



PMFC NEWS

News and Views from Peterborough Model Flying Club

Autumn 2022

Online and in Print



**Rubber Ducted Fan -
Bert whitehead describes
his development of a
rubber powered ducted
fan for indoor!**

**Hangar Rats - The indoor
season has started and
PMFC members are com-
peting it out with Hangar
Rats!**

**BMFA Award - PMFC honored at
the AGM**

• Flying Aces • Free Flight at Ferry • Competition Results • Members Builds •



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Magazine: Luke Goymour

Treasurer/Mem Sec: Richard Arnold

F/F Sec: John Ashmole

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Safety/Ferry Liaison: Dave Rumball

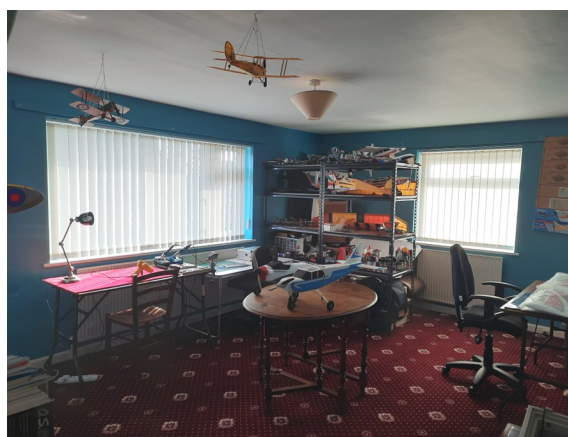
Webmaster: Paul Townsin



Dedicated model flying site at the local park—a rare site these days!

Editorial

Welcome to the autumn edition of PMFC News, the fact that it's winter when you read this I ask you to mercifully, overlook! I have now moved into my new abode at St Mark's Ipswich, which although much busier than my previous appointment boasts a rather spacious presbytery (priest's house) which means my workshop space is rather spectacular. Here's hoping I have time to make use of it! Furthermore, on a walk shortly after I arrived, I discovered a dedicated council run model flying area within the local park, just 10 mins walk from the house - it's almost like they new I was coming!



The new workshop—not short of space!

Since the last issue, we have had our very successful Flying Aces Nats, completed the final round of the Free Flight Competitions at Ferry and have gotten the indoor season underway—all of which

we report on in this issue. As well as this, we have our usual 'member's builds' (keep sending them in folks!), competition results and Bert Whitehead's reflections on developing a rubber powered ducted fan. We also bring you Hangar Rats, news from the BMFA AGM and on the back page a selection of YouTube channels to help keep the Aeromodelling appetite satiated in the dark winter months. What more could you ask for?

I had finished most of the magazine prior to the AGM which we will report on in the next issue, but just a heads-up: there have been a few committee changes as you will see from the column on the left.

I hope you enjoy reading this latest edition of PMFC News and I wish you every blessing and warmest good wish for Christmas and New year,

Luke

On the Cover: Julio Isidro gets his VMC Pilot off to a solid flight whilst Chris Grant acts a timekeeper at the Flying Aces.

Final Round of Free Flight Competitions at Ferry for 2022

Luke Goymour reports on the fifth and final round of competitions on 9th September...



Peter Gibbons, ever resourceful takes cover under the score sheets

The wind was almost non-existent for most of the final round of our Ferry Meadows Free Flight Competition. The same, however, could not be said for the rain, which came and went periodically along with thunder and lightning throughout the afternoon. Keeping models dry and choosing one's moment to launch were the main challenges of the day, as well as keeping a watchful eye on the storms and judging whether the lightning was of the 'sheet' or 'fork' variety.

Bert performed his duties as CD with excellence and due diligence, but not even he could stop the flight sheets from becoming waterlogged. It seemed even the plastic covers had sprung a leak! Nevertheless, Peter found the control tables a useful shelter between flights, and when the rain stopped the hardy group of Peterborough flyers emerged from their umbrellas to battle it out for the various trophies up for grabs.

