

Newsletter

March 2017

A rather wet month but with one or two decent flying days. Never mind, Spring is showing those lovely signs of 'springing'. Next, it'll be glorious sunshine - too hot to sleep at night so we can complain about that instead.

I'm sure that all of you who attended the last Social evening thoroughly enjoyed the talk given by Mark Tomlinson. He has a dry sense of humour and it was fascinating to hear his first hand experiences with the Hawker Siddeley Nimrod.



Dave followed this by giving us a talk about his latest creation - the Gloster Javelin. Something Dave said about the actual scale of his model was that it is based on the wheel size he was able to obtain. It is nevertheless near ½ scale.

He always makes the construction of his models sound so simple but I believe that very few modellers would be capable of taking on such a project.

The picture on the next page shows how big the model is - it's huge!!



This is going to look really good and just that bit out of the ordinary!

March 2017



I said it was big!

Horizon Hobby UK Closes

I sent you the notification that Horizon Hobby are moving to Germany. Just perhaps the service may be better than some of our members have experienced through the UK branch. So any warranty work you need to have done, you must now send it off to Germany.

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A VIEW FROM THE HEDGE. (By Will Sparrow)

March 2017



As all of you will be aware, the tail end of winter found us battered by the wildest of storms. I'm told that the worst storms are given names which alternate between boy's names and girl's names. A bit of harmless fun on the part of your weather men, you might think, but there seems to be something a bit deeper, a bit more psychological, if you like, to this phenomenon. Being a simple soul, much (all?) of this sort of stuff is over my head but The Wise Old Owl explained it to us in words that we almost understood. By all accounts, researchers, in somewhere called America, had analysed storms between 1950 and 2012 according to gender and had found that those given female names were far more dangerous!

Of the 47 most damaging storms examined, "female" storms accounted for 45 deaths on average, compared to an average of 23 fatalities for "male" storms. The researchers concluded that there was a bit of hidden sexism going on, whereby people did not take storms with female names seriously enough and failed to prepare accordingly...

Towards the end of February the weather was becoming extremely wild, and we sparrows prepared to spend an uncomfortable night hunkered down in our hedge. I was dozing on my twig and must have just relaxed my grip a smidgen at the very instant that storm Doris dealt me a mighty blow. I was blown backwards off my twig, banged my head on a sturdy (and unyielding) branch and found myself upside down being blown away over the east field! It took great presence of mind, not to mention full flapping power and maximum down-trim for me to regain the hedge. The lesson is clear enough: always take females **very** seriously, after all, they have been shown to be more deadly than the male!

You members are really rather fortunate in as much as you have very few hazards to contend with as you pursue your wonderful hobby. Apart from odd (some of them very odd!) walkers on the path, the occasional low-flying, full-size aeroplane and the inevitable torrent of advice from your fellow members you have nothing to get in the way of your enjoyment... Recently, however, a new (ewe?) nuisance element has entered the lists. I'll give you a clue: it's got four legs and is covered in wool... and there are hundreds of them! These little bleaters are there to eat the green crop that is growing in the surrounding field. Originally, the woolly scourge covered everywhere like a rash. They were in the car park, on the hut verandah and on the sacred turf of the



A View from the Hedge Continued/...

March 2017

flying field itself! An electric fence has been put in place and I noticed that your ever-vigilant committee men ensured that it was moved from its original, too close, position to a more sensible location. The news (ewes?) in the hedge is that the woolly pests are only staying for a few weeks, so you can all get back to normal service in time for the start of the flying season proper and, if the rain gods will oblige, be excused from having to consider buying a 4X4 to get down the track. All this turmoil has coincided with a period of really duff weather and I have really not had much to view from my twig except... sheep! I think I'll just take a quick tally of their number... 1, 2, 3, 4 ... 97...173...249...zzzzzzzzzz.

