

## Hirobo Industrial Co. Ltd.: *Bell AH-1S Tow Cobra*

### Specifications

**Powerplant:** 10cc, 2 stroke – OS MAX 61FSR-H glow ignition helicopter engine, single cylinder, schnuerle-scavenged, side-exhaust, with crankshaft rotary-valve and twin ball-bearings.

**Main rotor diameter:** 59<sup>3</sup>/<sub>4</sub>in.

**Tail rotor diameter:** 12<sup>1</sup>/<sub>5</sub>in.

**Wing span:** 14<sup>1</sup>/<sub>2</sub>in.

**Overall height:** 18<sup>1</sup>/<sub>2</sub>in.

**Fuselage length:** 58<sup>1</sup>/<sub>2</sub>in.

**Full equipped weight:** 11-12<sup>1</sup>/<sub>2</sub>lb.

**Radio equipment:** 4 or 5 servos (J. R. MacGregor).

**Other equipment:** Gyrosensor (JMW Electronic control) 4.8v, 225-450mAh.



Impressive with its sleek lines and its concept as a fighter helicopter, the Tow Cobra has lent itself to a scale model very suitably. Through its narrow slim fuselage, building this model is demanding and at times downright awkward and at other times seems completely impossible. As a deadly machine, it requires great dexterity and cunning on the modeller's part in building this superb model.

As with all Hirobo kits, the glass fibre fuselage is realistically detailed (but requires additions to achieve that complete scale look) and requires very little in the way of having to fill pin holes and blemishes caused through the moulding process. The model is packaged in two boxes – one, a long simple box which contains the fuselage in its major pieces, i.e. the main body, tail boom, upper cowl or doghouse/swashplate surround, cockpit and canopy, all wooden parts and formers that have not already been epoxied into place. Tail drive, linkages, rockets and gun assemblies, fan housing, plans and decals. The smaller box which is attractively packaged, contains all the mechanical/engineering parts which are displayed in individual compartments on plastic trays – so you have no fear of losing that one and only washer or grub screw.

Although this is a good idea, and in the instruction booklet which has maps of where to find the stage by stage pieces, the components are not all where they are stated! – however – with careful observation, each item will be found easily – that is if you left everything in the plastic trays as it is after removing the sticky cellophane wrap. Oh yes, do check the cellophane – some of the smaller components have a habit of

being stuck to it when removing – so be warned – remember that little grub screw!!

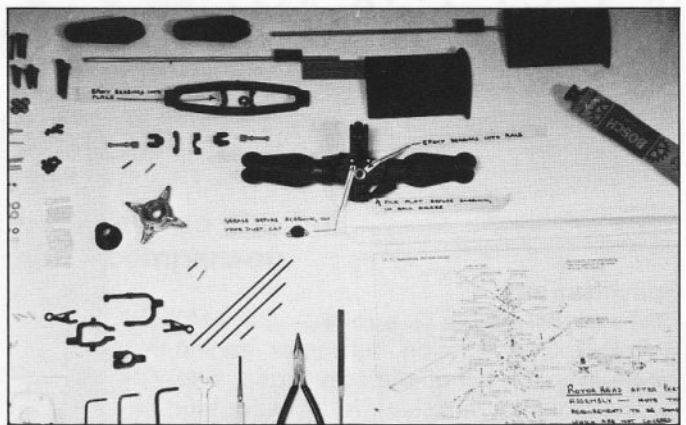
With the full size blueprint/plan and the instructions, one can begin to assemble and build with care this complex machine. It will satisfy the talents in engineering and airframe assembly to the full, as working things out – as previously mentioned requires advance thought and dexterity.

In next month's issue, there will be a full stage by stage report on the building of this model and a flight test on its characteristics. In this issue, there are some stage by stage building photos and of it in flight – it flies superbly.