Towards the end of the afternoon, the wind got up a little and it looked like the rain had set in and so, with just over an hour left and having given it our best shot, we trudged, wearily and wet, back to our cars. All was not lost, however, for when we got back to carpark the sun had slowly begun to emerge, the rain had stopped and the wind was, well, non-existent. Thus far, Mick had maxed out in P20, and the only other competitor; Peter Adams, had decided that rain had stopped play. But your Editor and Bert were keen to take advantage of the now excellent conditions and, with 40 mins remaining, see if we could give Mick a run for his money! With Andy Green and Brian Lever acting as timekeepers, Bert and I rushed back to the field, models in tow, to begin our great effort. There was little time to talk: wind, launch, wind, launch, wind, launch....a few moments later, we had both maxed out and we had a three-way fly-off with Mick, Bert, and myself. The only timekeepers present were Brian and Andy, so we decided that we would all fly off together and then count the models down. Rather predictably, Mick's model climbed the highest and took an age to come down. Bert was hot on his heels but just couldn't quite stay in the air long enough to beat him, yours truly was several seconds behind Bert and Mick, having only climbed to a third of the height of their models. Despite the weather, the danger of lightning, and the moist atmosphere, we all managed to fly and have fun!



Three tired but happy P20 flyers after the fly off, despite the best efforts of Bert and Luke, Mick prevailed as champion.



Umbrellas: essential for Free Flight at Ferry!

Results for Round 5

Precision Scale: 1 Bert Whitehead, 2 Brian Lever.

Catapult Glider: 1 Luke Goymour, 2 Chris Grant, 3 Peter Gibbons, 4 Bert Whitehead

P20: 1 Mick Page, 2 Bert Whitehead, 3 Luke Goymour, 4 Peter Adams

Cloud Tramp: 1 Bert Whitehead, 2 Mick Page, 3 Luke Goymour

Open Rocket: 1 Luke Goymour, 2 Chris Grant

E 20: 1 Luke Goymour, 2 Peter Gibbons, 3 Brian Lever

Bungee Glider: 1 Bert Whitehead, 2 Chris Grant

2022 PMFC Free Flight contest Final Results:

Over five rounds at Ferry Meadows, the top three in each class are:

P20: 1st Mick Page 11 points, 2nd Bert Whitehead and Luke Goymour 7 each.

Scale Precision: 1st Brian Lever 8, 2nd Bert Whitehead 7, 3rd Martin Skinner 3.

Open Rocket: 1st Luke Goymour 9, 2nd Brian Lever and Bert Whitehead 5.

E20: 1st Luke Goymour 7, 2nd Peter Gibbons 5, 3rd Jon Whitmore 2.

36" Glider: 1st Chris Grant 11, 2nd Brian Lever and Bert Whitehead 7 each.

Cloud Tramp: 1st equal: Mick Page and Luke Goymour, 10 points. 3rd Bert Whitehead 4.

(NB: John Ashmole writes: "As the only pre-arranged way of deciding a tie was to have a flyoff on the field, and because circumstances made that impossible, we must ask Luke and Mick to share the trophy. We should discuss a better method at the "FF Conference" this Winter.")

CLG: 1st Luke Goymour 16 2nd Peter Gibbons 10, 3rd Chris Grant 9.

The Victor Ludorum Trophy is calculated by counting the number of competitors beaten in the final (complete) results list. Has been checked and approved by the protagonists: First: Luke Goymour 18, Second: Bert Whitehead 14

The 2022 Peterborough Flying Aces

Luke Goymour reflects on this year's Flying Aces...

The weather can make or break a free flight event, so with one week to go to my first Flying Aces at the helm there was some anxiety when the long-range forecast was predicting rain with 18 mph gusts, that the day may just become a wash-out. I had, however, a theory (not based on anything scientific) that when the long-range forecast is bad, it usually improves. Also, call it faith if you will, but



Bryan Lea in Kit Scale with his Velie Monocoupe

I was cautiously optimistic that the weather would be flyable. As we got closer to the big day the weather forecast improved slightly each day, so that when we arrived on Oak Meadow at 8 am on the Saturday morning we were greeted with almost no wind and dry and bright conditions.

