NEWSLETTER December 2025

Hello Everyone, unfortunately for this 'end of year' comment, our Chairman Jonathan is not available to write it due to illness, so I will give it a try.

At the end of this newsletter, I have added a photomontage of all the PEEMS activities over 2025, and looking at it, Club-wise, I think we have had a very good year. A lot of the success has been due to Jonathan's very diligent efforts in organising Club activities, a lot of it in the background, so not immediately obvious. As Colin said at the Club Meeting, as deputy Chairman this was the first time in 5 years he has had to stand in for Jonathan such is his reliability. So, we wish Jonathan a speedy recovery.

Referring back to the "Pre-Christmas social" on December 3rd, we had a good turnout, and the itinerary was interesting with some curiosities brought in by Paul G and Mike. Mike didn't have a clue what a couple of the objects did historically, but with members' help we now think we know, although in Mike's opinion the jury still out on one of them.

Following the 'antiques and curios', we had a Christmas raffle with the ticket sales going to a charity nominated by the members. This raffle was a kind of experiment, but members responded really well to the request for quality items and the raffle was an excellent event. I think a precedent has been set for next year's end of year meeting

Talking of "turnout", we have recruited some new members to the Club, and we welcome them all. It is hoped they can bring their experience and skills to enhance the Club's engineering activities. Unfortunately, our very able Secretary David Proctor moved down south to Herefordshire to be near his family, so we wish him well in his new home, and Club. David, however, has left us with a bit of a vacuum administration-wise, which Jonathan was trying to fill with help from Richard Llewellyn. Now Jonathan has had to step aside, hopefully temporarily, we definitely need more help on the Committee. So, if you can help, please tell a Committee member.

Looking at this year's activities, we have had some very good external speakers, Matthew Brown from the Yorkshire Wolds Railway spoke about its part restoration, and Brian Mulvana gave us some very interesting local history about World War 2 radar on the East Yorkshire coast. We have also had some very good talks by our own members, with Rob Davey starting the year with his talk of overhauling his LE *Velocette* motorcycle engine. Chris and Peter Bramley gave interesting talks about their self-designed/built milling machine and model *Blacker* steam hammer respectively, and Paul Gammon explained, in detail, the cutter/grinder air bearing. Once again thanks to Paul and Doug Pickering for renovating the two cutter grinders for use by members in the Club workshop.

We went to the "*Land of Iron*" Museum at Skinningrove (organised by Jonathan) and had a revealing historical guided tour of the village. We will be organising a further visit or more in the New Year. We have also had two good meals out this year, with our annual dinner at Kirkbymoorside Golf Club and David's 'leaving do" at the *Namaste Bengal*.

The 'Bring and Brags' showed off the eclectic skills of our members, and the attention to detail which produced the excellent models on display. It has been interesting to see how a fantastic *Delage* model engine and gearbox have grown into an excellent *Delage* model car during the year. Let's hope that 2026 brings us as successful a year as 2025.

Nevile.

□ **Forthcoming Events.**

- **<u>There is No Club Meeting in January</u>.**
- **Tuesday January 20th Workshop Morning.**
- **Wednesday February 4th Passenger and Goods Workings at the Normanton Motive Power Depot (MPD) in the 50s/60s. A Talk by Allan Dawson.**
- **Tuesday February 17th Workshop Morning.**
- **Wednesday March 4th Aircraft Development. A Talk by Ivan Shaw.**
- **Tuesday March 17th Workshop Morning.**
- **Wednesday April 1st The Trams Of San Francisco. A Talk by John Schofield.**
- **Tuesday April 21st Workshop Morning.**

Club Evening Wednesday 3rd December ~ A Pre-Christmas Social, A Collection Of Curios and A Raffle.

While Jonathan is recovering, our Vice Chairman Colin Bainbridge, ably chaired the evening. Colin mentioned that he used to be Chairman before Jonathan, but is now vice-Chairman, but to give an idea of how reliable Jonathan is as Chair, this is the first meeting in five years that he has had to lead.

With the membership Colin wishes Jonathan a speedy recovery, and looks forward to seeing him back in the new year.

The December Club evening wasn't a formal affair, more of a pre-Christmas social, combined with a "curio corner" and a raffle (for which tickets would have been bought at the door), with the proceeds going to a charity of the members' choice.

- **A Few Announcements**:

  Next year our first Wednesday Club meeting is in February. There will be speakers for the first three meetings.

  - **Allan Dawson** in February. Allan is going to give a talk on passenger and goods workings at the Normanton depot in the 1950s and 60s. Allan is still a fireman on steam locomotives (as a volunteer on the NYMR), and has done a little driving. Incidentally he prefers shovelling coal as that is "less stressful" than driving.

"Steam heads" may be interested to know that recently Allan was, on a few occasions, fireman on the *Tornado* and *Flying Scotsman* locomotives when they visited the NYMR in 2025. So, if you have questions, Allan is the man to ask. The evening should be interesting.

To give a bit of context, Allan previously gave us a talk about the history of the Normanton *Motive Power Department* with personal recollections of his time spent there in the 1960s. This was unique testimony from someone who was actually there. His talk is written up (with some personal as well as historic photos) in the April 2024 Newsletter.

  - **Ivan Shaw** in April. Ivan is returning to PEEMS to give us an update on where he is with the SEKR single seat aircraft. Ivan designed SEKR from scratch as a 'personal' single seat carbon-fibre aircraft which would fill a niche in the aircraft sales market. In April 2019, PEEMS was invited to Ivan's Hutton-le-Hole workshop to visit the prototype. Since then, based at Leeds East Airport (ex RAF Church Fenton), he has obtained flight clearance from the *Light Aircraft Association,* and he has flight tested the aircraft (see below).

He is now pursuing turning the aircraft into a drone/personal aircraft hybrid. So have your questions ready!

Ivan had already designed, built, flown and sold many two seat *Europa* composite aircraft, forming a company in Kirkbymoorside to enable this. He then upscaled the *Europa* to create the *Liberty* composite aircraft of which many have been sold. Ivan has given talks to PEEMS about aircraft design, build, and test flying in September 2018 and October 2022, and those talks have been written up in those Newsletters. There is also a link to Ivan's interview with *Flyer* Magazine in the August 2021 newsletter and a link to his aircraft promotional video in the August 2023 newsletter.

Recently he has been made a Fellow of *The Royal Aeronautical Society* and when he went to London to receive his Fellowship, told the 'great and good' in a seminar that "it's alright designing aircraft, but you have to sell them as well", which is an art in itself. Hopefully he will dwell on that aspect of aircraft development.