Despite the warnings of Somme-like track conditions and the curse of the woolly bleaters I was pleased to see a goodly number of you turning out on the middle Sunday in March. It really wasn't a bad day: one of those days that holds good prospects at its start but then proceeds to go off at lunchtime. Right from the off, members were to be seen... repairing the electric fence and clearing brambles from behind the hut! Eventually, however, a very nice high-winged scale model had its first flight, successful despite a slight tip-stall tendency (?). I will look forward to seeing this model, later this year, doing its stuff, pinned against a clear, blue sky (dream on, Will – JS). Have you ever noticed that once one model has flown others are eager to join it? So it was on this fine day with two foamy Wot-4s quickly taking to the skies. Both flew well and one of the pilots got a hearty round of applause from the pits when he landed. I have no idea why; 'must be some kind of "in" joke, I suppose.

We do try to keep abreast of the affairs of you humans here in the hedge. We are constantly amazed at how you all seem to be totally dependent on something called "The Interweb". We got a bit of news recently that made some of us think that your world was going a little bit bonkers! News filtered down the avian channels, via DikiLeaks, I believe, that some secretive human organization called the CIA had developed a system whereby your TVs could be made to listen in to your domestic conversations when you thought that they were turned off. The same could be done to those little screens that you all seem to spend six hours a day staring at. (No wonder they have no time to build aeroplanes – WOO). With this in mind, the next time that your blingy new transmitter starts talking to you, try to remember that it may also be listening... and transmitting your modelling secrets to the CIA or, worse still, BMFA!

WS



My DHC Beaver

March 2017

Article and Photos by Dave Neighbour

About 10 years ago, the Czech firm HPV Modell produced a series of semi-scale ARC (almost ready to cover) models. Amongst them was a DHC Beaver.

I've always fancied this aero plane ever since I built a KeilKraft Ladybird in my teenage years, a model which has the looks of a Beaver about it. One of the attractions is the vast range of colour schemes on the full size – a quick browse on 'tinternet will reveal hundreds.



There were some really attractive schemes, but I soon found that 99% of the colour pictures only showed one view, usually the side fuselage, which meant the wing detail would be guesswork. Hmmm.... That however is another story.

Another attraction is that big radial cowl which cries out for a dummy engine to represent the 9 cylinder Pratt and Whitney fitted to the original production Beavers. Something else I wanted to have a go at.

The HPV model was a nice size, just under 2 metres span and designed for a 40 four-stroke – ideal for conversion to electric power. So a kit was duly purchased – which then sat on the shelf for 5 years!

Eventually, the model was built and covered, an 800 watt motor installed and tested and the time came to build the dummy engine. After downloading a suitable picture of the full size, I decided that this was not going to be a super detailed job but one that gave the right impression at normal viewing distances. After all, the model was only semi-scale with some obvious differences if you know the aero plane. Luckily, the cowl hid the difficult really detailed bits round the rocker boxes and cylinder heads, so all that was needed was a good representation of the crankcase, cylinders and pushrods.

It is easier to build a dummy engine around an electric motor than an i.c. engine – the whole thing can be built on a tube that fits around the motor and can be fixed to the firewall with simple brackets. I was a little concerned that the tube would restrict the cooling airflow around the motor but reasoned that this was a Beaver and realistic flight would only take a few tens of watts once airborne!

My DHC Beaver continued/...

March 2017

Article and Photos by Dave Neighbour

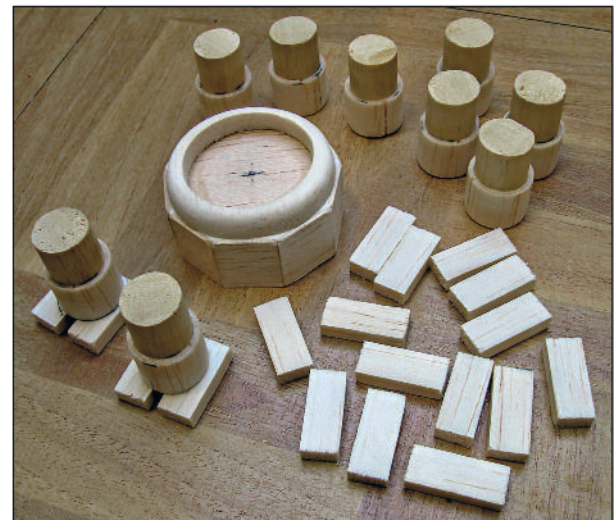
As always, the pictures show the construction far better than any written description but a few words do help to fill in the gaps.

