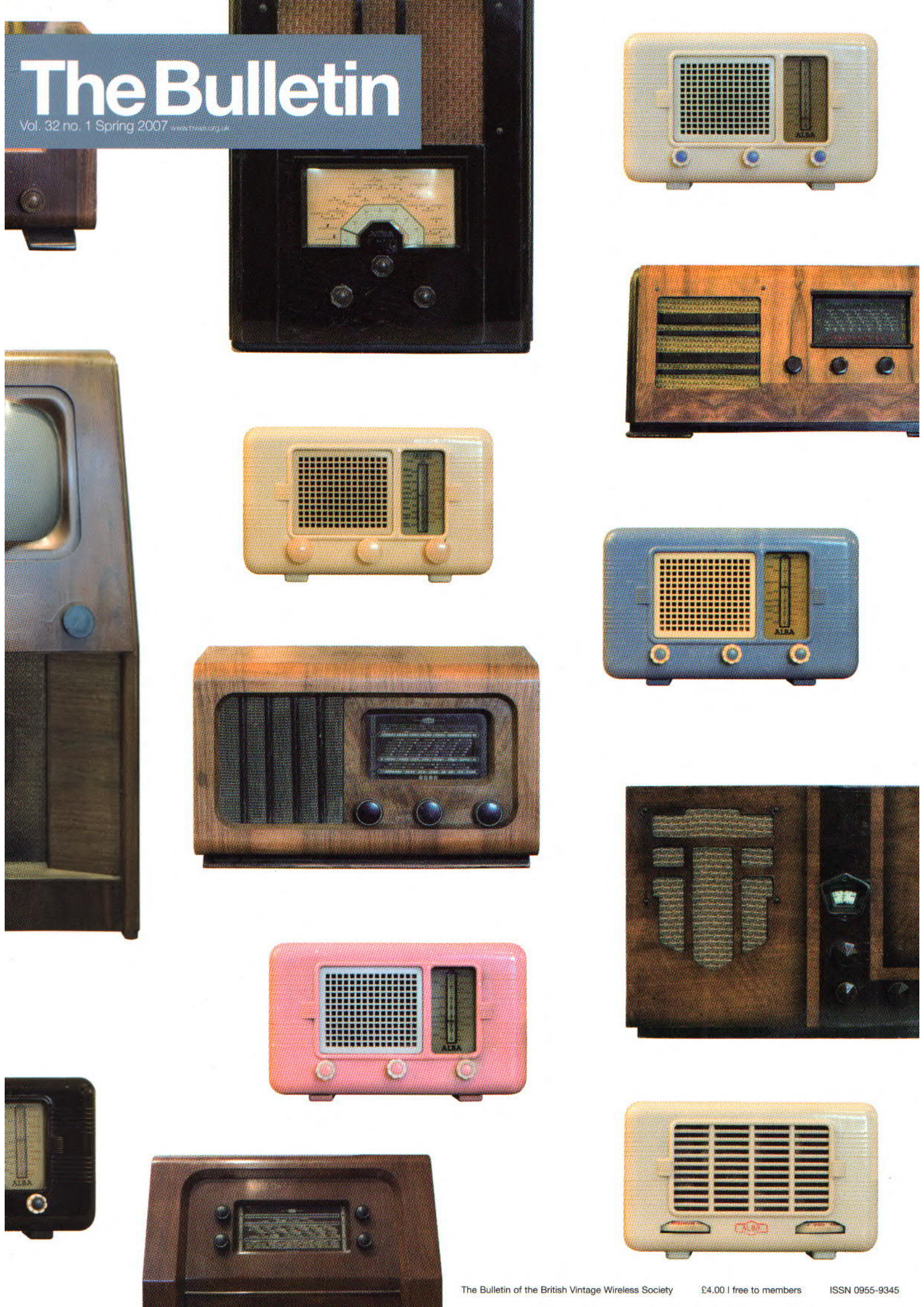


The Bulletin

Vol. 32 no. 1 Spring 2007 www.bvws.org.uk



29 April 2007

National Vintage Communications Fair Now at The Warwickshire Exhibition Centre



Now in our 14th year!

**10.30 to 4.00 £5 admission (under-14s Free),
early entry 9.00 at £20**

300 Stallholders

Free car parking!

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(please enclose an SAE)

Email: info@nvcf.org.uk

a downloadable booking form is available from www.nvcf.org.uk

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From the Chair

Bulletin of the British Vintage Wireless Society
Incorporating 405 Alive
Volume 32 No.1 Spring 2007

www.bvws.org.uk

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Jonathan Hill | David Read | Gerald Wells



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Having finally recovered from the grand auction at Wootton Bassett in January where prices of really good quality sets were certainly higher than in the past couple of years, another very good day spent at the Audio jumble hosted by John Howes who always makes us very welcome in February and the March Auction and AGM behind me, I can now concentrate on getting back into the workshop and finishing off so many different projects and restorations that cry out for attention every time I look at the sight of chassis and cabinets lined up around the bench. I really must try and catch up with it all!

A new venture for the BVWS will be the introduction of what has been loosely termed the BVWS Parts Department. This will provide members with a single source of commonly needed restoration items at keen prices. To start with we will be able to supply high voltage low value capacitors of the metallized polyester film variety to replace all types of paper capacitors found in radio and TV equipment. These are high quality components of new manufacture with long axial leads and much better than the original paper caps used. These are already available from some sources but not always in a wide range of values or at high voltages so our stocks will be tailored to vintage applications.

We will also stock the commonly used multi electrolytic HT smoothing capacitors so look out for info in the next Bulletin.

In this Bulletin you will find a posthumous article written by Pat Leggatt. Just one of a number that Pat wrote for future use in the

Bulletin. The Society in this way remembers Pat for the tremendous work he did in advancing the Society towards its current standing.

The next event on the Vintage wireless calendar will be the meeting at Willand, where we always enjoy a good day out and I often find something unusual to tempt me to part with my hard earned money. It's well worth a visit and then afterwards to enjoy the Somerset and Devonshire countryside.

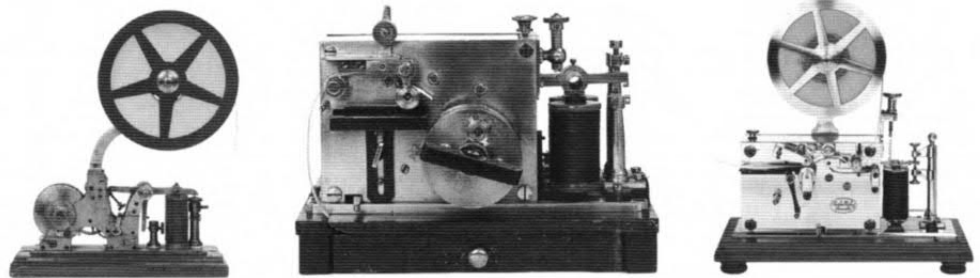
It is not long now to the NVCF where this year there will be an extensive display of Telegraph equipment hosted by BVWS member Fons Vanden Berghen. More on that later in the Bulletin.

Stall bookings for the NVCF are going well and you are advised to send in your application quickly if you have not done so already, or call Guy Peskett direct on the number at the top of this page.

In line with our original promise to bring BVWS members special NVCF benefits, last year we gave a reduced stall price to our members. This year we are able to continue with this and also give a £1 Restaurant voucher to all visitors at the entrance pay desk who show their BVWS membership cards. So you will still pay £5 entry, but you will get the first £1 off anything you purchase in the Restaurant.

This strictly applies ONLY to visitors who are BVWS members and show their membership card, (not stallholders), so make sure you take yours with you. If you cannot find it then contact the membership Sec. as soon as possible. See you all at the NVCF.

Mike



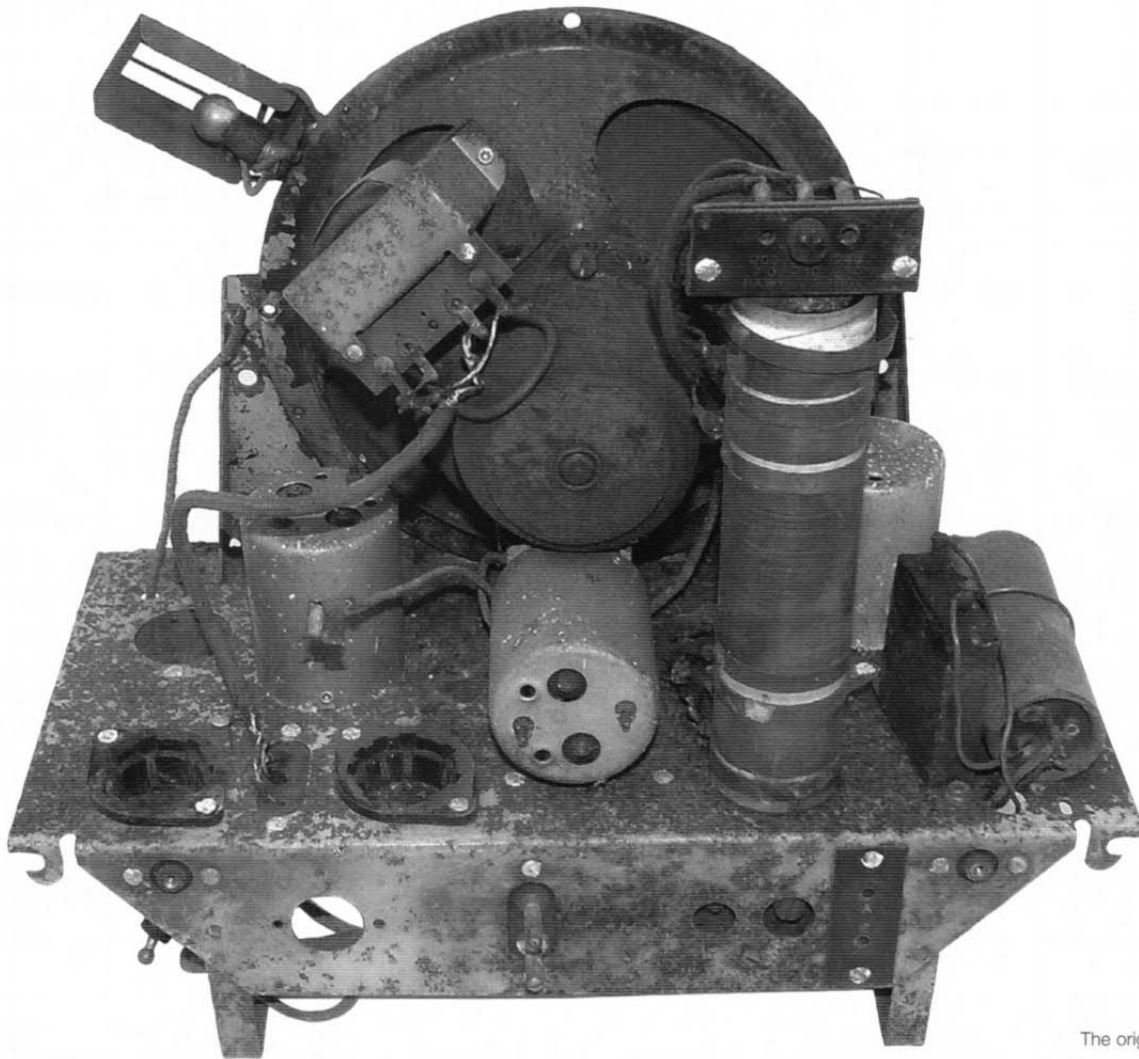
Magnificent Telegraphy Display at the NVCF Hosted by Fons Vanden Berghen

An attraction not to be missed at the next NVCF will be a comprehensive display of Telegraphy equipment covering the development of electrical telecommunications from the experimental beginnings through to commercial systems. Some 30 different telegraphs showing most technologies of the 19th Century will be there to see.

The display will include such interesting items as a working replica of the very first five needle telegraph by Cooke & Wheatstone, an extremely rare and impressive two needle telegraph, Brights bells, a double plate sounder, dial- (ABC-) telegraphs, a siphon recorder, an attractive Hughes printing telegraph, a Wheatstones rapid telegraph system, a baseboard, a Steljes telegraph, stock tickers (incl. the one by Edison of 1872), a complete Baudot system and, of course, several morse telegraphs (including a replica of his very first model of 1844) plus many other interesting items.

There will be hourly tours and working demonstrations of the equipment by Fons from midday onwards.

An Ekco AD65 Tuning Capacitor by Gary Tempest



The original chassis

The radio belonged to a friend and I agreed to see if it was possible to save the very rusty chassis. As can be seen from the 'before' chassis pictures it was in a bad state. I started to strip it and restore items as they were removed; the tuning capacitor was an early item for attention. It was rusty and filthy dirty. Sometimes, on tuning gangs, if the rust is not bad and confined to small areas it can be treated without many problems. This is particularly so if it is going back on a chassis that looks its age. However, this one was going to look 'newish' as the plan was to have it zinc-plated, level out all the pock marks and then spray it the correct shade of grey.

The Tuning Capacitor

Cleaning

I had heard about cleaning these by putting them through the dishwasher, but to be on the safe side I tried a junk item first. It was placed on the top shelf and not being very domestic I simply used the programme cycle that my wife uses for the dishes. It was then well rinsed and left to dry in the sun, it being a hot summer's day. I had measured the insulation of the stators, supported on Paxolin panels, to the gang frame, before washing and these were greater than 1000M Ohm at 250V. Now they were down to a measly 100K Ohm at 1V. It needed to go somewhere nice and extra hot for awhile and under the jacket of the hot water cylinder proved to be ideal. A week later the insulation figures were back to the greater than 1000M Ohm at 250V. I imagine that if you have a tuning gang that uses ceramic insulators this loss of insulation would not occur. Now for the actual AD65 tuning capacitor, that came out an awful lot cleaner but still had a rusty frame.

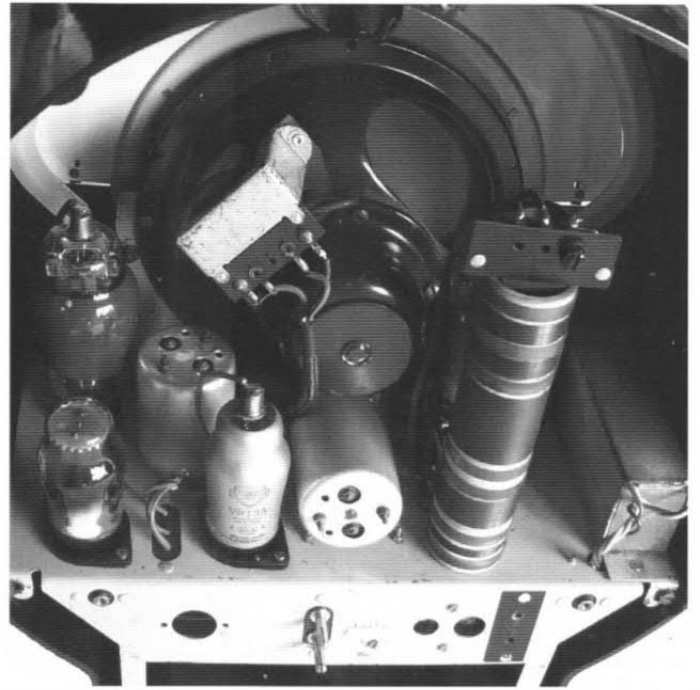
Disassembly and treating the rust

I have only ever taken one gang apart before. That was a large early 30's item, which was made with three vertical support plates, held together with studding and spacers. Many later items look as if they were assembled, the front plate fitted and then stakes from the sides splayed out, using a press, never to be taken apart again.

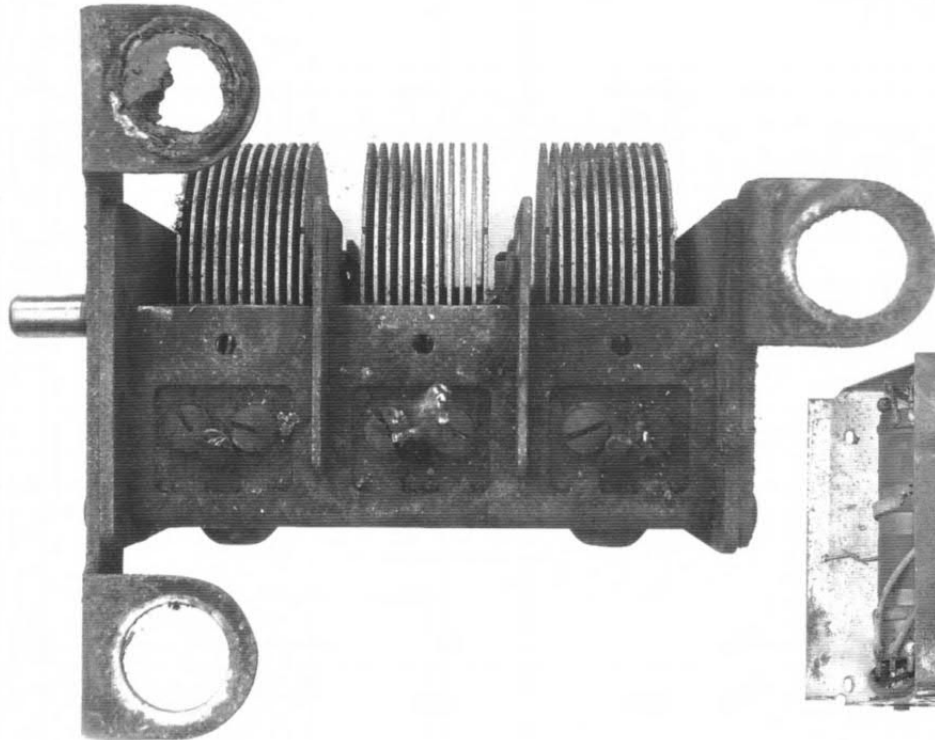
On examination this capacitor looked as if it could be disassembled and so it proved. I started by removing the screws, fibre washers and mica dielectrics for the trimmers, which were cleaned and carefully stored away. Then I took out the top and bottom screws that secure the stators. These were then pushed as far back in the frame as they would go. Now with the rotor in the fully open position out came the rear thrust bearing and the front ball bearings. With the rotor removed, and having clear access, each stator assembly was eased out and marked so I could put it back in the same position. It was now simple to immerse the frame in phosphoric acid (thin Jenolite) and finally, after cleaning, mask off (inside and out) the Paxolin insulators and spray it with silver Smoothrite.



The finished radio



The replacement chassis



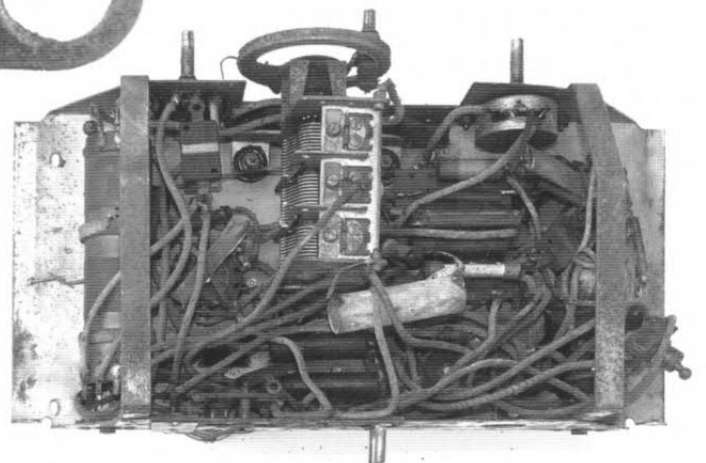
The tuning capacitor start

Reassembly

Firstly the stators, which are a tight fit, were replaced at the rear of the frame. Then the front bearing was greased and the rotor inserted in the open position and a little towards the rear. The balls were then positioned around the shaft and bearing. As the stators were eased forward the moving vanes were meshed and crudely aligned. The thrust bearing was then fitted and just tightened down so I could feel pressure on the rotor. It was now a matter of manoeuvring the individual stators into position whilst trying rotation of the moving vanes. Having got this approximately correct I put in the top and bottom fixing plates and screws, leaving these just nipped down. The top plates, for the trimmers, have a projecting bush which helps to self align the stators fore and aft. The bottom plates are flat.

Next it was a process of adjusting individual stator assemblies, through the cut outs in the back of the frame, whilst trying rotation of the moving vanes. A bench magnifier helps to see what is happening whilst doing this.

Finally I locked up the screws; rechecked and then made



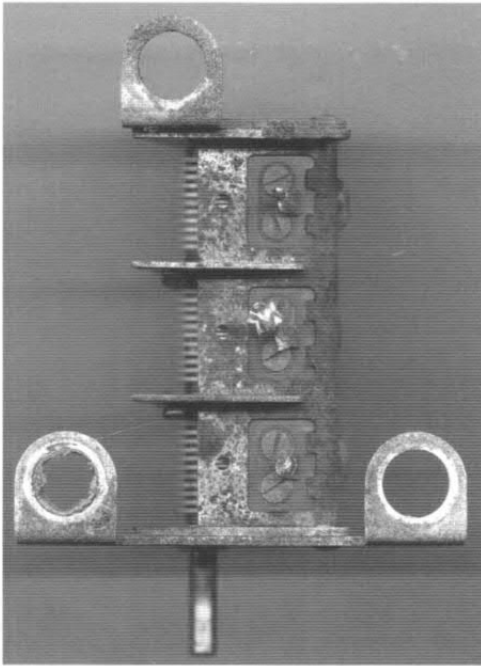
Underside of the original chassis showing tuning capacitor in situ

tiny adjustments to individual moving plates, mainly those on the outside, until there were no shorts anywhere during rotation. Having checked this with a low voltage Ohmmeter I repeated it using an insulation tester set at 250V.

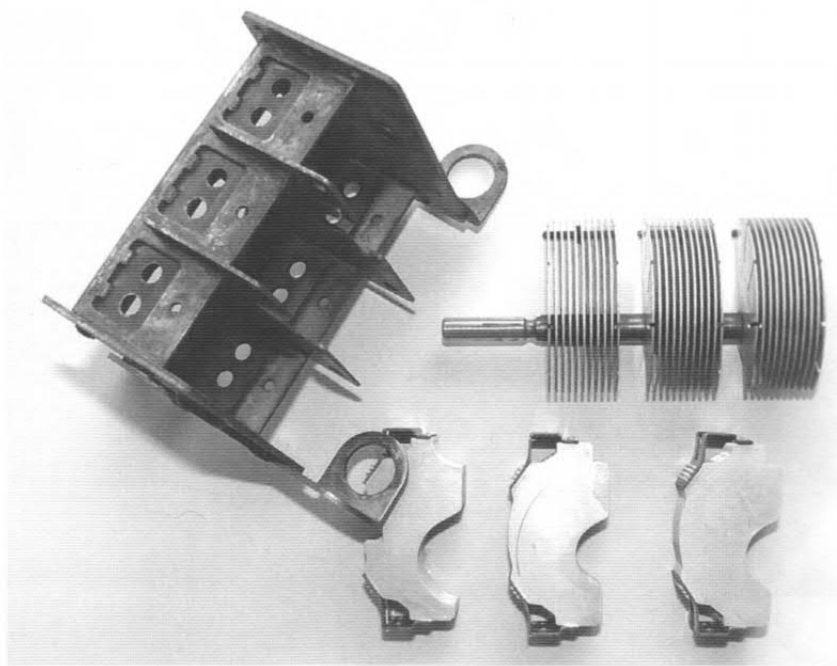
The trimmers and capacitance check

I had sprayed the whole frame, only masking off the stator insulating panels. This meant that the mica dielectrics for the trimmers now had a layer of non-conducting Smoothrite between them and the original metal. But the trimmers measured, with the moving plates fully open, 35 to 60 pF for the front and 43 to 71 pF for the other two. If there was still a small capacitance from the gang itself then this didn't seem too unreasonable. I decided to leave things like this as cleaning off the paint would not look as tidy. If alignment could not be achieved then it could always be done then.

