Club Magazine

WINTER EDITION 2021

Luton & District MBC

.... a club NOT just for boats ....

CONTENTS

EDITORIAL

A VERY HAPPY CHRISTMAS TO ALL L&DMBC MAGAZINE READERS

Another calendar year has come to an end, however our Secretary has organised a number of events for us to enjoy during December they are all listed in the Diary section of the Club Web-Site and also listed under **Diary Dates** in this Magazine, however, as you are already reading the magazine this is another reminder. The Christmas festivities kick off with the annual Fish and Chip Supper on Monday 13th at the Bushmead Hall and finally our Christmas Meal at the Moat House on Wednesday 29th. Preceded by a short sail commencing at 10am at the lake. I trust you will all be attending these events?

ED

SECRETARIES NOTES

Well, Christmas is nearly here, so bah humbug!

A good year overall, with shows coming back online at long last. We had Fenny Stratford, Northampton and Wings & Wheels, a new show for us to attend; Deans open day, Brambleton model railway and Blackpool model show. I'm looking forward to all the shows next year now!

Our planting was going great guns, until 10 November when we found out the council had strimmed all out lavender plants. About 14 mangled plants left out of nearly 40!! Until that happened, it was looking good, the rats population was not as active near us as it was!

Membership is climbing with ¾ of our members already paid up. There will be new show dates appearing on the website so stay up to date! Our Christmas meal at the Moat House is going ahead on 29th December at 12.30, with sailing from 10am till 12. Booking forms are available from myself.

Big thanks to Bob V the Spider, for revamping the website, a work in progress. Also a thanks to John Karis for taking pictures down the lake!! John has also undertaken to update our club folders with new pictures. If you do not wish to have your picture taken, please tell him!! These will only be used by the club for our own use to demonstrate the variety in the club. I already know he has several pictures of me in waders.....not happy about that!!

We held our first club 500 race for many years, lots of laughter and crashes. There seems to be some rivalry between members, so a second race is planned!!

We had several boats given to the club over the last year, so a big thanks to all those who have or are helping out with refurbishment of them. All boats will be club boats, available to be used by members. But if you fancy buying one, please do not hesitate to ask. Hopefully with shows restarting in earnest next year we could sell a few! If you fancy refurbing a boat, please see Terry or myself to see what's available, we have some real wrecks!!! Off my head, there's a Revell QM2, Revell Gato sub, 2 speed boats to strip and paint etc etc.

Another thanks to Mr Dalton, our magazine editor, who had a heart attack a few months back, hopefully fully recovered now. He is pestering me for articles. Thanks to Dave Seath for making us tea as well.

On a side note, once the shows start again, there will be a tea/cake fund for those attending.

In the New Year, at our club nights, we will hopefully be having the club shop, with some demos going on, and a new talk by a club member!!! Plus a photo shoot and a show and tell night.

WATER FOWL and the LDMBC

Hi all, a quick note to all. In recent weeks we have had an influx of Canadian Geese. I counted over 200 during the last week while walking the dog. The council have asked us to be mindful of all the water fowl on the water, and to remind us that it is an offence to chase the fowl with boats. It seems this year, the geese are more brazen than ever, literally swimming where we sail. If this happens, the protocol is to slow your boat, and to steer clear of the gander of geese. Once clear, resume normal sailing!

Please be aware, if the club is reported for chasing the water fowl, the club can be fined, and could lose the use if the lake.

CLUB 500 RACING.....REALLY

For a couple of years, I have wanted to have club 500 racing within the club. The club owns 3 boats, and several others have now purchased new ones as well, so it looked like the time to have a go! A date was chosen, jelly babies purchased for a few prizes, and we were nearly off!

First, I had to ensure that the clubs' boats were ready, so new radios were purchased, receivers put in, speed controllers checked etc. That gave us 3 boats; I had another 2 personal boats, plus the 5 or 6 others in the club. It took me a week to charge the 10 batteries required for the 5 boats I was bringing.

Sunday dawned, cold wet and miserable. I got down and put the buoys out for the M shaped course, it then started to rain, and carried on till 10.45. We lost nearly an hour.

THE RULES ARE SIMPLE.