I couldn't find a suitable tube of the right diameter, but I did find some thin ABS sheet in the scrap box. So I cut a couple of 6 mm balsa discs and glued a piece of the ABS around them to form a closed cylinder of such a diameter that it would eventually slide over the motor, leaving a few mm air gap.



The circumference was then divided into nine sections and nine pieces of 1.5 mm balsa cut and glued to the tube at one end to form the bases of the cylinders. A ring of thick balsa was also cut and carefully shaped and glued to the front edge to form the front of the crankcase.

Nine short lengths of 1 cm balsa dowel were cut to make the cylinders. The upper half of the cylinders are a greater diameter than the lower, so two layers of dampened, soft 0.8 mm balsa were wrapped and glued around each one.



Two small blocks of balsa were then glued to the top of each cylinder and shaped to represent the rocker boxes. As most of the rocker boxes are hidden by the cowl very little detail is required.

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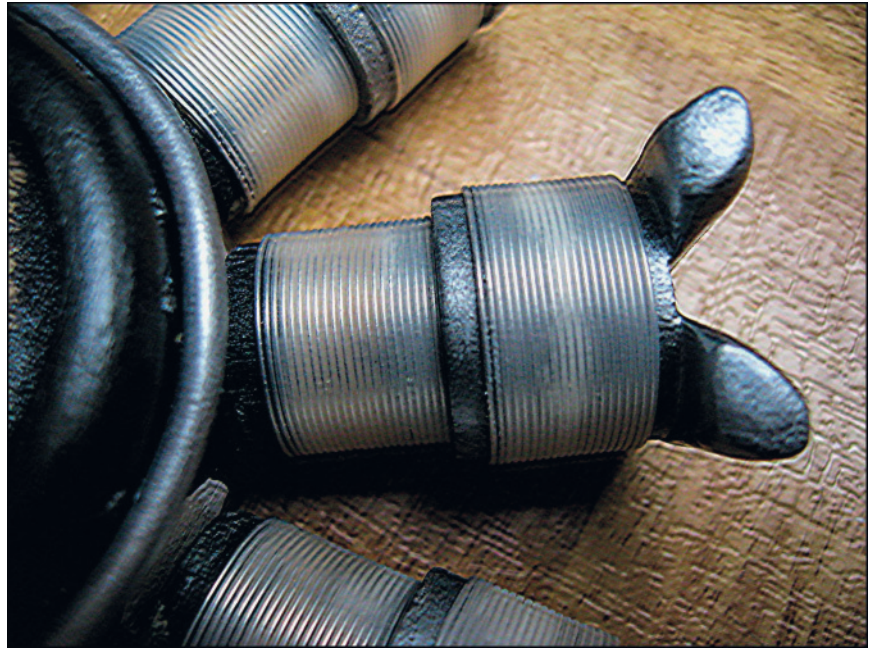
My DHC Beaver

Article and Photos by Dave Neighbour

The gaps in the crankcase were filled then all the exposed balsa surfaces were treated with sanding sealer and sanded smooth.

Then came the tricky bit! I close wound some thin insulated single strand copper wire around the cylinders to represent the fins. Fastening the start and end of the wire in tiny holes with cyano and keeping the coil of wire tight was really fiddley, but patience and perseverance won in the end!

The cylinders were then carefully fixed to the crankcase ensuring they were evenly spaced.



Then it was time to work the magic with the paint! Brushed black and silver acrylic paints were used; the paint on the crankcase and cylinder lower half were undiluted, but the black paint on the upper cylinder fins was well thinned – the paint then ran into the cracks between the wires and concentrated to give a good impression of the shadows between the fins.

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My DHC Beaver

Article and Photos by Dave Neighbour

A number of cocktail sticks were then smoothed, painted silver, cut to length and glued in place to simulate the pushrod tubes.