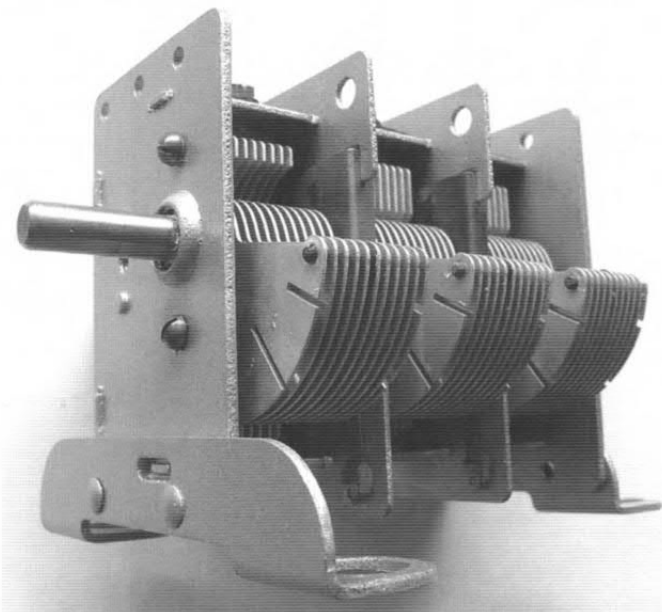
With the gangs closed I measured: front (oscillator) 415 pF and middle and rear (bandpass filter) 500 pF, but I balanced these with the trimmers.



After the dishwasher

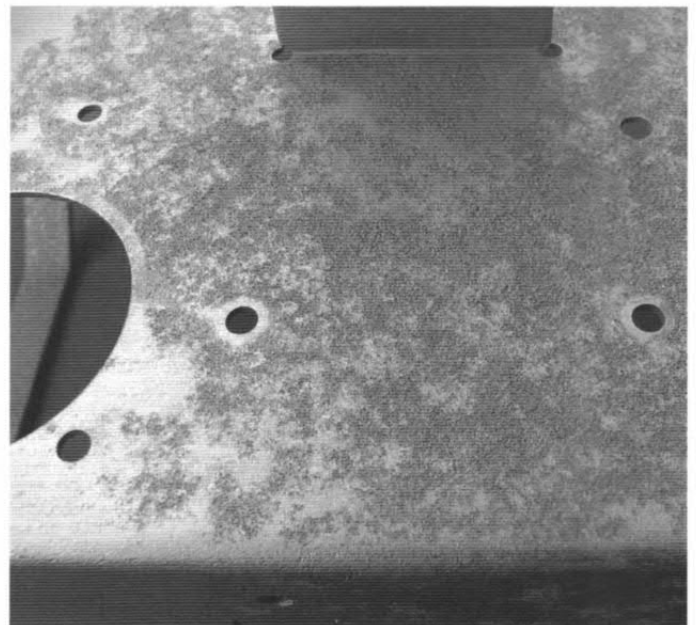


Disassembled



The finished item

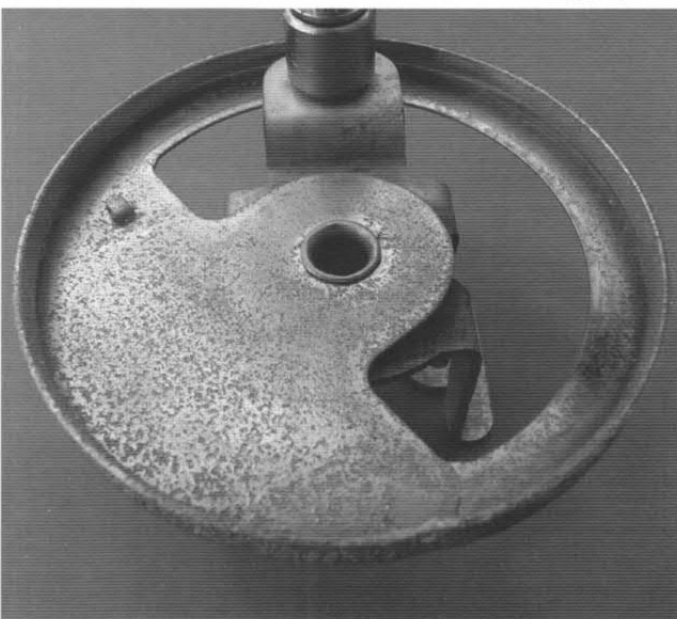
Below: the tuning gang wheel



Plated chassis detail

The Chassis

This came back from plating with all the rust killed, by acid dip, but badly pock-marked. However, the wheel for the tuning gang dial cord looked a bit like an abrasive tool you would put in a power drill. This could never be successfully levelled with filler and spray painted. How the chassis would have come out I shall never know as another good one was found in a much broken cabinet. This one was restored (not by me) and is in place in the finished radio seen in the pictures.



Audiojumble!

Photographs from the
Tonbridge Audiojumble on
Sunday 11th February 2007.

Photographed by Mike Barker and Bob Costa.

Below: "Recordograph" machine of American origin
that records an optical sound track onto
film without pictures.



The BWWS stall



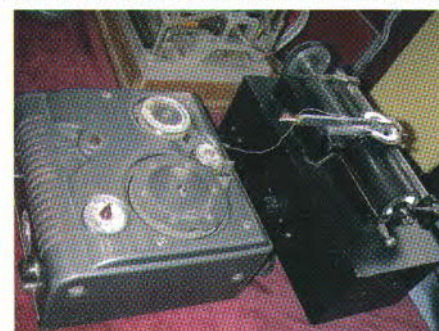
"Graphophone" a phonograph that uses a stethoscope



Below: Early high quality microphone



Below right: wire recorder and phonograph cylinder player with modern pickup.





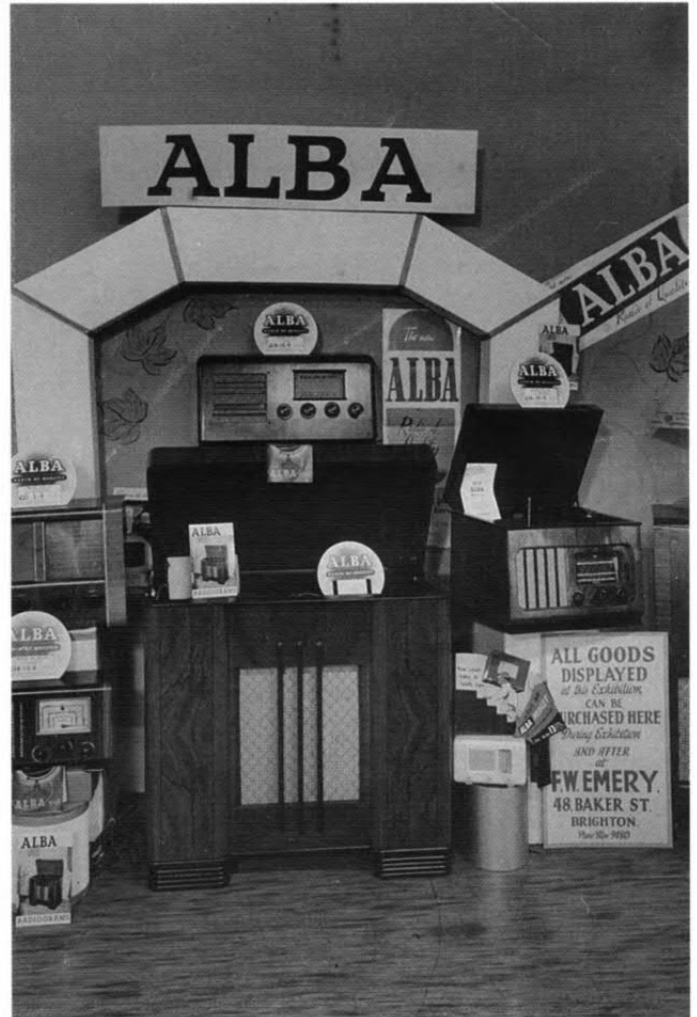
The Alba Story

by Jeremy Balcombe. Photography by Carl Glover

A few years ago years my father-in-law decided to research my family tree so that his grandchildren wouldn't have to rely on me for information about their forebears. Over time the document has grown ever larger as each new discovery raised more questions, so much so that the initial few pages now number over a hundred. Stretching back over eight generations his research uncovered distant Balcombe cousins only a few miles away as well as relatives living as far afield as the USA, Australia and South Africa. On one memorable occasion I shared a pleasant half an hour with a fifth cousin in a shopping mall restaurant on the outskirts of Boston!



Alfred Balcombe



FW Emery display, Brighton c 1947

Of particular interest to me was the story of my great grandfather Abraham Balcon who, having changed his name to Alfred Balcombe, founded Alba in 1917. My grandfather and father had in their turn run the company until one fateful day in June 1982 when the receivers walked in and the family walked out. It struck me as particularly wrong that, apart from a couple of pieces, none of Alfred's descendants had any Alba equipment and so I resolved to build a collection that would accompany the family history. After all, Alba had survived and prospered as an independent family company for a lot longer than most of its peers – 65 years - and had played a significant part in developing the UK's radio and TV industry.

Abraham Balcon was the second child of David and Rebecca Balcon and was born in Liverpool at 1 Great Orford Street on 3rd October 1874. David had been born in Konin,

Poland and had emigrated to England in the late 1850's. Abraham was raised along with his brother Sydney in the Norwood Orphanage after his father departed for America to seek his fortune, never to be heard from again. His first job in the musical instrument business was as an office boy with Barnett Samuel & Sons who were better known for originating the Decca gramophone. He showed great promise and became one of their more successful salesmen and eventually Sales Manager in 1909. He left in 1911 to join Otto Ruhl Ltd who imported musical instruments and gramophone motors from Switzerland and Germany.

He was already well known in the trade, having held the post of Honorary Secretary of the Talking Machine Trade Association, and by now had changed his name to Alfred Balcombe. One of the more fascinating items I have uncovered is the dinner

programme and menu from the 1905 Trade Association event held at the Venetian Hall in Holborn – 10 courses, 24 separate entertainers, various bands and the Right Hon. The Earl of Denbigh in the Chair.

He left Otto Ruhl to take on his own import agency and in 1917 aged 42 he registered Alba and started to manufacture gramophones. Sydney, his brother, was offered a partnership in the business but was unable to raise the £100 required. It was only several years later that Alfred was told that Alba meant "white" or "pure" in Latin which he felt to be entirely appropriate given his approach to both suppliers and customers.

The fledgling company was based in City Road, London and, after early success, moved in 1919 to larger premises in Tabernacle Street where it was to remain for the next 50 years. Business remained profitable and Alfred regularly



Kenneth Horne Johnny Golding Radio Show c 1950



Albert Ponder - Chief Designer



Radio show - c 1950

crossed the Atlantic to New York and by 1924 was travelling first class!

Part of the Tabernacle Street factory was converted into a recording studio where records were made for the trade and sold under various labels. "Artists" ranged from Lloyd-George to a Guards Band who, true to both their musical and military professions refused even to start rehearsing until several crates of beer had been provided. So far none of these records has turned up but with Ebay you never know!

My grandfather Edwin Kesteven Balcombe (Teddy) had joined from school in 1918 and the company, requiring yet bigger premises for its gramophone production, crossed the road to the block which, over the years became well known as "52 to 58".

Moving with the times Alba produced its first simple radio sets in 1930, followed by radiograms and portable radios which became a large part of the firm's production.

In 1931 Alfred died aged only 57 and Teddy took over as Chairman and Managing Director, together with John Golding (who had previously worked with Alfred at Barnett Samuel) as Sales Director.

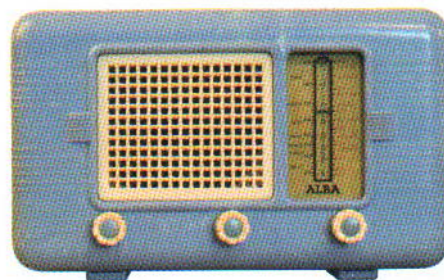
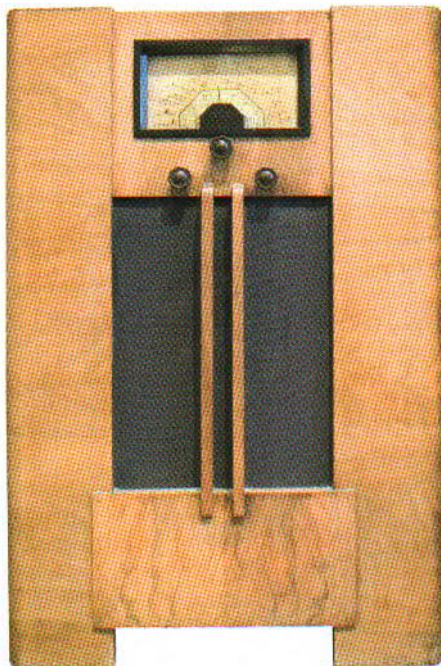
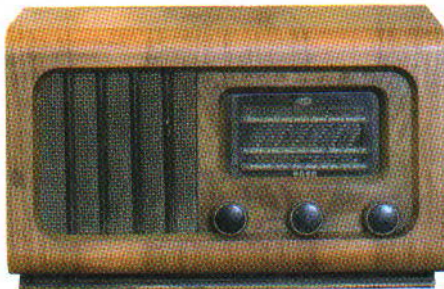
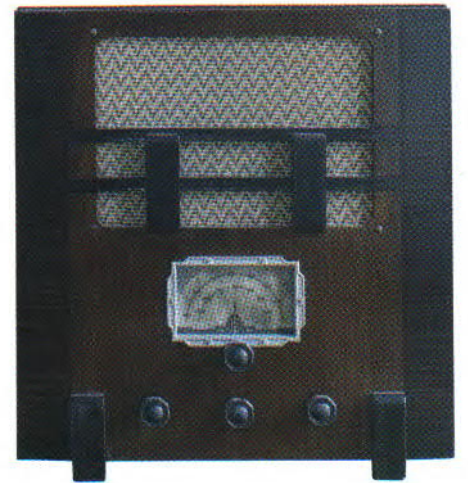
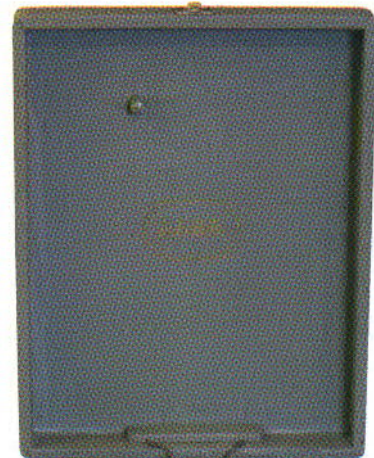
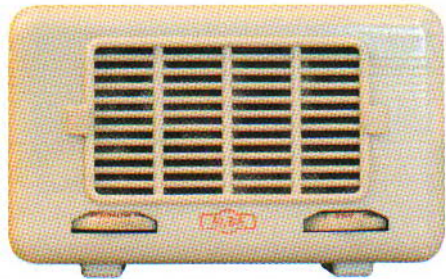
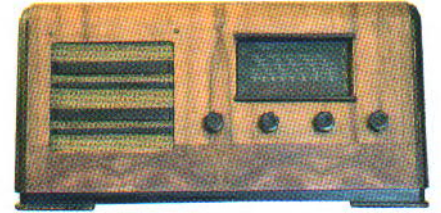
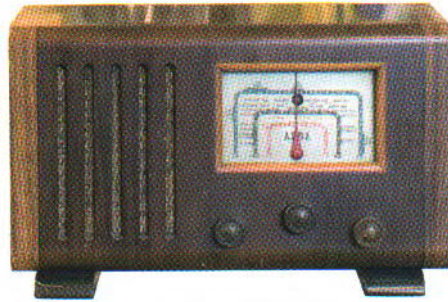
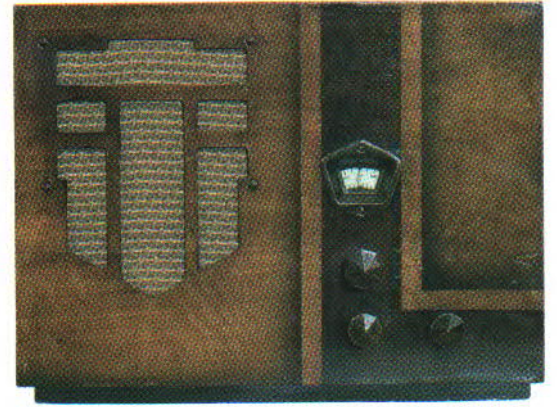
The 1930's saw Alba develop some of the first superhets as well as being one of the few manufacturers who could offer radiograms that operated from DC as well as AC mains. The first Alba television appeared in 1939 as part of the Alexandra Palace telecast programme although development and production was curtailed by the war.

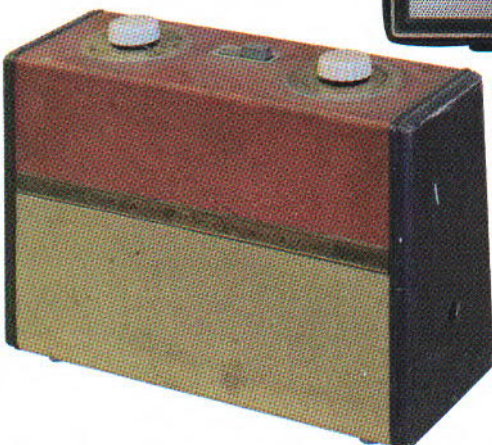
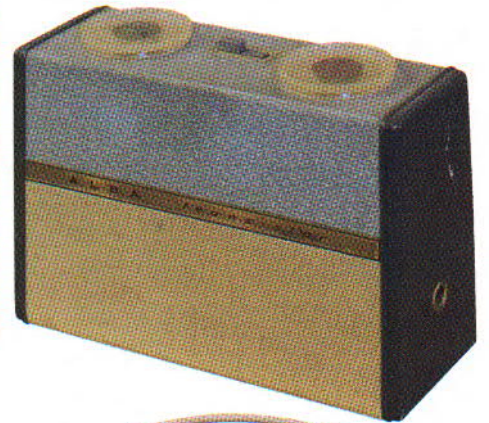
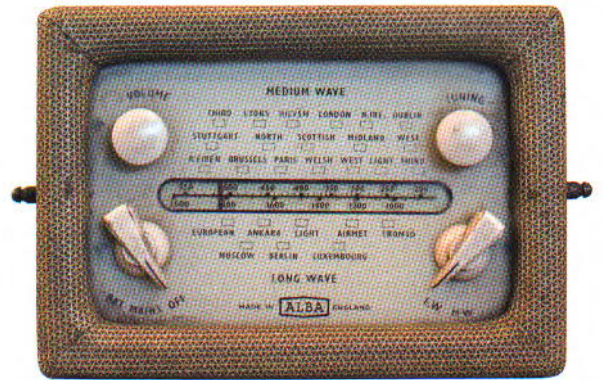
During the hostilities the company took on government contracts and produced significant numbers of radio transmitter/receivers for aircraft, tanks and armoured vehicles. It also made its share of domestic utility sets. It is extremely gratifying to know that my family, refugees from Eastern Europe only 60 years before, played their part in the war effort. As a letter from the

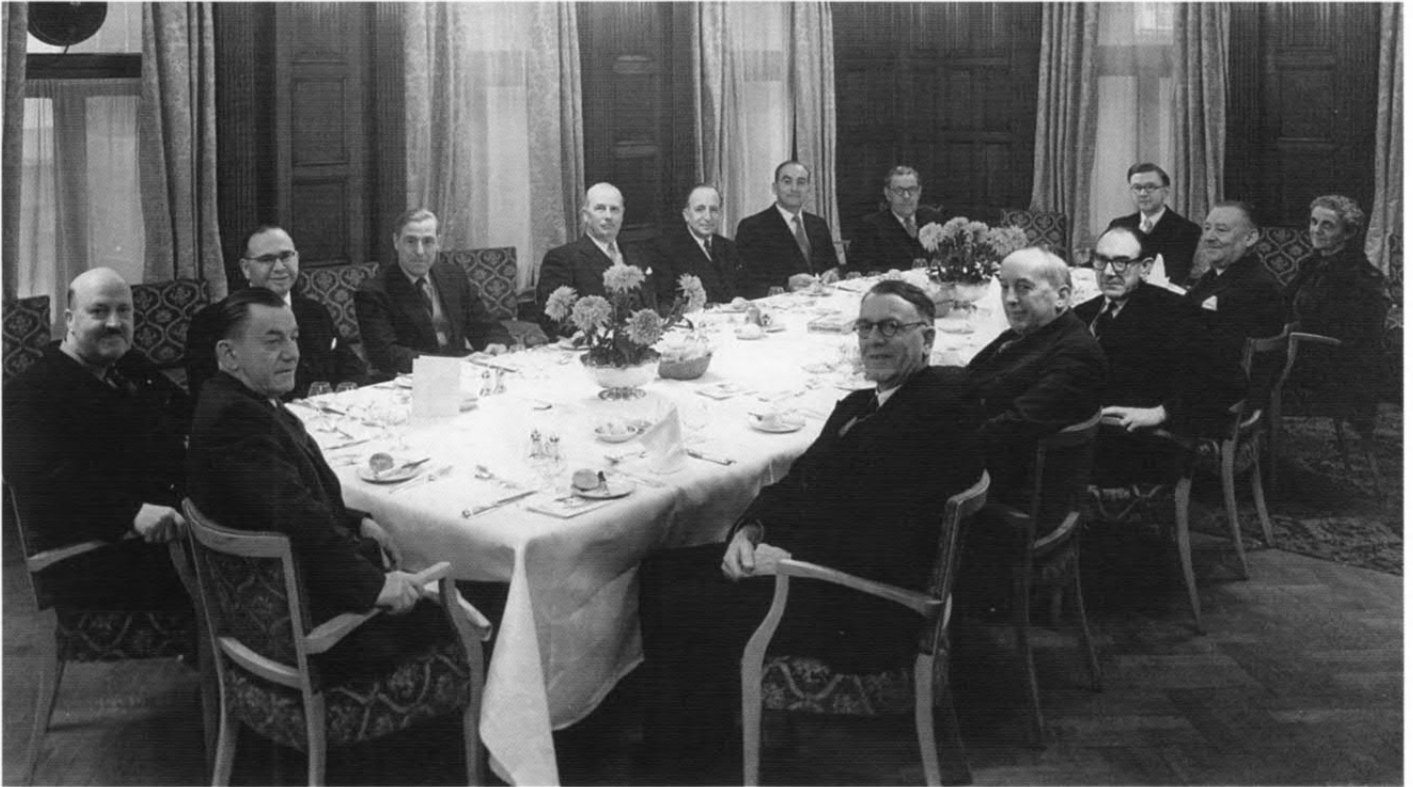
Ministry of Aircraft Production said in 1942 "...as a result of your efforts, operational aircraft were put into service with the minimum delay, a very direct contribution to Bomber Command's activities."