Ivan has also appeared in the "*Masters Of Reinvention*" television series on the "U&*Yesterday*" TV channel which aims to encourage young people to engage in engineering activities. This particular series has raised critical comments from some PEEMS members, so it will be interesting to hear Ivan's take on the programme.

Not bad for a 'lad from Barnsley' who started out as a drummer in a P&O cruise ship orchestra.

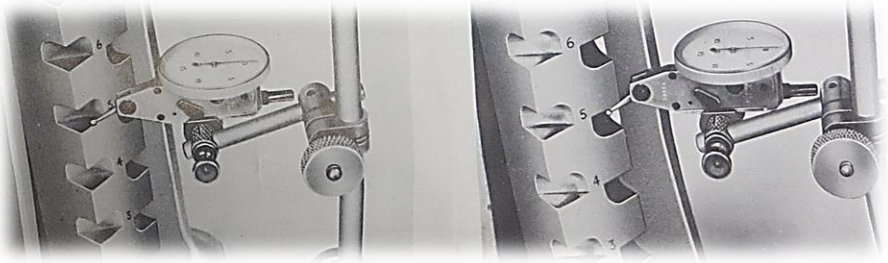
We had a talk by Jonathan Selby in June 2022 about his "ground effect vehicle" prototypes, but have heard nothing since. Ivan is still in contact with Jonathan, so he may be able to enlighten us as to the progress on that project.

  - **John Schofield** in May. John will be talking about "*The Trams Of San Francisco".*

If members have any ideas for speakers or visits, please let Jonathan or The Committee know. It would be preferred that speakers and visits should reflect our engineering interests.

- **‘*Just A Collection Of Antiques And Curios’*.**
  - **Paul Gammon: Micro-Bar Height Setting Gauge.**

This is what they used in the tool room for accurate height measurement. By twisting the knob on the top, the ‘beam’ can be moved up and down to an accuracy of 0.2 thou.

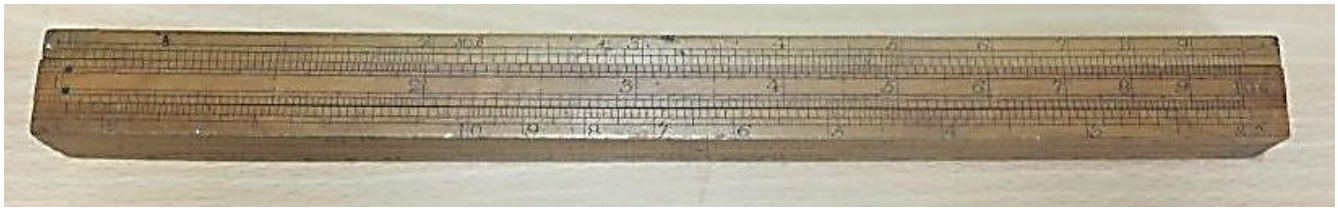


You can put a Dial Test Indicator on the top and bottom of the notches for setting up. This is a very precise method of sizing that could be checked on a surface plate. This is the forerunner of the digital measuring equipment we saw on our visit to *Forum Technologies* in Kirkbymoorside in December 2023.

  - **Mike Sayers: Three Mystery Objects For Discussion.**

Mike said that of the three objects that he had brought along for discussion, two of them he’s had for “donkey’s years” and doesn’t have a clue what they are for. He brought them along to “get educated”, so any help would be appreciated.

Object 1: A *Wooden Slide Rule* for use by excise officers, to determine alcohol and malt (a taxable product) content for taxation purposes.



The object is a wooden slide rule, in fact two slide rules, one on each side, with different calibrations. Mike couldn’t work out what the calibrations were, but he brought it along on the evening because it appears to have something to do with alcohol measurements. It has some symbols on it and the words *“Gauge Points for Ale, Wine, MT, Malt, G St, D st, Hs Hot, Hs Cold, G SS, W SS, FG, PG CG, and GB”.*

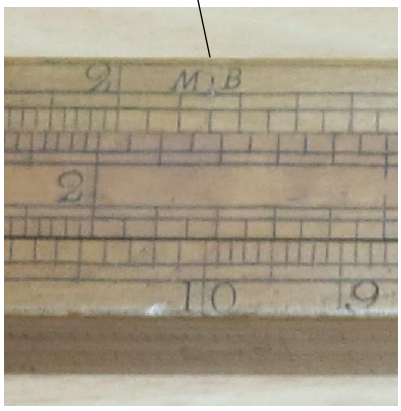
It also had, Lewis and Briggs, Makers, Bird In Hand Court, Cheapside, London, written on it.

According to Gloria Clifton, the firm of *Lewis & Briggs* operated in London from at least 1795 to 1799.
Ref: The Smithsonian Learning Lab.

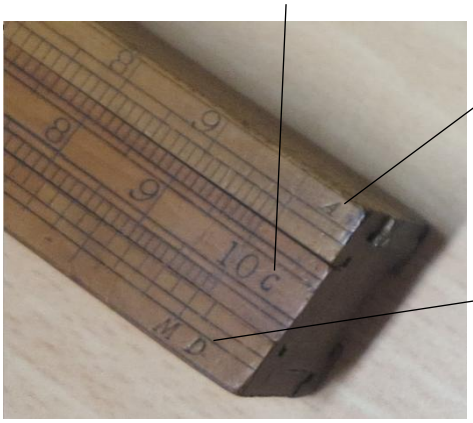
This slide rule would have been used by excise officers to determine the malt content of alcohol for taxation purposes. The excise officer would use various callipers and dipping rods to measure the cask and the depth of liquid in it and would then use the various scales on the slide rule to calculate the volume of ale, wine or spirit.

Gauge Points on this side of the slide rule:

MB ~ *Malt Bushels.*
Excise Officers used the MB mark to perform calculations related to Malt which was a product subject to taxation.
MB – Volume of 1 Malt Bushel (2150.42 cubic inches)



C ~ Circumference of a circle of diameter 1 = π (3.14)



A ~ Ale Gallon
(282 cubic inches)

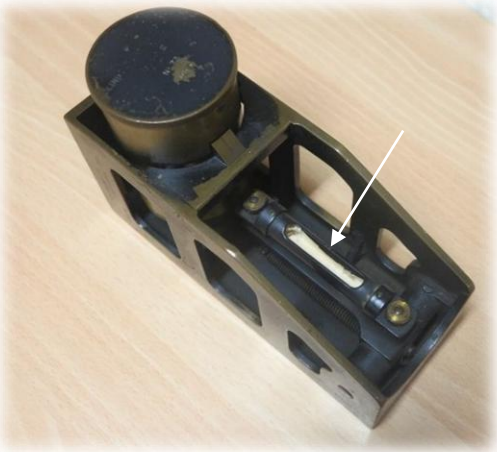
MD ~ *Malt Depth Gauge* determines the malt cubic content from measured depths crucial for taxation

Other Gauge Points:

- M.S – Malt Square, the side of a square vessel containing one Malt Bushel per inch depth (46.37 inches).
- M.R – Malt Round, the diameter of a cylinder containing one Malt Bushel per inch depth (52.32 inches).