By 10 am the control tent had been erected and was functioning splendidly with Andy Green and Goymour Senior (my father) logging in flyers and distributing the flight cards. Models were soon taking to the sky, and despite a few early wind direction changes and a little turbulence it soon felt like the Flying Aces.

There were some excellent flights and excellent models on display throughout the day. Although attendance was significantly less than in previous years (the dire weather forecast, change of day and Covid, were likely contributing factors) many competitors still made the effort to travel to our Flying Aces events, some from significant distances: Julio and Sandra Isidro, great friends of PMFC traveled from Portugal and managed to compete and place in several events including a third in Cloud Tramp and a second in VMC Pilot.

The junior category was represented by cousins, Kalin Hall and Braydon Mileson, the latter together with his father Shaun, did very well in several events, including a second in E20.



Chris Sanders on High Start, with Dave Rumball and Bert Whitehead looking on.



Luke on his knees (force of habit?) releasing his 3-Hour Hawk in Profile Jet scale

Although the TSP rocket duration event did not have as many competitors as one had hoped, Bert and I fought it out with various fizzes and smoke streams jetting across the meadow. Both of us struggled to escape the turbulence, but I managed a few lucky flights which nudged me into first place. That aside, Bert had a good days flying, finishing the day as our top club member as he won High Start Glider, Cloud Tramp and P20. (Results for the

Flying Aces are available on the club website)

The rocketry fun continued with Roger Simmonds and Daniel Rackstraw putting in several impressive flights in scale and semi scale Jet.

Phil Worth wowed us in the Unorthodox category with his Focke-Wulf Triebflugel as well as putting in solid flights with his EDR Horten 229, Flying wing.

It was a real joy to have John Ashmole with us to run the rubber scramble. John as many know, has been dealing

with health problems which, understandably, had kept him from the flying field for much of the year. He turned out, however, to do his bit for the club, which he did superbly, run-



Models at the ready: The Flying Swarm is released

ning a tight ship as usual, and even managing to find time later in the day to fly as well!

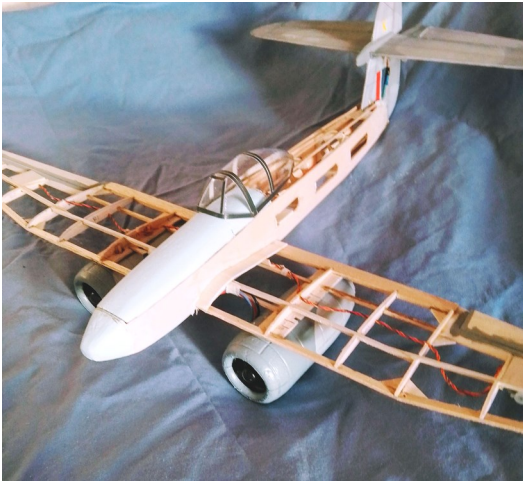
Overall, the day was a great success. We made a good amount on the raffle, the weather stayed warm and flyable and the atmosphere was quintessentially 'Flying Aces'. On a personal note, I would like to thank everyone who volunteered and helped to make the day a great one. Here's to next year!



Peterborough's Top Flying Ace: Bert Whitehead

Members Builds...

From the workshop of Rob Smith....

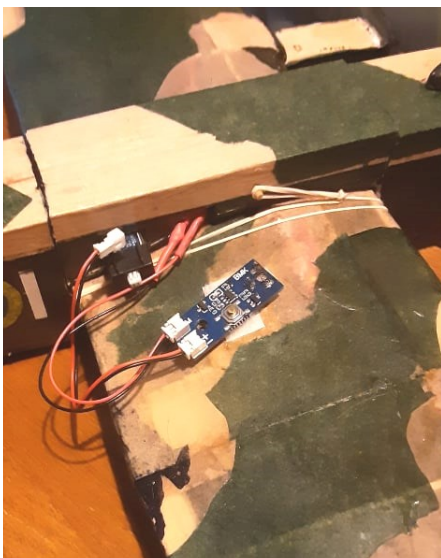


Rob writes: "Here is a jet version of the Westland whirlwind fighter. Using the parts from a wrecked A10 thunderbolt."