Immediately the war ended domestic production resumed and two radios were produced. Wholesaler allocations were strictly controlled and orders were not placed for some time. The smallest all-wave superhet, the C112, was launched in 1947 (a green version was sold for £350 on Ebay recently) and the 707, the first mains/battery portable radiogram, came off the production line. Always up with the latest technology, Alba were one of the first manufacturers to sell radios with the new VHF/FM band.

By now the radio shows had restarted and Teddy Balcombe, already a member of the British Radio Manufacturers Council, went on to the Exhibition Organising Committee, bearing much of the brunt of the financial







BREMA dinner - 1950s

work. Television began to play a more prominent part in Alba's activities and in 1951 it introduced its well known advertising slogan "It's Telewisdom to choose Alba". The initial 9" and 12" models were soon followed by 15" and 17" screens and in 1954 turret-tuned two band models were introduced and in 1957 the first portable TV's were sold.

Then came one of Alba's most significant achievements – the introduction of the Packaged Service, an idea that was provisionally patented. A TV chassis was developed which incorporated two plug-in printed circuit panels that could be serviced by retailers in less than a minute, providing great benefit to viewers.

My father Edwin Philip Balcombe joined the company in 1956 following university and National Service where fortunately he missed out on Korea and did his time in the Signals Regiment based at Fontainebleau and Versailles. There he learned of the death of his grandmother from a notice in the Times. Little do we realise how wireless technology has changed communications in such a relatively short space of time.

The advent of transistors spelt the death knell for valve radios and Alba began to design and manufacture transistor radios. By now the Far East had started to flex its manufacturing muscles and the company also started importing radios and other electrical equipment including CB radios and cassette players. Bizarrely enough though, it also exported British made items to the region including televisions to Hong Kong and radios and radiograms to Singapore!

A thriving export side saw Alba material going to over 20 countries including Australia, Peru, Iceland and many African countries. In fact the Alba brand was sold to every continent except North America.

Hi Fi equipment came on the scene and in 1971 the 900 amplifier was designed and built. Received enthusiastically by the trade it was described in one review as "without doubt one of the best British amplifiers I have had the pleasure of evaluating... ..one of which Alba can be truly proud".

However the inevitable slide into receivership had begun and Alba began to lose market share to importers like Binatone. Retailers started to become bigger brands than the manufacturers and mass market demand was more efficiently met by cheaper foreign imports. UK based design and manufacturing companies found it hard to compete and the industry focus shifted from making to assembling. This trend, along with an ill-timed move in 1974 to purpose built premises in Edmonton, North London eventually brought about Alba's demise. The end came in June 1982 when my father called in the receivers and to his credit promptly drove up to Birmingham to see me graduate. At what must have been a very difficult and emotional



Tabernacle Street fire



The BX998A/54: Philips' most ambitious table model from the 1950's.

by Jonathan Dollimore

I first saw this imposing set in a friend's barn a year or so back. I'd never seen one before or even heard of its existence. Even a quick glance showed it was special. To begin with there were six wave-bands (LW, MW, three SW, and VHF), and looking inside I counted no fewer than 16 valves. Other obvious features included two speakers, an integral AM aerial rotatable from the front of the set, a built in FM aerial, and a tuning indicator (EM34). There were also an alarming number of drive cords, almost as many dial bulbs and, most intriguingly of all, some kind of electric motor. Control wise it was apparent that FM has two settings – one for "extreme sensitivity/sensible" and the other for "Haute Qualité/Excellente reproduction". There were also separate smaller dials for local station and short wave tuning. The tuning dial itself was entirely devoid of station names. Station selection was by push buttons which were obviously a function of that electric motor. There was also a badge on the front proclaiming the set's "Bi-Ampli" credentials.

A most intriguing set then, and one I needed to find out more about it. My friend had found the set in an antique shop in Lewes, Sussex, some years ago but knew no more about it than what we gleaned from inspection. A quick call around some of the Wise Men of the BVWS came up with nothing. Not for the first time the miracle of the internet provided the answer, on this occasion in the form of Gerard Tel's very helpful site Radio Corner (<http://www.cs.uu.nl/~gerard/RadioCorner>). There I discovered that this set dates from 1955 and was one of Philips' most ambitious domestic receivers of the post war era. In Holland it cost 820 guilders in 1956 when, I believe, there were about 10 guilders to the pound. "Bi-ampli" refers of course to the separate amplification of bass and treble notes. The latter comes from the EL84, the former from two PL81s. Treble and bass can be altered separately and the treble control also narrows the bandwidth of the IF strip for the AM bands. The bass also benefits from a series balanced output (readers who would like more technical information on this side of things will find it on Gerard's site together with an account of his own restoration of one of these sets). That electric motor was, as we surmised, for wave changing. I'd assumed this was a fad of the late 1930's which didn't survive the war. But here it was, and operated by push



buttons, just as in the old days. Incidentally one other feature it has in common with quality pre-war sets is that it's both heavy, weighing around 60 pounds, and big – 28ins long by 18ins high and 13ins deep.

The "qualité" setting on FM mentioned earlier also features silent tuning. On short wave you get everything between 517 and 26500 kiloHertz. VHF and AM have separate dials with their own pointers, but each is operated independently by a single knob. Again the connection between the latter with its appropriate dial/pointer

is electrical. There's also a fine tuning facility for short wave with a separate knob and its own small dial which is lit only when the relevant bands are chosen. Also with its own dial is a local medium wave facility allowing for the pre-setting of one station and, again, only lit when chosen.

I decided this was a set that had to be got working again and my friend agreed to sell it on to me. I felt that the restoration of a radio like this was beyond me; I should add that I am a relatively recent convert to the world of old wireless, and in no way an expert, and so willingly open to correction on anything I've written here. But I am learning: being of the bah-humbug mentality when Christmas was concerned, and I managed to escape the festivities I devoted my time to working on an Ekco console, with motorised tuning. The thrill of getting it going tolerably well was great indeed. As for the Philips was concerned I persuaded another friend, John Pearson of Brighton, to undertake the chassis work for me. As always he did a superb job. Generally, the condition of the set was pretty good. There turned out to be around 18 drive cords in the set and fortunately only one of these was actually broken. That was for the VHF tuning and, as you'd expect with a Philips, proved a bit tricky to restring. Four valves needed replacing (EF80, EBF80, EF85, EL84), also a valve socket where tracking of high voltage had caused the carbonization of the paxolin material. The grid coupling capacitors to both output stages were duff, and several resistors were sufficiently out to need replacing. The bass tone control was seized and needed freeing, and the cone of the bass speaker needed to be recentred. Quite a few switch contacts needed cleaning. Lastly, five of the pilot/station bulbs were replaced.

What can one say of the styling? Only the Devil and its mother could regard it as handsome. To be fair it is, I suppose, simply a more opulent version of a typical mid 1950's radio and my misgivings are mainly about its appearance. Why for example was it necessary to give a perfectly nice piece of wood that high gloss toffee coloured finish which obliterates all trace of the grain? And why give metal and plastic trim that gold finish which seems to have been the precursor of those dreadful gold coloured electrical fittings of more recent

times? Well, as someone once said, you have to forgive fashion almost everything because it dies so young. Fortunately the cabinet on this set is in reasonable condition – I wouldn't have the resolve to spend painstaking hours restoring it to an original finish that I don't actually like.

As to the way this set performs, I can't fault it. The motorised wave changing operates smoothly, and mostly silently, although the various dial lights flash a little disconcertingly as it moves in sequence through the chosen bands. This is particularly so

when switching from the high sensitivity to the high quality settings for VHF: the buttons are adjacent to each other but for some reason the selection goes round the houses via all the other wave bands. Performance on the other wave lengths is also excellent. I may be a bit biased here since I'm keen on Philips sets more generally, especially of two pre war sets in my collection – a 691A/U radiogram from 1938/9 and the other a 701X console from the previous year. Both are of the notorious monoknob variety and on both the sound is excellent. The 701 is best, having a better treble response than the 691.

Gerry Wells, also a fan of Philips, tells me that they devoted great attention to the speakers. As for the monoknob control I can only conclude that, far from making tuning easier for the amateur listener easily intimidated by several separate knobs, it was specifically designed to frighten off such people. And if the head of the household was a control freak (so to speak) that might well have been just what he wanted. (Well it would be a "he" wouldn't it?)

I learn from Gerard that there was also a console model of the BX998A, and another with a built in tape recorder selling for about 2700 guilders. Also that there is an internal logic to the Philips model numbering. In this case, the first letter indicates type (B=table model), the second letter country of origin (X=Netherlands), first number indicates price class (1 is cheapest, 9 the highest) and so on. But the suffix numbers could apparently mean just about anything and in the case of my set I haven't yet been able to find out what 54 stands for.

A question remains – was this set ever officially available in this country? None of those in the BVWS I've consulted so far had heard of it. Remember that it cost, in Holland, the equivalent of around £85 in 1955. The basic imported cost over here would surely have been even higher than that, and additionally there would have been purchase tax to pay as well. Gerry Wells recently remarked to me that most people in this country in 1955 could hardly afford our own conventional 5 valve sets, let alone ones like this. And I can't help feeling that

A question remains - was this set ever officially available in this country? None of those in the BVWS who I've consulted so far had heard of it.

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sets of this kind, no matter how impressive their engineering, remained toys for the rich. But then, was it not ever thus? Comparison with Rolls Royce cars, and Purdy guns, among many other products, come to mind: how many of their first owners really appreciated the fine engineering of those cars, the supreme craftsmanship of those guns? And in case you think I'm reserving that discrimination for myself, someone who definitely could not afford them, let me hastily put another related question: was their excellence really worth the huge extra cost over and above similar high quality mass produced items? If the answer is "no", then the finer discrimination may lie in declining the higher cost item. There have always been those in a position to answer the old quip "if you need to ask the price you can't afford it" with "actually I can afford it but want to know the price because I suspect it ain't worth it". It used to be said of the Oldsmobile that it was the wise man's Cadillac. I rather agree – but then as someone who once bought an Olds in preference to a Caddy I would say that wouldn't I?

But we can only be grateful that expensive items like the 998 were made at all, that someone originally bought them and that they survive for us to enjoy at much more

affordable prices. Gerard believes that, despite the cost quite a few of these sets were made, and the survival rate is quite good, at least on the continent. And to be fair to this set, coinciding as it did (at least in this country) with the early days of VHF, its sound quality

must have been a revelation. There are other good VHF sets from the mid 1950's - Ekco C273 console and the Bush VHF 64 to name but two. Sound-wise this Philips set is the best I've ever heard. These things are notoriously subjective but I find the sound of high quality mono VHF sets of this era especially pleasing. Somewhat perversely perhaps, I'm as happy listening to music in this form as in stereo. Shortly before writing this I was listening to a Radio 3 broadcast of Shakespeare's King Lear and was hugely impressed too with the way this set reproduced speech. Gerard regrets the simplicity of the tonality control, pointing out that whereas in this set there are just two controls for treble and bass, other VHF sets of the era had four or five band equalizers and presets for speech, jazz, orchestra, etc. His explanation is that "in 1955 there was just one acceptable style of music, namely classical music, while pop music didn't exist and jazz was hardly played by the class of people buying this radio." In practice, I'm always happy to play with the controls, so the more there are the better. It's also true that I don't actually miss not having them in this case. The sound quality of this set always has its own integrity, something that can't always be said of expensive sound equipment.

Final results of 'Virtually Second-hand':

an ESRC-funded research project on eBay, the Internet auction site By Dr Rebecca Ellis, University of Essex

Way back in the summer of 2004, at the edges of dim and distant memory, I made an appeal in *The Bulletin* for volunteers to take part in a study of eBay and its impact on collecting practices and rituals. The project was funded by the Economic and Social Research Council (ESRC) for two years. We were also interested in wider issues of identity, knowledge and community – such as if eBay provided any sense of community for its users, whether it was just regarded as a “big shop”, or if it represented a pre-existing community of collectors ‘going online’.



Below: My eBay-bought Sonora Sonorette (1933) – I'd been looking for a good one for years to match my advertising poster



As usual, BVWS members came up trumps, and many of you contacted me by phone or e-mail to arrange an interview or complete a questionnaire. So thanks to all who contributed such excellent data – I really enjoyed the interviews, and subsequently seeing some of you again at swapmeets. Since then, we've been working through the various strands of our research, from focus groups with a range of users including University students selling unwanted gifts, to interviews with stamp and First Day cover collectors. Indeed, stamp and First Day cover collectors were interviewed as a contrast to radio collectors – the Internet has been heralded as a revolution in philately, and they certainly have an easier and cheaper time of sending things through the postal system, although they are not completely immune from damage by postal automation. We also talked to self-employed eBayers, and were eBay buyers and sellers ourselves – asking questions about why people wanted our items or why they were selling things on. People wrote Blogs (weblogs) for us on their everyday experiences of eBay as buyers and sellers, and we even talked to charity shops – who were using eBay to sell rare CDs and expensive jewellery that had been donated. We were lucky enough to get a chapter in a Routledge book, *Everyday eBay*, called ‘virtual radiophile’ – which as a homage to Chas Miller's eponymous publication, examined the difference eBay was making, if it indeed was, to radio collecting and radio collectors' collecting practices and rituals.

We've also got several working papers on our website (see the links mentioned at the end of this article) on the impact of eBay for real networks (the distribution of goods, money and Internet infrastructure), and eBay's implications for the policy community in terms of eBay as a source of self employment and its consumer issues. Hopefully these will become published papers (when I get time!), and possibly a book. So, to the results – I'll split these up into sections. There's a lot of material to report, so I'll keep to the most relevant, and as I know many of you are very learned, I'll leave in the technical terms rather than dumbing it down.

The impact of eBay on collecting

eBay was, of course, initially set up in 1995 with collectors in mind – where the traditional inefficiencies of person-to-person trading such as the limitations of geography (being able to get there) and imperfect knowledge (knowing what is available) could be offset through the use of the Internet (Bunnell and Luecke, 2000). The project's results suggest the ways that goods are exchanged on the site make for a qualitatively new space that challenges the traditional practices, rituals and geographies of collecting. Yet eBay also opens possibilities for new forms of ritual practice. Let me explain rituals in more depth. Rituals are instances of symbolic action through which collectors give objects meanings that evoke, affirm, or revise the existing meanings of those objects. Collecting rituals make objects ‘worthy’ of a

collection; through the process of meaning making, the ordinary becomes special and worth collecting (McCracken, 1990). There are a number of collecting rituals that academics associate with consumer goods—rituals of exchange, possession, grooming and divestment. Rituals of exchange, for example, involve the movement of meaningful properties—such as “collectable” or “rare”—between the trading parties. Acquisition rituals are also vital to traditional ways of collecting. In general, collectors value genuine rarity; acquiring rare items is a challenge, and confers a sense of accomplishment and accompanying kudos. Finding rare items is part of an acquisition ritual entailing extensive searching in many places over a lengthy time period. So, we may value the round Ekco we bought for £20 in a junk shop after 20 years of opportunistic looking more than one we bought on eBay for £600 last week. And it's not just because it was cheaper!

Our interview and ethnographic work with radio and stamp collectors reveal a number of changes to collecting practices and rituals with the advent of eBay. First and foremost, eBay is rapidly accelerating the speed at which collections are accumulated. Collectors describe eBay as publicly ‘outing’ radios and stamps/covers that would require years of visits to physical venues to find. I was very pleased to find my 1933 Sonora Sonorette (pictured) on French eBay after buying an original advertising poster of it some years ago (also pictured). But eBay's central role in rapidly accelerating collecting itself causes problems – it allows collectors to buy items they may later deem inappropriate for their collection, and some see the new collecting challenge of eBay as both keeping within the boundaries of their collection, and refining that collection – so as not to be overwhelmed. Collectors are experiencing collecting in a more intense way with eBay, to the point where they feel it has ‘taken hold’ of them – through constant and quasi-obsessive browsing and buying of items because of the fast through-put of goods in the auction format. Stamp and cover collectors appear to be more ‘overwhelmed’ than radio collectors – as they have established price guides which clearly highlight the ‘bargain’ nature of their items, and they feel compelled to buy. However, there is also evidence that early eBay adopters are becoming satiated in their collecting, with some radio collectors perhaps only now buying parts.

Collecting rituals are also challenged on eBay. Buying on eBay means anyone may acquire a rare item, if prepared to pay

← Back to list of items Listed in category: Collectables > Radio/ Television/ Telephon

1930's Art Deco American Radio

You are signed in Watch th



Starting bid £100.00 Place Bid >

End time: 4 hours 49 mins
(26-Jun-06 21:20:28 BST)

Postage costs: Pickup only - see item
description for details

Post to: Will arrange for local
pickup only (no postage).

Item location: Stratford Upon Avon,
United Kingdom

History: 0 bids

You can also: [Watch this item](#)

[View larger picture](#)

the eBay price. Additionally, many items are listed as 'rare' to fetch higher prices. This disrupts traditional exchange rituals and makes it more difficult to transfer the meaning of an object's rarity. Evaluating the rarity of an eBay item remains difficult even for knowledgeable collectors as listings frequently disrupt the social construction of rarity established by collecting communities – this may happen when a high eBay price creates a glut of supply of a 'rare' item. Buying items on eBay also challenges the importance of and pleasure in recalling how an item was acquired—a component of acquisition rituals that helps make an object special. Buying an item on eBay is regarded by some as 'clinical', and few collectors believe the provenance given to objects.

eBay's final challenge to traditional rituals of acquisition is that collecting should be an "organization of coincidences" (Grasskamp cited Belk, 1995). What items will look like, how and where they will be acquired, and can they be purchased at a bargain price—all are intrinsic to collecting rituals relying on the organization of coincidences. On eBay, the how and where are obvious (purchased through the site), and in general, prices may be inflated by a large market. But for many collectors, using eBay proves uncontentious in this respect, and few subscribe to formalized distinctions against collecting on eBay as being too 'easy' - as their focus is on possession through 'armchair collecting' rather than the 'hunt' of acquisition.

Many collectors, particularly radio collectors, choose to complement eBay collecting by frequenting physical collecting arenas such as the swapmeet or the car boot sale, which allow them to perform aspects of collecting rituals not possible on eBay - places of serendipity where the 'traditional' organization of coincidences still come to pass. Yet it would be simplistic to suggest that eBay itself is an undifferentiated collecting space. Collectors are reformulating some of their rituals of collecting, particularly

the 'organization of coincidences,' through denying the 'obvious buy' and searching for relatively 'unknown spaces' on eBay where the potentially serendipitous item may await, which *hi-fi collector Phillip* sums up as a parallel between material geographies and eBay's virtual geographies:

...so yeah, sometimes you might find that someone has done a cock-up on the description, spelt it wrong, or they didn't really know what they've got, you can maybe get a bargain... it's akin to us like at swapmeets going through boxes on the floor, it's the trawling through eBay looking through boxes on the floor for things that have fallen between the stalls, you know, in the wrong category.

Stamp/cover collectors were more likely to find these unknown spaces in a 'virtual bargain hunt' than radio collectors, because of the volume of listings in their categories and the fact that signed covers were often listed without knowledge of the signature. They were less likely to find the need to re-establish collecting rituals through physical arenas.

In terms of the changing geographies of collecting, globalised collecting has increased significantly with eBay. Often, buying from abroad is another way to exploit eBay's 'unknown' or 'unknowing' spaces - where items are less appreciated or not searched for. In terms of the geographies of attending physical events vs. eBay, some collectors have become purely virtual in practice, either due to reduced mobility or because they are driven by motives of possession and convenience, rather than ritual and the desire for sociality. I should expand on this point, as Mike Barker has mentioned the role of Internet auction sites in altering this year's events diary (The Bulletin, 29(4) (Winter): 3) - which has included reducing the two National Vintage Communications Fairs to one, and removing one Harpenden swapmeet event. The finger of blame was firmly pointed at "online Internet auctions"

by the BVWS in the article, who recognise the arm chair collecting potentials of the Internet for those who do not want or cannot go to physical events. They point out the negotiation to be made between eBay and the swapmeet - highlighting the downsides of eBay as being receiving items not as described, broken, more expensive than at the swapmeet and involving the "hassle" of bidding and sniping. The swapmeet, on the other hand is presented as the antithesis - as the place to make a hassle-free purchase, where you can physically handle items and see what you're getting before purchasing. There is, of course, a lot of truth in all these statements, but the picture that emerges from the interviews is much more complex. Sometimes people prefer to buy from eBay because of two principal differences from the swapmeet. Firstly, they can potentially see in the back of the set. In swapmeet situations, interviewees commented that the pre-auction viewing was often too crushed or hectic for them to be able to take the back off a set and have a good look. On eBay, they sometimes have pictures of the set's insides, or prospective buyers can ask for them within the bidding period. Yes, I know eBay pictures are often terrible, taken with a camera phone, and showing more of people's living room than the set - but the potential for something informative is there. Secondly, interviewees often felt that people used swapmeet auctions to 'offload' rather dubious items, and they had no recourse - *caveat emptor*. They would never find out who had put the item in the auction. One particular example was a 1950s television bought with a dud CRT in a swapmeet auction, that one gentleman paid a reasonably high price for. At least with eBay, some collectors felt that they knew who the seller was, could perhaps negotiate a return or price reduction for a poor description, or ultimately leave a flashing red negative. Interviewees also felt swapmeet auction items were likely to be other collectors' 'cast offs' - that they'd been 'fiddled' with, perhaps scavenged or rejected for some hidden fault. In comparison eBay was thought to return more 'loft fresh' items in original condition. The results also show, anecdotally, that physical events are being 'hollowed out' with the best items cherry-picked for eBay, where higher prices are possible - often leaving items that are less saleable or hard to post. This is offset to some extent by BVWS members, sometimes those who have passed away, in getting the BVWS to dispose of their collections in their entirety. There are complex negotiations going on in terms of what sells best on eBay versus the swapmeet. eBay tends to be reserved for "the cream", as one collector put it - rare items in very good condition. But sometimes very rare items are more appreciated at the swapmeet by a group of knowledgeable collectors and fetch higher prices than on eBay - which is limited to whoever looks in the particular seven or ten day window chosen. Swapmeets may turn up damaged items, better to inspect in person; televisions; console radios and more 'mundane' radios which collectors are reluctant to pay the postage for on

eBay. Swapmeet items, also, of course, make their way on to eBay – and in the early days of eBay and higher prices, items with ‘eBay potential’ were ‘hoovered up’. eBay use is also not all about substitution away from swapmeets – it is allowing some radio collectors who could never attend swapmeets because of health and mobility problems, geographic distance or heavy work commitments to feel part of something. In relation to networks of collectables, collectors’ internal distribution networks have been more heavily utilised in an eBay era for difficult to post items – events are used as nodes or pick up and exchange points for eBay items. eBay buyers may pick up at events or from collectors who live near to them, who transport the item back from an event as a favour to the seller. Collectables’ networks have also been adversely affected by eBay – the research suggests eBay has truncated dealer networks threatening the ‘middle man’. House clearance dealers are putting items on to eBay and realizing an item’s value, circumventing the ‘food chain’ of specialist dealers who previously sold items on and took their slice.