Thanks to Paul Gatenby for the extra info.

Object 2: Clinometer.



Mike had never seen a clinometer like this one, and he found it in an antique shop. It's delicate and has very tiny divisions on it. It's made of bronze which makes Mike think it was destined to stay in a temperature-controlled room. The glass bubble of the spirit level has gone (indicated). Mike doubted whether he would be able to find one sensitive enough to differentiate between the fine micrometer settings. What the actual spirit level looks like, is shown overleaf.

Comment: It may be bronze, because it could have operated in a sea water environment.

Q: Do you think it was for a gun?

Mike: It's very accurate, it's graduated in 1/100th of a degree.

Further research on the internet has found a similar clinometer for sale on e-bay. It is labelled as an *'Antique WW1 Artillery Clinometer".*

Antique WW1 Artillery Clinometer, James Hicks, Hatton Garden, London, Militaria

Object 3: "Ball Resolver".

Mike said that those who have been modelling for a number of years will know someone called *Whiston*, who had a catalogue selling government surplus equipment in the 1960s and probably into the 1970s.

The catalogue sold nuts and bolts etc. and if you bought those in a certain quantity, there would be a discount, either in cash or additional items. Mike would always ask for the "additional items" because of the element of excitement in not knowing what you would get. Mike dealt with *Whiston* over a long time during his school days. *Whiston* had this item called a "ball resolver" in his catalogue which added "*just the thing for the enthusiastic modeller, full of ball races and things that are very useful.* So, at the end of one of Mike's orders, he requested a "ball resolver", and this is what turned up. It's an ingenious piece of engineering, and contains one large ball. What Mike thinks it does, is resolve the movement of two of the shafts, but quite what it's for, Mike has no idea.

Colin said it was probably a "war surplus" item. *Whiston* was a product of the post war years. There was a lot of war surplus equipment available in the 20 years after the war.

For example, you may find an advert in the "*Model Engineer*" magazine " in the late 1940s, and into the 1950s, where surplus equipment was sold to model engineers on the basis they may be a good source of bushes, ball races, and gears, just the things that model engineers would find useful.

Subsequent to the meeting, Paul Gatenby has done further research and has found a YouTube video, which describes how the "Ball Resolver" works. The YouTube link is on the following page.

Summary:

In aircraft navigation, an analogue Ball Resolver was an early key mechanical component. This system used a steel ball to perform complex trigonometric calculations, in an era before modern digital avionics.

Function and Operation: The analogue Ball Resolver was essentially a sophisticated form of a mechanical analogue computer. Its primary function was to continuously convert the aircraft's movement (measured as ground speed and heading) into changes in its geographical coordinates (North/South and East/West position).

Inputs: The system received mechanical inputs from instruments like the airspeed indicator and the gyro compass (heading indicator).

The Ball Mechanism: A steel ball was rotated and the rate and direction of this rotation were analogous to the aircraft's ground speed and heading.

Outputs: Two wheels, positioned at 90° to each other, relative to the ball's rotation, would track the ball's movement. These mechanical outputs were converted into distance travelled along North/South and East/West axes, by a system of levers and linkages.

Calculation: Navigators or an associated analogue computer would accumulate these distance increments over time to continuously track the aircraft's changing latitude and longitude from a starting point.

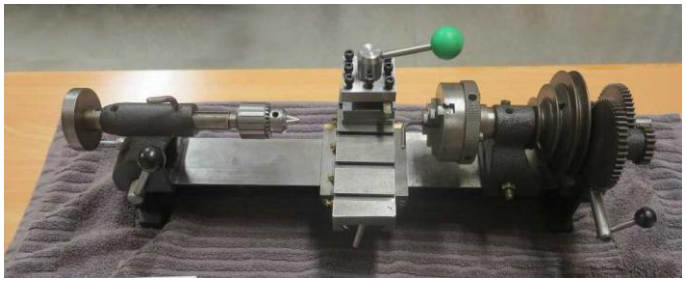
In Conclusion: The Ball Resolver performed a continuous trigonometric function (vector resolution), using a mechanical system to calculate the sine and cosine components of the aircraft's movement vector in real time.

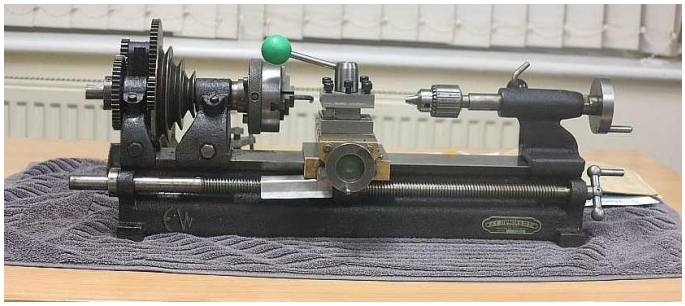
Navigation computer and Ball Resolver: This video shows a lost technology used in the past for aircraft or missile navigation: the Ball Resolver. The first part shows the theory of the Ball Resolver. On the second part, a real Ball Resolver is presented and basic tests are performed on that device. 00:00 - Intro 00:05 - Travelled distances calculated from speed and heading 02:48 - Ball Resolver Theory 09:21 - Ball Resolver patent drawing 10:32 - Nimrod Sight Computing Resolver teardown 13:00 - Quick test

https://www.youtube.com/watch?v=SKPPBgBhxNs

To see video press on link. To return to newsletter, press on the back arrow on the top left hand of the screen.

- **The EW Lathe. Mike Sayers.**





Mike began by saying that in the 1950s, this little lathe was advertised as a "*modular purchase lathe*". For £12 you would buy the head and tail stocks, and then you could add to it, and build it up into a complete machine with countershaft, screw cutting etc.

In 1955, when Mike was eleven, this was the machine he wanted after seeing the adverts. However, even in its cheapest form it was always "out of reach" with regards to expense.