From the workshop of Peter Gibbons...



Peter writes: "Combined electric model with 60 inch wingspan. It's a 'Go Go 15' designed by Dick Staines, I never had a plan, just a few sketches so it was a bit of trial and error. The CG came out at 68% so we'll try there first"



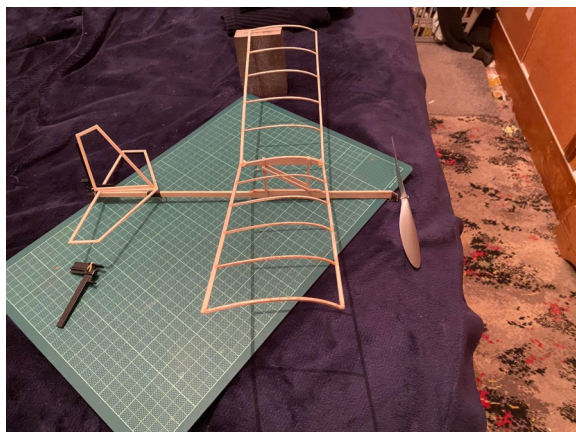
In a departure from Peter's usual FF duration builds, he wanted to experiment with building a fun-scale Lancaster utilizing the E20 timers from BMK. This is just a prototype, but already it looks promising: All four motors run on an E20 timer and a 150 mAh battery . Looking forward to see how Peter gets on with this. —Ed.



From the workshop of Kev Tatlow....



A rather splendid RC Tiger Moth from Kev, from a kit he acquired from a certain John Ashmole many years ago! He says: "The moth will have a Thunder Tiger 54 4 stroke when I get that far." And a more seasonal model: The Hangar Rat:



Kev had some trouble with the fiddly build and affectionately named the model the Hangar Twat! (apologies) Martin Skinner came to the rescue, advising Kev to "make the ribs by 2 strips of soft-ish 1/32 balsa. Then wet and apply thin PVA and laminate over a suitable former. After 2 or 3 nights you should have enough ribs. A good former is a piece of 3/32 balsa cut to shape and extended each end by a 1/2 inch. It is made glue proof by applying cellotape (sorry sticky backed plastic) over the edge and sides. 2 formers will speed things up a touch. Lots of dress pins will hold the open / outside edge to the basic former. The glue is dry in a couple of hours." Kev duly followed the advice and now has a successful model.

From the workshop of Luke Goymour...



Your editor decided to address his passion for early flight and tackle a Tony Ray kit of the Bleriot XI. Fitted with micro RC gear, and with the addition of a semi-profile pilot and radial engine, she's all ready to tackle the English channel and those pesky white cliffs! Just waiting for a very calm day (and soft grass) to try her out before trying indoors.

From the Workshop of Bert Whitehead

The 'Logo P20'

On the cover of the magazine there is the PMFC logo encircling the picture of a P 30 or Coupe, probably circa 1990's. I decided to copy the model in the form of a P 20. Everything about the plane seemed okay except the blunt back end. I've decided that it must be like that to let the rubber go all the way to the back. Either way, I kept it as it was part of the model's aesthetic.



Bert's attractive looking 'Logo' P20

About 'Logo'

It features a freewheeling propellor. The wing mounts are made from 3mm x 1mm bamboo. (from skewer). The Tail plane is hinged using plastic tubes and 1.5mm bamboo hinge pin and the motor peg is a double aluminium tube. The d/t is a viscose timer at the nose



with activating elastic from cheap shock cord. Wing and tailplane elastic bands are cut from balloon necks. Overall Weight is 35 gm. + 6 gm rubber = 41 gm, which I marked on tailplane. (note: PMFC rules 32.5 gm min.+ 6 gm max. rubber). It needed 3 gm lead in nose block to bring the balance

point 70% behind L.E. The wing spar is 1/16 sq. top and bottom with 1/32 vert. grain webbing all along, with two 1/32 x 3/32 stringers let-in front/tops of ribs to keep section shape. The artwork painted on with acrylic after water shrink but before Easy Doping. Cost of the model was peanuts! Designed to fly using 4 strands 3/32, 200 turns pre-tension. Turns tested at 1400. Free plan is available from bert.w1943@gmail.com (if I ain't in Benidorm!)

