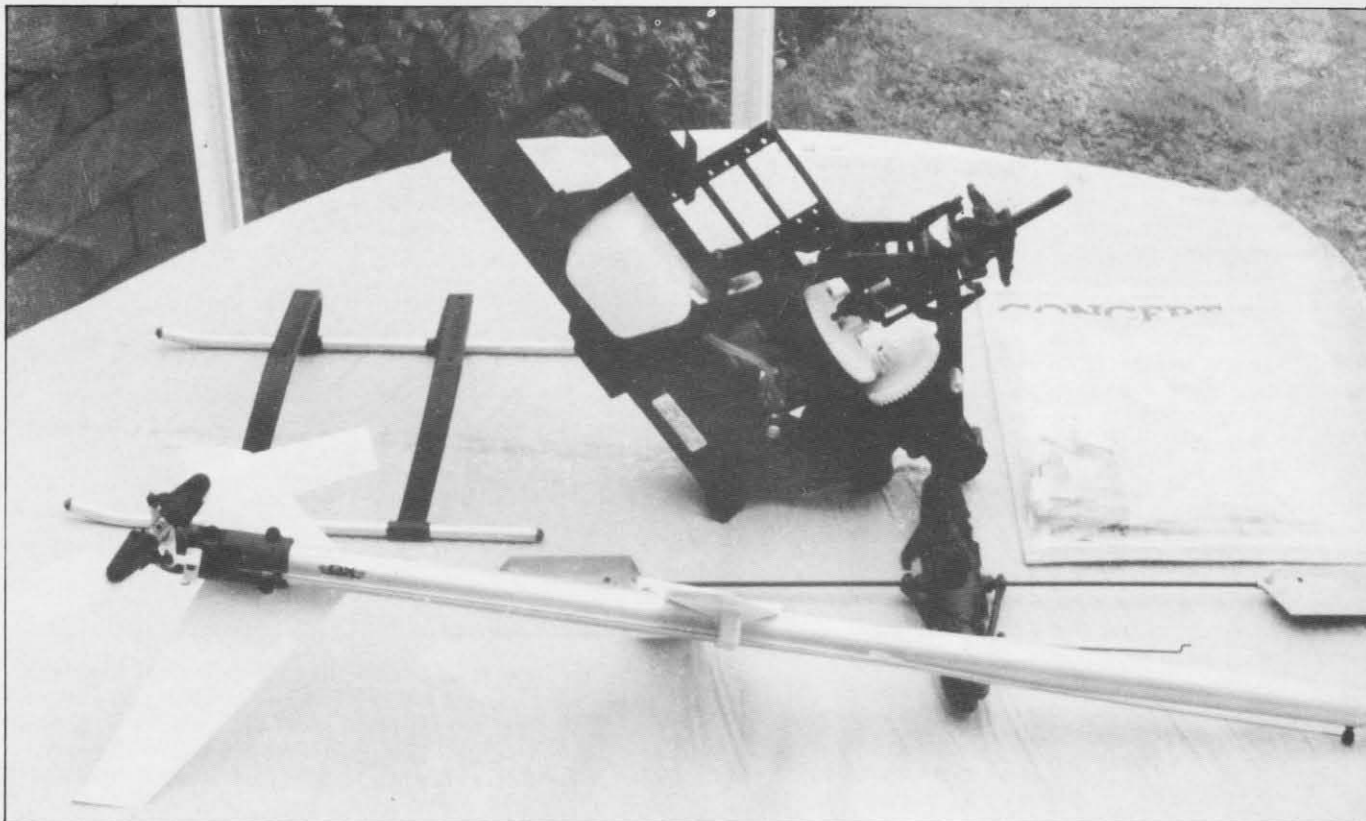
After checking Andrea's handiwork a few adjustments were needed here and there but they were minor. One small piece of

tape on the blades and a correction to slightly out of line paddles. Everything else seemed OK, so after setting the pitch at 0 degrees at the bottom and 6 degrees at the top off we went to fly the beast. The engine started easily and with a few minor adjustments to the tracking and the mixture I put the model into the hover. It felt really nice so a few circuits were in order. I was a bit concerned that we were only using 5% Helimix and not the 10% recommended but I have had no problems so far (fingers crossed!) I was also concerned about the stiffness of the linkages but they are easing off slightly after an application of silicon oil and a few flights.

The worst thing in my opinion is the silencer; my ears were ringing after ten minutes — the noise was dreadful. So I fitted a Super Tigre 45 swing silencer, which went on with only a little filing to the holes. There is now much less noise and the power seems to have gone up a little, but why didn't the manufacturers fit a decent silencer in the first place?

The other small groan is the flapping head. This design makes the model very docile but the trouble is if the model is landed heavily the boom is going to get knocked by the main blades, so to stop this happening on Andrea's model I have got the idle-up turned on. This does seem to have worked as we have had no boom strikes so far and if ever there was a test for this theory then my wife's landings have certainly provided it!





The main pre-built components show how little work the builder has to do — only the canopy and blades have still to be taken out of the box.

### Postscript from Andrea

After giving her Concept some more flying time Andrea has come across a couple of problems which could well be peculiar to her model only, but just in case, she asked us to mention them for the sake of those who could suffer should their models exhibit the same faults.

The first fault wasn't too serious, after several flights the engine began to lose consistency. Upon investigation Jim found that the engine hold-down bolts had slackened off and the consequent vibration was causing the slow-running screw to unscrew itself. A dose of thread-lock on the engine bolts and a locknut on the idle screw cured that problem and Jim says that

Jim's alternative to what he thinks is an objectionable standard silencer.

models of this type which he has subsequently checked have shown no such fault.

The second snag appeared during a heavy landing or as a result of such an arrival, which caused the canopy to distort and come into contact with the radio switch and turn it off. This caused 'a slight crash' (Andrea's words), she says "the canopy is very close to the switch. Make sure that when you fit your switch it slides forward for on. On ours it went forward for off and after a heavy landing the canopy slipped and switched

the radio off. Possibly this is something we should have foreseen when the Concept was being built but we thought it was worth mentioning."

Andrea goes on to say, "Everything has its teething problems and despite these points we still wholeheartedly recommend the Concept for both the beginner and the more experienced flier. After ten flights of about ten minutes duration I am making progress and my landings are getting softer — well, some are."



The tail assembly — again fully built and beautifully made. It's worth knowing that the whole tail section is quickly detachable by slackening off the front boom clamping bolts and disconnecting the ball link, making a very compact package for your holiday bag.