The boat comes as a pre-packaged kit, no modifications are allowed to the parts supplied, no swapping out motors etc. You supply the choice of radio and esc, and a standard 7.2v 3500mAh battery. This idea and principle is a standard class boat, that is easy to build, easy to repair and easy to drive. More about that later!

The course is M shaped to incorporate left and right tight turns.

If you hit a buoy, you do a 360 turn.

If you hit a stationary boat you are disqualified.

Each race is 5 minutes in length, with laps being counted. (3500 mAh Batteries should easily last 5 minutes at full speed)

Other than that, anything, within reason goes!

So back to the rain-soaked morning. Certain club members were keen to go.....no names, I have been since told off for mentioning a certain person's name too frequently!!!

Race 1, we lined the boats up against the landing stage, counted down from 5, and off they went!! Some people are really good sailors, some are, shall we say, visually challenged. I have seen demolition derbies with less crashes! Poor Bob Vaughan's boat suffered a horrendous crash, where it was flipped upside down, only to be hit by John Allen's, which ran right over Bob's boat, righting it. John's boat then turned through 180 degrees and charged full speed at the bank, crashing into Jo Wejman's parked tug! This won John a prize for the best crash!

A short time later, Harvey Vaughan's boat, mounted Maureen Dempster's club 500. Maureen suffered a damaged superstructure where Harvey's prop had eaten though the plastic, Harvey had no pro left either!

Dave Dempster just carried on racing round the course, easily coming 1st in this heat. Some of the others racing, well you would have thought they had never heard of left or right, or even knew what a radio control unit does! Abysmal control, but it made many fine crashes, and a lot of laughing!

We had a break for 30 minutes, so normal sailing could recommence. Plus, I had to check out the club boats, as some were not performing well! Out of the 5 I took down, 3 were left operational. We got ready for the second heat.

It was much the same as the first heat! Crashes, people going the wrong way, laughter and more crashes! Dave Dempster was disqualified for hitting his wife's stationary boat! I don't even remember who won the second race!!!! I was laughing too much!

The course was still laid out after we finished, so some of the members decided to run normal boats round the course, from a fishing boat to a 4ft brushless crash tender!

A couple of weeks later, we had a race on a Wednesday. After repairing the club boats, I took them down again. Course laid out.....this was not going to go well! Only about 10 people down, but racing commenced. Not even completing the first lap, and there was a floating superstructure in the water! The orange club boat was whacked by someone, causing a 5-inch split in the top of the foredeck. A certain un-named club member, spent most of the first race going the wrong way round the course. Again, Dave Dempster's smooth driving and situational awareness made him the winner.

After another repair brake, only 2 club boats were available. I had repaired the orange one with superglue.

2nd heat.....now I'm not sure what happened here, but one of the club boats was broadsided, turned turtle and sunk. This stopped all racing whilst it was recovered. The boat had sunk, despite having airbags inserted!! Again, Dave was best consistent driving, with Bob V getting in on the action as well.

I think everyone enjoyed the racing, and I will endeavour to put some more races on in 2022.

As a side note, Graham Crow built us a starting gate for club 500 racing, whilst it's a prototype, we did use it once.....after the left the gate it sank! We will remedy this so it can be used in future!

Another side note. I took the 3 club boats and my 2 boats home. The damage consisted of....

1 boat to dry out

1 boat with a seized prop shaft

1 boat with a cracked hull

1 boat with battery tray broken loose

1 boat with burnt out motor.

All boats were stripped down, shafts regreased, dried out and running apart from the burnt-out motor. That will be fixed once I get the new motor!

The racing is fun, but, and this is a biggie.....if you don't want your boat damaged, don't enter the race.

DIARY DATES

Sunday 19th December	Mince pies by the lake
Wednesday 29th December	Sailing 10am till midday, Moat house, Christmas Lunch
Monday 10th January	Bushmead. Bring what your building
Sunday 13th February	Shuttleworth IPMS Show
Monday 14th February	Bushmead club shop and photo shoot for new website
Monday 14th March	Bushmead talk on Airships
Monday 11th April	Bushmead club shop
Sunday 8th May	IPMS Milton Keynes
Monday 9th May	Wardown lake night sail
Sat/Sun 28-29th May	Mayhem at Wicksteed
Monday 13th June	Wardown lake night sail
Sat/Sun 25-26 June	Wings and Wheels.