Flying

On small windy village playing fields using old rubber, only dare 400 turns. It flies okay after reducing back height of tail plane to 1/16 and 1/16 packing in nose to achieve about 5 degrees downthrust.



The prototype fan

I have been struggling with Rubber Ducted Fan for over two years now, probably because I keep being told that it can't be done! To test my ideas I went for indoor models because they are easy to make.

Method

Firstly, I would need the fan to revolve somewhere round 3 to 4000 revs. just to make a 30 sec. flight. How do I utilise the rubber torque to drive the fan? Everyone keeps shouting "GEARS" at me. But, to my mind, gears won't work as they are an extra weight; there's nowhere to put them and probably 30% power losses on a system that is already desperately inefficient.

Basically: Torque x Revs = Power. If the revs. are high then the torque only needs to be low for the same power. I found that a long rubber motor, but very thin, is the answer. Somewhere between 2 strands 1/16 to 2 strands 1/8 but well over a 25 inch long

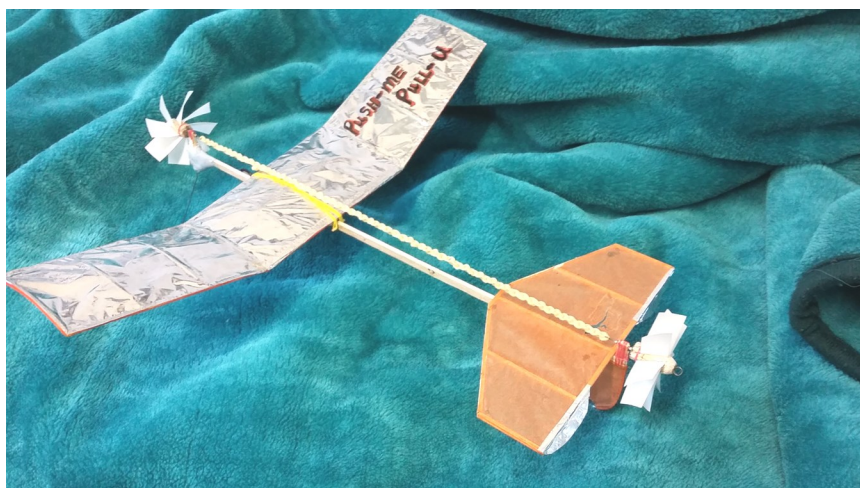


Winding Fan's from Tiger adapted for hand winding

strand. You need some means of winding this without standing there all day long with a 15:1 winder. Photo shows experiment using cheap hand winding fans. The two 70:1 winders are from Flying Tiger shop. (available in the Summer time).

The Models

Push-me - pull-u is my first attempt. The fan is at front and coarser pitch fan at back. It needed three arms to wind it! Two strands 1/8 sends it in a straight line into the oppo-



The Push-me-pull-u-Bert's first attempt at a flying rubber ducted fan

site wall of the hall. (Because of this set-up, there is no torque trying to turn the air-frame opposite to the fan.) I couldn't, however, think of any means of fixing a tube over the fans, and so abandoned this initial attempt .



My second model bears a really rough similarity to a MIG 15.(it was also overweight). It featured a single 4 bladed fan, driven by two 3/32 strands up a 1/2" sq. balsa tube, which becomes the spine of the whole model. Interestingly I do get enough power from a surprisingly thin motor, maybe because I was able to rig up a short tube over the fan. BUT, and this is

the problem, the model is completely uncontrollable, even when I moved the TP off the top of the fin to the thrust line. I concluded that the fan tube needs to go all the way to the back of the model as to not have influence over any of the flying surfaces.

In this version the fan was mounted on a very small nose block, just like a conventional model, which also allows the nose assembly to be removed for winding. My third model is now underway using the idea of a central motor tube and spacers radiating from it to support a light, full length, stick and tissue tube.

Any ideas anyone? To be continued...