Understanding eBay’s own sense of community in comparison to offline collecting communities

An examination of the project’s data on a sense of an eBay community reveals a highly complex and contentious picture, largely dependent on the individual’s perspective and experience in terms of: what they buy on eBay (general items or collectables in a narrow field) and how regularly; how they use eBay (as a tool in a goal-directed manner, or to gain social interaction); and whether they like to belong to a group. Fostering a sense of community is revealed to be important business practice in e-commerce – to make sites “sticky” and self-regulating through a sense of being a stakeholder. eBay’s own official definition of community is: “...all the buyers and sellers on the site as well as the staff that eBay employs [...] The power of the community is that we’re all looking out for each other” (Wilson, 2005: 5) – you help others and eventually expect to benefit ‘down the road’.

Evidence from our research suggests there are four concepts of community being outworked by eBay users: a community of commerce; a community of practice; communities of interest and imagined communities – which I will explain, in depth, later on. Results also suggest that some eBayers totally reject the label of “community” in relation to eBay because of its commercial angle. Most of this rejection either comes from those who use eBay as a ‘tool’, and those engaged in more generalised purchasing rather than collecting. Those respondents liken their eBay experience to visiting Tesco – they’re not interested in the shop assistant’s name or telling them what a superb pie they made with last week’s potatoes. The competitive nature of eBay in both buying and selling is also perceived to mitigate against a sense of community. Transaction-based social interaction is seen by both buyers and sellers to be unfulfilling –

eBay’s own new ‘checkout’ system is seen to limit the social interaction of the past, whilst sellers talk of “warmth”, but “you don’t make huge lasting relationships” and the “fickleness of customers”. eBayers are cynical of the ‘community’ label – they suggest that the notion of an eBay community is beneficial to eBay as a business to make people more amenable to paying fees, and see eBay’s pushing of the concept as ‘indoctrination’. eBay, themselves, recognise the business benefits of having a “community of practice” (Wenger, 1998). “Communities of practice” are defined as “...groups of people who share a concern or passion for something they do and learn how to do it better as they interact regularly” (Wenger, N.D.: 1). Interactions in such communities are said to facilitate trust and other beneficial aspects. There is a shared domain of interest, knowledge exchange, and a shared repertoire of resources including vocabulary. eBay was recognised in the study as having its own in-group language, such as the term ‘eBayer’ and standard feedback responses like “A++++”. Our results show that eBay buyers and sellers often gain a sense of community through the practice and performance of ‘doing eBay’ and having the appropriate eBay knowledges. They describe a shared experience of eBay as like being part of a “clique” or exclusionary “secret society”, and being an eBayer is about being “given the knowledge”. eBay practice was much talked about offline – with family members and in work contexts: “I started a course here at the beginning of the week [...] and nobody had met anybody before, so you go round the houses [...] I sell things on eBay. And two other people said: ‘Well, I sell things on eBay.’ And that community started there and then”. People share stories about the latest eBay scams or problems they’re having, and even saw attending the project’s eBay focus groups as an opportunity for learning. eBay community pages were used by only a very small number of the study’s participants – many said they were just not interested and didn’t have the time. Feedback was also seen as an intrinsic part of the eBay community – not giving it was seen as breaking a community ‘norm’, and getting and building good feedback comments made people feel part of a wider community as ‘good citizens’ or stakeholders. Some people were revealed as excluded from the eBay community of practice through lack of a computer, computer skills, Internet access or being under-18. People also self-excluded themselves through security concerns and trust issues. However, some, such as young people in their early teens, reconnected themselves through using friends and family as mediating ‘agents’ in buying and selling. Within the “community of commerce” and “community of practice” are found to be numerous “communities of interest” – lifestyle enclaves who share common interests. These are described in geographic terms and related to very specific collecting interests: “I suspect there’s a set of smaller communities, a bit like mini-villages; so there’s a mini-village for stamps... And I imagine there’s a set of housing estates within the villages

as well” (Gerard, stamp collector). However, there are many ‘generalist’ eBay buyers and sellers who get no form of community from what they buy and sell – because there is no consistent pattern. Many “communities of interest” pre-existed eBay, and so eBay merely represents some offline communities ‘going online’. This included stamp and radio collectors who had met prior to eBay, and recognised the buyer or seller’s name after completing a transaction. Some people meet on eBay first, then find they are thrown together again because of their collecting interest – at fairs and exhibitions. However, some “communities of interest” exist entirely on eBay, especially with collectors who do not attend physical fairs or meetings. It particularly helps those who are geographically remote or who are constrained from participating in offline collecting. One novel form of “community of interest” and consumption communities which exists on eBay in virtual form is revealed in the research – “communities of bidding” or “bidding circles”. This involves the feeling of being part of a particular specialist global community of interest by very regularly seeing the same eBay user IDs crop up in bidding (“the usual ID names”).

The Sonora advertising poster that started my hunt for the set

“Communities of bidding” may contain what are regarded as ‘arch rivals’, and fierce competition can ensue. However, one eBayer in the study decided to contact his Brazilian arch rival after losing out to another competitor. They struck up a conversation and now regularly correspond and have face-to-face visits. They also have a protocol as to who bids for what item – creating a form of auction ring. The research suggests the type of item collected is also important as to whether there is a sense of a “community of interest” through eBay practice – stamp collectors in the study had a greater feeling of online community than radio collectors – since they bought greater volumes of material, often as repeat purchases from the same people. Radio collectors quickly ran out of space for additional purchases, and often bought from diverse individuals. eBay’s sense of ‘virtual’ community is also understood by the research participants in relation to their offline communities of meetings and collectors’ fairs. A sense of an eBay community mostly comes off worse in this comparison, and is regarded by many as no substitute for offline interaction – offline collecting communities are regarded as “safe and chummy”, with a chance to catch up and chat with friends and acquaintances – the “same old faces”. Much is placed on the ‘experience’ of the offline – queuing up on a Sunday morning to get in – whereas eBay’s experience is described as “faceless” with an amount of information that is difficult to absorb. In this respect, the swapmeet will never disappear – collectors value the sociality of the swapmeet and the experiential elements, such as being able to visit each stall in turn, and enjoy the spectacle. Yet, the eBay community of interest shares similarities with the offline community – the

"same old faces" become the "usual ID names". The research reveals that many eBay participants had a rich imaginary world when it came to the eBay community, which they used to compensate for a lack of the usual social information. A sense of an eBay community, therefore, finally involves it being an "imagined community" (Anderson, 1983) - existing in the mind, but with boundaries. Much of this involves imagining "bidding communities" or "communities of interest" - one eBayer constructed himself as being on the edge of a giant circle of other Concorde-related collectors, and began to imagine the content and extent of their collections. Others look at user-IDs and buying and selling, and try to build up a picture of people such as the gender of the collector. eBayers use whatever information they can get to build up an imagined picture of their own eBay virtual community - from perceived tastes of individuals, to whether they are fringe or central members of that community. However, the eBay community and its composition is itself 'imagined' within other community spaces such as the online Vintage Radio Repair and Restoration forum. I don't want to get involved in the politics of the eBay section of that forum, just to say that the eBay section helped me to understand how experienced collectors looked on what were sometimes 'non-expert' listings, and how they imagined other collectors that were not directly part of their own social circle. Inevitably, knowledge became highly politicised in that context. eBay was there perceived to be a virtual space or territory - "e-bay land" or "planet Ebay" - where specific practices occur which are seen as the antithesis of those performed by the forum 'experts'. Posters to the forum spent time 'imagining' those who occupy "planet Ebay". eBay sellers were even said to have their own language - "ebayese" - because of their perceived 'non-expert' use of technical terms, and purposive 'spin' of their item descriptions to incorporate keywords which attract eBay 'lookers'. The virtual eBay community is ironically imagined to have many of the elements of a nation state.

eBay and real networks: delivery networks, money and Internet infrastructure

The growth of eBay into the world's largest e-commerce site has been built on the back of three 'real networks' - those which deliver goods, those which involve money and an Internet infrastructure. Our results show eBay has had interesting and complex implications for the 'real networks' which underpin the exchange of goods. The number of items being sold on eBay has not only been perceived to put pressure on existing networks through an increase in business (particularly for Royal Mail), but led to complex negotiations by eBayers in terms of choosing between the services of these existing intermediaries, and substituting their business to new intermediaries which have grown up to cater for eBay and e-commerce.

eBay is shown to make highly visible problems with existing 'real networks,' particularly with its globalising effects on the exchange of goods. In terms of

the money flows behind the exchange, traditional banks are seen by our research participants as very expensive, slow and highly administrative in terms of being able to deal with foreign currency transactions. These foreign exchange transactions have particularly been substituted away from banks in favour of PayPal, which has the arm chair convenience that eBayers are used to. In terms of the distribution of goods, eBay's main contribution, as shown by the research, has been the cherry-picking of national carriers' distribution services through the perspective of a 'chain of accountability' back to the seller. eBay sellers increasingly require traceability, and quick, full refunds to the full value of eBay items. Couriers tend to be preferable for larger, high value items which need traceability - Royal Mail's standard parcel service is untraceable. However, some needs are not currently catered for at all, such as a fragile service, and both Royal Mail and couriers are seen as likely to damage fragile or large items. Where no adequate service exists to cater for eBayers' needs, this often stops them bidding for such items, affects saleability and ultimately supply - for example eBayers often do not bid where foreign currency payments are needed and PayPal is not an option. These unmet needs mean a loss of business to both eBay and the real networks, who could adapt to meet these service omissions.

In addition, the research shows eBay is not only supported by the 'real networks' of distribution, money and Internet infrastructure, it in turn has supported them. Without eBay, it is likely that many more local post offices would have closed in that period due to diminishing revenues from elsewhere. National carriers such as the Royal Mail and Parcel Force seem, from our study, to have benefited most from the rise of eBay trade because of their accessible network. eBay has also been one factor amongst others (such as releasing the phone line) in encouraging the fast adoption of Broadband by eBay buyers, according to our study, but is the 'killer application' of Broadband adoption for eBay sellers - because of the need for a fast, reliable, always on connection for listing and 24/7 customer service.

Insights into eBay self-employment and consumer issues

The rise of the "eBay phenomenon" (Bunell and Luecke, 2000) has had implications for the wider policy community. This has first and foremost been in terms of self-employment. eBay has meant 10,000 full-time jobs (Bown, 2005) and 50,000 Britons earning some money from the online auction site (Blakely, 2005). However, this is unlikely to be a net gain, with results suggesting substitution effects away from traditional (offline) intermediaries who impose 'middleman' margins - such as specialist antique dealers - due to increased price knowledge through eBay and its undercutting of retail prices. Traditional intermediaries are having to counter substitution effects by using eBay themselves, providing a more personal and trusted service, and by monopolising supply. New jobs have been shown in our study to

have arisen in terms of new intermediaries which have grown up around eBay, such as eBay drop shops (consignment stores). All the eBay sellers interviewed in the study began their businesses with no help, and eBay has provided an easy entry route with few of the traditional barriers of having your own business. This may seem like a self-employment panacea, which should be backed up with more help from government and voluntary sector organisations. Indeed, eBay may provide an income for those who have been excluded from the formal labour market in some way such as by being made redundant, being a carer or being disabled in some way - circumstances which were represented in our study participants - but often their reasons for choosing eBay for their waged employment were multi-faceted. One of the most striking reasons for being a self-employed eBayer was revealed to be dissatisfaction and frustration with an existing job in formal sector employment - such as boredom or doing a 'mundane' job, or the limitations of formal sector in supplying the desired job in a particular geographic location for those with specialised training. The study shows that eBay self-employment has many positive elements. Being able to sell via eBay from anywhere, and flexibly, to a world market, makes it an appropriate solution when 'going out' to work for certain hours isn't possible - and is particularly appreciated for gaining a better work/life balance. However, being an eBay seller was shown to be no panacea. Most of the eBay sellers reported having an erratic income, with the nature of eBay and PayPal tending to exacerbate the problem. Earning an erratic income on eBay is also revealed to be a product of buyers delaying their payments - respondents felt eBay was perceived as some amateurish venue for second-hand exchange - rather than as a place where people earn their living. Concomitantly, being an eBay seller was revealed to have a low status as an occupation, regarded as a "rag and bone" business. Working from home rather than experiencing the sociality of a geographically distant workplace is also seen as a negative aspect of eBay self-employment, and some eBay sellers supplement their eBay selling with other part-time employment. eBay flexibility also has its paradoxical elements - for some in the study eBay is a 24/7 bind which can interfere with taking holidays and sellers' social lives. A more profound set of long-term problems for eBayers selling second-hand, as revealed in the fieldwork, are the compound issues of increased competition on eBay as the eBay market matures - driving down previously high prices - and a diminishing stock of original second-hand items for them to sell. It is difficult for eBay sellers to find a good supply of second-hand items at cheap prices, and some sellers are selling reproduction pieces as 'originals' (particularly jewellery), or at least making the age ambiguous - regarded by some eBay sellers in the study as unfair competition. There are also perceived problems of unfair competition through shill bidding - using friends and alternate eBay identities to drive up item prices. The research suggests it is

therefore advisable for eBay self-employment to be one income-stream amongst others – such as a static e-commerce website or a physical outlet, or to use eBay as an introduction to having your own business. Indeed, many of the eBay sellers interviewed were moving over to this strategy of having more than one direction to secure a more reliable income stream. eBayers were reluctant to receive start up help because of their propensity to independence and sometimes due to their treatment of eBay selling as a ‘hobby business’.

eBay has also attracted considerable media attention for the consumer issues it raises. Many eBay users participating in the study were concerned about their own consumer privacy, with the issue of seeing what people had bought and sold through their feedback profile being particularly contentious – with the potential to gain someone’s address just a transaction away. Those in our two year study had also experienced many types of fraud – such as misdescribed items, receiving counterfeit goods or not receiving items at all. I’ve had my problems too, as have family members – such as being a victim of shill bidding, people wanting back items after they’ve sold them (?), items that don’t exist and so on. eBay have a key role in getting buyers their money back in cases of fraud. However, paying by PayPal is increasingly the only

way to get more than partial redress as a buyer and seller – eBay is ‘locking in’ users to paying by or accepting PayPal (from which it derives a percentage) as part of their business model, if they want a degree of insurance. eBay ‘newbies’ who have not yet learnt the appropriate consumer knowledges to offset their risk are revealed to be particularly vulnerable to sophisticated frauds. Stronger fraud prevention and ID verification measures are needed to prevent opportunistic fraudsters with no or limited feedback from selling high value items, to those yet to learn ‘intelligent interpretation’ of eBay – when something’s ‘not right’.

That’s about it for the results. If you’d like to see everything in much more detail, then have a look at the website – where there is a lot of material to download. I’ll sign off for now, but I’m a regular fixture at swapmeets (our stall has a brown Philips table cloth), if you’d like to come and chat further about the results. Thanks again to those who gave up their time for either interviews or questionnaires, and I hope you’ve enjoyed this article.

Web links:

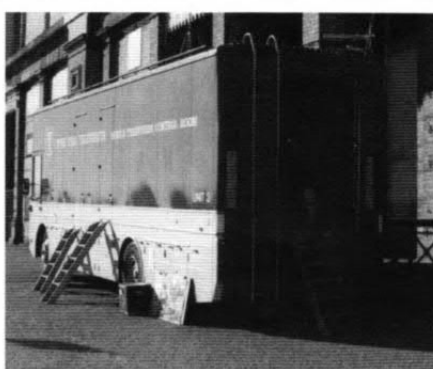
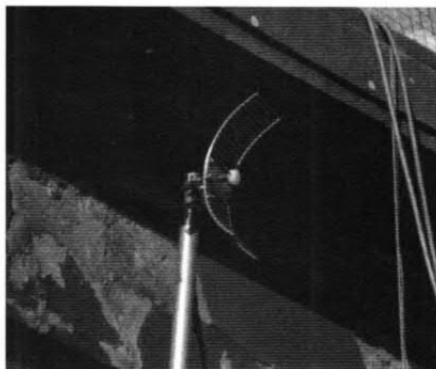
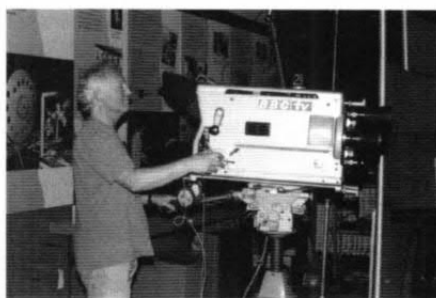
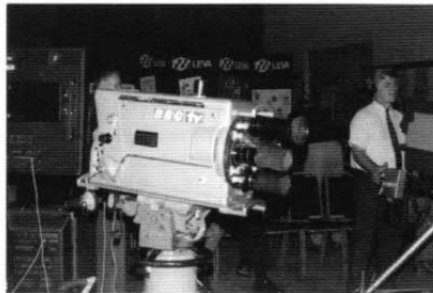
<http://tinyurl.co.uk/vwop> (project page)
<http://tinyurl.co.uk/yoxz> (ESRC page)

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Photographs from the Test Card Circle and British Heritage Television Project’s ‘TV70 Event’ at Alexandra Palace 2nd November 2006.

by Dave Young, G8TVW (QTHR)
 For more information visit: www.405-line.tv



Can there be life after death for a Mazda tube... incredibly... Oui!

by Bernie Bowden

How many of us 405 TV anoraks have got hold of a TV we have dreamt of finding only to discover after many hours slaving over a hot soldering iron that its tube is kaput - and probably has been since shortly after the set was sold! Such is the reputation of the MAZDA CRM series!



Completed Ekco TS88 restoration

Let's start with a little history!

When I was an apprentice (back in the prehistoric, monochrome 60s) my betters told me that Mazda had a built in "fluffer". This they affirmed was to ensure that it died shortly after its guarantee ran out! Did I believe them? Well I don't think I did then; but latterly, since restoring numerous 405 sets, I must confess it is one explanation for their very poor performance!

In those far off days, after leaving school, I started my career at the famous Ekco works in Prittlewell. It was just down the road from my home and it was there I really began to learn about our business - as well as seeing a few famous faces. After a few years I then went on to serve a full apprenticeship at a large local TV establishment. Amongst my many duties (one of which was making tea!) was a task made more enjoyable because it allowed me out of the workshop and into the open air! This was to take any CRTs considered suitable for repair to the re-gunners - in this case Brybel Tubes. In those days, such miracles were pretty cheap with a full re-gun costing a mere couple of "old" pounds. Time passed and Brybel Tubes became Wellview tubes which eventually became Canvey Tubes by which time it was run by my old pal Derrick. For many years thereafter, he supplied us with both monochrome and colour tube re-guns and I can't ever remember having a duff one! That was until the local Council closed him down because of their pathetic rules and red tape - typical!

With a renewed interest in early TV and consequently the need for the odd re-gun, I called on Derrick a few years back to ask if he could re-supply. His first response



Close up of new re-gunned tube face showing bright crisp picture.

was mildly discouraging...he doubted the availability of new guns. It's easy to re-gun he said, but if you can't get the guns... I returned home determined to source some guns. I finally found a supply last year and went to see him again. This time the reply was even worse "Oh sorry", he said "I have just dumped all my old re-gunning gear down at the tip because there's no money in it any more!" When I told him I would pay £100+ per tube he said "Oh. Bleep bleep"! (well that's what it sounded like!)

I returned home to re-think my strategy and wondered whether any re-gunning/re-building was being undertaken on the near Continent. I wasn't optimistic so you can imagine my amazement when I discovered that a small company in the depths of France (near Clermont Ferrand) was indeed in that business! I immediately made contact and via the Internet, met Phillipe of RCS. "Please send me your old tube" he said "there is no problem" (and there wasn't!).

I went to the post office to price the cost of sending a tube to the South of France. Well-packed "that will be £75 Sir." How much!

The following week my friend was going to spend a day in France (cost about £9 a head - and unlimited access to the supermarkets!) so what about taking the package across the Channel! So while we were there we popped into Boulogne Post Office. In my poor French I asked to post the parcel and in perfect English came the reply - that will be Euro 8 (about £5!) I spent the balance saved on wine and beer for Christmas!

Back to the plot... an Ekco TS88 purchased for £55 had been my initial reason for seeking a re-gun. I had already fixed a very poor cabinet; major veneer replacement/

repairs and a complete re-polish. The rubber-coated wiring, which was totally rotten, had also been bound with cotton twine (tied every half inch rather in the style of old military equipment), so potentially it was a difficult replacement job. At the same time, I could see that the majority of it was solid copper, so rather than re-wiring it entirely - which incidentally would also increase the risk of the odd mistake - I cut one end of each wire, pulled off/removed the old insulation and pulled over each wire sections of RS silicone rubber sleeving (part number 252-1688). This sleeving is unaffected by heat (even the soldering iron), matt in colour and looks very original. It was a tedious job but worth the trouble. Given that I believe there is no such thing as a good 'old' capacitor, out they went, together with some of those high-value resistors, often gone o/c.

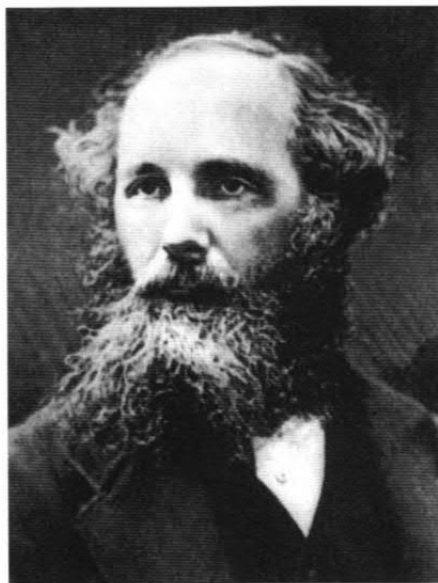
By the way, treat the EHT generated by these old sets with great respect. I think a modern TV of around 25 KV is often safer than the <5 KV of an old set! After all this work, the TV produced a perfect picture if operated in black-out conditions!!

