



ELI-PAD

John Griffiths and Nigel Brackley visit the Nuremberg '80 Hobby and Toy Fair

NUREMBERG 80 was again the venue of the West German helicopter manufacturers vying with each other for first place in the race to display new developments. Certainly there were some surprises in store for us when we entered the brightly lit supershow from the miserable February rain outside.

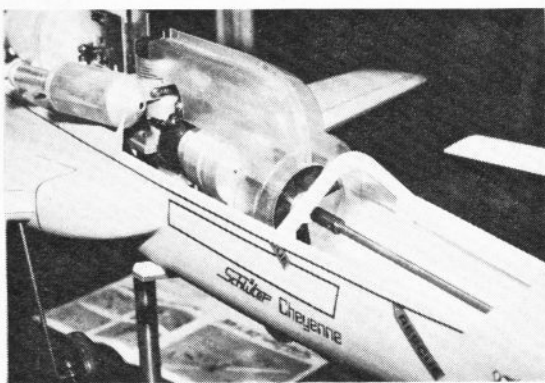
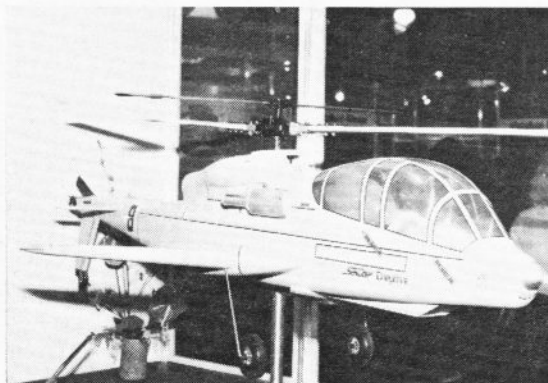
The **Schluter** stand was first on the list (purely

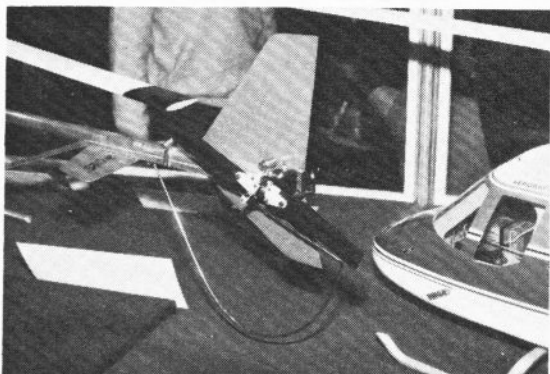
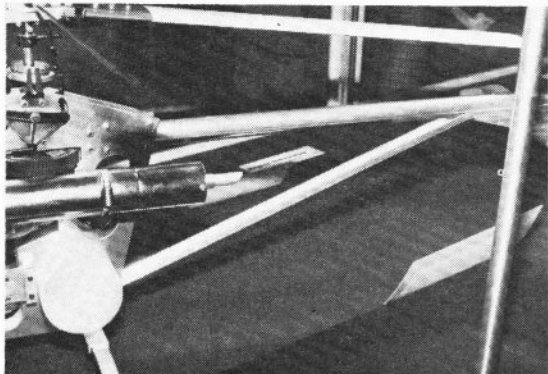
accidental) and we must give them full marks for the *Jet Ranger* fuselage which is soon to be available as a bolt-on extra for the *Heliboy* mechanics. The model on display was beautifully finished and apart from the slight 'wrongness' of the undercarriage and that unsightly starting cone on top, it was definitely one of the best seen. One point to mention — **Schluter** use their own version of a tuned pipe for quietness which does show on the left of the fuselage, you could however, use a normal silencer which would project beneath.

And now for something completely different!!

Next from **Schluter** was a *Lockheed Cheyenne*. It looked fast and exciting — using a new set of mechanics (except for the rotor head which was very 'Heliboyish'). The engine is fitted upright and starting is through a cone which also doubles as part of the nose, a very ingenious idea and the twin undercarriage legs are retractable in flight.

Left; Schluter 'Jet Ranger' — latest addition to the range for the Heliboy mechanics. Below left; Schluter 'Lockheed Cheyenne', has retracting undercarriage, note starter cone on nose. Below; close-up of 'Cheyenne' mechanics, note shaft from starter cone and upright motor, also the engine cooling fan and cooling duct to cylinder.