Bert Reflects on the Hangar Rat and rallies the troops:

"Brian Waterland spends a lot of time organising venues and activities for the benefit of PMFC members. Among all these efforts he secures the bookings for the indoor meetings at Bushfield. Within the Bushfield sessions he has organised, along with the help of Andy



Green and Brian Lever, the running of the low key - but very interesting HANGER RAT COMPETITION!

I would urge any flyers to come along and have a go in this fun competition. The model is easy to-build, costs next to nothing, robust and always flies. It's a good time out for you, your family and friends with just a reasonable cost to come.

It would make a good Christmas time build. Brian Waterland has some plans, or email me at bert.w1943@gmail.com for a free plan and plenty of slightly used rubber.

P.S. Brian Lever, who's longest flight of the October session was 1 min. 27 secs. At last, he revealed his secret winning formula a: 7 INCH TERN PROP!"

Bert looking happy with his Hangar Rat

Hangar Rat and Indoor Fun-Fly competition Results

Round 1

(Best three results from the six competitions will decide the winners. So plenty more events to complete your 3 best scores. The totals represent the cumulative flight time in seconds from 5 flights.)

1st Peter Adams.	358 secs.
2nd Bert Whitehead.	335
3rd Andy Green.	267
4th Martin Skinner.	213
5th Malcom Styles.	132
6th Brian Waterland.	69



Round 2

1st Brian Lever	345 secs
2nd Bert Whitehead	301
3rd Andy Green.	300
4th Malcolm Styles	225
5th Martin Skinner	218



Round 3

1st Bert Whitehead	445 Secs
2nd Andy Green.	349.
3rd Malcolm Styles.	250.
4th Olivia Tatlow.	146.
5th Peter Adams.	68.

(Olivia Tatlow completed 3 Flights and Peter Adams 1 flight)

Also:

The Longest Flight Competition was won by Bert Whitehead with 94 seconds with his Hangar Rat. Scale (Flying Only) was won by John Cooper in a fly off with Gordon Hannah. John flew a Fike and Gordon with a rare French Maboussin monoplane. Scores were 19 and 17 respectively .

Winner of the nearest to the £5 laid on the floor was Malcolm Styles Flying his Hangar Rat.

Above: This is Brian Lever's 30 year old Hangar Rat, which had remained in its box unflown for all that time. It is a Flitehook model supplied by John Hook. The first competition outing at Werrington Sports Centre he did not manage a single scoring flight ending with a wall crash and the cabane being destroyed. However, having carefully retrimmed the model it won the latest Hangar Rat Competition held at Bushfield with a total of 345 seconds from 5 flights. The second picture shows the amount of rudder required to obtain a nice wide right hand climbing circle.

Indoor at Bushfield

The indoor meetings at Bushfield are well underway. Bushfield has one of the finest indoor venues in the country and its right on our doorstep! So if you haven't tried indoor flying yet, there is no excuse- do come along and join the fun! Here are some pictures from the meeting on the 26th November ...



Photo 1: John Watson with his Flying Santa which flew superbly.

Photo 2 John Cooper with his winning Fike.

Photo 3 A Gordon Hannah creation of an early Bleriot Racer.

Photo 4.

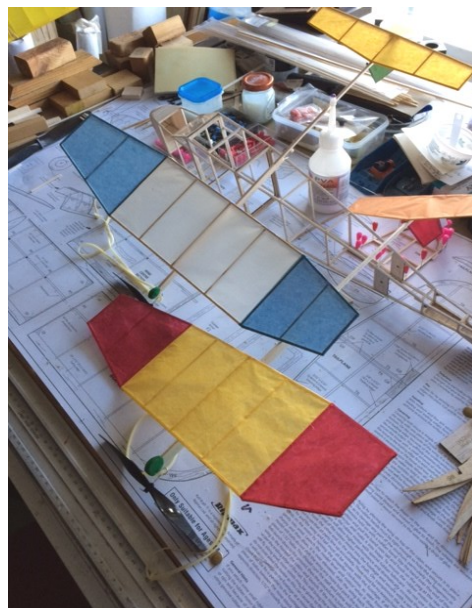
Gordon Hannah with his French Maboussin Hemiptere, placed 2nd in scale.