BUILDING A CHINESE Z-10 ATTACK HELICOPTER

Some time ago Derek Thompson gave me a Hobby Boss plastic kit of a 1/72nd scale Chinese Attack Helicopter. I promptly stored this away for a rainy day. Recently I decided it was time I got around to building it and as with most of my plastic models it would have powered rotors, working navigation lights and be displayed on a plinth, which would also house the motor controls and battery power for the rotor blades and LED lights.

The Z-10 attack helicopter development began in the mid-1990s. Prototype of the Z-10 made its maiden flight in 2003. Primary mission of the Z-10 is anti-armour and battlefield interdiction. It also has some limited air-to-air combat capabilities, **Photo 01.**

Photo 01 Chinese Attack Helicopter Z-10

The Z-10 helicopter has a standard gunship configuration with a narrow fuselage and stepped tandem cockpits. Gunner is seated at the front and the pilot at the rear. The fuselage has sloped sides to reduce its radar cross section. All vital areas are believed to be protected by armour plating.

The prototype of the Z-10 is powered by two Canadian Pratt and Whitney PT6C-67C turbo shaft engines, delivering 1531 hp each. This helicopter may be fitted with a fly-by-wire control, helmet-mounted sight for head-up display, television and forward-looking infrared sensors, radar and laser warning receivers, infrared jammer and decoy dispensers.

The kit, made by Hobby Boss (No.87253) includes an eight-page booklet of assembly instructions; seven moulded frames containing all the parts, a coloured A4 glossy sheet depicting the painting requirements and a sheet of decals see **Photo 02.**

Photo 02 Hobby Boss Kit

My first task was to design a simple pulsed speed controller to limit the rotational speed of the motor that will be used to rotate the rotor. This was built on a piece of Vero Board (Strip Board) onto which the required components were fitted. A number of small motors were attached to the controlling circuit, one at a time, to ascertain which was going to be the most suitable **Photo 03**.

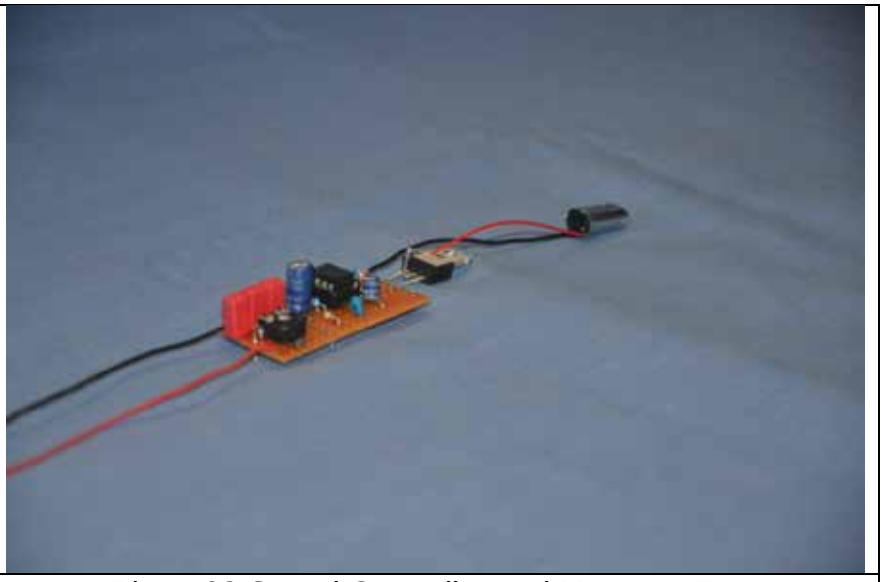

Photo 03 Speed Controller and Motor on Test

Satisfied that the speed controller and motor combination were acceptable, the 1mm diameter motor shaft was extended in order to be able to mount the rotor hub. A short brass shaft was made with a 1mm hole at one end to match the motor shaft and an M2 tapped hole at the other for mounting the rotor hub. The small brass shaft was bonded to the motor shaft ensuring that it was completely concentric. The Hub base was modified to allow the motor body to be mounted onto it using two M1.6 screws, all the modified parts may be seen in **Photo 04** prior to assembly.