For that reason, Mike set out to make the parts himself. He made a wooden bed with mild steel strips screwed on top. His father helped him cast an aluminium 'U' shape to make the headstock. Mike's parents were caretakers for the local chapel which had a big coke boiler underneath. On Saturday nights, when they stoked the boiler to heat the chapel for the Sunday service, there would be a good fire going, to melt the aluminium.

During 1957, a series of articles by Martin Cleeve appeared in *Model Engineer* magazine. He was a remarkable engineer, who made all sorts of lathe accessories and workshop equipment, prefabricated using mild steel sections.

He made a number of improvements to the *Myford ML7* lathe, with a different cross-slide, and a rack feed tailstock. He also designed an arrangement to change the gears just by swinging a lever, and a fine feed.

He then turned his attention to the little EW lathe and did the same things he did on the *ML7*, just by scaling down. In the end, in Mike's opinion, he made a 'magic little machine tool' out of it. Even though Mike never got to do anything with the EW, in the back of his mind he has always wanted to own one of these little lathes.

At one of the Harrogate Model Engineering shows about fifteen years ago, Mike found an EW lathe under a bench on one of the stalls, and he bought it. It's been sitting in the back of one of his workshops with a pile of *Model Engineer* magazines which contained all the articles by Martin Cleeve.

Rapid gauging and tooling facilities are an advantage on any lathe

Modifications to an EW lathe

In this article MARTIN CLEEVE discusses a saddle dead stop

ALTHOUGH we had this lathe on test in my workshop, circumstances would not permit of anything very extensive. However, my friend has now had uniform and full contact; the right hand or leading bearing shows that the bush is only gripping at the front and rear—perhaps contacting or rubbing would be better words—but as it is giving satisfactory results I am square bright steel, in such a manner that the rod and locking arrangement can be accommodated in the "head." Fig. 1 will give an idea of the appearance of the arrangement. It

Mike always intended to work on the EW as a project, but things kept getting in the way.

A short while ago Brian Stephenson was in the "project doldrums", because he had finished the hot-rod project for his friend. Mike offered him this project, which was basically modifying the EW to Martin Cleeve's redesigns. Brian agreed to do the work on it, and that's why the EW was at the meeting.

Brian has been making all the components that Martin Cleeve designed and presented in the *Model Engineer* magazine. Although everything on the lathe looks original, the 'T' slotted cross-slide, and the four-way tool post (instead of a clamp), have been machined by Brian using Martin's drawings. There's also the 'swing-clear' boring tool. This machine is going to be marvellous when it's finished.

Q: Do you think the EW has ever been used?

Mike: There are hardly any marks on it and there are no 'dints' on the chuck. It's twenty-eight years old.

Brian: What I hadn't realised was that, although I've made the components out of solid, Martin Cleeve designed the components on the drawings to be fabricated from 'bits and pieces'.

Colin: During my readings of *Model Engineer*, I found Martin Cleeve to be fascinating. At that time in the 1940s and 1950s, the contributors to *Model Engineer* magazine were mostly time-served engineers, and things were made with dove-tail cutters and castings (done in the "right" way, if there is a "right" way). I found Martin's articles so inspirational because, as Brian has pointed out, Martin designed his components so they could be fabricated for use on the ML7 lathe, and also on the EW lathe.

Martin would design and build something out of mild steel sections (sometimes machined) and then basically screw them together with cap heads. The running joke was that some components were 'bristling' with cap head screws. It sometimes looked "*Heath Robinson*", but there was no doubting the quality of the engineering at the end of it. He achieved the result he was intending. I know for the EW and the ML7 lathes, Martin designed a 'T' slotted face plate, which I thought was a great idea. I had never come across such a thing. All the surface had been built up through successive layers. You could use 'T' shaped nuts from other machines to hold things on the faceplate.

From what I gathered, Martin Cleeve was something to do with the electrical supply side of *Southern Railways* in the 1940s and 1950s, when *Southern* was electrified, working in one of the control rooms from 1935 to 1973. I believe he did an electrical engineering apprenticeship where he would have been trained in both the mechanical as well as the electrical engineering disciplines.

In my opinion, he did a great deal to promote model engineering throughout the 1950s and 1960s, simply because he broke things down to 'bite-size' bits so people thought "I could have a go at that".

The *Model Engineer* offices I believe, up to the mid-sixties, had a workshop of their own. The publisher was a model engineer himself, and whilst he built what became a large publishing empire involving technical subjects, I think *Model Engineer* magazine was his favourite project and resources were put into it. The original Martin Evans put a lot into it in the 1960s and 70s. In my researches, I found that they used an EW lathe in their own workshop, and though it was not of the highest precision for its class, it was impressive in what it could do. It might look like a humble machine, but it is certainly capable of achieving good results.

Mike: The advantage of the EW lathe over a Chinese lathe, nowadays straight out of a cardboard box, is its adaptability. When you buy a mini-lathe now, it's an entity that is difficult to adapt to do operations not normally associated with a lathe. With the EW, it is so adaptable, and you can set it up to do operations other lathes can't. This is the reason why the *Myford* lathe became so popular. In the early days it was a basic lathe, but then it was developed with accessories and adaptations so it could do operations like milling, for example, and it basically became a workshop within itself. The EW lathe is just as capable.

- **The Raffle.**

  Many thanks to the members who brought along quality items for the raffle. This contributed to the evening being a real success. There was a good range of prizes on offer for those who bought tickets at the door:

  - Home-made cake,
  - Home-made jams and chutneys,
  - Pack of biscuits,
  - An XP Home Arc-Welder (and brazing tool),
  - An AVO meter,
  - A turned oak bowl (turned by a well-known wood craftsman in our membership).
  - Several tins of chocolates,
  - A 2-in-1 paper trimmer,
  - Bottles of wines,
  - A boxed dial indicator,
  - A boxed micrometer,
  - A pressure gauge (steam pressure?),
  - Boxes of tools,
  - Height vernier calliper gauge.

The raffle raised £72 for "*Changing Faces*", a charity nominated by the membership, and for which Mike has had some personal involvement.

CHANGING FACES
Providing support and promoting respect for everyone with a visible difference

- **Can Hi-Fi ruin your life; will a Thermionic Valve bring happiness?** ***Colin Bainbridge*****.**

Part 4 – On the Threshold of a Dream – Something for Christmas.

I left you earlier this year, as I was grappling to keep my new addiction under control. For having been united once more with the technology of my youth, the thermionic valve, I was finding it ever harder to resist the temptation to find out more about it; in fact, I sensed it was becoming an obsession.

As with any addiction I felt I should seek the best possible help, but when that didn't appear to be available, I turned instead to our worthy Editor, that pillar of stability and strength (*'get on with it' – Ed)* to see what could be done. He told me the best thing was not to talk about it, don't let the word out, and whatever you do don't write anything down.