An Honorary Membership for John!



PMFC honored one of its oldest members, John Coleman with an Honorary Membership at the October 30th Indoor meeting. This was the day before his 90th birthday. John has been a joyful presence within the club for many years and is a great supporter of the indoor flying meetings. Happy Birthday John!

Brian's Charity Gyminnies



Brian Lever built two Gyminnie Crickets for a Cancer Fund Raising Day at the Ruddy Duck Pub in Peakirk. The deal was for the two winners to come for a morning learning how to fly them at one of the Bushfield indoor meetings. The models were both won by ladies who will join us at the first meeting in January. Over £1000 was raised

Results from the Wind Break Club (PMFC Free Flight Team)

7th Area

Combined Electric 2nd: Gerry Williamson
E36 4th: Gerry Williamson

8th Area

E30 1st: Peter Gibbons
3rd: Gerry Williamson

Midland Gala

E36, 2nd: Gerry Williamson
3rd Peter Gibbons

CLG

2nd Peter Gibbons

P30

2nd Mick Page

Control Line Results:

Voetsak Tribute Racing

Well done to Brian W and Brian L who won both the racing and speed at the final event held at Buckminster at the SAM35 October-fest.

Overall they ended up second in the Championship beaten by just one point. Good job lads!

PMFC Honored with the SMAE Medal at the BMFA AGM

The following appeared in the program at the award ceremony:



“Since its inception in 1938, the Peterborough Model Flying Club has become one of the most influential clubs in the UK, particularly in areas of traditional free-flight and control-line. Examples include:

Running the Flying Aces meeting for 30 years on the small Ferry Meadows site, encouraging people (100+ entries) to build and fly the small models from their youth in a very relaxed and friendly atmosphere.

Running the Cabbage Patch Nationals for Control-line for 14 years, with 13 circles and 260+ entries.

Developing numerous popular classes suited to small-field flying e.g., Weatherman Speed, 36 Hi-Start Glider and in particular the new Electric E20 Class. The events run

successfully at the Flying Aces are too numerous to mention.

In addition to the events at Peterborough, the club promotes and runs non BMFA competitions at Old Warden and Buckminster which appeal to the traditional aeromodeller.

The club has often provided the organization (and up to 30% of the entry) for the Bowden contest at the Nationals.

Members of the PMFC have provided National Champions in areas like HLG, E36, F1D, C/L and scale.

The PMFC Website is a very useful resource on technical matters. Those attending any free flight or control-line meeting cannot fail to have notice the ubiquitous blue PMFC Sweat-shirts; a highly visible indicator of their influence. Perhaps the most remarkable feature of the club is the unflinching enthusiasm and level of organisation that they bring to all they do, and for so long.”

Aeromodelling Online TV for the Winter months

The winter months can be a little challenging for the Aeromodeller. Of course there is always indoor flying and we are encouraged to build, but with little daylight hours and inclement weather, outdoor flying sessions can be few and far between. In those dark nights and rainy afternoons you could explore YouTube to enjoy an aeromodelling smorgasbord of material. Here are some top picks to get you going:



Maxfliart - A superb channel:

All about the love of hand built, rubber-powered, free-flight model airplanes.

Joshuawfinn



Joshua and Hope Finn's adventures in model aviation. Most content regards Free Flight model aircraft design, flying, and research.



Flite Test:

"Flite Test is here to educate, entertain and elevate those who have an interest in flight. Our website: <https://www.flitetest.com/>"



BMFA YouTube channel, where you can watch the brilliant "In the Air Tonight" series. PMFC member Mark Benns is one of the minds behind this initiative and there are some great topics covered.

Dates for the diary :

Frostbite at Ferry: 28th December 10.00 to 13.00 hrs

Indoor at Bushfield: Saturday 7th January , Sunday 5th February, Saturday 4th March
(all the Indoors start at 10.00 am and are 3 hours long except the 7th Jan is 4 hrs.)

Please keep your photos, stories and competitions results coming in. This is your magazine