So after a few months RCS came to the rescue and sent back a beautifully re-gunned CRM and just look at the pictures to see the result - just stunning! So it will come as no surprise that I will be sending Phillipe another tube soon and in the meantime I have just posted another (TA15) (in Calais) for my pal Trevor. This is even more of a challenge with a broken neck but Phillipe is confident it will be repaired. It's just awesome! You too can contact Phillipe at RCS at racs2@wanadoo.fr He speaks excellent English and they also have a web address.

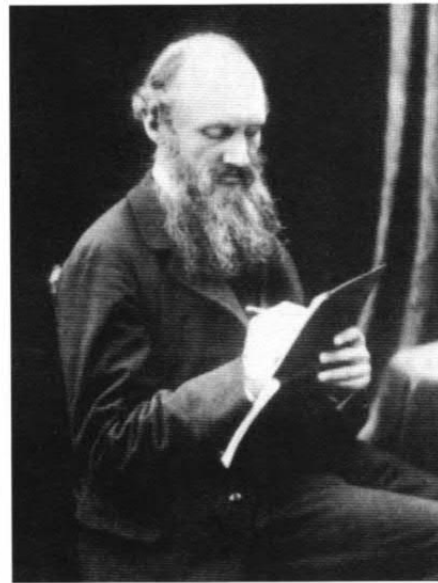
How Radio became Wireless by Pat Leggatt



Faraday



Maxwell



Kelvin

The story of the origins of radio has often been told, sometimes in rather simplified form, on the following lines. Michael Faraday in 1831 suggested that magnetic and electric forces might be propagated through space as some sort of wave motion. Clerk Maxwell in the 1860s gave a rigorous mathematical basis to this concept of electro-magnetic waves. In 1888 the brilliant experiments of Heinrich Hertz demonstrated that these waves did actually exist. And in the 1890's Guglielmo Marconi developed a wireless communication system utilising these Hertzian waves. This version of events should be taken with a pinch of salt; not because it is untrue but because, as we all know, a bit of salt helps bring out the real flavour of things. In fact the background is rather more interesting than the bare bones above would indicate.

It is common usage to speak of the electromagnetic activities around the early years of the past century as *Wireless*, and the later broadcasting developments as *Radio*. But I suggest here that 'wireless' is an abbreviation for 'wireless telegraphy or telephony' and that 'radio' is a better term to describe the first investigations into *radiation* of electromagnetic energy, before any thoughts of use for communication had crystallised. So hence my title.

In the earlier decades of the nineteenth century, magnetic and electric forces were supposed to act instantaneously at a distance. This concept was less acceptable to some in the United Kingdom, and to Michael Faraday in particular.

Faraday's waves

In 1831 Faraday conducted a series of experiments on the magnetic effects of electric currents, during which he made his important discovery of electromagnetic induction whereby an electric potential was induced in a conductor subjected to a changing magnetic field. In the course of these experiments, Faraday came to the conclusion that magnetic and electrostatic forces were not instantaneously effective at a distance but required a finite time for their transmission. We know now that electromagnetic energy is transmitted at the speed of light; but while continuing his experiments into 1832 Faraday had no means of detecting or measuring the very small time

intervals necessary to confirm his theories. Furthermore he suggested, with remarkable intuition, that transmission of such forces took the form of some kind of wave motion. To establish his prior claim to the notion of wave motion, Faraday deposited a written statement in a sealed envelope with the Royal Society in 1832. The envelope was finally opened more than a hundred years later in 1937 by the then President of the Royal Society, and found to contain, inter alia, the following words: "I am inclined to compare the diffusion of magnetic forces from a magnetic pole to the vibrations upon the surface of disturbed water, or those of air in the phenomenon of sound".

Faraday, the son of a blacksmith, was a brilliantly imaginative experimenter and theoretician but only had self-taught scientific education and little knowledge of mathematics. Because of this, his theories were regarded with some disdain by many contemporary scientists. However there was one young mathematician, James Clerk Maxwell, who was most impressed by Faraday's concepts of magnetic fields and lines of force as set out in his paper *Experimental Researches in Electricity* read to the Royal Society in 1851.

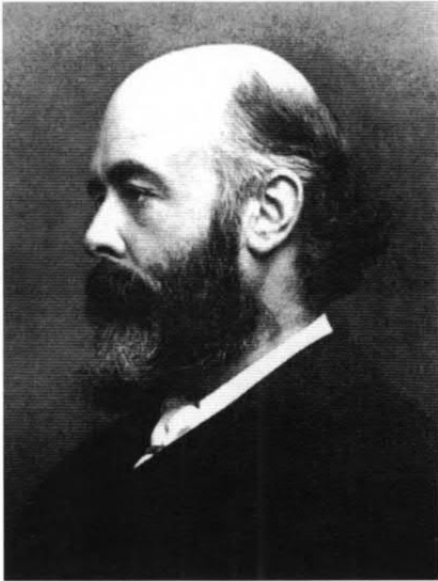
Maxwell's analysis

Maxwell already had an interest in this area, triggered while he was at Cambridge by the ideas of William Thomson, afterwards to become Lord Kelvin; and Maxwell determined

to submit Faraday's concepts to detailed mathematical analysis. As his studies continued he concentrated attention on the possible nature of the medium through which electromagnetic forces could be propagated, wishing to devise a mechanical model exhibiting appropriate characteristics. This was a complex task, but by about 1862 he came up with a system of even more minute rapidly spinning eddies or vortices, each surrounded by a layer of even more minute particles revolving in a direction opposite to that of the vortices themselves.

The vortices, with their outer layers of particles, could interact with one another in a matter analogous to a train of gear wheels, so that energy imparted to one vortex would be transferred to others and so progress through the medium.

Maxwell devised this mechanical model as one which could exhibit the sort of behaviour necessary to embrace Faraday's concepts of lines of force and wave-like transmission of energy: but it was a convenient model only, and he was not so fanciful as to suggest that it represented anything much related to reality. Nevertheless it served his purpose of enabling rigorous mathematical analysis, culminating in his 1864 paper to the Royal Society *A Dynamical Theory of the Electro-Magnetic Field*. One of Maxwell's main hopes had been to derive the electromagnetic nature of light and heat, and this was triumphantly achieved in particular by one of the consequences



Lodge

of his theories that electromagnetic wave propagation would travel at a velocity very close to the value for the speed of light which had been experimentally determined by others at the time.

So there it was – a rigorous and comprehensive theory of electromagnetic radiation, for which the term ‘radio’ seems appropriate. In 1873 Maxwell produced a further work, his *Treatise on Electricity and Magnetism*, which however did not add anything very significant to his 1864 paper.

The Maxwellians

Maxwell’s analysis was deeply mathematical, making use of Hamiltonian quaternionic calculus and high-order differential equations and, at the time of final publication in 1873, there were very few physicists with the intellectual ability to understand it. Really there were only three of note; Oliver Lodge and Oliver Heaviside in England and the Irish professor George Francis FitzGerald of Trinity College, Dublin.

In 1873 Oliver Lodge, then a student at University College, London, attended a lecture by Maxwell at a meeting of the British Association and obtained a copy of his *Treatise* published in that year. Lodge did not get round to studying this closely until 1876, but when he did he quickly came to realise that Maxwell’s equations implied not only the electromagnetic nature of light and heat, but also that there could be a whole spectrum of radiations with wavelengths both above and below those of visible light. Lodge was probably the first to appreciate that such electromagnetic waves could perhaps be generated electrically; and in 1879, after Maxwell’s death, he began to give serious attention to this possibility.

FitzGerald too was studying Maxwell’s theories at about this time and, in a paper to the Royal Dublin Society in 1882, suggested that electromagnetic radiation of about 10 metres wavelength could be generated by discharging a condenser

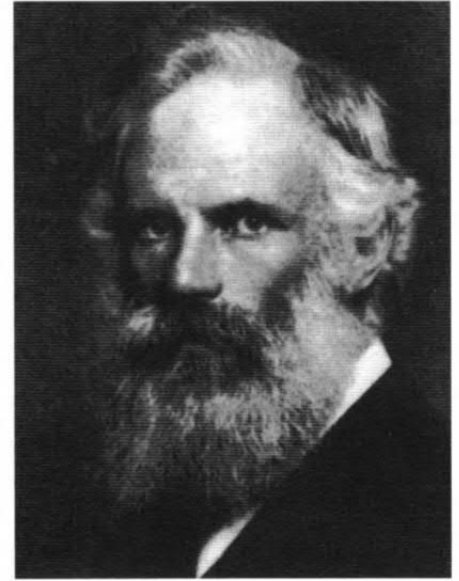


Heaviside

(Leyden jar) through a circuit of very low resistance and low inductance. Furthermore he clarified Maxwell’s analysis to the extent of showing that the equations also led to the laws of reflection and refraction which had already been developed in the wave theories of light. FitzGerald did not at this time experiment with generation of radiation, since he had no means of detecting the waves even if they could have been generated. Lodge was himself no mean mathematician but, recognising his friend FitzGerald’s even greater ability, he encouraged the latter in his clarification and development of Maxwell’s work.

Another physicist who contributed significantly in this way was Oliver Heaviside, now best remembered for his 1902 theory of a reflecting ionised layer in the upper atmosphere which, when physically verified some 20 years later, was named after him. Heaviside was a first-class mathematician and was already interested in Maxwell’s papers. He re-formulated much of the analyses in appreciably simpler terms, changing Maxwell’s rather convoluted systems into notation of his (Heavisides’) own devising. He developed his own operational calculus and vector algebra and although contemporary mathematicians found it difficult to grasp at first, it is in this form that Maxwell’s equations are familiar to students of today.

These three adherents and interpreters of the equations called themselves ‘Maxwellians’. They were scientists, and what was crucial to them was that the electromagnetic radiation implicit in the equations indicated that the unsatisfactory theories of instantaneous action at a distance could be discarded. While the theoretical analyses were their prime interest, they naturally hoped for experimental verification of the real existence of such radiation and it was Lodge who pursued this most effectively.



FitzGerald

Oliver Lodge

Oliver Lodge was born in Staffordshire, England, in 1851, the son of a pottery merchant. He received his scientific education at University College, London and while there attended a lecture by James Clerk Maxwell showing that oscillatory electrical discharges resulted in electromagnetic wave radiation propagating with the velocity of light. This fired Lodge with an abiding interest in what was eventually to become ‘wireless’.

Lodge quickly rose to be an eminent physicist, gaining his DSc degree in 1877 and being appointed Professor of Experimental Physics at the University College of Liverpool in 1881. In 1887 he was elected Fellow of the Royal Society, the highest honour in British science; and he was knighted as Sir Oliver Lodge in 1902. He died aged 89 in 1940.

In 1887 Lodge undertook a series of investigations into lightning discharges and protection against them. He found by experiment that lightning flashes were oscillatory and followed this up with further experiments involving spark discharges from Leyden jars. In early 1888 he developed a famous experiment which he called the ‘recoil kick’. This involved generating oscillations by discharge of a Leyden jar capacitor into a long pair of wires and observing that a much greater spark would occur at the end of the wires when they were a suitable length. He correctly surmised that this was due to a standing wave pattern along the wires with a voltage antinode at the end. Furthermore he understood that this condition would be satisfied when the wires were a half-wavelength long (or a multiple of this) and was thus able to determine experimentally the wavelength of the oscillations. It can be seen therefore that he was conversant with principles of resonance and tuning – or syntony as he called it – saying in 1888 ‘The natural period of oscillations in the wires will then agree with the oscillation period of the discharging circuit, and the two will vibrate in unison, like a string or a column



Hertz

of air resounding to a reed'. In an 1889 paper he wrote: 'A Leyden jar discharge can so excite a similarly-timed neighbouring Leyden jar circuit as to cause the latter to burst its dielectric if thin and weak enough. Put the circuits out of unison by varying the capacity or by including a longer wire in one of them; then although the added wire be a coil of several turns, well adapted to assist mutual induction as ordinarily understood, the effect will no longer occur until the capacity is suitably diminished and the synchronism thus restored'.

Although his experiments were largely confined to oscillations along wires, Lodge knew well that the electromagnetic waves were propagated in the space surrounding the wires rather than in the wires themselves. He knew also, being familiar with Clerk Maxwell's mathematical analysis, that the waves would be radiated into space and travel at the speed of light. To quote him; 'The oscillatory discharge of a Leyden jar disturbs the medium surrounding it, carves it into waves which travel into space; travel a velocity of 185,000 miles a second; travel precisely with the velocity of light'.

Thus we can see that Lodge had demonstrated experimentally the existence of electromagnetic waves as predicted by Maxwell's equations. But he had dealt only with waves guided along wires, since he had not then devised any means of detecting such radiation in free space.

In fact Lodge was not the first to observe electromagnetic waves along wires. In 1870 Wilhelm von Bezold observed such phenomena, detecting the waves by patterns formed by dust particles under the influence of electrostatic fields. However he did not relate these observations to Maxwell's theories and his work attracted little notice.

Heinrich Hertz

But at the same time as Lodge was undertaking his experiments, there were even more effective investigations being carried out by Heinrich Hertz in Germany. Hertz, the son of a lawyer, was born in February 1857. At the age of seventeen he developed a strong interest in and talent



Loomis

for oriental languages and almost decided to study for a career as an orientalist.

However – and fortunately for the future of communications – he turned eventually to science with a year's course in Munich, transferring in 1878 to the University of Berlin. Here he studied under Professor von Helmholtz, who gave such encouragement to one he recognised as an outstanding pupil. Finally, having been awarded his doctorate, Hertz was appointed assistant professor at the Physics Institute of Berlin in 1880.

Hertz had been brought up in the 'instantaneous action at a distance' school of thought, but fairly early in his career he was introduced to Maxwell's postulated 'displacement current' in air or empty space. Hertz did not immediately take this up, but he was intrigued by the possibility that the concepts of displacement currents and electromagnetic waves could fundamentally change action at a distance theories.

A few years later he had been appointed Professor at the Technical High School at Karlsruhe and found there in a collection of old physical apparatus a pair of Knockenbauer spirals, flat coils wound in wooden frames. Experimenting casually with these, he noticed that discharging a Leyden jar through one of the coils gave rise to a small spark across the open terminals of the other some distance away. This revived his earlier interests and he began to devote effort to theoretical clarification of Maxwell's equations. He became increasingly convinced that the equations could indeed give the true explanation of electric and magnetic field phenomena, and by 1884 he wrote 'I think we may infer without error that if the choice rests only between the usual system of electromagnetics and Maxwell's, the latter is certainly to be preferred'. But the physical existence of electromagnetic waves, and especially their finite velocity of propagation, needed to be established by practical demonstration, so Hertz undertook a series of experiments culminating in the famous ones of 1887/88 which proved the point beyond all doubt. It is true that others before him had, rather accidentally, observed electromagnetic radiation, notably



Muirhead

Mahlon Loomis in America in 1872 and David Hughes in England in 1879, but neither of them understood what was happening or were familiar with Maxwell's work.

Hertz's investigations into the subject had involved generation, detection and measurement of waves in free space, rather than along wires. Lodge generously acknowledged that Hertz's experiments were superior to his own and a more convincing proof of the validity of Clerk Maxwell's theories.

After his experiments Hertz undertook further theoretical interpretation and development of the Maxwell concepts, much helped by his correspondence with FitzGerald, Lodge and Heaviside which revealed significant earlier work by these Maxwellians which he had not previously heard of. Hertz's papers in 1890 were particularly important in the field of theoretical physics and were influential in setting the scene for the later achievements of Lorentz and Einstein. Hertz died in 1894 at the early age of thirty six.

Hertz was not primarily an experimentalist seeking to demonstrate the existence of electromagnetic waves. He was a theoretical physicist who conducted his famous experiments as a means of justifying his firm conclusion on a matter of fundamental scientific importance. The waves were not important to Hertz for their own sake: he saw them simply as affording proof that Maxwell's equations gave the true picture and that hitherto accepted theories of 'action at a distance' must therefore be regarded as obsolete.

The three 'Maxwellians' Lodge, FitzGerald and Heaviside, were of a like mind. They were satisfied with the fact that Hertz had experimentally demonstrated the real existence of electromagnetic radiation, and neither they nor Hertz himself concerned themselves with any possible practical applications such as communication.

Someone soon did however, in the shape of Richard Threlfall who as President of the Australasian Association for the Advancement of Science proposed in 1890 using Hertzian waves for communication purposes.



Branly

But no one else saw this as a practical proposition at the time, the range of a few yards achieved by Hertz in his Karlsruhe laboratory not seeming to offer very much.

Wireless begins with Marconi

Five or six years went by with nothing very significant happening until Hertz's death in 1894. But ironically this was one further event involving Hertz which had a most profound impact. For in that year the 20 year old Guglielmo Marconi, on holiday in the Italian Alps, read an obituary describing the work of Hertz. He was immediately inspired to consider whether Hertzian waves might not form the basis of a wireless telegraph communication system, and dedicated himself to this idea for the rest of his life.

At the end of his holiday Marconi returned to the family home in the Villa Griffone near Bologna, and at once commenced experiments in his attic workshop where he had long since occupied himself with the electrical devices which had fascinated him since boyhood.

It is a well-known story of how Marconi improved his apparatus and techniques to achieve greater and greater ranges during 1894/95; how he came to England in 1896 to make further progress; and how he spanned the Atlantic with the letter 'S' in Morse in 1901. This story need not be told again here, but Marconi's relationship with Oliver Lodge is perhaps less well known and may usefully be described.

Lodge and Coherers

Although it was Hertz who first contrived to demonstrate the existence of waves in free space and that they exhibited reflection and refraction in the same way as light, it is true to say that Lodge knew and understood as much or more about the nature and behaviour of the waves than anyone else in the latter years of the 19th Century.

As already mentioned, Lodge was thoroughly conversant with resonance and tuning, and he also well understood the principles underlying radiation from antennas of various configurations. Although he knew that waves must be radiated



Marconi

into free space, he lacked any means of detecting them; and it was use of the crude, but just adequate, resonant spark gap detector that enabled Hertz to effect his splendidly successful experiments.

But in 1889, the year after Hertz's demonstrations, Lodge made a discovery which was to prove a crucial step forward on the path to a practical wireless communication system. During his investigations into lightning and the analogous effects of spark discharges from Leyden jars, Lodge observed that two iron spheres or other metal surfaces in very close proximity would at times fuse together to form a conducting path when subjected to a Hertzian wave pulse. He called this arrangement a 'coherer', saying 'an astonishingly sensitive detector of Hertzian waves'. Later, in 1893, he was made aware of the work of Eduard Branly in France who had observed similar cohering effects with a glass tube filled with metal filings. Lodge immediately tried this for himself and found it much more sensitive than his own iron spheres. In fact the phenomenon of coherence resulting from nearby spark discharges had been independently noticed by others some years earlier, including Guitard in 1850, Varley in 1866 and Onesti in 1874; but these predecessors had not in fact ascribed the effects to Hertzian waves, and neither had Branly in his 1890 experiments. Branly was upset that his name 'radioconducteur' was superseded by Lodge's 'coherer', but the latter became standard usage. In 1902 Lodge, in conjunction with Alexander Muirhead, invented a new form of coherer in which a knife-edged steel wheel grazed the surface of a small pool of mercury covered with a film of oil: an incoming radio pulse ruptured the thin oil film and allowed low-resistance contact between the steel and the mercury. This type of coherer was at least as sensitive as any other and a good deal more stable in operation.

Lodge did not at the time attempt to put his coherers to practical use, but Marconi used a filings version in his early apparatus. It was this, plus the use of

elevated antennas and connection to earth, which enabled Marconi to develop and steadily improve his equipment to the point where it could be seen as a viable wireless communication system.

Lodge versus Marconi

Marconi came to England in 1896 as a young man of nearly 22, with little theoretical knowledge of wireless principles but brim full of enthusiasm and dedication. He had a flair for publicity and in December gave a demonstration to members of the public, carrying a black box round the audience which rang a bell whenever a key at the end of the hall was depressed. Representatives of the press were present and the next day Marconi was headline news, hailed as the inventor of wireless. In fact Marconi was always quite modest and did not claim to be an inventor but rather that he 'took up other people's ideas and inventions and improved them'. But Lodge and other scientists who had made significant contributions in the field, were naturally indignant about the adulation of a young Italian upstart: Lodge may thus be forgiven his testy comment in a few years that 'It was stale news to me and a few others' but he then added more generously 'But whereas we had been satisfied that it *could* be done, Marconi went on enthusiastically and persistently till he made it a practical success'.

Another area of interplay between Marconi and Lodge was tuning. As already mentioned, Lodge had a full understanding of the principles of resonance and tuning and in May 1897 he applied for a patent on his 'syntony' ideas.

Tuning, and the resultant ability to separate one transmission from another, was of course a vital necessity for the development of Marconi's wireless system and he tried many different circuit arrangements with gradually increasing success. Finally in 1900 his famous 'four sevens' patent was granted. It may appear strange that he was granted this patent when Lodge had registered his some years earlier; but it seems that it was not considered that one infringed the other, and it was ruled in court that the two were complementary rather than duplications. Nevertheless the existence of Lodge's patent was seen as an embarrassment by the Marconi Company, especially when its validity was extended in 1911 by a further seven years. Accordingly Marconi negotiated with Lodge and bought up his patent for a considerable sum.

The Lodge-Muirhead Syndicate

Another source of rivalry was the appearance of the Lodge-Muirhead Syndicate with a competing wireless telegraphy system. Although Lodge was basically uninterested in commercial exploitation of his Hertzian wave experiments and discoveries, such a thing was suggested to him by Dr Alexander Muirhead after he had attended one of Lodge's lectures in 1894. This eventually resulted in the formation of the Lodge-Muirhead Syndicate in which Lodge provided the scientific ideas and Muirhead – a very able telegraph engineer

– the design of practical equipment.

By 1903 the syndicate was ready with a well-designed and effective system incorporating the Lodge steel-mercury coherer, but they found themselves up against the Marconi Company's monopoly of coastal stations in the United Kingdom which they had negotiated with Lloyds of London from 1901, and the Company's contracts with many shipping lines for exclusive use

of Marconi equipment and operators.

Faced with this situation, the syndicate could only find limited markets in the military field and in a few overseas countries. So despite its technical excellence, the Lodge-Muirhead system was not a commercial success and was wholly bought out by the Marconi Company in 1911, together with the Lodge tuning patent referred to earlier. As part of the deal,

Lodge was appointed Scientific Adviser to the Marconi Company, but it is not on record that his advice was ever sought!

So by the early years of the twentieth century wireless telegraphy was well established and went on with ever increasing development up to the new 'radio' era of the 1920's and beyond this to the all-pervading presence we experience today.

The Alba Story continued from page 13

time he nevertheless put his family first.