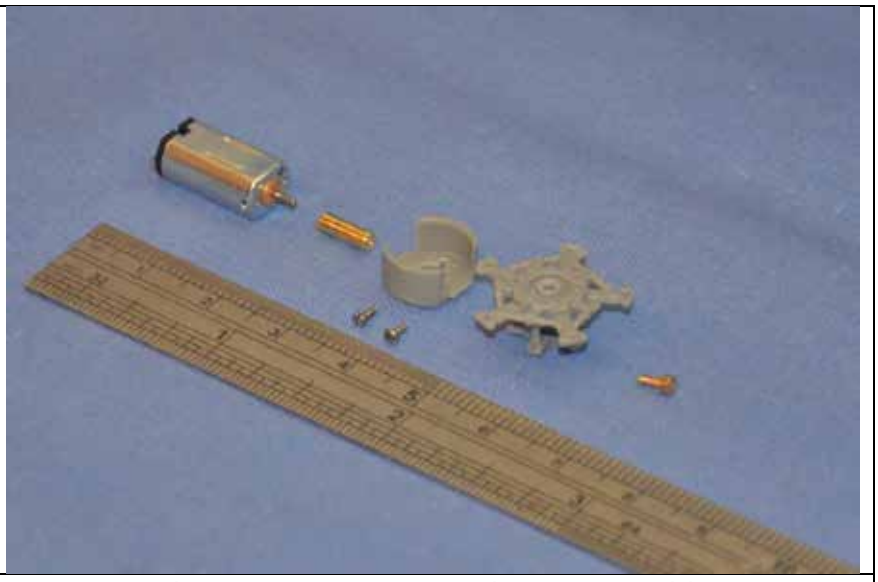

Photo 04 Rotor Parts Prior to Assembly

The rotor assembly was put together including the rotor blades which then allowed the complete assembly to be tested using the simple speed controller **Photo 05.**

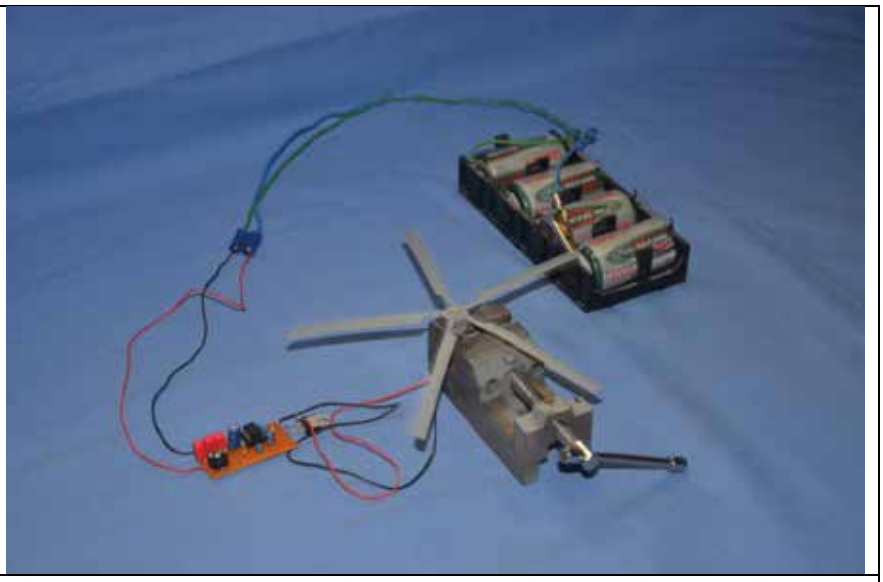

Photo 05 Rotor Assembly on Test with Speed Controller

The rotor assembly was removed from the motor drive shaft and painted black all over followed by the painting of the rotor tips yellow and the hub securing stubs silver. It was then stored away in a safe place until it was required towards the final stages of assembly **Photo 06.**

Photo 06 Painted Rotor Assembly

Assembling the internal layout of the cockpit as a small sub-assembly required 12 items to be glued together including the base moulding, two seats with headrests, two control panels with hooded covers and two control sticks. Some of these parts were very small and difficult to handle. The completed assembly was then painted satin black all over, see **Photo 07**.