So, if you are now reading this, despite it costing me a few 'bob' for heads to look the other way (thanks again Nev, a little something is in the post), be assured you are doing your bit to help one of your fellow members in allowing it all to come out in the open at last.

Where to begin.....?

As I now sit at the keyboard, I am finding it hard to know where to start, for my story is not yet over. In the last year I have travelled further into the land of the valve circuit in search of knowledge and wisdom, and in so doing found it taking me in one or two unexpected directions.

I feel I should then start by acknowledging my weakness, for in but a few short months after my last article appeared, having met what I thought would be my one and only comforter, my humble (but lovely) *Rogers Cadet 3* valve amp,
I was starting to feel the desire to go even better. In my mind the bijou valve of the *ECL86* Triode/Pentode was being overshadowed by visions of the 'more beefy' *KT66* Tetrode.

I fought it as long as I could...but failed. This then is the story of how I became the proud, but poorer, owner-operator of a pair of the 1950s legendary British hi-fi amplifier, the *Quad 2* Power Amplifier.

It would though, be wrong of me to let you think that after a year of study, I had nothing more to learn, for as with so much in life, it hasn't been like that. Instead, my education has been *ad hoc*, starting by trying to tackle several of the thickest text books on my bookshelf in an effort to satisfy my thirst for knowledge, only to be disappointed six months and four volumes later when I had to admit I didn't understand one word in ten of them. Nothing daunted,
I sought the more unorthodox approach, took myself in hand and said, ''*sod it, I am just going to buy one anyway''.*

So, if what follows lacks a level of technical detail that the more knowledgeable may crave, I can only apologise and point you to the 'Suggested Further Reading' section that will appear at the end. But for those that may just want to perhaps fill the odd five minutes while waiting for their breakfast toast to pop up, and wish for something to entertain them whilst sipping their tea, you need look no further.

Finally at the end of this introduction (I told you Nev, I could stretch it to 500 words), I will just say from the outset that this has been a personal journey of discovery for me, and my musings are not trying to prove anything, or make any point. For the world of Hi-Fi is highly subjective and valve circuits are just... bewildering, so if any aspiring audiophile gets pleasure from their set-up, it matters not whether it cost ten or ten thousand pounds. If they like the sound of it, that is all that matters....HOWEVER, where I do have issue, is being *told* that something sounds better, just because someone's chequebook is bigger than mine. Let's just agree it's like art, or how hot you like your curry, everyone likes something different.

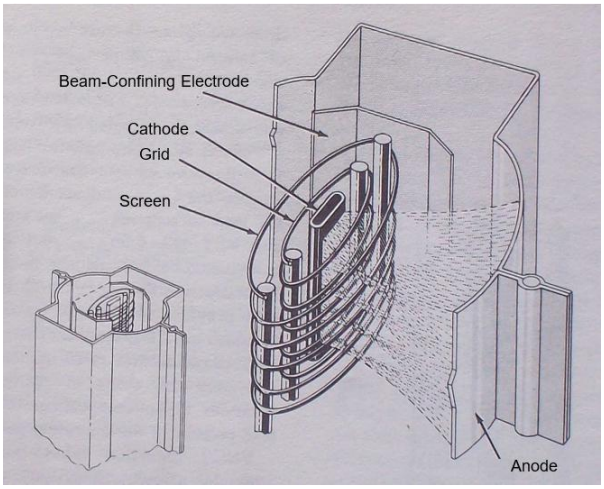
The Amplifier

Just in case anyone is thinking that I have abandoned any notion of engineering in my ramblings, be assured I will mention bits and bobs as they become relevant, though by necessity they will be mainly electronics biased; however, I am nursing the hope that one of the modern valve manufacturers will allow me to describe the metal-bashing processes involved in making a valve, and how they eventually put it all inside a bottle.

Let's get the temptation started then, by acquainting you with my new arrivals, by showing how alluring a Quad amplifier can be.

I fancy not many could keep a check on their emotions upon seeing one of these for the first time.


QUAD 2 Amplifier



Here, purely by co-incidence and not-so-good fortune on my part, we also have a couple of pictures of the outer and inner engineering structures inside two of the main valves. These are the *KT66* beam Tetrodes which do the heavy work in the amplifier's push-pull output circuit. I have also included the diagram that appeared in the February 2025 Newsletter to help identify the bits inside.

These particular examples were made in England by GEC around 1980. The naked one on the right (which provided one half of the push or the pull) was the brother of the fully clothed one, and lived happily side by side with it. This happened until the day I started re-fettling the first amp; when having removed all of the valves, one of them sensing freedom for probably the first time in nearly 50 years, got carried away and leapt onto the floor teaching me the first lesson in handling vintage hi-fi: glass rarely bounces, and mistakes don't come cheap – so be careful!

The Quad 2

My particular amplifier(s) were made by the *Acoustical Manufacturing Company* in Huntingdon England, around the mid-1960s, when 'butch' electronics were still built into a heavy metal chassis.

The name Quad stands for: **Q**uality **U**nit **A**mplifier **D**omestic - named by its creator Peter Walker – so you will probably get a feel for the period from which the design originated, immediate post Second World War, when this sort of descriptive name had routinely been used within the fighting services to identify pieces of equipment and their use.

The *Quad 2* was an improved version of the first power amplifier from this company, the model *QC12/P*, which had been aimed at the embryonic hi-fi market that came into existence in the late 1940s. By the time the microgroove LP (long playing) record appeared in Britain around 1950, with it came the requirement to have a quality amplifier capable of getting the best from the new medium - it should of course be borne in mind that hi-fi in this period meant mono sound, that is, one speaker only.

Pre-amplifier

Ironically the idea of having a 'quality' amplifier to reproduce records created problems of its own. For up to the introduction of the LP record that played at 33.3 rpm, recordings issued on the prevailing 78 rpm format were recorded using different recording characteristics depending on which company had made the recording. In the days of low-fi, that is radios and radio-grams, this difference didn't matter much, as with the help of a 'tone' control they could reproduce whatever source was available in a pleasing manner. The expression ''*has a lovely tone*'' springs to mind here.

So, when Peter Walker came along with his new amplifier, capable of faithfully reproducing all audio frequencies, 78s now sounded overly rough. His answer was to introduce a complimentary piece of equipment to go with his *Quad 2* amplifier, called a "preamplifier" which contained controls that hadn't previously existed outside of the recording studio.

