

Helicopter Indoor Flying by Ivor Richards

Once again I have tried to think of a way to occupy my time during the current spate of

NO FLY WEATHER.

I saw an idea on the internet on flying small helicopters in your garage.

So I popped off to B&Q and bought a metal table leg and a length of dowel.

I discovered that the dowel was too heavy for the helicopter to lift so I then designed a MK 2 using carbon fibre tube.

The carbon fibre was a success story and a disaster.

In the construction I tapered the ends of the carbon fibre.

The tube did not like this it started splitting. So I made some small aluminium sleeves and placed them on the end of the tube to stop it splitting.

At this point I thought it would be stronger to epoxy the screws into the tube, but decided to leave it until later.

That was a mistake.

On about the 10th flight the pivot screw (holding the helicopter) stripped the thread in the carbon fibre tube and the helicopter therefore was suddenly in free flight in the garage.

I shut the throttle quickly and there was not a lot of damage.

I am now flying the MK 1 version.

Construction

A disc of 20inch in diameter was cut from a piece of chipboard I had hanging about.

To the underside 4 soft sponge pads were glued at each quadrant.

A wood screw was added centrally for the centre pivot.



The B&Q table leg was screwed centrally to the top side .

The threaded foot was unscrewed and discarded.

The end cap was temporarily removed to insert a spring to prevent any heavy landings.



A disc slightly smaller than the inside of the tube, was placed on the bottom of the rod.

This ensures that the rod travels centrally up the tube. It also acts as the bounce stop.

The leg end cap was drilled to ensure free travel of the rod through it.

An interface plate was made to match the base of my helicopter



And the helicopter was mounted.

10 successful flights were had until the design flaw caused the top pivot to fail.

LESSON: YOU CANNOT TAP CARBON FIBRE because you end up cutting up the fibre into small lengths with the tap. Consequently there is no strength.

In the MK3. the ends will be short lengths of wooden dowel.



Mounted helicopter.