Photo 07 Cockpit Seating

As the motor control was to be housed inside the display plinth the pulsed output of the speed controller would be connected to the rotor's motor via two 0.5mm diameter brass wires running vertically from the base up into the underside of the fuselage and then connected directly to the motor. It was planned to also use this supply to power the LED navigation lights. In order to reduce the flickering effect of the pulsed supply on the LED lights, a simple diode detector was created and inserted in the LED supply line in order to smooth the pulsed motor supply for the illumination of the LED lights. **Photo 08** shows

the detector printed board which eventually will be housed within the helicopter's fuselage.

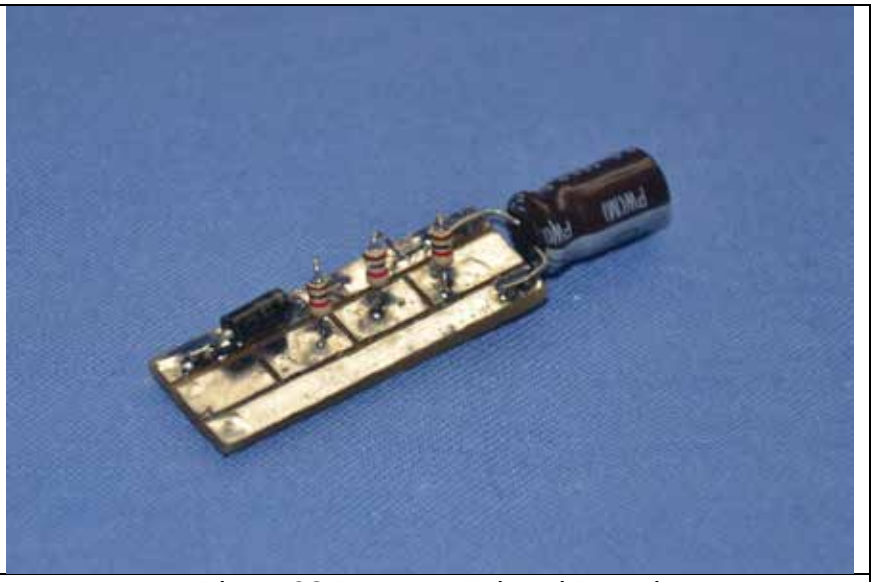

Photo 08 Detector Printed Board

A single gun mounted just below the front nose of the cockpit was next item to be assembled. It is made up of 5 individual parts, once these had been glued together and all joint lines removed, it was painted gunmetal all over and placed to one side until required during the final assembly stage see **Photo 09.**

Photo 09 Nose Gun

Other small assemblies including the main undercarriage and the tail wheel these being assembled and placed into storage, awaiting the final assembly stage **Photo 10.**

Photo 10 Small Assemblies

Next it was time to focus on the fuselage. After removing it from its frame and cleaning away all the ejector mould marks the first job was to mount the three navigation lights (LEDs), one red and one green on each end of the short stubby wings and a white LED on the top of the tail. The wire connections comprising 0.006” diameter single strand tinned/copper wire which was laid into grooves cut into the surface of the plastic fuselage. They were then routed to a central area inside the fuselage for eventual connection to the detector board **Photo 11.**