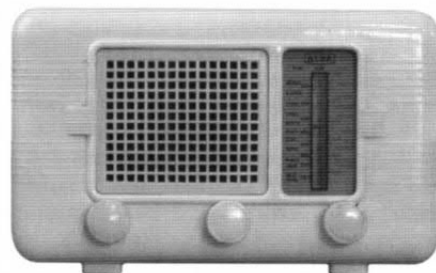
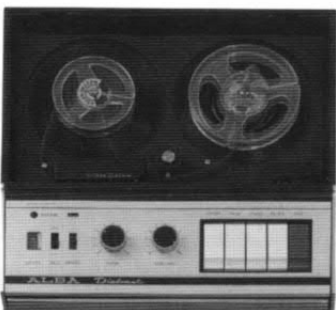
We have had over twenty years to get over the pain of losing Alfred's "baby" and we now get great pride and pleasure from knowing that the family built an enduring brand, and that the Alba name is still around.

My collection has examples of Alba craftsmanship from the 1920's through to the 1970's and includes both valve and transistor radios, radiograms, cassette players and hi-fi equipment, branded playing cards and numerous items of literature. The

radios from the 30's and 40's are my favourites, particularly the Clipper made in 1940. Bought for £16 on Ebay it came in its original box and, after some Gerry Wells magic, is permanently tuned to radio 5 Live. The sports results sound marvellous especially when the red and whites from North London are on song.

The search however goes on – so far I have not been able to track down any TV's – although I suspect my wife's patience is beginning to wear thin. With space at a

premium it is becoming harder and harder to smuggle items into the house, especially the two 1950's radiograms I recently acquired. Still the cause is a worthy one and I am sure Alfred would be delighted to know that one of his great grandsons is doing his best to protect the Alba legacy.

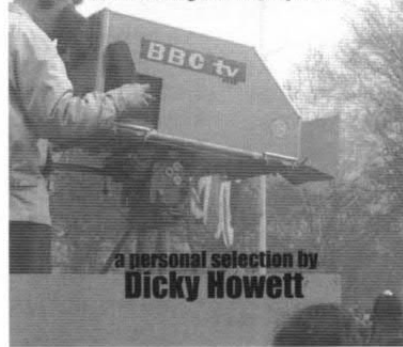


Television Innovations- 50 Technological Developments

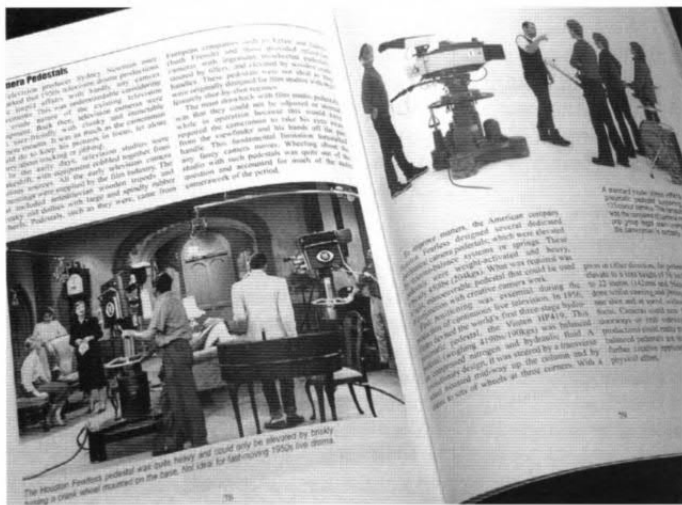
by Dicky Howett

Reviewed by Roger Richards.

TELEVISION Innovations 50 Technological Developments



a personal selection by
Dicky Howett



DATA PROBLEMS

Examples of the problems which have arisen from the use of electronic cameras and their associated equipment are given in this section. These include the problems of the camera operator, the problems of the camera itself, and the problems of the studio. The author discusses the various methods used to overcome these problems, and the importance of the camera operator in the studio.



THE AMERICAN CAMERA

The American camera, which was developed by the American television industry, was a major development in the history of television. It was the first camera to be designed specifically for television, and it was the first camera to be used in a studio. The author discusses the various features of the American camera, and the importance of the camera operator in the studio.



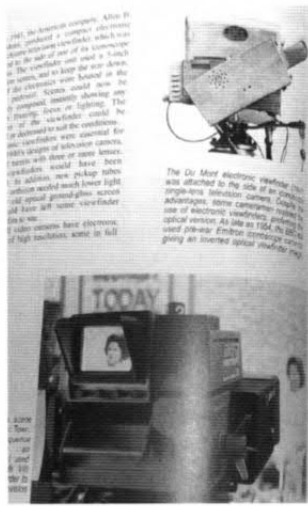
THE GERMAN CAMERA

The German camera, which was developed by the German television industry, was a major development in the history of television. It was the first camera to be designed specifically for television, and it was the first camera to be used in a studio. The author discusses the various features of the German camera, and the importance of the camera operator in the studio.



THE JAPANESE CAMERA

The Japanese camera, which was developed by the Japanese television industry, was a major development in the history of television. It was the first camera to be designed specifically for television, and it was the first camera to be used in a studio. The author discusses the various features of the Japanese camera, and the importance of the camera operator in the studio.



THE ELECTRONIC VIEWER

The electronic viewer, which was developed by the American television industry, was a major development in the history of television. It was the first viewer to be designed specifically for television, and it was the first viewer to be used in a studio. The author discusses the various features of the electronic viewer, and the importance of the viewer operator in the studio.



THE VIEWING CAMERA

The viewing camera, which was developed by the American television industry, was a major development in the history of television. It was the first camera to be designed specifically for television, and it was the first camera to be used in a studio. The author discusses the various features of the viewing camera, and the importance of the camera operator in the studio.



THE PORTABLE CAMERA

The portable camera, which was developed by the American television industry, was a major development in the history of television. It was the first camera to be designed specifically for television, and it was the first camera to be used in a studio. The author discusses the various features of the portable camera, and the importance of the camera operator in the studio.



THE UNIVERSAL ZOOM CAMERA

The universal zoom camera, which was developed by the American television industry, was a major development in the history of television. It was the first camera to be designed specifically for television, and it was the first camera to be used in a studio. The author discusses the various features of the universal zoom camera, and the importance of the camera operator in the studio.

Entitled, 'Television Innovations- 50 Technological Developments', Dicky Howett's personal selection charts for the first time 50 key television inventions and improvements including that of imaging tubes, video tape, studio pedestals, zoom lenses and television cameras.

Dicky discusses the work of many television equipment manufacturers including famous names such as Ampex, EMI, Houston Fearless, Marconi, Philips, Pye, RCA, Sony and Vinten. The book is well illustrated with photographs, many never before published and some especially sourced. Chapters include 'Capturing The Image', 'Recording The Image', 'Sound & Vision', 'Television Cameras & Accessories' plus much more. This book, essentially non-technical, is not specifically concerned with who did what first and how, but mainly about

the various practical and artistic applications triggered by fundamental improvements. This book is a 'must read' for anyone remotely interested in television technology. I can thoroughly recommend it. Roger Richards, Editor 'In Focus', magazine of the Guild of Television Cameramen. Television Innovations- 50 Technological Developments by Dicky Howett. price £14.95. ISBN 1-903053-22-6. Published by and available from Kelly Publications. www.kellybooks.co.uk. (tel 01884 256170).

A brief resumé of British (and several overseas) finished goods & component manufacturers (as at May 2005) part 12 by Dave Hazell

NAIM. Naim Audio Equipment Ltd, 11 Salt Lane, Salisbury, Wilts. (in 1974). Maker of audio equipment.

NEAL. North East Audio Ltd, 5 Charlotte Square, Newcastle-upon-Tyne (in 1975). Maker of HiFi cassette deck, using the 3M "Wollensak" tape transport. In 1978, they made the NEAL Ferrograph audio test sets (e.g. RTS2), tape recorders and NEAL cassette deck – having bought Ferrograph from Wilmot Breeden.

NCR. National Cash Register Co, USA. In 1961, in the UK at 206-216 Marylebone Road, London, NW1. Originally a maker of tills but later diversified into computers and automated tellers (bank cash dispensers). Taken over by AT&T (in the 1980s?), then later spun off.

NEC – Nippon Electric Company.

A Japanese multinational. Founded in 1899 as a joint venture between Western Electric Company (USA) and a group of Japanese investors. In 1925, Western Electric's stake was bought by ITT (founded by Colonel Sosthenes Behn). In 1932, ITT passed management control to the Sumitomo group. In 1960, Harold Geneen, the chairman of ITT sold its stake. Maker of communications equipment, valves, microelectronics, consumer electronics, etc.

NSF. A German manufacturer of tuning gangs, VHF (FM) front ends and TV tuners. It became part of the Telefunken company. Rank Bush Murphy's first fully dual standard pushbutton sets of 1964 used an NSF UHF (valve) tuner and an NSF equivalent to Mullard's ELC1043 UHF varicap diode tuner was also used extensively in the early 1970's.

There is also a separate and unconnected (?) company – British NSF Co. Ltd. (1946 & 48) based in Ingrow Bridge Works, Dalton Lane, Keighley, Yorks. In 1953, known as NSF Limited. NSF made switches (originally under licence from OAK Manufacturing Co. of Chicago, Illinois and Cutler-Hammer Inc., of Milwaukee, Wisconsin and "Ledex" rotary solenoids (under licence from G H Lelan Inc, Dayton, Ohio), potentiometers, wirewound resistors and paper/silvered mica capacitors. In 1960 and 65, the company was a subsidiary of Simms Motor & Electronics Corporation. NSF Ltd became a public company in 1965 (it was established in 1922). NSF Switches became part of Lucas Industries (1970's?). Since Lucas was taken over by TRW, I am not sure what has happened to NSF.

A Dutch company – Nederlandse Seintoestellen Fabriken (NSF) of Hilversum, which was formed in 1917, to make marine radio equipment, later made domestic radios in 1924. It was bought by N V

Philips in 1926 and formed the basis of their entry into the manufacture of radios.

N.T.L. With the demise of the Independent Broadcasting Authority (formerly the Independent Television Authority) at the end of 1991, its engineering division was formed into a company known as National Transcommunications Ltd (NTL). This became the UK cable TV company we know today (although it nearly went bust a few years ago). In December 2004, NTL agreed to sell its TV and radio transmitter operations to Macquarie Communications Infrastructure Group (a subsidiary of Macquarie, the Australian investment bank).

Nalder Bros & Thompson Ltd, Dalston Lane Works, London, E8 (in 1946 & 64). Maker of Nalders "NCS" "Ideal" protective relays, power factor meters.

National. In 1955, National Co Inc, 61 Sherman Street, Malden, Mass. Maker of record changers, tuners, preamps, amps and loudspeaker systems. Did it become part of Panasonic later, i.e. National Panasonic?

National Electronics Inc. In mid-60's, at Geneva, Illinois and a subsidiary of Varian.

National Semiconductor Corporation, 2975 Ysidro Way, Santa Clara, California, 95051, USA (in 1970). Semiconductor maker.

National Union. In 1935, a brand name of USA valves imported into the UK by: Universal Importers Ltd, 24 Fitzroy Square. London, W1.

Neoflex Ltd, 123a Neasden Lane, London, NW10 (in 1961). UK agent for "Te-Ka-De" germanium diodes and transistors and cooper oxide rectifiers.

Neosid. Neosid Ltd, of 23-25 Hyde Way, Welwyn Garden City, Herts (in 1947). In 1959 & 64, at Stonehills House, Howardsgate, Welwyn Garden City, Herts. In 1979, Neosid Ltd, Eduard House, Brownfields, Welwyn Garden City, Herts. A maker of magnetic materials, iron dust cores, coil formers, etc. No self-respecting workshop would be without the Neosid hexagonal ferrite slug trimming tool! There are several firms with Neosid in their name around the world. It seems that the original Neosid company was established in 1933 by a German, Hans Georg Pemetzrieder. He selected the name in reference to carbonyl iron, a new material used to manufacture rod cores, tuning slugs and toroidal cores (NEOSID is derived from the Greek neos sideros = new iron). It may be that, as a result of WW2, the overseas companies ceased to be under the German parent's control. The UK firm is now part of MMG (Magnetic Materials Group), a TT Electronics subsidiary (TT is a UK mini conglomerate). MMG Neosid Ltd, Icknield Way West, Letchworth, Herts (in 2001).

NERA Aksjeselskapet, Pilestredet 75C, Oslo 3, Norway (in 1967). "NERA" Transistorised VHF TV transposer equipment (but also made TV transmitters, FM broadcast transmitters and Microwave systems). UK rep – Ash Electronics Ltd, 12 Swallow Street, Piccadilly, London, W1 (in 1967).

NERA – projection TV. Made by Aren (Radio & Television) Ltd, High Street, Guildford, Surrey (in 1953). In 1954 known as Nera of England Ltd, Jeffries Passage, High Street, Guildford, Surrey.

Nera. Brand name of large screen projection televisions made by P.A.M. Ltd, of Mellow, Guildford (in 1959). In 1959, it merged with Tyer & Co. of Dalston. Both companies were part of the Southern Areas Electric Corporation.

Nettle – Victor H Iddon Ltd, Harper Road, Wythenshawe, Manchester (in 1946). Maker of "Nettle" electrical accessories. In 1958, Nettle Accessories Ltd, Harper Road, Wythenshawe, Manchester. By 1962, an Aerialite company. By 1962, Nettle Accessories Ltd, Warren Street, Stockport.

Neve (Rupert) & Co Ltd, Little Shelford, Cambridge, Cambs. (in 1968). Audio equipment manufacturer – including compression amplifiers and mixing desks.

New Day Electric (Sales) Ltd, Cotswold Works, Chalford, Nr Stroud, Glos (in 1958). Maker/seller(?) of the "Sonic Washer". Also in 1958, at the same address: Gillott Electro Appliances Ltd – maker of convector heaters.

Newmarket. Newmarket Transistor Co Ltd, Exning Road, Newmarket, Suffolk (in 1958 and 1970), tel 0638 3381, in 1969. Newmarket was a Pye company. They made germanium transistors in the 1950s and 60s. They also produced modules (similar to the Mullard LP series) for use in manufactured products or by home constructors and later on, from circa 1967, hybrid circuits. Specialising in Germanium transistors in 1969. By 1982, known as Newmarket Microsystems Ltd (same address), as part of CEI. Now defunct?

Newmatic. Brand name of Newmatic (Electrical) Ltd, Argyle House, 22 Parnall Road, London, E3 (in 1964). Car radio manufacturer. These were being advertised in 1962.

Nexus Inc, USA (in 1967). Operational amplifiers. Nexus Research Laboratory Inc, 480 Neponset Street, Canton, Massachusetts. Later Philbrick-Nexus, then Teledyne Semiconductor.

N H Radio Products Ltd, 88 Vyse Street, Birmingham (in 1944). A maker of the wartime utility radio set (manufacturer code U39).

Nife Batteries Ltd, Hunt End, Redditch, Worcs. (in 1942). Battery manufactured. Any connection to Alcad of Redditch?

Nokia (Oy) AB Electronics, Helsinki, Finland (in 1972). Maker of electronic equipment and systems. Later took over Luxor/Skantic, Oceanic, Salora and Finlux – also ITT's European TV set making business (Scaub Lorenz, Graetz and Ingelen).

Nombrex Ltd (instruments division), Estuary House, Camperdown Terrace, Exmouth, Devon (in 1962 & 65). In 1967, a firm called Westechno Ltd, was also at Estuary House, Camperdown Terrace (signal generator). In 1970, to at least 1974, Nombrex (1969) Ltd, Exmouth, Devon. In 1976, Nombrex Ltd, Pound Place, Wolborough Street, Newton Abbot, Devon. In 1978, at Marsh Lane, Chudleigh, Newton Abbott, Devon. Maker of test equipment. In 1985, Nombrex equipment was made by Altair Electronics, Cannon Road, Keathfield, Newton Abbot, Devon.

Nora – brand name of foreign made radio sets in the 1950's. UK agents: Winter Trading Co Ltd, 6 Harrow Road, London, W2 (in 1955).

Norman Rose (Electrical) Ltd, 53 Hampstead Road, London, NW1 (in 1955). Maker (?) of Band 3 converters and aerial attenuators (in 1955).

Nordmende – brand name of Norddeutsche Mende Rundfunk KG, Zentralkundendienst, 28 Bremen, Postfach 44 85 08, Germany (in 1968 & 74). TV and radio manufacturer – later absorbed by Thomson of France (in 1977).

Norfolk Capacitors Ltd. Founded in 1986. Leyden Works, Station Road, Great Yarmouth, Norfolk. Formerly an STC/ITT/Erie business.

Nottingham Electronic Valve Co Ltd, Main Street, East Bridgford, Notts (in 1962). Moved from Netherfield in 1961. Maker of the "NEV ICON" CCTV camera. In 1959, located at Kenrick Street, Netherfield, Nottingham, they also produced a CRT evacuation pump.

"Norelco" – the North American company and brand of Philips (of Holland).

Oak. OAK Manufacturing Co. of Chicago, Illinois, USA. Established in 1932. Maker of rotary switches and (in 1938) pushbutton tuning mechanisms for radio sets. In the UK, their licencees were: AB Metal Products and British NSF. It later diversified into TV encryption systems, subscription TV and cable TV systems. In 1982, it formed a joint company with Racal, to develop subscription cable TV technology – Racal-Oak Communications Ltd.

Oceanic. Brand name of a French manufacturer of consumer electronics. In 1963, their transistor radios were imported into the UK by H K Harrison & Co Ltd, 1-3 Jacob's Well Mews, George Street, London, W1. Oceanic was later a part of ITT's European consumer electronics operations.

Oki Electrical Industries, Tokyo, Japan (in 1967). Manufacturer of domestic tape recorders. Handled in the UK (1967) by

Denham & Morley (Overseas) Ltd, Cleveland Street, London, W1. Established in 1881 by Kitabaro Oki, to make telephones in Japan.

Oldham & Son Ltd, Denton, Manchester (in 1950 & 64). A battery manufacturer, established in 1865. It is believed Oldham was taken over by Mirlees Blackstone (a manufacturer of large diesel engines) – possibly in the 1960's. MB was then taken over by Hawker Siddeley. By 1982, Oldham Batteries Ltd (same address). In 2002, Oldham Crompton Batteries Ltd, Edward Street, Denton, Manchester – a Hawker Energy Storage subsidiary (itself part of Enersys, USA).

Oliver Pell Controls – see Varley.

Olympic Lamps Ltd, 32 Palace gardens, Enfield, Middx (in 1964).

Omega Electric Lampworks Ltd, Albany House, Burlington Road, New Malden, Surrey (in 1964). Low cost lamp manufacturer. Formed in 1918 but acquired by Thorn in 1957.

Opperman (S E) Ltd, Borehamwood, Herts (in 1955). Maker of TV aerials, FM tuners and Band 3 converters. Used the "Stirling" brand.

Orega. French TV and radio component manufacturer in the 1960's. In 1961, it was a subsidiary of CSF.

Ortophon A/S, 5 Trommesalen, DK-1614, Copenhagen V, Denmark. In 1981, Ortophon Manufacturing A/S, 11B Mosedalvej, DK2500 Copenhagen-Valby, Denmark. Maker of cartridges and record cutting heads. At some point, they were owned by Harman International.

Orxy Electrical Laboratories Ltd, Dominion Road, Worthing, Sussex (in 1958). In 1960, they relocated to Industrial Estate, Meadow Road, Worthing, Sussex. Maker of lightweight soldering irons. By 1969, name used by W Greenwood Electronics Ltd, 21 German Street, Chesham, Bucks. In 1964, W Greenwood Electronics Ltd was at 677 Finchley Road, London, NW2. Then, Greenwood Electronics Ltd, Portman Road, Reading (in 1975). Currently, Oglesby & Butler, Carlow, Ireland.

Osborne. In 1947, Morgan, Osborne & Co Ltd, Southview Road, Warlingham, Surrey. Maker of coil pack units (ready assembled L, C + switching RF assemblies). In the 1960's and 70's, there were "Osborne" branded "mains droppers" (Thorn 1400,1500,3000 etc) and wirewound resistors. Nothing further known.

Osmabet. Osmabet Ltd. of 14 Hillside Road, London, N15 in 1959. At 46 Kenilworth Road, Edgware, Middlesex (in 1964 & 68). Manufacturers of mains and audio transformers, bulk tape erasers and radiogram chassis. Still going in 1970 (and 1982?).

Osmor. The brand name of Morgan, Osborne & Co. Ltd., of Warlingham, Surrey (in 1947). Later on, they were known as Osmor Radio Products Ltd, Bridge View Works, Borough Hill, Croydon, Surrey (in 1950) and Osmor Ltd, of 418 Brighton Road, South Croydon, Surrey (in 1958 & 64). Also in 1964 "Trader" yearbook: Osmor (Windings) Ltd, Crunden Road, South Croydon, Surrey. Manufacturer of "Q" coil packs and wound components. In the 1950's – kits to make Band 3 converters, FM tuners, etc.

Osrsm. Until the 1950's, this was the brand name used by GEC for valves. GEC also owned the Osram brand for lighting products in the UK and commonwealth countries (whereas Osram GmbH had rights to the brand in Germany and many other countries). In 1911, Osram Lamps were advertised by GEC in the UK. Osram was originally a trademark (from 1906) of a German company-Deutsche Gasglühlicht - for its electric lamps. The name Osram was originally coined in 1906 by the original manufacturer, Deutsche Gasglühlicht AG, and is derived from Osmium and Wolfram (Wolfram being the German name for Tungstam). The German Osram company was formed on 1st July 1919, when three German companies, Siemens & Halske, AEG and Deutsche Gasglühlicht AG (Auer Gesellschaft) merged their lighting interests. Later on, it became a wholly owned subsidiary of Siemens. GEC sold its Osram lighting interests [Osram (GEC) Ltd] back to Osram of Germany a few years ago. Today, Siemens AG is the sole shareholder in OSRAM GmbH. Osram bought the North American Sylvania lighting business from its parent, GTE, in 1993. In North America, Osram own the rights to the Sylvania brand name. In most other areas, SLI does.

In 1968, Osram (GEC) Ltd (a wholly owned subsidiary of GEC) had the following principal subsidiaries:

Pope's Electric Lamp Co Ltd. A sales company, using mainly the "Elasta" brand.

Ascot Lamps & Lighting Co Ltd. Acquired by GEC in 1965. A sales company, mainly for "Ascot" branded products. This company was originally known as Tungstalite Ltd and formed in 1923. Tungstalite was acquired in 1957 by Radiation Ltd and renamed. Radiation manufactured Ascot branded gas water heaters (believed to be under licence from, or originally connected with, Krups of Germany)..

Lumifax Ltd. Phosphor manufacturer.

Oxley. Oxley Development Co., (Priory Park in 1967-70), Ulverston, Lancs. (in 1948). Founded by Robert Oxley in 1942. Makers of connectors and trimmer capacitors. Later on, a subsidiary MARL, made an enormous range of LED replacement lamps for filament types. Oxley took over Beck Electronics in 1996. Beck can be traced back to Erie Resistor, Great Yarmouth.