In his preamplifier design, he incorporated more sophisticated bass and treble controls and a filter specifically for high frequencies that could be ‘tuned’ to take out a lot of the unwanted harshness. Additionally, the design included a couple of switchable pre-set filters matched to the most popular recording characteristics of the time, that could be selected to compliment the record being played.

I think it would be fair to speculate that Peter Walker knew these filters would only be required until micro-groove records became the main format available, and that in the not-too-distant future, stereo (more anon) would make an appearance and with it the requirement for an entirely different pre-amplifier, capable of producing two channels of sound. You will be pleased to learn that the pre-amplifier is not going to be part of my story this time, as the five minutes I am allocated before the toast starts to burn, will not permit it. I will instead concentrate only on the power amplifier.

Buying the Amplifiers.

Having decided I could not hold off any longer, I scanned the pages of ‘*Exchange and Mart*’ for something suitable.

This brought little in the way of excitement, largely because when I put it down again, I realised it was from 1985, but nothing daunted, I instead made straight for the modern on-line version and found a nice looking amplifier being sold not far from me; better still, by a hi-fi establishment which gave me the confidence to believe it would work (which is not a given when buying something unseen from someone’s dusty loft in outer suburbia).

With a date and time agreed, and with my plastic friend safely tucked into the inside pocket of my jacket, I headed the car westward and towards the address I had been given.

- Just before I go on, I should give you a little background to our car situation: We are a two-car family, one to do the sight-seeing (in my best beloved’s), and the other (mine) to do all the rough work. I would, if pushed, have to admit I may have let the appearance of my car slip a little, partly because of the various tasks it is put to, and partly because it has to live under a tree on the opposite side of our little single-track lane where we live. And yes, it’s been a while since the chamois was last run over it.

Given its location, I am sure you will not be surprised to learn that more often than not, it has the odd spray of dried mud affixed to the panels that face the road, thrown up by a passing car or tractor, and naturally if one keeps a car under a tree, then you might reasonably expect a light patina to form on the coachwork, and for the window sills to promote a liberal growth of moss here and there.

However, in the ordinary way of things, these additions are usually not enough to draw the eye of the casual observer, as this is normally left for the dent in the rear door and wheel arch where we wedged it against the gate post of our narrow driveway one day, and of course in poor light none of this is an issue anyway.....

To continue, as this was to be just another routine pick-up for me and my car, I gave none of the foregoing a thought. That is until I arrived at the premises of the business in question, where I had been ‘invited’ to park in their *exclusive* customer car park. I did mention earlier that prices can be high in the hi-fi world, but to say I felt a touch uneasy as I swung my car into their car park, to park beside a lovely looking sports Porsche, which itself was parked beside what I think was a gleaming red sports Ferrari, would be an understatement.

It seems that when selling hi-fi at this level, it is necessary to go all out to impress the ‘client’. This I discovered when trying to enter through the swing doors at the front of the building. For entry is by appointment only, where upon pressing a buzzer, the door is released allowing you to enter into a reception area, which in itself would give any high-class 5-star hotel a run for its money.

Having given me a preliminary look-over as a hand was extended in greeting, my host then took on a decidedly pained look as he looked past me, and out in the direction of my car. The once beaming smile melted swiftly away to more of a tight grimace as we shook hands, suggesting to me that he now considered my car and me were not natural inhabitants of such an emporium of quality. However, to his credit he was most civil as he steered me to the various items I had come to see, albeit heaped in a floppy cardboard box on the table in the reception area, rather than laid out in a seductive manner somewhere altogether more in keeping with their place in hi-fi history.

After the business part of the visit was concluded, and the various items were being collected up and heaped back once more into the box, (this time by his assistant), we found ourselves with a moment to fill. It was then I made the next social *faux pas* by inviting myself into the '*Audio Lounge'* after first calling it a '*showroom*'. Again credit to my elegant host, for he acted most graciously and with the utmost tact as he leapt ahead of me and did his best to round me up like an errant sheep that had escaped the watchful eye of the shepherd; all the while shooting anxious glances out in the direction of the car park, looking out for someone altogether more important to their business who was about to arrive, and he had decided he really didn't want them, me or my car to meet. In this, however he failed.

Returning to the reception area, I decided the flimsy box was not really suitable to make it to my car (Quad amps are not light), so foolishly I said I had a "stout box" in the back of my car which I would fetch. This of course brought said host to the swing doors so he could let me out, but from where he could also have a much better view of my car and me as I opened the rear door revealing the assorted bric-a-brac within.

You will be pleased to learn that I refused to let myself feel intimidated by the eyes that I knew were now to be upon me as I struggled to free the box I wanted from under the old curtain that I keep in the car to throw over the dog cage when it's in the back, only then to discover its progress was being hampered by the weight of the burnt-out toaster I had not got round to taking to the tip; all this while fighting a losing battle to free it from out and under the half ripped box the dog food comes in, also destined for the tip.

Finally, as I emerged triumphantly holding the box, I was just in time to see the purple-coloured box that pussy's dinner comes in, topple over under the weight of the shabby wax coat kept in the car in case of unexpected bad weather, and onto the ground. At this I glanced over my shoulder to see a look of frozen horror on the face of my host, much in the manner of Alan Bennett upon finding 'the bag lady in the van' parked on his drive.

By the time all the various items had been re-arranged and fought back into the limited space left on the back seat, my host's next customer had swished by me in a vision of white luxury BMW and alloy wheels, issuing enough loud music from within, at a level that I hoped to eventually achieve with my 350volts and 10 valves going all out. Inwardly I gave a sigh of relief as it finally came to rest, parking (wisely I thought) beside the red Ferraris; for the thought of settling an insurance claim for my inadvertently filleting the side of it, as I tried to reverse out, didn't bear thinking about.

Possibly it's best not to dwell much more on the parting, let's just say I think my host and I, both learnt something that afternoon about the different social circles which we inhabit. I for one, found it a bit of an eye opener, for it made me realise that: a) what seems a lot of money to one person, could just be pocket money to another and b) it might be wise in future to at least throw a bucket of water over the car before going out in daylight. As for *'mine host',* I imagine he will have been dining out on the event ever since, but then it's all part of life's rich tapestry.

Next time: Yes, we look inside to see what my purchase has revealed, and is my budget going to be big enough after all?

A HAPPY CHRISTMAS TO ALL, Colin.