Photo 11 LEDs Fitted to Fuselage

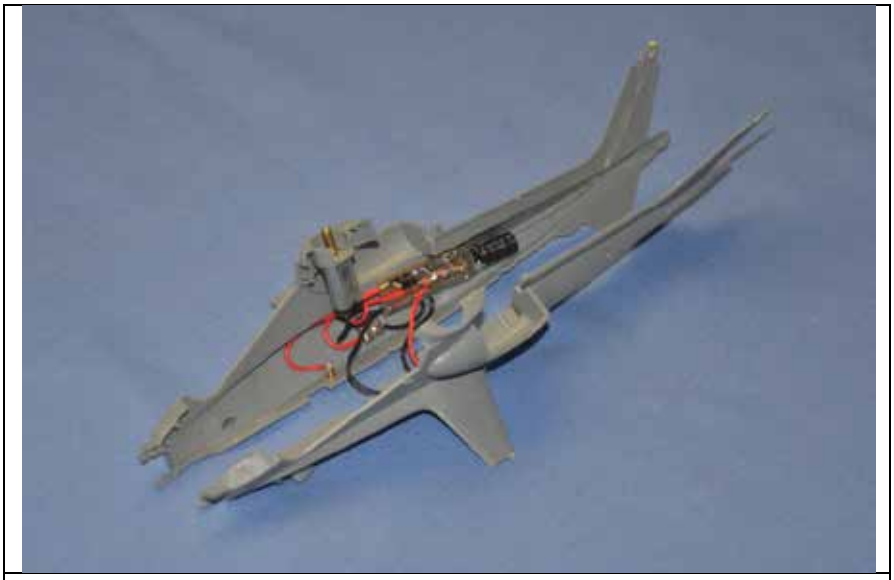

Photo 12 Detector Board and LED Wiring Completed

Photo 12 shows the Rotor Hub with motor, Detector board and the LED interconnection wiring completed prior to gluing the two halves of the fuselage together.

Photo 13 Cockpit Seating and Fuselage Assembled

Photo 13 shows the fuselage glued together including the Pilots and Gunners seating assembly, main undercarriage, tail wheel, turbine exhaust assembly and the tail rotor drive housing.

Photo 14 Fuselage Assembly Painted

Photo 14 shows the fuselage assembly having been painted satin black all over.

Photo 15 Tail Rotor Assembled & Painted

Photos 15, 16, 17 and 18 show the Tail Rotor, Missile Cradles, Missiles and Cockpit Canopy all assembled and painted. **Photo 19** show the Missiles fitted into their respective Cradles

Photo 16 Missile Cradles Part Assembled

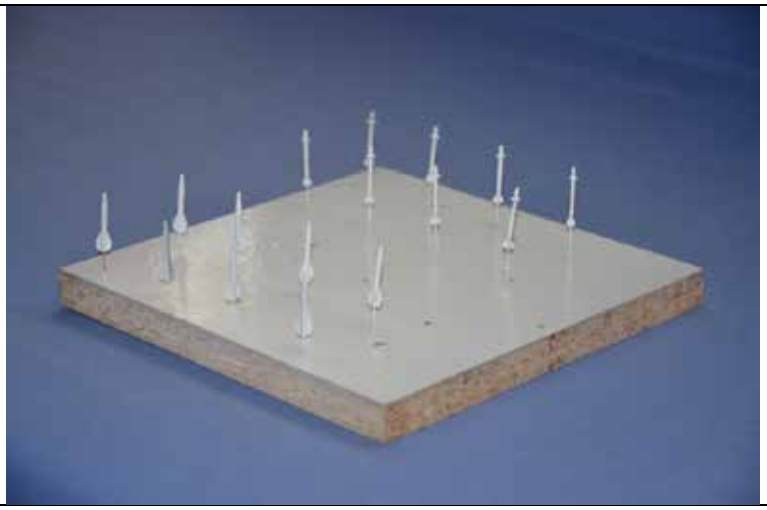

Photo 17 Missiles Assembled and Painted

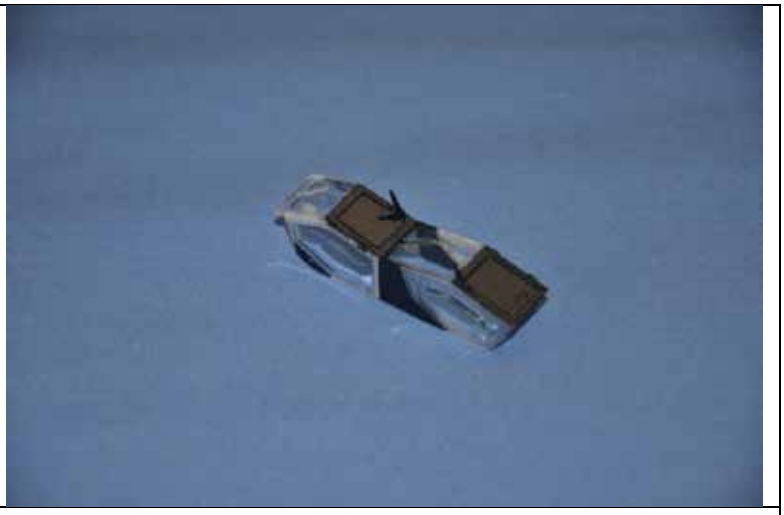

Photo 18 Cockpit Canopy Completed

Photo 19 Missiles Fitted to Cradles

With all the small sub-assemblies now completed it was time to fit these to the fuselage to complete the assembly of the model which can be seen in **Photo 20**