Finally, the crankcase tube ends were cut away, a final paint touch-up and bingo! there you have it – one Pratt and Whitney R-985 Wasp Junior (sort of)!



The final result - looks good to me (ed)



TX Setup - 8

March 2017

Article by Brian Holdsworth

Timers

These may be divided into three types, accessed via a menu option, usually identified as "Timers" or similar. Their current values may be on the main display or only visible in the menu; sometimes, display options are selected via a menu. They have no effect on the receiver so may be setup and tested without it being powered.

- **System**

A System timer is often available, running whenever the transmitter is powered and accumulating time over multiple cycles. It is typically displayed in the format "hh H mm" to indicate hours and minutes - where shown on the main display, the "H" would blink to indicate its running status.

Sometimes, it is reset to zero automatically after charging, so that it indicates battery usage time since the last charge. Others have an option to reset the value via a menu or by highlighting on the main display and pressing a clear button etc. If reset after charging, it would show battery usage time as above. If reset just before take-off, it could indicate flight time. If left running, it could be used to indicate total usage over an extended period such as a year. Because it only indicates transmitter powered time, it is a poor indication of flight time but some may find it useful.

- **Model**

Some sets have a timer for each model memory which runs whenever the transmitter is powered with that model selected, so the time for each model is accumulated separately over multiple cycles. Usually, the value may be reset via a menu, or when the model memory is reset. The display format will be as for the System timer above. Only indicating transmitter powered time, they are a poor indication of flight time, but there may be some uses. For example, the bearings in a jet engine require periodic replacement so that running time needs to be monitored to determine when servicing is required. However, the importance is such that many jet engine controllers calculate service intervals from actual running time, throttle settings, temperatures, cycle counts etc. giving a more representative indication via their displays.



TX Setup - 8 Continued/...

March 2017
Article by Brian Holdsworth

- **Up/Down**

One or more up/down timers will generally be available for each model memory, and may be used to measure elapsed time or to generate a warning indication when the defined time has elapsed. The current timer value(s) is usually on the main screen in the format "mm : ss" to indicate minutes and seconds, with a running timer indicated by blinking the colon (":"). They are reset to the initial value(s) for the selected model when the transmitter is powered, another model memory is selected or, often, by highlighting on the display and pressing a clear button etc. The enabled state, initial value and a switch to determine when they should run are setup via a menu; sometimes count direction or a separate reset switch are also specified.

If the value is set to zero, a count up timer is specified, generally allowing up to 99 minutes and 59 seconds before wrapping round to zero and continuing.

Setting a value in minutes and seconds specifies the starting value for a count down timer, generally allowing up to 99 minutes and 59 seconds before audible beeps are generated to indicate the end of the period, preceded by a countdown indication for the last few seconds. After the time has expired, the timer will continue to run as a count up timer.

Using a count down timer for a powered model is helpful (essential?) to avoid running out of fuel, or flight battery, when the resultant dead-stick landing is likely to be off the strip resulting in damage etc. It is wise to allow at least a minute of powered flight after timeout to allow for overshoots etc - longer for first flights, windy weather or if inexperienced.

Using a switch to start the timer is vulnerable to being forgotten. It is convenient to make it automatic by starting a count down timer from the throttle stick by setting it to run above about two ratchet clicks open; a suitable margin may be added to the initial value to allow for taxiing etc. Some sets have an option where the first (or second) movement of the throttle above a threshold starts the timer which then runs regardless of throttle position; this can be confusing in operation but could be useful for timing flight duration. When using a switch, sometimes it is required to be toggled off before switching on to start the timer; perhaps this is intended as a safety feature but it complicates usage for no obvious benefit!



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TX Setup - 8 Continued/...

Article by Brian Holdsworth

Some have an option where the timer is controlled by the throttle stick, as above, but the timer rate is proportional to stick position so that it runs slowly if just above the threshold increasing to full speed at full throttle. This is intended to provide a more representative measure of fuel or flight battery usage.

Auto Shutdown

Increasingly, this option is included to shut down the transmitter automatically, if inadvertently left switched on, to avoid unwanted drainage of the battery etc.