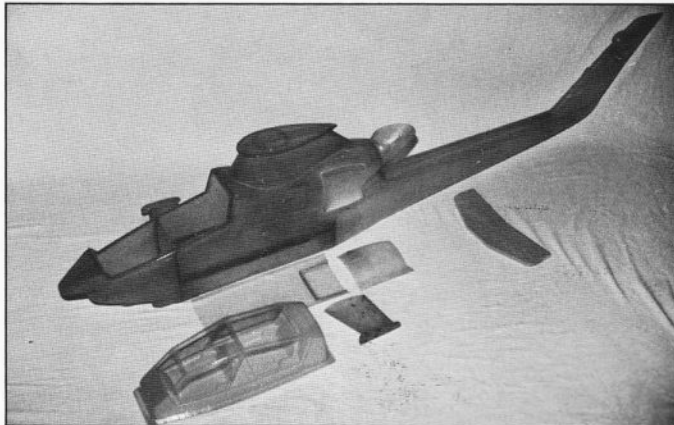
After many hours of simple hovering and checking that all the mechanics were okay – I went flying one evening – it was warm, little wind and very pleasant, the only thing wrong was the grass at the local airfield. It was a couple of feet high. Well, after taking off from a clearing I enjoyed myself for about 45 minutes, including refuelling – flying Nap of the Earth manoeuvres, imagining that I was skimming across Vietnamese paddy fields. There I was, oblivious to the world. Me and my Tow Cobra, having a lovely flight, then, I must have got shot, because down into this grass I went. Well, after surveying the damage (the blades had clipped the tail boom) – broken main blade, fractured tail boom under the exhaust, and fractured yoke, having a spare head with blades with me, I put it on, started up and with very slight vibration in the tail – due to the fracture in the boom – it hovered superbly. Just goes to show what a strong machine it is. Also, that I should practice more before doing Nap of the Earth flying!



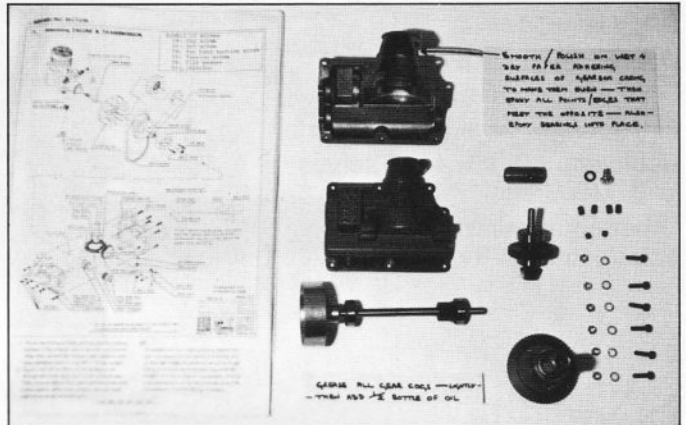
The kit laid out ready for construction.



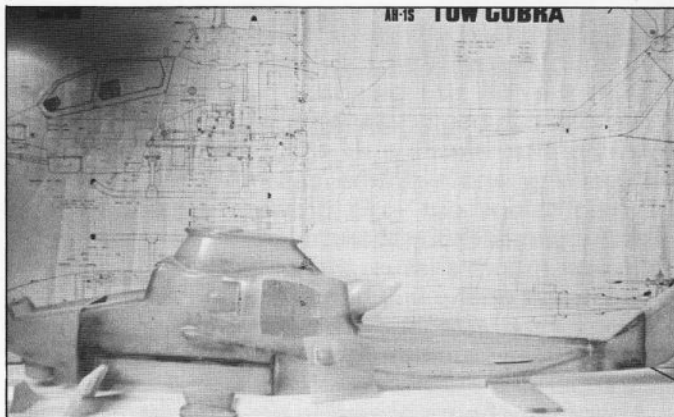
Rotor head components.



Fuselage shell with canopy and rocket pod fins.



Gearbox assembly.



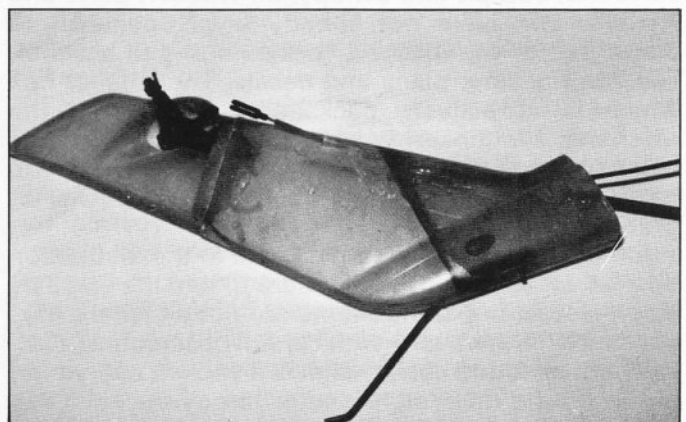
The superb schematic drawing which is scale size to the model.



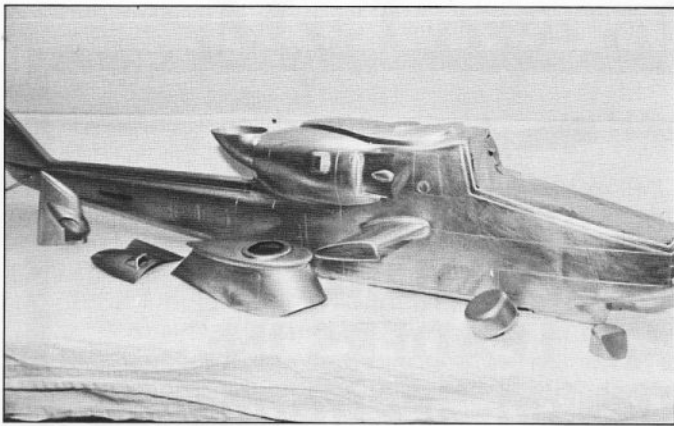
Tail fin and tail drive.