Letters

Dear Editor

I would like both you and Dave Hazell to know that I enjoy reading his regular resume of component manufacturers as published regularly in the Bulletin.

I find it therapeutic, informative, and nostalgic, and I am particularly looking forward to you reaching letter 'S', and reading what he has to say on the subject of 'SRC' – Stability Radio Components.

When I worked for this company in 1950 they were based in Woodford Av. London E 18. and soon after I left (no connection!) they were involved in a serious fraud case of which I still have details.

My only regret now is that at the present rate of publication, it could be many years before it appears!

I hope I make it !!

Best wishes,
Sid Denney

Dear Editor

Too big for their volts!

I came across a new problem the other day.

I was changing the two AA buffer and display batteries in a Sangean ATS 803A synthesised tuned receiver when I found the new Duracell AA batteries would not fit in the place occupied by old Eveready cells.

Comparison showed that each Duracell was about 0.6mm longer and two in series did not fit between the terminal springs.

The problem was solved by putting the cells into the bench vice and gently squidding them with a piece of paper on one pole to prevent short-circuiting.

Their volts were unaltered, and the reduction in length came from the compression of the positive pole plate which changed from convex around the pip to slightly concave.

The freephone customer service engineer (who was very helpful) was intrigued and sent me a £5.00 voucher and reply-paid envelope for the return of the remaining unused cells. My daughter said I should have asked for one of their pink bunny drummers instead!

Sincerely,
Anthony Hopwood

Dear Editor

Unfortunately a few typographical errors have occurred in the printing of my article entitled 'The early range of EMI pre-war TV receivers' which may cause some confusion to readers as follows:

Paragraph one, line 13 – replace '...little for them to do...' with 'little information initially available'. I wrote 'little to go on' but I believe the new phrase is better.

In paragraph three, three lines from the end – 'flow resistance' to 'low resistance'

Paragraph six, line 9 – after '... 4th RF cathode voltage' requires a full stop and the

next line should begin with 'Dealing with the line frequency (10,250 Hz) called H sync; the circuit...' deleting the full stop after H sync.

Yours Sincerely,
Michael Usher

Dear Editor

Orr = Invicta = π

In the December 2005 auction at Wootton Bassett, I noticed a wireless which had no make on the front, but there was a plaque on the back which said "Manufactured in England by Orr Radio Limited, Fleet Place, Hampstead, London NW3". There was no model or serial number to see, but from the style of the cabinet and particularly the small tuning dial, I concluded that it must have been manufactured in the early thirties.

Bearing in mind that the Chairman and Managing Director of Pye from its inception to its demise/sale to Philips was Charles Orr Stanley and that in my youth, I had seen an old T.R.F. Invicta which was manufactured at the Orr Radio works in London NW3, I came to the conclusion that I was looking at a wireless with historical connections. This gave me the urge to bid, and ultimately, I was successful.

Shortly after I arrived home, I found that the tuning mechanism was completely seized up and after much effort, I concluded that the job was completely beyond me. I adopted my usual practice on such occasions and sought a second opinion. The advice I received was that the 3-gang tuning condenser was made of a material known as mazak that is inherently unstable in the longer term. Further, the set could be put into good order at the cost of the proverbial arm and leg, so a decision was taken to abandon the project.

I therefore put the set into the September auction at Harpenden. This event took place some 5 weeks after my beloved wife Sue had died from multiple cancers. The set went for roughly what I had paid for it and at that stage, I thought no more about it.

I next attended the December 2006 auction at Wootton Bassett and, much to my amazement, I saw on the platform an Orr radio which appeared like the one which I had abandoned looking pristine and lit up. On enquiry, I was told that it was formerly my set, which had been totally re-built but it was not for sale because it was going into an exhibition.

The next thing I knew, prior to the beginning of the auction itself, Mike Barker asked me to come onto the platform. I had no idea of the reason for his request. He told the assembled people that 2006 was a traumatic year for me after 40 years of married bliss prior to Sue's death but, by way of limited compensation, the refurbished Orr Superhet 4 was mine to keep.

I was totally overcome and burst into tears. I could hardly speak and I was told a number of people in the hall had the same reaction. My thanks to Mike Barker who electronically restored the set and John Sprange who restored the cabinet. I am sure it looks better now than when

it came out of the factory. Not only that but the quality of the sound is incredibly good. I can easily forget FM with this lovely equipment, let alone DAB.

I realised right from the start of my membership of the BVWS that I had joined an extremely friendly and genuine set of people. The experience of this most generous gift at a time of great personal sadness goes to reinforce that view.

Yours Sincerely,
Rodney Dews

Dear Editor

A cautionary tale

My son, whilst in Plymouth reading for his Earth Sciences degree, bought me a 'Linesman Detector' for my birthday, from a local antique dealer. Noticing that there were one or two other items of test gear, my son got the dealer's telephone number. I phoned the antique dealer who seemed very pleasant – I informed him that I would come down in a month or so to collect Peter after his degree was over. We talked in general terms of interest about what he had. I duly phoned again only to hear that he had got rid of everything.

This story has a sting in its tail. In his own words: "A guy turned up, saying in rather pompous terms that he was a BVWS member". I assume he saw the entire stock. The dealer was told "these are all rather old radios, I'll give you £500 for the lot". The dealer showed him the door! He subsequently sold the entire stock getting enough money to buy himself a Range Rover (I don't know if it was new or second hand). From my conversation with the antique dealer I picked up that he had a very poor impression of the BVWS. Of course the man may not have been a BVWS member, but the damage was done.

Two things come up straight away. It is one thing to try this sort of approach with a trader/dealer and quite another to a naive member of the public. I have first hand experiences of the latter. Many years ago, a local radio 'ham' died very young. I knew him well. I, of course, did not enquire about his things straight away but I raised the subject to his mother about two weeks later. She asked if I would like a meter – it was an Avo 40 (this was about 1961). "Yes please" I replied. I think I gave her 5 or 10 Pounds.

What about the rest of her son's equipment? A full 'ham shack'. It turned out that a chap gave her £2, 10s (£2.50) for the lot, she was glad to see it go. I was appalled.

The moral of this tale is that we are all ambassadors for the Society. One bad encounter of the sort mentioned by the antique dealer can ruin an organisation's standing. I knew this only too well when I ran my own small electrical contracting business. Be alert to this sort of situation.

Yours sincerely,
Richard Shanahan

Dear Editor

I am a subscriber to the Bulletin and read each issue avidly. Of particular interest is the resumé

of British and overseas manufacturers of components and finished goods. Being an ex-Marconi apprentice lad I have lived with radio all my life and I founded Sonifex Ltd in 1969.

I have enclosed a company resumé, which may help Dave Hazell with a few facts about Sonifex which may be interesting when 'S' comes around for inclusion in The Bulletin.

Sonifex Ltd. 61 Station Road, Irthlingborough, Northants NN9 5QE
Founded in 1969 by Paul and Dorothy Brooke trading as Sonifex Sound Equipment, the business was created to manufacture sound mixing and sound recording equipment for television, radio, film dubbing and theatre applications. The early custom built equipment was supplied to a broad range of customers including ITN, De Lane Lea, Worldwide Pictures and John Wood Studios. Sonifex customers specialised in TV, film dubbing and radio advertising media.

In 1974 the company expanded and moved to a small purpose built factory at Irthlingborough and in the following years produced and sold specialised sound mixers and sound processing equipment for

theatre, radio and TV use. At this time the company developed a range of inexpensive mass-produced cartridge machines. These endless loop machines were used for advertising spots, trailers, sound effects etc and were familiarly used as 'jingle machines'.

In 1981 the Sonifex R & D department designed a broadcast quality cartridge machine to meet the stringent IBA code of practice for radio and TV broadcasting. The micro HS series cartridge machines were successfully sold to broadcasting authorities worldwide. In 1984 the company name was changed to Sonifex Ltd., with an increase in production staff. As a result of the increasing demand Sonifex moved in 1985 to much larger new premises in Irthlingborough. The popular micro HS series became recognised as the standard for broadcast cartridge machines and was in continuous production until the early 1990s, with large orders for BBC local radio and independent radio stations. In addition a new generation of telephone hybrid units were developed for use in telephone line to studio connectivity.

The founders retired in 1994 and the

company is now headed by Marcus Brooke as MD with directors Andrew Brooke, Chris Stills and Paul Schofield.

With the advent of on-chip audio compression a new era of digital audio was possible and the research and development division produced an extended range of digital audio storage and sound mixing products employing surface mount technology and in-house software production.

Sonifex continues to grow on the same site, with an active R & D department. It has a large catalogue of digital audio products, ranging from portable digital news recorders to audio logging equipment, complete digital sound desk installations, digital telephone hybrid units and sound processing equipment.

In 2007 the company has more than 50 employees and manufactures its digital and analogue audio products in house, selling to customers worldwide. For more product details see: www.sonifex.co.uk

Kind regards,
Paul Brooke

BVWTM Dulwich Friends Group Review By John R. Sully

The British Vintage Wireless and Television Museum (BVWTM) at Dulwich is probably the most important collection of vintage radio and television in the U.K. The BVWTM is now managed by a Committee appointed by the Trustee's, and to support and assist in the running of the Museum a Friends Group was formed a little over a year ago. Even at this early stage it is perhaps worth reviewing what the Friends of the Museum have achieved so far, and the benefits that accrue to all of the vintage wireless and television community from the existence of the BVWTM.

The Friends group is just entering its second year of existence, so renewals of subscriptions were due a couple of weeks ago. Encouragingly 63 existing "Friends" have already forwarded their payment for 2007. Even more encouragingly an additional 45 new "Friends" have already joined in supporting the Museum in 2007, and it is only the first week of February as this is being written. The Friends group Committee have also decided to offer an option of Life Membership of the Museum Friends Group. Life membership status can be achieved by one of several methods, which by way of example includes offering exceptional help and assistance to the Museum, donation of an important or notable exhibit, or on receipt of a substantial donation (currently suggested to be £250 or over) to the BVWTM Trust funds. Donations can also be accommodated maximising benefits from tax efficient schemes such as Give As You Earn.

The fact that so many people have supported the BVWTM Museum, even at this early stage, is evidence that those joining the Friends Group understand the importance of maintaining a Museum of the stature and importance of the collection assembled by Gerry Wells at Dulwich. Whilst there are unquestionably many first class private collections within the wireless and television collecting fraternity, these usually tend to focus on one particular aspect of wireless or television history, be that a specific manufacturer, era,

technology, etc. Additionally these private collections are by their very nature not so easy to view, and are geographically spread throughout the country. The BVWTM brings together the vast majority of the important examples of receivers, and also some of the rarest and least often seen. These exhibits can be examined all at one location with good transport links for the rest of the country. By way of example, just considering the Acliffe room alone, seven pre-war television sets are brought together for direct comparison, and can be seen working through the on-site ex ITA original standards converter. Yet the same room also provides the opportunity to compare progress in radiogram development, for instance assessing design evolution from the 1930s to 1940s as seen through the differences between say the HMV 800 and Decca Decola. Elsewhere the first ever radiogram is displayed in the Paul Getty room, and in other rooms crystal sets can be seen, and rare radios from the likes of Climax and Hampton. The foregoing are just a few examples of the exhibits, throughout the Museum the total collection runs to more than 1200 radios and televisions. The museum is a showcase for all of us who collect and preserve radios or televisions, and as evidenced by the number of times the Museum has appeared on radio, television or in magazines has become the public window on our pastime and interest. Ensuring the continuation of the BVWTM for this foregoing reason alone is a more than adequate justification, if one were needed, for joining the Friends group, but there are other benefits too.

Membership of the Friends group provides access to the vast service data library based at the Museum. Whilst we all now have copies of the "Trader" service sheets courtesy of the BVWS CDROMS, sometimes reference really needs to be made to the manufacturers service instructions - and there are dozens of boxfiles of such data at the Museum, not to mention copies of "The Broadcaster" and other generic service data. There is also a massive holding of spare parts at the BVWTM, built up over the years by Gerry, and it is often possible to find exactly the right knob that will complete a restoration for example. A regular newsletter is circulated to Friends of the Museum outlining latest news and developments. The last Friday of every month sees an evening meeting held at the Museum for any BVWTM Friends who wish to attend. These get-togethers are very relaxed events, and focus more on the social aspect of the Museum, and rather less on the technical side of restoration. Typical evenings include Videos or DVD's of programmes or films that have been shot at the Museum,

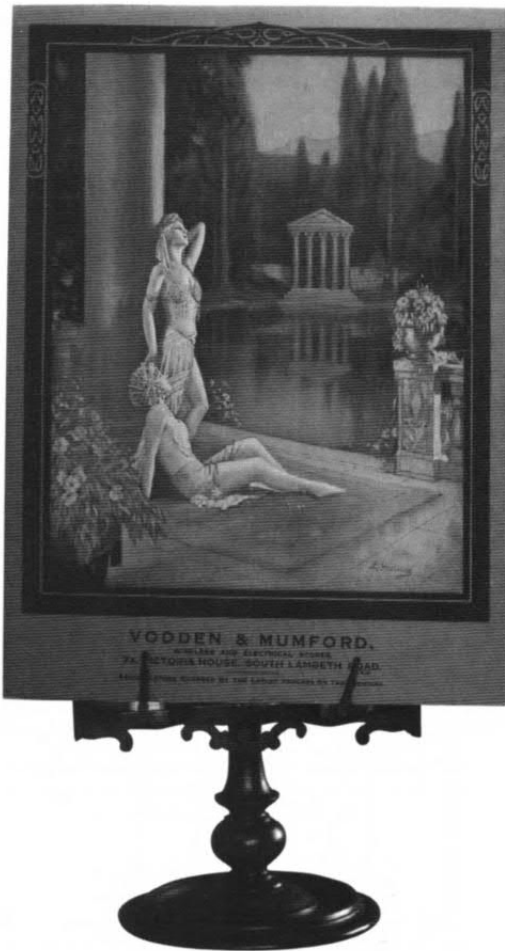
Continued on page 44

Ephemera and collectables from the age of early wireless

Text and photographs by David Read

This short article provides a taster of wireless related memorabilia and includes both printed matter and hardware. Today, the collective noun “ephemera” has almost become a word with a single meaning covering printed matter such as cuttings, letters and postcards etc. In fact this usage is recent, making its appearance in dictionaries in the early 1960s to reflect the language of collectors. Before then it was the scientific name for a Mayfly, an insect that is ephemeral i.e. short lived or lasting no more than a day.

The memorabilia we are concerned with here might, indeed, have been expected to last but a short time but, as we now know, much of it has lasted far longer than expected and has become historically valuable in its own right as a record of the events that were taking place in the late 19th and early 20th century.



Far left: Garden of Golden Dreams
- L.Goddard (Rudolph Ingerle)
Calendar for Vodden & Mumford
wireless and electrical stores



Left: Art print -1948. Dealer's
display of the Marconiphone
Personal Portable P20B

When “Wireless” ventured out of the laboratory in the late 1880s and early 1890s, it developed in the company of other major technical achievements of the modern world including trains, motor cars, ocean liners, aeroplanes and the sciences that underpin these transport systems.

At the same time, in the world of art, art nouveau merged into art deco and modernism in order to reflect the modern functional world. Art Deco, a term that derived its name from the World's Fair held in Paris in 1925, (the Exposition Internationale des Arts Décoratifs et Industriels Modernes) was a major style in Europe from the early 1920s, and caught on in the USA in about 1928, when it quickly modulated into the Streamline Moderne during the 1930s, the era with which the term Art Deco is most strongly associated. The worlds of art and technology were strongly

influenced by each other with manufacturers employing industrial designers and the art world embracing modernism.

In this period, developments in photography, cinema, lithography and offset colour printing were causing a revolution in art and the printed media. Newspapers, magazines and the film industry employed artists and photographers who became as well known as their publishers and, for the first time, a lucrative career in the world of commercial art enabled artists to escape their traditional dependency on patrons or galleries to earn a living. Some of the most talented artists of the day were employed to satisfy the demand for art prints required by a new market for glamour pin-ups, advertising posters, display material and the production of calendar art. The example shown here is Garden of Golden Dreams, painted by

the artist Rudolph Ingerle (1879 – 1950) in collaboration with the photographer L. Woolfenden.

Ingerle first studied painting in Vienna, the city of his birth. Emigrating to the USA, he studied at the Chicago Art Institute becoming a distinguished painter in oils. In the 1920s in partnership with Woolfenden, he formed the Arthur Studios delivering commercial art work for the calendar and art print industry. Black and white photographs of beautiful women and children taken by Woolfenden were placed on the canvas in real or fantasy landscapes devised by and painted in oils by Ingerle. Details and colour were added to the photographs which Ingerle merged into the oil painting to make a unique art work from which prints were made and delivered to the calendar manufacturer under the pseudonym L. Goddard.



1. The Calendar and Art Print

Calendar art rose to its zenith in the 1920s and 30s. Businesses gave customers a calendar to provide a daily reminder of the company's name and product. The original artwork by artists such as Ingerle was so good, and the reproduction so convincing, that at the end of each year people removed the calendar pads and framed the art prints and that is what we have in this image.

The calendar depicting the Garden Of Golden Dreams on page 32 was sent by Vodden and Mumford in Lambeth to its customers in the early days of wireless. This calendar was almost certainly manufactured

by Thomas Murphy, an American calendar company known for the quality of its full colour printing. Murphy had a branch in London and specialised in selling to small businesses and merchants. Like most calendars of the time it is purely artistic and without reference to product except in the name above the calendar pad.

On page 32 a beautiful and wealthy woman is seen reflected in the mirror of her dressing table tuning a 'personal portable', but the name G. Marconi can only be read backwards as a mirror image on the lid and the model number of the radio is left to the imagination.

After WW2 photography rose to a position of dominance in commercial art causing the art print calendar to go into a slow decline. This 1948 art print, though not a calendar, is in the same tradition and almost without product emphasis. Calendar manufacturers also supplied advertising novelties for companies to give to their customers Shown on page 32 are pen knives made for Tungsram Radio Valves and Hellesens Wireless Batteries.

2. Everyday ephemera (page 33)

Here we find card games such as Radio Whist and Iddy Umpty, the latter for



teaching Morse. A standard deck of cards for Six-Sixty, given away as advertising, together with Radio Whist, typify the art deco style. A pen holder decorated with a horn provides a scoring aid.

Away from the elevated world of film, publishing and art prints, everyday items such as blotters, tin cans or traditional cardboard boxes, now became the surface on which an artist could work for industry and help to sell the product. And for suitable products such as cereals and cigarettes, a collectable could be inserted within the package in the hope that it would persuade the buyer to buy that brand again and

so begin to collect the whole series.

The advertising blotter illustrating contemporary themes was a popular giveaway in the 20s and 30s. Thomas Watkins & Co. issued a well illustrated series of wireless hints, all using puns on words such as dials, sets, apparatus, tuning, and so on. In this seaside example the wireless hint reads "Dial turning during musical turns is a masculine weakness".

3. Pottery (page 34)

Pottery, another art form, did not remain unaffected. Heraldic and crested porcelain items were largely manufactured in the

potteries in and around Stoke on Trent. Such pieces were created as holiday souvenirs of the brief escape from industrial labour in the week that factories closed for their holiday. The new and growing population of factory workers travelled in trains to the seaside for their annual paid leave and a very large memento business grew up to serve the demand for souvenir items. The range of souvenir pottery became enormous and reflected the issues and novelties of the time. It was a new market deliberately manufactured to create collectable items so that buyers, as with cigarette cards, could try to collect the "complete set".

The major potteries making wireless items were Willow Art, Arcadian, Victoria China, Wilton China, and Carlton. These are all represented here together with four German imports: the grotesque Pixie with radio and horn in the form of an ashtray, the radio dogs matchstick holders, the wireless with horn and frame aerial and the two scent bottles.

The Staffordshire potteries suffered a decline in the depression of the second half of the 19th Century. However, many were revitalised during the two decades before and after WW1 with the rise of new technologies, travel and holidays that gave rise to the craze for souvenirs.

By the 1930s, with the great depression and another war looming, the mood for souvenirs began to evaporate and bankruptcy struck the potteries. The business of manufacturing crested and heraldic souvenir items was over.

Post WW2 and with the eventual return to prosperity these objects which could be found in junk shops again became interesting. But this time it was a new generation of collectors, with a fascination in the historical aspects of the subjects covered, who created a market for second hand crested china.

4. Tea Time

In less than a year after the start of official broadcasting by the BBC, the most regular speech and music programme of any length was the Children's Hour, running six days every week from Monday to Saturday. Examining the Radio Times for the early years one sees that the precise timing varied slightly depending on the arrangements of local stations; London's programmes for children starting at 6.00 PM whilst Birmingham and most of the others began at 5.15 or 5.30. Children's letters lasting ten minutes every day was an essential element

and provides convincing evidence of the extraordinary popularity and wide involvement with broadcasting amongst children from the very beginning. C.A. Lewis (Uncle Caractacus) wrote, "I wonder if there is anyone in the world who has such a jolly mailbag as a broadcasting Uncle", whilst Reith himself stressed the social value of the Children's Hour.

By 1926 the BBC management began to feel swamped by Aunts and Uncles and felt the need for change and, as a result, in November of that year these words were dropped. This was unpopular and led to difficulties. Asa Briggs in the Birth of Broadcasting writes: By this time, however, the Children's Hour had attracted the enthusiastic support of so many children – and some of their parents – that there was strong opposition to the changes. There had to be a relaxation of the ruling in 1927. The strength of the opposition demonstrates that whether or not disproportionate amounts of energy had been devoted to the Children's Hour, the BBC had succeeded in making them feel that the world of Children's Hour was one in which they could freely participate.

Children's Hour was broadcast at "Tea Time" and soon children listening-in at tea time began to appear as a theme in advertising, post cards and objects. Today, we can still find the evidence for this in the ephemera that has survived as illustrated on page 34 in the following examples: Advertisement for Cremalt – Reverse transfer on glass, Tea cup, saucer and plate - Victoria pottery, Tea time napkin – Listening In (page 35).