- **Suggested Further Reading:** Norman Crowhurst - Understanding Hi-Fi circuits (1957)

- **PEEMS 2025 ROUNDUP**

  - **FEBRUARY: LE Velocette Main Bearings, Crankshaft and Big-End Overhaul. A Talk by Rob Davey.**

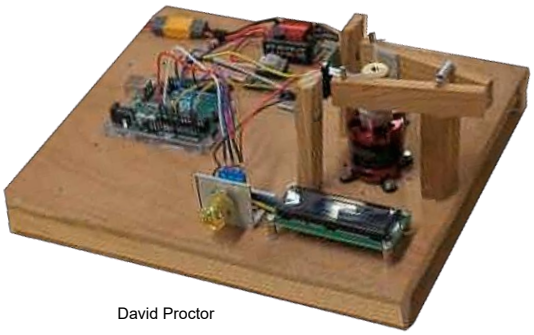
  - **MARCH: The Yorkshire Wolds Heritage Railway (YWR) And The Malton To Driffield Railway (MDR 'Malton Dodger'). A Talk By Matthew Brown.**

Screen shots of track and drone footage from the first Youtube Video below (*Wobbly Runner Exploring*)

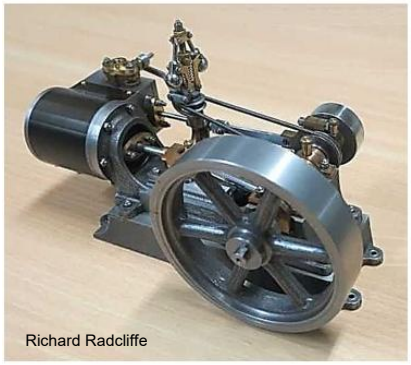
  - **APRIL: The Cutter Grinding Tool ~ A Talk By Paul Gammon**

PEEMS Annual Dinner At Kirkbymoorside Golf Club

- **MAY : Spring *'Bring and Brag'***



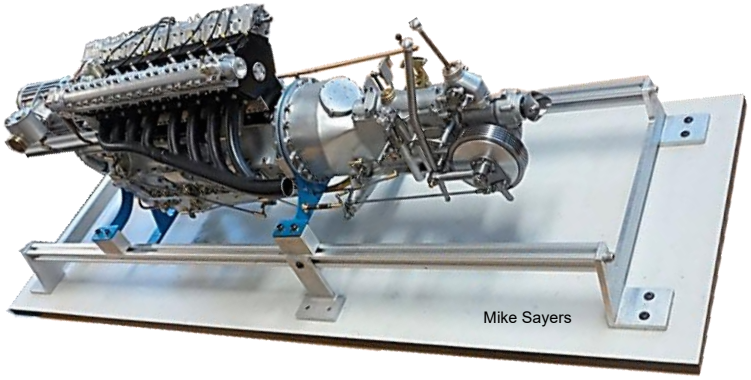
David Proctor



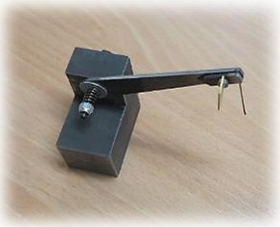
Richard Radcliffe

Rob Davey

Paul Gammon

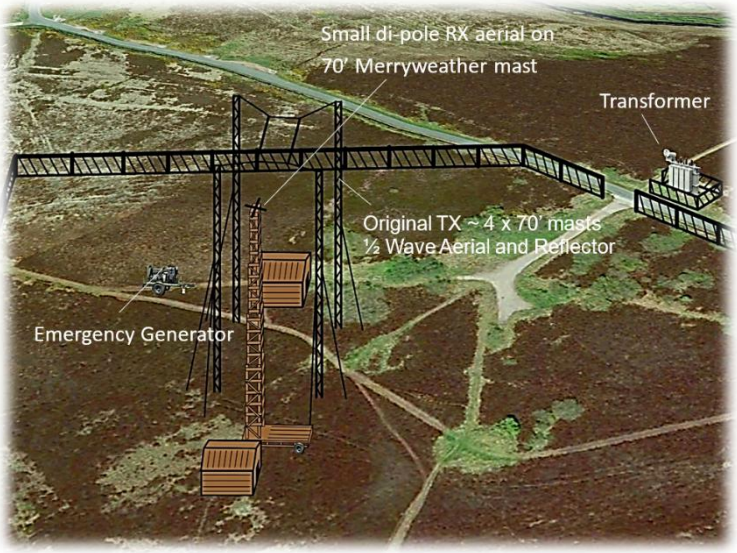


Mike Sayers



Tony Leeming

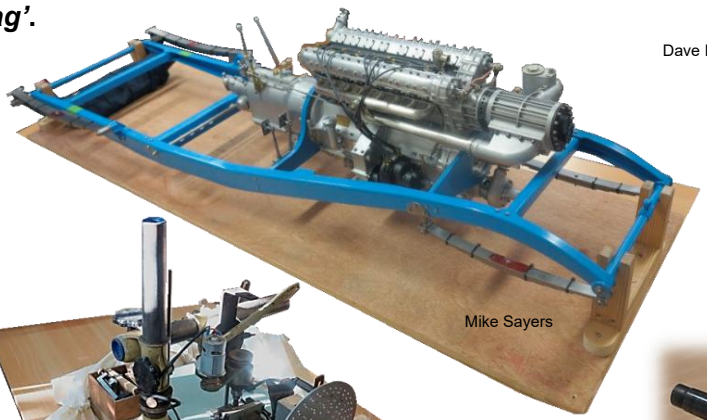
- **JUNE: East Yorkshire World War 2 Radar Stations. A Talk By Brian Mulvana**



David's Leaving Do.

