

An Autogiro

Designed and built (and rebuilt) by Fran Oakey

Introduction

This autogiro was originally built in the late 1990's and flown for a few years until its untimely end in about 2002 and has been stored in the garage awaiting a rebuild. The undercarriage was badly twisted, the tail plane, fin and rudder were also in a very sorry state, so restoration to working order was started. The two photos below are of the model in its sorry state ready to be stripped, cleaned and rebuilt, the radio, servos etc. had already been removed.



The refurbishment

The model was dismantled and the items shown in the photo below have been cleaned, straightened where necessary, bearings oiled and reassembled. The flybar will have to be replaced because it had to be cut in two to remove it from the head assembly, shown in the lower part of the

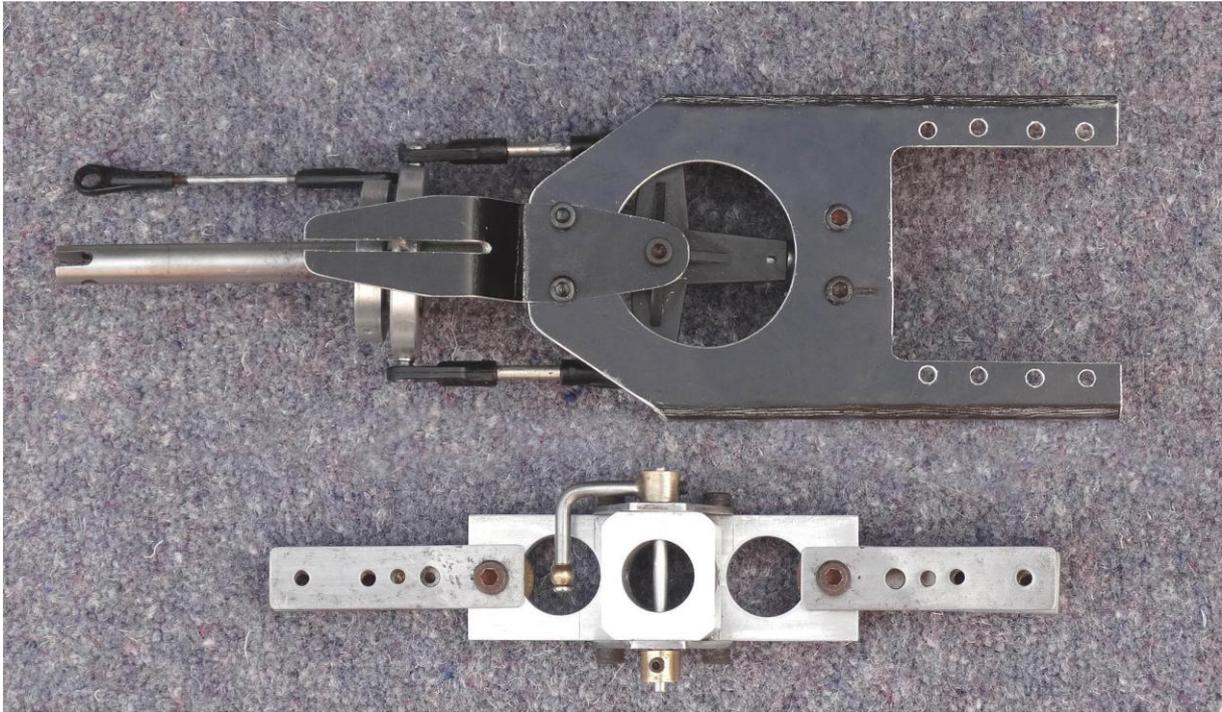
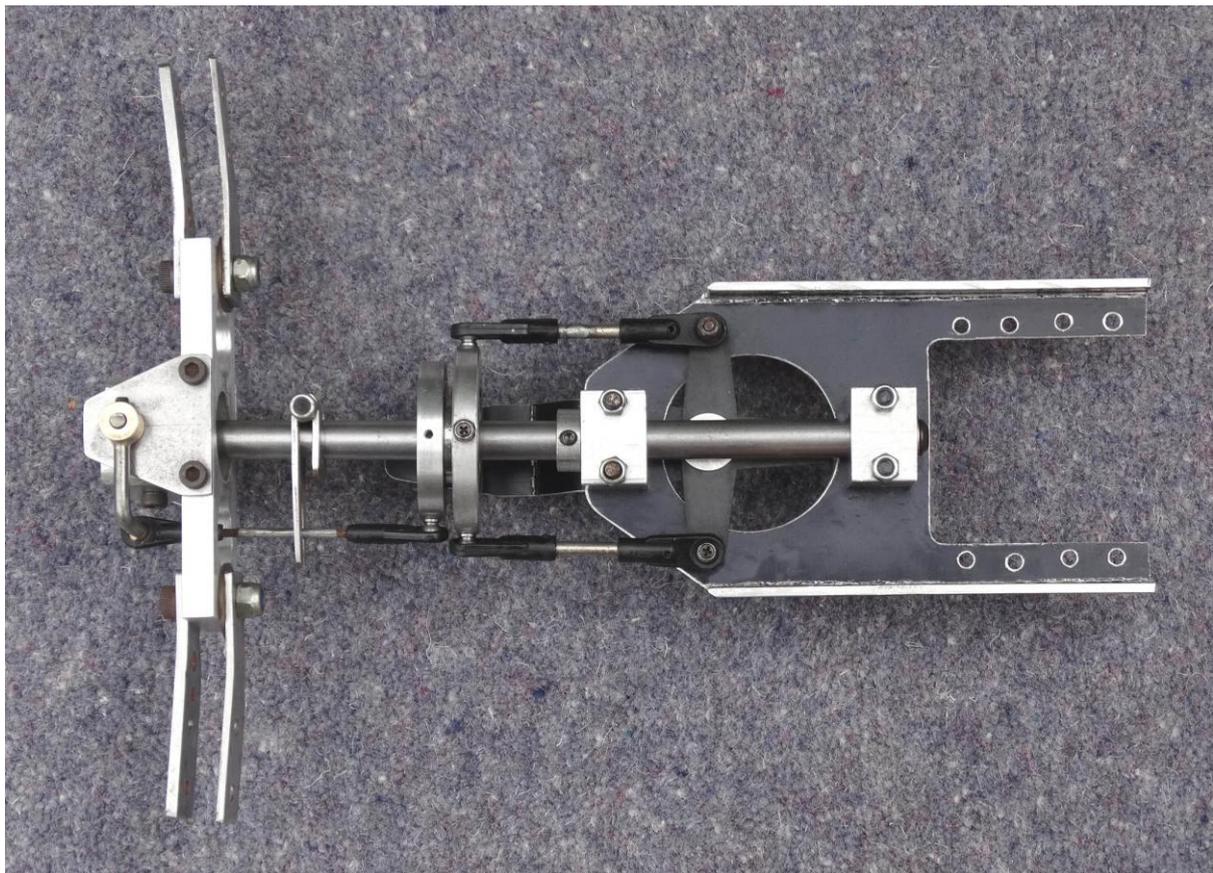


photo.

The photo below shows the other side of the assembly in the photo above and shows a little more detail of this assembly, i.e. the bearing blocks and control rods to the head layout. The eight holes on the right side of the plate seen in the photo are for the two servos that control the head.



The photo below shows the refurbished model ready for covering. The tail plane fin and rudder had to be remade, the original design was a solid structure, i.e. made from 6mm balsa sheet. The new structure is a built-up structure from 12mm x 6mm and 6mm x 3mm strip balsa in order to reduce the weight with conversion to electric power in mind. The twisted undercarriage has been straightened and the aluminium side plates re-enforced with 1/8" thick by 1/2" inch wide aluminium strips where the undercarriage is attached. A pair of new rotor blades have been purchased to replace the original damaged ones and a new flybar has been made from 3mm diameter silver steel but this will be changed for one made from piano wire before the model is flown.



The model now covered the refurbishment is complete, just the radio receiver and a couple of servos to be added then the model will be ready to fly again, oh! and the new flybar. The control system for the model requires only four control channels, one for the throttle, one for the rudder and two for the rotor, aileron and elevator. At the moment the model is powered with an ASP 46 I/C engine driving a 10" x 6" propeller but thoughts are going in the direction of converting to electric power.