Photo 20 Completed Model with the Missiles Fitted

Having now completed the construction of the plastic model it was time to build the plinth in order to display the model and to house the electronic controls.

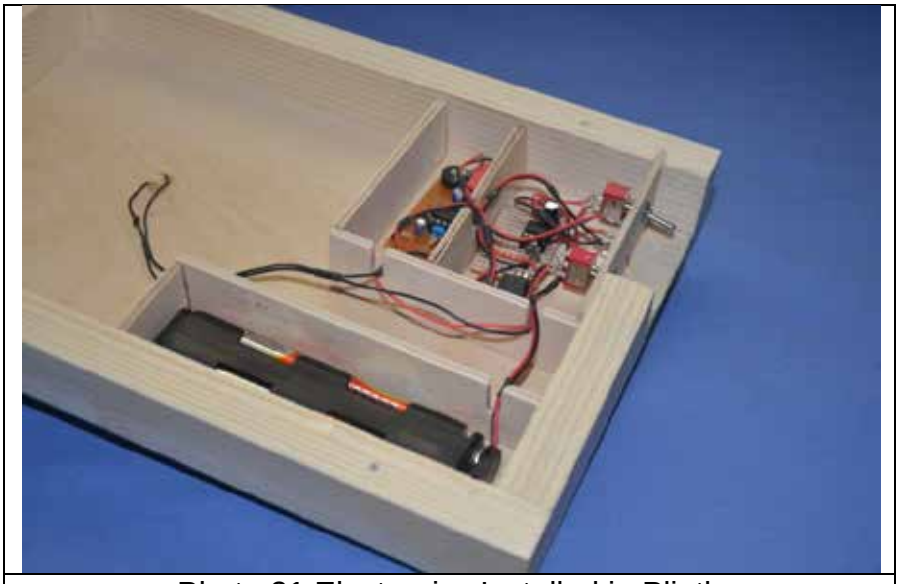

Photo 21 Electronics Installed in Plinth

The plinth needed to be deep enough to contain the electronics and also the four AA size batteries contained in a holder. Rummaging through my wood store I found a suitable plank of wood which I cut up to form a frame plus a thin sheet of MDF for the top/bottom covers. Some suitable plywood off-cuts helped form compartments within the base to house the electronics which were duly wired into position together with the control switches. The completed plinth is show in **Photo 21** prior to painting.

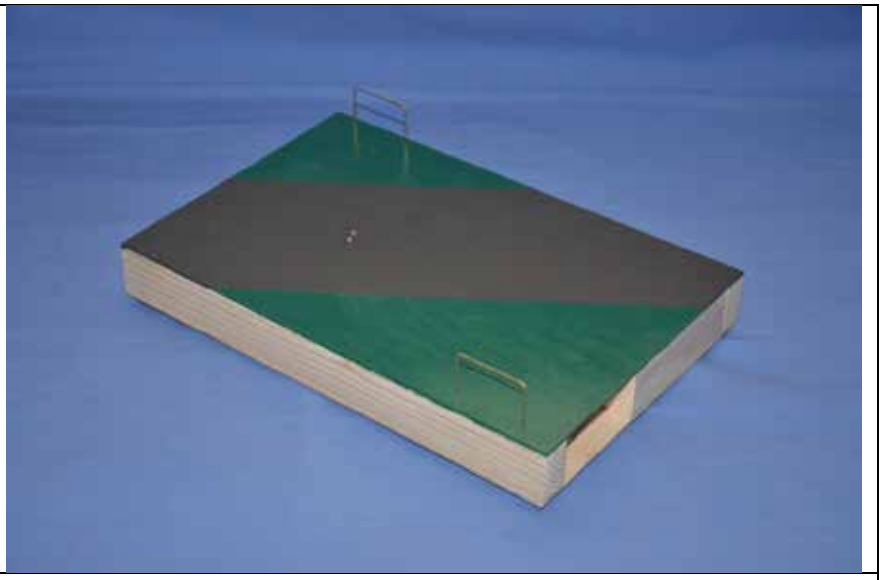

Photo 22 Plinth Assembled and Painted

Photo 22 above shows the completed plinth all painted with some grab handles to assist in handling the model on its stand.