Above; modifications to the Schluter 'Heliboy' included a reinforcing bar to the tail boom, plus, above right, an enlarged fin and full tail skid. Right; This Kavan 'Lockheed 286L' features semi-retractable landing skids and 'flybarless' rotor head, — looks interesting.

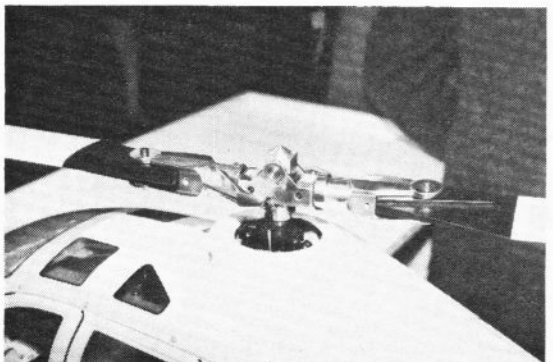
We also noted that the *Heliboy* had undergone some changes, notably at the rear end with an enlarged fin, full tail skid and reinforcing bar to the tail boom.

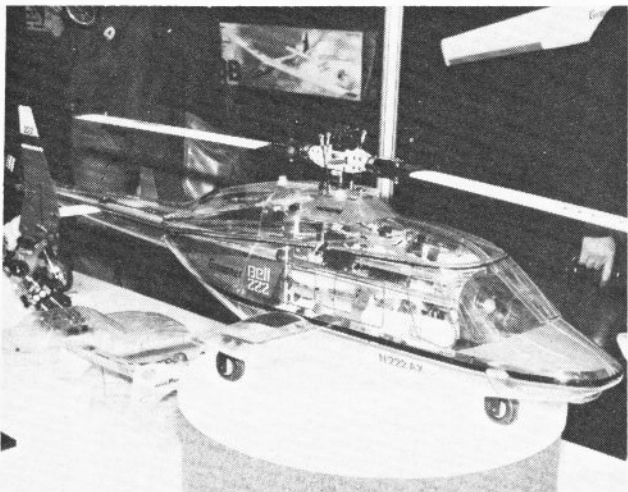
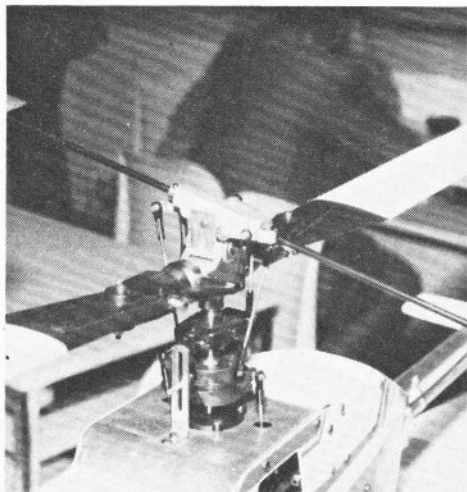
Our next stop was at the **Kavan** stand and on entering we vaguely noticed a videotape TV display showing a film of a *Jet Ranger* flying around; on taking full notice we could only stand and stare amazed — it was flying *inverted* for about 5 minutes. Now, we don't mean loops or rolls, but fully inverted figure of 8's, circuits, and in the hover. In fact at one stage, pilot Ernie Huber looked as though he was actually going to land it upside down!

However, there were other things to attract our interest on the Kavan stand i.e. a *Lockheed 286L* with semi-retractable skids and flybarless rigid rotor as standard. This was basically a new fuselage arrangement surrounding uprated *Jet Ranger* mechanics and looked extremely interesting.

Next — A new *Jet Ranger*. Don't believe it? Look at the photographs. This is a training *Jet Ranger* designed to be crash-proof and, as it is nearly all metal, it might just be true! Mr. Kavan says that people learning to fly prefer something along the *Jet Ranger* lines in looks but still strong enough to stand all the usual knocks. Only time will tell!

Below; close-up shot of the Kavan 'Lockheed's' 'flybarless' rigid rotor head. Right and below right; Kavan's new 'Jet Ranger' trainer features almost all metal construction, designed to withstand those 'hard arrivals'!





Above; Kavan Jet Ranger trainer's rotor head shows little change from previous Jet Ranger model. Above right; The Graupner 'Bell 222' uses the '212' mechanics but features a 'flybarless' rotor head. This is of course, a 'see through' fuselage for display only, giving a clear view of the mechanics.

On the Graupner stand we paused to refresh our memories with a quick look at the Bell 222, which uses the 212 mechanics but has a 'flybarless' rotor head.