- **JULY : Summer *'Bring and Brag'*.**

Brian Stephenson



Mike Sayers

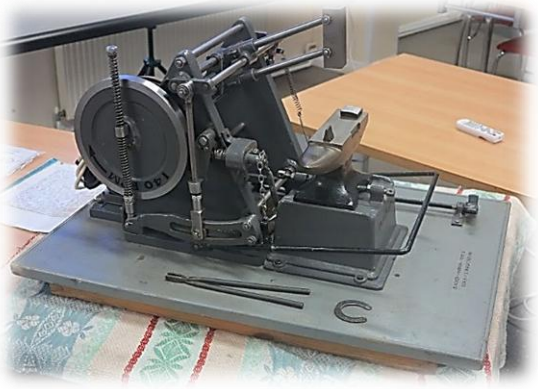
Dave Hick

Paul Gammon

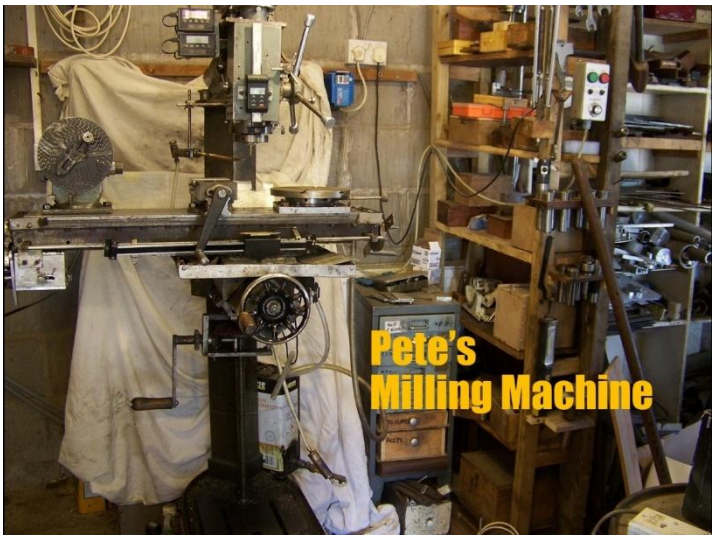
Peter Bramley

Mel Doran

- **AUGUST : ⅓rd Scale Blacker Power Hammer Model. A Talk by Chris Bramley.**



- **SEPTEMBER : 'My Milling Machine'. A Talk By Peter Bramley**

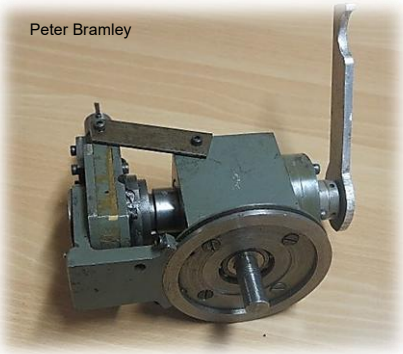


PEEMS Visit The Skinningrove *Land Of Iron* Museum

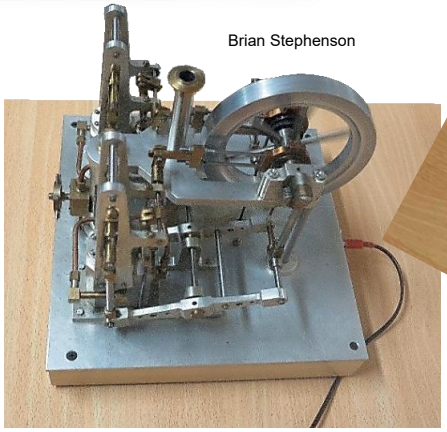
- **OCTOBER : Autumn *'Bring and Brag'.***

Chris Bramley

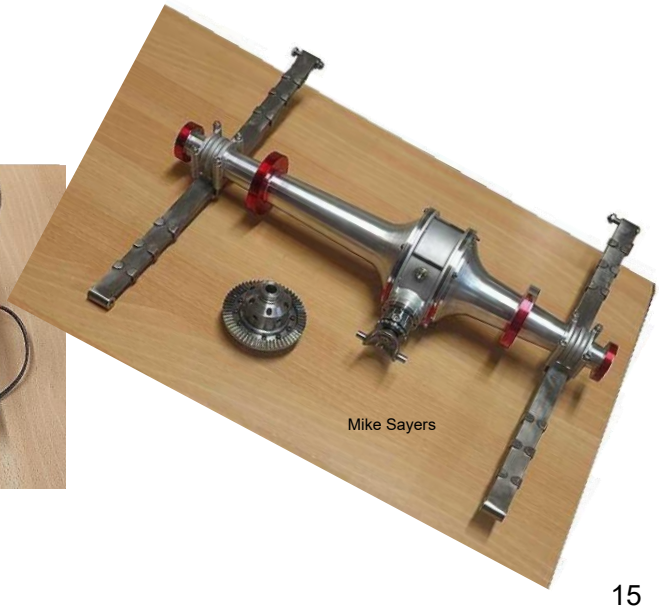
Peter Bramley



Brian Stephenson



Richard Radcliffe

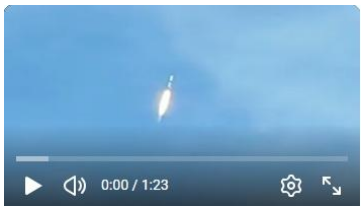


Mike Sayers

- **NOVEMBER : Annual General Meeting and Chairman's Award.**

Paul Gammon receiving *The Chairman's Award* on behalf of himself and Doug Pickering, for the Cutter Grinder Refurbishment.

- **Falcon 9 Rocket Launch Carrying Starlink Satellites.**



I thought I would end the Newsletter for this year with a bang, or is that a flash? Pressing the link will send you to a video "wot I recorded on me 'olidays" on the 27th January at Cape Canaveral at UTC-5 (5.05 pm)

https://youtu.be/EIdX9YbnSGs *to return to newsletter press back arrow at top left-hand side of screen.*

[hide] Flight No.	Date and time (UTC)	Version, booster[j]	Launch site	Payload[k]	Payload mass	Orbit	Customer	Launch outcome	Booster landing
429	January 27, 2025 22:05[274]	F9 B5 B1076-20	Cape Canaveral, SLC-40	Starlink: Group 12-7 (21 satellites)	~16,500 kg (36,400 lb)	LEO	SpaceX	Success	Success (ASOG)
	Launch of 21 Starlink v2 mini satellites, including 13 with direct-to-cell connectivity, to a 559 km (347 mi) orbit at an inclination of 43° to expand internet constellation.								

This is a '*Space X' Falcon 9* rocket launch carrying *Starlink* satellites into orbit. As it was *'Space X',* the captain warned us to dodge the debris if it exploded in the near vicinity! To be fair there's only been a few early failures. It was a successful launch, and we were fortunate to see it as we were rescheduled because of the worst snow storm in New Orleans since 1895! A lady at the terminal told us that, at the time, these launches were fairly regular and rattled her windows, doors and tiles. You can see the sheer number of launches (e.g. 163 in 2025 and 134 in 2024), on the Wikipedia page below:

https://en.wikipedia.org/wiki/List_of_Falcon_9_and_Falcon_Heavy_launches

Sorry about the wobbly camera work towards the end, but that's because of the limitation of my zoom lens, but you get the gist. A lady was showing us her higher quality video which showed the separation of the reuseable stage which was destined to land on an *Autonomous Spaceport Drone Ship* (ASDS) off Bermuda, in this case a ship named "*A Shortfall of Gravitas"* (*ASOG*).

Contact: If you would like to contribute to the Newsletter, the contact is:
Nevile Foster Tel 01751 474137 or e-mail nevf123@outlook.com