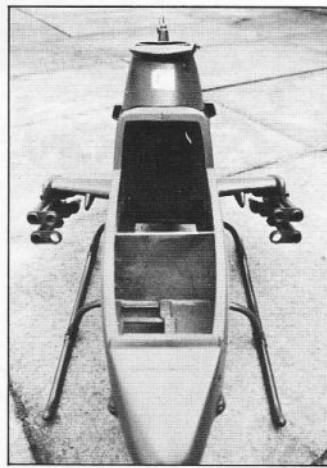
Rocket launchers and super quiet silencer.



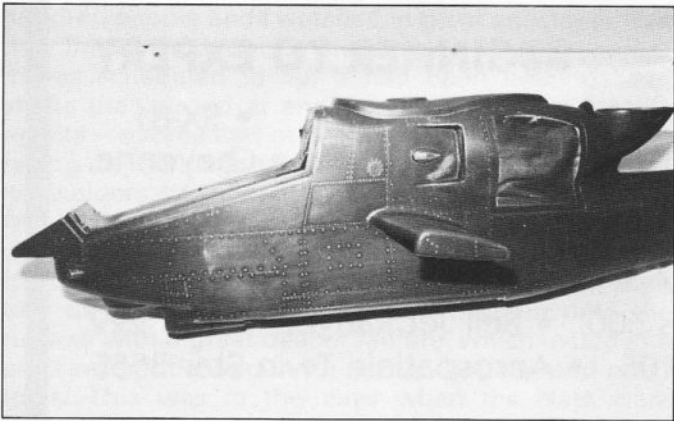
After assembly with push rods connected prior to epoxy gluing onto main tail fuselage.



*After sanding lightly, body was painted aluminium.*



*From this shot, it is easily seen how narrow the fuselage is. It gets rather warm inside there. One small problem is the silencer being very close to the fuselage wall which if overheats can burn the glass fibre.*



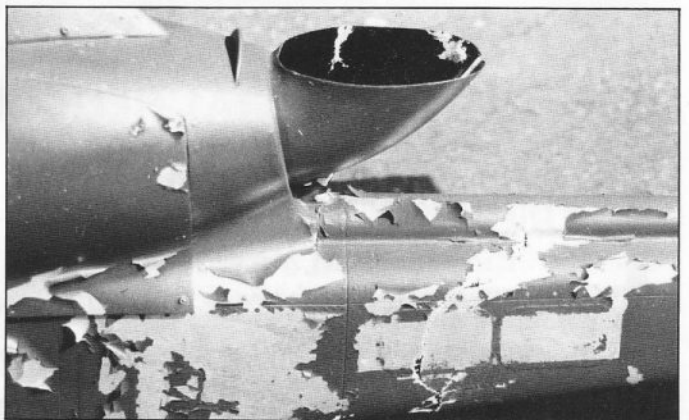
*Sanded once again, rivets added, and a final light aluminium coat.*



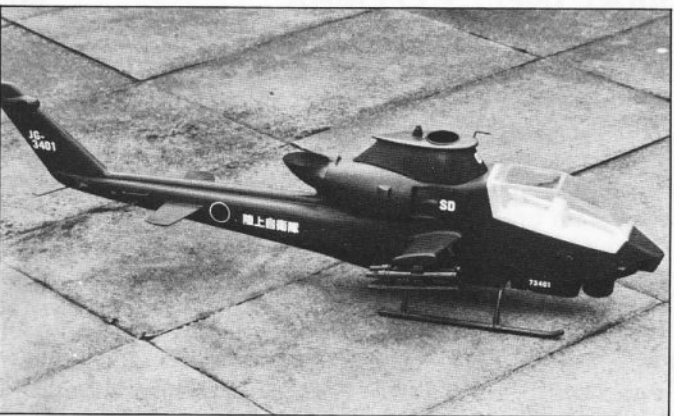
*The cracked canopy after Nap of the Earth flying – see script.*



*How the body looked after its top coat.*



*The fractured tailboom, but still strong enough to fly home for repairs.*



*Final preparations to install mechanics and scale canopy and cockpit.*



*With new blades and rod ends, she took off again and flew superbly. Just goes to show that Bell did well – see script.*