If no transmitter stick, switch etc. has been moved for maybe 10 minutes, a warning screen will be shown with beeps and, after a further delay of a minute or so with more beeps, the transmitter will shut down. The warning screen usually includes the time remaining before shutdown, and is reset by moving any stick etc. The time may be fixed, or a menu option may be available to inhibit or alter it, often from a list of values.

If automatically shut down, the power switch will be in the On position and should be switched to Off before the transmitter is put away since a low current may still be drawn by the circuitry.

Servo Limits (Absolute Travel)

Where available, this should not be confused with the apparently similar "Servo Travel" function. As the name suggests, it limits the maximum throw of a servo channel. It is generally only relevant where multiple mixers are used which can increase servo throw over that produced from its stick movements. It can be possible for inappropriate switch combinations to enable mixers etc such that the controlled surface could be overdriven with the potential for stalling servos and/or damaging hinges, linkages etc.

Separate values for each direction default to the maximum possible positional value, typically 150%, so that they have no effect. Setting a lower value would prevent that channel from exceeding that value for any combination of inputs and would be adjusted according to the control surface and linkage movement limits; it is usually preferable for paired servos such as ailerons to have identical limits. While it may seem helpful, the results on flight performance can be confusing if the limiting is triggered, which is, perhaps, why the option is not widely available.



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March 2017

Article by *Brian Holdsworth*

For example, switched flaps on a glider may also be driven by Crow (Butterfly) and switched mixers to couple them with elevator and aileron which are not intended to be used in combination. Instead of limiting movement with this option, different positions of a three position switch, or Flight Modes as below, could be used to enable the mixers etc. inhibiting unwanted combinations and avoiding the potential problem.

Snap Roll

This function allows a switch (usually the spring-loaded trainer switch) to move the aileron, elevator and rudder towards their full throws to perform a snap (flick) roll while the switch is held. It lost favour many years ago after a number of incidents when operated inadvertently at inappropriate moments!

It is sometimes available, with the option of defining a safety switch to reduce the possibility of inadvertent usage. A pair of switches with four combinations can usually be used to select left and right, upright and inverted snaps. The aileron, elevator and rudder positions may be defined for each setting.

A similar capability may be achieved using multiple programmable mixers.

Servo Speed

If available, this option would allow individual channels, and hence the attached servo(s), to be slowed from the servo capability, sometimes with an enabling switch; a servo transit time of 0.1 sec could be slowed to several seconds. Flap movement could be slowed, but some elevator correction is usually required which could not, obviously, be slowed by this option to match the flap speed. Pan and Tilt movements of a camera could be slowed to smooth the resultant video. A switched electric motor, as sometimes used in gliders, needs a slow startup otherwise its considerable torque would be liable to rip it out of the airframe - using the "soft acceleration" option in the ESC may be more appropriate. Mechanical retract operation, where a standard servo is used, could be slowed but these are obsolete since compressed air and electric units are more effective; a dedicated retract servo is switched with two positions and is unaffected by the rate of change of its driving channel.



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March 2017

Article by Brian Holdsworth

Flight Modes (Conditions)

The Sailplane (Glider) model type, where implemented, often includes this option, but it is rarely available for the Aircraft type. Two or three modes would be available for a two or three position switch; sometimes two switches may be used in combination to give up to five modes or even three switches for up to seven modes - multiple switch position combinations can be awkward to remember in practice. It is difficult to identify more than three modes for powered aircraft which is, perhaps, why it is rarely available for this model type.

The switch selection available in some mixers etc. would include Flight Mode, allowing different values for each mode. Multiple parameters are used to define a flight mode, often allowing different trim values for each mode if enabled via a menu option. Its use may simplify the avoidance of inappropriate combinations of mixers etc in a complex configuration. During initial flights, it will generally be easier to use separate switches while experimenting with values for the various parameters; when satisfied, the Flight Mode switch could then be specified to simplify selection for subsequent flights.

A similar effect for up to three modes may be achieved by using a single switch to control multiple functions. For example, a three position switch could be used for Normal, Take-off and Landing selecting flap position, retractable undercarriage up/down, rates etc and enabling some mixers in particular modes.