Wik had their original Bolkow BO 105 on display fitted with a four blade head. We were not able to ascertain whether they were marketing this or whether it was for display only in this form.

On the radio scene, Simprop had an 'all singing, all dancing,' programmable set and Sanwa were showing a new helicopter set complete with digital timer. I wonder if it bleeps when your fuel runs out!

British manufacturers MacGregor were displaying their new (imported) JR Helicopter 5 channel set which looks nice and functions well.

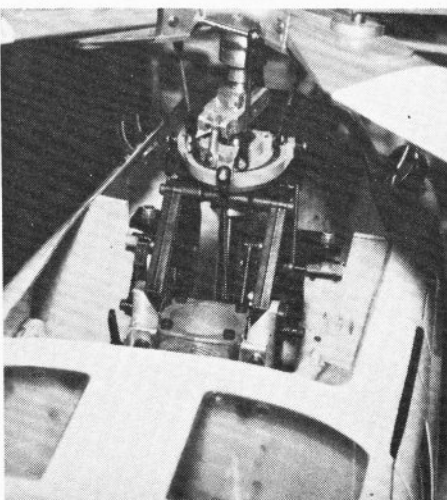
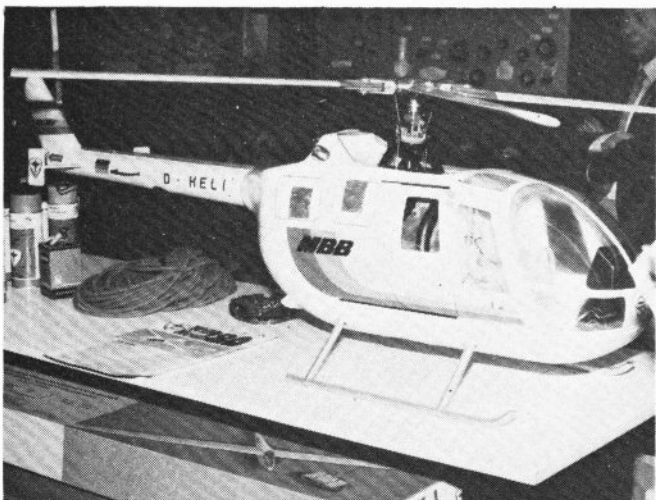
The control knobs on the case top provide mixing of the tail rotor control with either collective or non-collective pitch helicopters. For non-collective pitch a percentage of extra tail rotor may be incorporated spontaneously to compensate for torque produced by wind-up on lift off and wind-down on landing. The amount and time lag may be preset by the two left hand controls. For collective pitch, using the right hand controls, continuous torque compensation may be mixed in to balance the main rotor pitch change, varying the amount and zero position.

Well no room for more at the present time but we will keep you updated on product testing and prices as the products become available.

Beginners Aid

We are sure that most helicopter enthusiasts would agree that the most difficult control the beginner has to master is the tail rotor, especially when flying on

Below left; Wik displayed their 'Bolkow BO 105' fitted with a four-blade rotor — note the washout at the blade tips. Below; close-up view of the 'Bolkow's' swash plate area.



'windless' days. Many 'aids' have been thought of, and tried — some with moderate success. One of the most successful has been, possibly, the coupled gyroscope and tail rotor servo, but to fit such a unit usually called for a certain amount of electronic skill.

We now hear that a completely new British designed gyroscopic tail rotor mixer which anyone will find simple to fit, as it plugs direct to the Rx, will shortly be available on the home market. Other advantages are adjustable mix, and the facility of adjusting the sensitivity of the mixing during flight. The prototype of this gyroscopic unit has now passed all its flight tests and we look forward to producing a full report in our 'What's New' column in the very near future — when it becomes readily available.

Nationals 1980

Once again the venue will be Barkston Heath. The helicopter event will be held on Monday 25th August. Radio frequencies will be green, yellow, orange and red.

The flight area this year will be a 'prime display area' and to streamline the proceedings the 'Required' manoeuvres will become 'Optional' — the number to be performed has yet to be determined.

The Heli-pad at the Nats will be a wooden square and the Pre-organisation Director, Pat Dubock, advises contestants to fit short lengths of silicone tube to the skids for non-slippery take offs and landings.

Pat would appreciate it if intending contestants



Above; MacGregor displayed the latest J R five function helicopter R/C control system at Nuremberg, see text for description of knobs.

would drop him a line (it would help him determine the number of flight lines and judges required) at 169 Waters Drive, Staines, Middlesex.