Photo 23 Z-10 Helicopter Fitted to Plinth

Photo 23 shows the model on the plinth, by operating the switches housed in the side recess of the plinth the rotors and navigation lights can be made to operate.

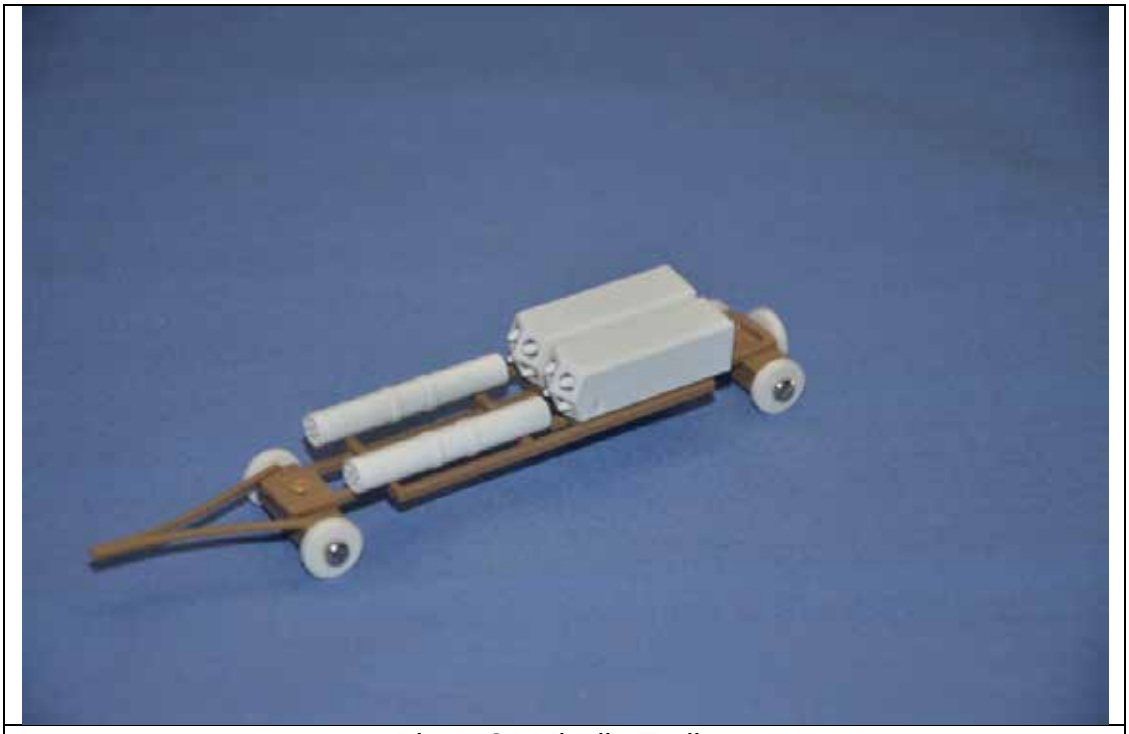

Photo 24 Missile Trolley

There is an option when building the model to fit different sets of missiles thus I ended up with a spare set. Not being one to throw anything away I decided to use the so-called spare missiles and make a Bomb Trolley using spare scraps of plasticard. The finished Bomb or Missile trolley may be seen in **Photo 24.**

Photo 24 Storage/Protection Box

Finally, all models are protected from damage and dust/dirt by placing them in a covered box. I created a suitable box for this model by using the top and bottom of the kit box, increasing the height by inserting and gluing card sheet into the sides as shown in **Photo 24.**

I do hope you have found this short article of interest and that you may have been encouraged to write an article or two for the Club Magazine?

Tony Dalton.

End of Magazine