WHAT'S MY IDEAL NUMBER?

By John Higgins

The ideal number of models that one should own is $(n+1)$, where "n" is the number of models already owned.



Shows and Events

March 2017

Blackpool & Fylde RCMS
Radio Control Model Society

FLY-IN

Sunday 28th May 2017

Special Guest Pilot:
Azza Stephens

Like us on **facebook**

International WESTON PARK MODEL SHOW

16/17/18th June 2017

Large Model Aircraft Rally Cosford
15th - 16th July 2017

RAF Museum Cosford, Shifnal, Shropshire, TF11 8UP
T: 01902 376290 www.rafmuseum.org.uk www.largemodelassociation.com

Trade & food stalls
Access to the RAF Museum
A great day out for all the family!

Come and see model flying at its best

Sponsored by **RCME**
Lead the way!

Vulcan Bomber XH558 as seen on the BBC One Show

Admission Prices (Gates open at 9:30 am)
Advance - Online Only £45.00 on the gate £40.00 in advance (at 1st July)
Adults £9.00 £10.00
Children under 16 free (when accompanied by an adult)

On-site camping (at the weekend)
£45.00 on the gate, £20.00 in advance (at 28th July)

Public camping: please contact 01927 675665
email: public-camping@largemodelassociation.com

For all other enquiries contact: 01927 784528 or email: chairman@largemodelassociation.com

All major credit/debit cards accepted

All advertised attractions are subject to change. For full terms and conditions see: <http://www.largemodelassociation.com/press-office/terms-and-conditions>

Elvington Model Air Show 2017
Saturday 12th & Sunday 13th August

Elvington Airfield, Halifax Way, Elvington, North Yorkshire, YO41 4AU

One of the largest model shows of the year

Come and see some of the best pilots from throughout the UK and Europe. Show runs from 10am till 5pm each day (Gates open 8:30am last entry 4pm)

Camping will be allowed on the airfield from Friday and Monday

On-site camping (at the weekend)
£45.00 on the gate, £20.00 in advance (at 28th July)

Public camping: please contact 01927 675665
email: public-camping@largemodelassociation.com

Admission Prices
Adults £10.00
Children under 16 free
(when accompanied by an adult)

For all other enquiries contact: 01927 784528 or email: chairman@largemodelassociation.com

All major credit/debit cards accepted

All advertised attractions are subject to change. For full terms and conditions see: <http://www.largemodelassociation.com/press-office/terms-and-conditions>



List of our instructors.

March 2017

Jason Reid, John Higgins, Chris Vernon, Mark Conlin, Brian Holdsworth, Jim Sheldon, Paul Cusworth, Andy Harrison, Justin Goldstone & John Prothero.

Social Calendar for 2017

2017 Social Evenings - Marton Institute, Oxford Square, Blackpool

12 th April	Mystery Night
3 rd May	Open Forum and Safety Talk

I am so grateful to you members who have kindly put your time in to share your experiences and write those excellent articles. So I thank this month the tweets from our tame Will Sparrow, Brian Holdsworth for his technical articles, John Higgins for his humorous observation and finally, Dave Neighbour for his fascinating article on the construction of that very realistic 9 cylinder Pratt and Whitney.

In fact, I've had to hold back another member's article concerning his new petrol model. You'll see that one next month. Mr Prothero is at this time sunning himself in Florida and he has promised to bring me back loads of pictures and will be putting pen to paper.

Thanks also to Mark Tomlinson for his excellent talk on his days in the RAF flying in the Nimrods. That evening was of course further enhanced by Dave Swarbrick who brought along and gave a talk about his latest project, the twin turbine Gloster Javelin.

I've said it many times before, but this Club really does have some very talented members, both as flyers and builders.

I am also really enjoying the article which John Higgins wrote concerning the building and flying of his 47% scale Cri-Cri which is currently being published in the RC Model World. As I say, this is a very special Club and one I'm very proud to be a member of.

So, have a good month guys - happy and safe flying.