5. Post Cards (page 35)

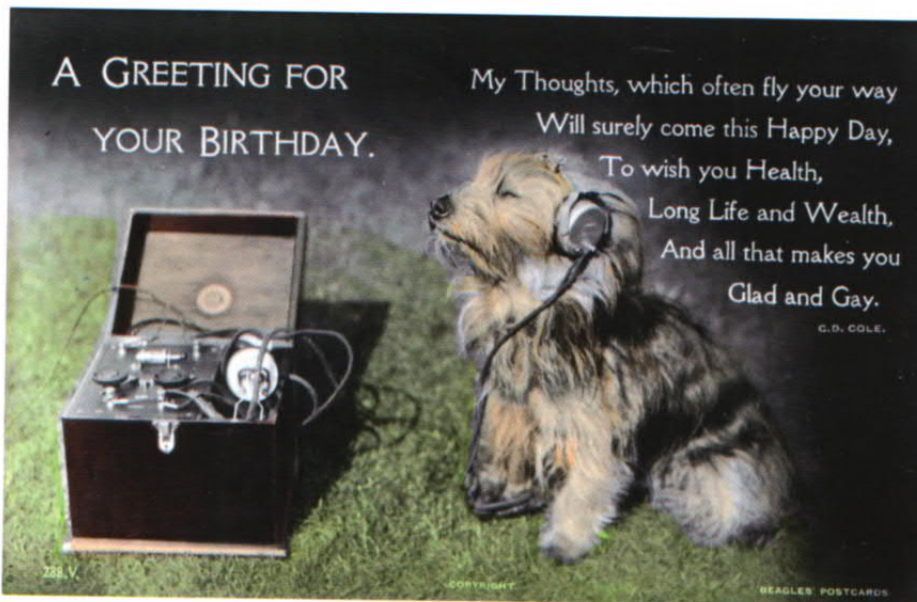
The same population of tourists and holiday makers in the 1920s and 30s needed something other than the traditional letter to send home or to a friend; something quick, decorative and easy; something just to say "wish you were here"; and so a tremendous post card industry was born.

Two examples from Weymouth and Bognor show how cards like these also provided a living for artists and photographers as evidenced by the photographic images that unfold in concertina fashion from beneath the wirelesses and illustrate the places of local interest. Both the wireless sets in these cards are realistic, but that in "Weymouth Calling" is easily recognisable as a four valve Ericsson with a Brown's H2 horn 'speaker.

The "lovely set" from Bognor on page 35 exploits the traditional double meaning associated with seaside humour. On this page is a tinted photograph on a card posted in 1925. The crystal set has the PMG registration mark

Finally, a post card that is a real crystal set. This German card is a genuine radio with a pleasing and signed art image on the front.

The back of the card shows how it works as a crystal set with Aerial, Earth, and Telephones clearly marked. The detector (marked detektor) is folded down flush with the card's surface on a hinge and when lifted consists of a pivoted cat's whisker. The tuning (abstimmung) is a slider working on a pancake coil embedded between the front and back surfaces of the card.



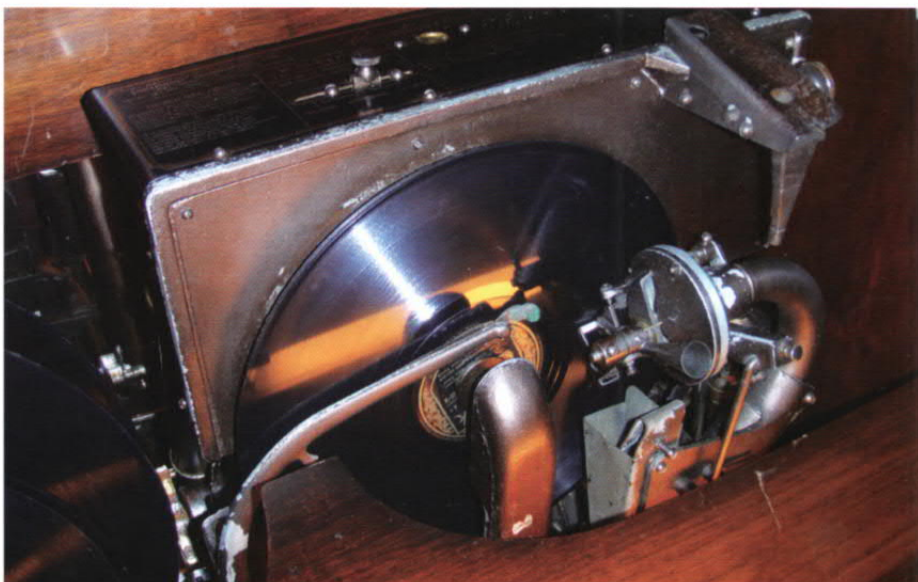
Spotted at the Audiojumble, Tonbridge

Report and photographs by Gary Tempest

The Star of the show for me was the Continuous gramophone (see pictures on the right and below, right), probably the only one left! It is owned by Ron Armstrong. It was made in 1928 and plays up to seven 78's of 10 and 12 inch mixed in any order. It changes the needle for every record and is fascinating to watch, making wonderful clunks and other noises on record changes.

The 1938 Duo-Trace Optical Recorder (see pictures below) was interesting (didn't get to hear this) principle as film sound striping.

Reviewed in Wireless World issue 19, 1937. Manufactured by: British Ozaphone Ltd, 72a Carlton Hill St, St Johns Wood, London NW8



Just for the record...

A history of recording technology exhibition – by Terry Martini

The British Vintage Wireless Society has been celebrating its 30th Birthday. As part of the celebrations, a number of special events have been staged at various members' meetings held throughout the year, covering important fields of mass communication. I was delighted therefore when asked if I would arrange a for a small exhibition covering recording technology, at a recent BVWS committee meeting, in time for the society's Harpenden swapmeet held on 2nd Oct 2006.

The exhibition concentrated where possible on equipment produced for the U.K. market. Many of the exhibits were demonstrated during the day of the show, and most of these items were sourced from my own collections. Video footage was also screened during the day, covering in some detail the manufacture of a CD and how a vinyl record master disk is cut on a recording lathe and the subsequent pressing process.

The Gramophone was represented with three very early wind-up examples and one post-war radio gramophone, the Decca Decola; this monster can really make some noise! The demonstrations proved how good the Decca Full Frequency Range Recording (FFRR) replay capabilities of this equipment from a period 78 rpm disk could be. Wire recording was represented by a Boosey and Hawkes, Wirek type "A" recording machine from 1948, one of just a handful of designs built in the U.K. with the first domestic tape recorders on the U.K market represented by the Soundmirror of 1949, and by Ferrograph with their first domestic machine, the Model D, first produced in 1951.

Of the many practical uses magnetic tape has, one outstanding example must be the tape-based "talking book" developed by Clarke and Smith in conjunction with the RNIB during the early 1950's. This was represented at the

event by an early (Mk 1) talking book machine. The company eventually went on to produce the "Tapette" a much smaller (and lighter) version. (A separate article is in preparation for a future Bulletin on the talking book player, and a complete history of the company behind it).

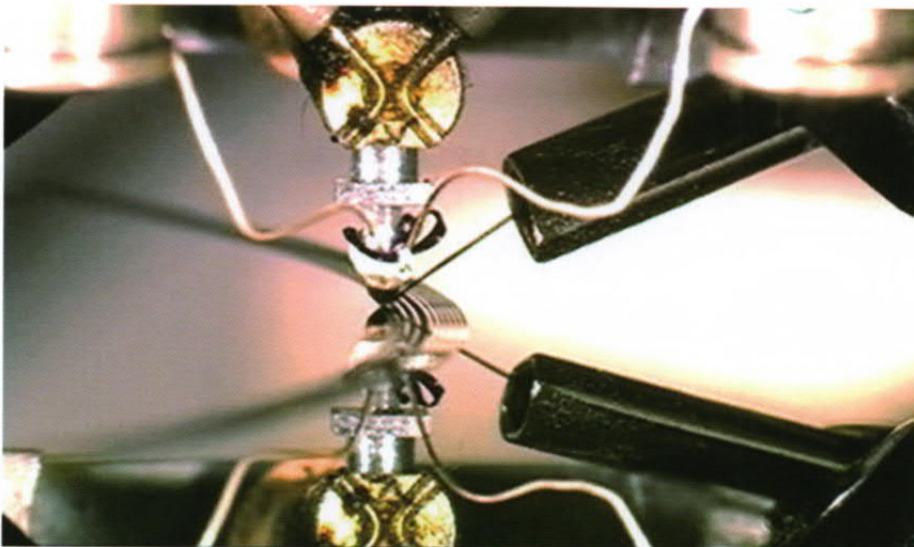
The exhibition also covered the more quirky aspects of the technology in the form of the Pye record maker from 1956. This used a magnetically coated disk as the recording medium. The machine also played conventional gramophone records and was supplied with an interchangeable head shell. The concept was a failure. The Garrard "Tape Magazine" was also shown, an idea that was in some ways ahead of its time but, as it was to turn out, another marketing failure with just a few firms briefly adopting the Garrard deck. The Simon Minstrelle was one of around half a dozen machines to appear on the market in the late 1950's.

The Philips compact cassette represented further development of tape in the 1960's and a number of different equipment was shown, however the format was not viewed as a serious competitor to reel to reel, initially being confined to speech and dictation uses. It was not until the early 1970's, with a succession of improvements in tape formulation, head manufacture and noise reduction in the form of "Dolby", that the system overtook open



Ferrograph

Probably the most fondly remembered manufacturer of tape recorders based in the UK. The concern also traded as Wright and Weaire with many of their earlier products branded "Wearite". Their earliest tape machine can be traced back to the latter part of 1948, also making a brief appearance in a Wireless World advert of the period. It is believed this was a prototype machine that never went into full-scale production. The first machine marketed was the G100, designed for military applications, and launched onto the professional market in 1949. The first Domestic model, ("D") followed in 1951 and is very similar in electronic design. This was the first (and last model) to be housed in an upright cabinet. The recorder offered as standard half track recording and AC erase. The later series of machines (starting with the Series 2) were altogether different in appearance, and had also been adapted to give the user a choice of two linear speeds. The "Wearite" tape deck remained largely unchanged until the mid 1960's. The Ferrograph was the first all British designed and manufactured tape recorder to be marketed in the UK. The model "D" was also offered in a deluxe polished wood cabinet or black or cream rexine covered finishes. Several industry standards were set by the company very early on, most notably tape specifications and track sense. The company ceased trading in 1983 after a slow but steady decline in the professional recorder business.



"In the groove"

A blank acetate mastering disk in the process of being cut on a recording lathe. Note the highly flammable swarf being drawn away from the cutter tip via the black tube to the right of picture. The cutter is of the moving coil type.

reel based machines in all but the professional and enthusiast markets. During the early 1980's, The Sony Walkman revolutionised the portability of the format, (with some players little bigger than the cassettes themselves) and examples of these were also shown.

The 8 track cartridge was another format on display. Although more popular in the U.S. than here in the U.K. it did for a while gain some acceptance for use in the car, with many cheap players subsequently appearing on the U.K.market. A quadraphonic version was also (briefly) marketed, along with Hifi recorder / player versions of the deck. The format was unreliable, and prone to jamming due to the continuous tape loop system housed within the cartridge, this could often be remedied by giving the cartridge a swift smack on a flat surface, the aim being to loosen up the tape sufficiently to get it playing again.

With the arrival of the Compact Disc in the early 1980's (a joint development by Philips and Sony), was to be the start of affordable digital audio in the home, a number of machines based on this format were also on display. Interestingly, the prediction that traditional audio carriers, the vinyl record and magnetic tape would finally be consigned to the analogue scrap heap as a result of the CD has not entirely come true. There has been a steady demand for vinyl, with albums

being issued again by a number of record companies and favoured by many young D.J's., particularly those involved in the house and garage scene using as they do the 12" vinyl single for mixing on modern record decks. Cassette tape and equipment is also still widely available for the home and can still be found as a standard option in some vehicles.

The exhibition concluded with an overview and examples of Mini disk, DCC and DAT technologies. Regrettably, time and space prevented any coverage of the Apple Ipod or the many other portable digital technologies, although this is an important area that I would like to cover at future exhibitions.

A slide show has also been prepared of the one day event staged at the Harpenden Halls and is available to view on my website at www.ferrographworld.com/events You can also find a couple of historically important experimental recordings (along with some accompanying notes) made during the 1930's, including the Magnetophon experimental tape recording made with Sir Thomas Beecham in Berlin. You can download these from www.ferrographworld.com/recordings

My thanks to Mike Barker for providing the Decola (we had fun drowning out the auction with it for most of the afternoon), to Russell Atkinson for the phonograph and gramophones, Steve Sidaway for the loan of the Pye "Record maker" and Paul Schimmel.



Thermionic Products

The "Soundmirror" was in fact a Brush Model BK411, an American conceived machine. The personality behind the UK Company was a Colonel Colly who evidently made his fortune in the novelty markets before setting up the new company with an eye to manufacture electronic equipment. The UK version of the machine went into production in early 1949. The company do not appear to have directly developed anything themselves, preferring instead to "license in" the technology. The Recordon (Mail a Voice) was another Brush development, subsequently manufactured by Thermionic Products.

The Soundmirror continued being produced in the UK until 1952, remaining largely unchanged apart from an update to the track width, (from full to half track) and the introduction of a portable version; neither of these later machines surface very often. The recorder was in some respects old fashioned almost from the outset, relying on a permanent magnet erase block and a fragile, paper based magnetic recording tape as the audio carrier, it was very quickly outdated. However the machine did give good results despite these limitations. It also had as the push pull output valve, a 6SN7 double triode, an unconventional arrangement. The claimed output using this valve is 1 Watt !

Thermionic Products do not appear to have produced any further domestic models after discontinuing the Soundmirror models and were later involved with Racal, supplying professional markets. The company was dissolved in 1972.



"Decca" was the trade name of a mass-produced wind-up gramophone which was widely used in the First World War. In 1929 the company switched to the manufacture of 78 RPM records, recording mostly dance numbers by such favourite band-leaders as Henry Hall and Jack Hylton but with a sprinkling of new British classical music. Edith Sitwell reciting Walton's *Facade* was an early venture and during the war Britten's *Serenade* was recorded, its six movements fitting comfortably on to a set of three 78s.

Decca recordings are however, almost accidentally, remarkable. Midway through the Second World War, RAF Coastal Command found that its sonar was not able to identify Axis U-boats. It seems the signals returned from Allied submarine hulls and Axis U-boat hulls were so similar that it was impossible to distinguish one from the other. To be able to tell the boats apart, the RAF would have to refine its sonar equipment, and this job was given to Arthur Haddy, the chief engineer of Decca. Haddy was able to increase the frequency response of the sonar signal to 15000 cycles, thereby making the signal

more sensitive and able to clearly distinguish one hull from the other. He was also asked to produce a set of training records so that sonar operators could learn to use the new equipment. To do this Haddy needed to cut 15000 cycles into master discs. He eventually developed a cutting technology that could do just that. Now he had a high-frequency signal that could be transmitted underwater and a cutter that could produce the signal on disc. But to record music with this technology, Decca had to be able to capture up to 15000 cycles through air. With the subsequent development of Haddy's FR-1 microphone, the company was able to do so. Decca, through wartime sonar research, had developed its wide-range FFRR sound.

With the war ended, Decca had a technology that enabled it to make wide-range commercial recordings. This the company first did with subsequent 78 RPM releases. The Companies Radio & TV manufacturing division produced the Decca "Decola" radiogram from around 1947 which incorporated a new design of pickup to take advantage of the extended range possible captured on the new FFRR disks.



Wirek (right)

By the late 1940's, one of the most prolific manufacturers of wire recorders based in the UK was Wirek Electronics Ltd. The Company operated from a factory located in Deansbrook Road, Edgware, London.

This was also the home of the Boosey and Hawkes Company, better known as a manufacturer of high quality musical instruments. Wirek was set up as a subsidiary company to B & H, to manufacture these machines. Three different models were produced by the company, these being Types A, B and 49. Most of the subsequent manufacture was undertaken by sub contractors. The amplifier chassis were produced by Associated Electronic Engineers Ltd who were based in Stanmore, Middlesex.

Some of the machines were also sold to other companies such as Simon Sound Sales, for subsequent resale under their own marque. The Type "A" was on sale to the professional markets from around 1948. It is not known how long the machine was in production for.

The equipment was made under licenses granted by the Armour Research foundation, an industrial research laboratory operated by the Armour Institute of Technology (later to be renamed Illinois Institute of Technology). During WW2, following research and development in wire recording, Armour Research Foundation received a contract from the United States Navy to develop a portable sound recorder. Between 1942 and the end of the war, Armour and one other licensed manufacturer, General Electric, made fairly large quantities of these recorders. They were used for many purposes throughout the war, most

notably as a portable field recorder for journalists.

By 1945, Armour Research Foundation shifted from war production to selling licences. The Foundation licensed the manufacture of its recorders to over a dozen American and European manufacturers, and introduced a cheaper "consumer" design, which many of the licensees also adopted. The resulting income funded additional research that Armour hoped would help the organization remain at the forefront of the industry. Armour standards for wire speed; the wire itself, wire reels, and other basic features were adopted by nearly all the licensees, Wirek included.

Modified versions of the Type "A" recorders found unexpected fame when they were specified by the BBC for a new outside broadcast van. This recording van was especially constructed to record up to eight simultaneous foreign commentaries at the 1948 Olympic Games. The vehicle was reputedly nicknamed "The Octopus" by BBC engineers, after the eight cables that could be seen, trailing from the vehicle to the various commentators' positions around Wembley stadium.

Wirek machines were generally considered to be a "medium quality" recorder, and in addition to the use of these machines by the BBC, they were also adopted by the military and intelligence services, with some also being sold to overseas concerns. They would not have initially been made generally available to the public, however a quantity of the Type "A" machines were subsequently sold on the government surplus market, via Henry's Radio, Edgware Road, London in around 1954. These were reportedly being offered at £25.00 each.





Left: Clarke and Smith are probably best remembered for the high quality Record Players, Amplifiers, Radios & P.A. equipment especially produced for the educational and other specialist markets. In 1951 they were commissioned by the RNIB to produce the first purpose made talking book, using at that time a microgrooved record. However by the late 1950's this had been superseded by the first multi-track cartridge specifically designed to take advantage of magnetic tape. Clarke & Smith designed and produced the complete replay equipment, manufactured all the tape duplicating and recording equipment and also gave out free licences to others. It is also known that several modified Leavers-Rich machines were used in the duplication process, at a later date along with a one off special machine produced by Branch & Appleby.



The Tefi Company was founded by Karl Daniel in the early 1920's initially to develop and produce a machine for recording telephone conversations. By 1936, the first "Tefiphon" machines were demonstrated to the public at the 1936 radio exhibition held in Berlin. These machines were not sold outside Germany. They were capable of recording speech only. With further developments during and after WW2 all subsequent models were capable of replaying music as well.

By the 1950's the company had produced several different models (some incorporated into table top grams) and also launched a range of cartridges containing pre-recorded titles of music. The whole concept had a typical continental Europe look and feel about it and for a short while was a relatively popular alternative medium to magnetic tape.

The Tefi cartridge contains a "continuous loop" grooved plastic tape, generally 18mm wide. A crystal pickup tracks these grooves in a very similar way to that of a conventional gramophone record. Up to 4 hours playing time was possible.

The Pye "Record Maker" first appeared in the mid 1950's when launched as an alternative, novel method of magnetic recording. A handful of models were produced, most being incorporated in the companies then current range of radiograms, the Fenman 2 R.G. being one such example. The technology is similar to that used in the Recordon "Mail a Voice" and EMI "Emidicta" dictating machines, in that a special recording head tracks the surface of a flexible magnetic "floppy" disk. Tracking is generally achieved either via a lead screw arrangement or via conventional groove pressed in the disk. There do not appear to be any maker's published figures confirming the expected frequency response from this type of magnetic recording medium.

The technology is in all probability based on earlier American designs from the late 1940's. It has been suggested that the company may have had a tie up with American CBS. The format failed to achieve much success and Pye did not produce any further models.



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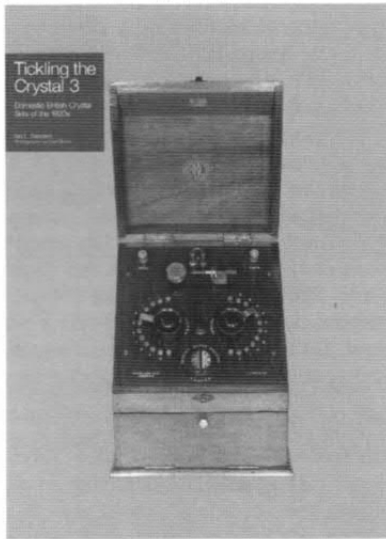


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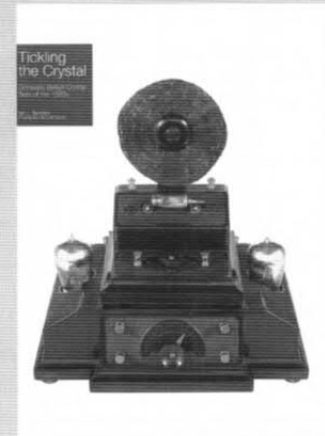
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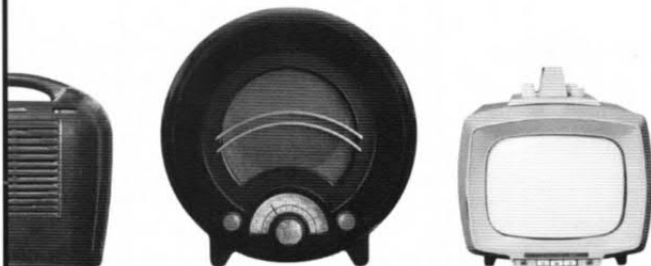
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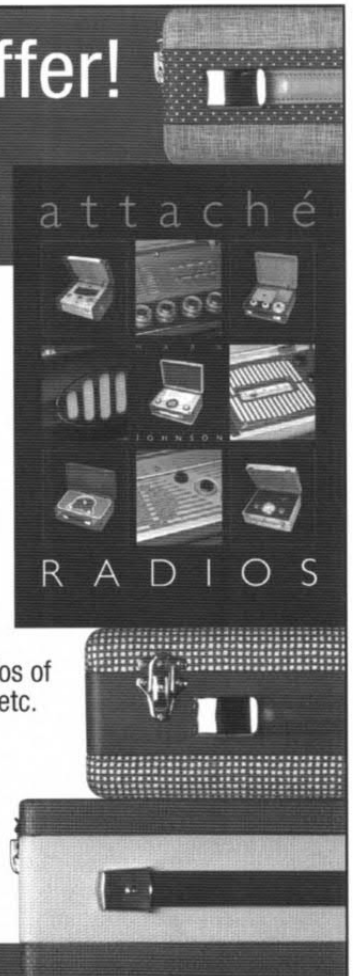
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Minutes

Minutes of BVWS Committee meeting held on Friday 5th January 2007 at 59 Dunsford Close at 7.30 pm.

Present: Mike Barker (chair), Graham Terry, Guy Peskett, Paul Stenning, Terry Martini, Jeremy Day, Jon Evans.

1. Apologies for absence: Ian Higginbottom.
2. The minutes of the meeting held on 27th September 2006 were tabled and accepted as a true record. Matters arising, none.
3. GT reported that so far 894 members had renewed their membership and that 763 had yet to do so. There were no figures to compare with as there had been no previous meetings of the Committee in January of previous years.
4. JD reported that at 5th January the Society's account balances stood at £21,678 (deposit) and £1,442 (current). He tabled the Society's accounts for the year ended 31st December 2006 and the accounts for the May 2006 NVCF. These will be presented at the AGM in March. The meeting thanked Jeremy for his clear and detailed reports.
5. MB passed on a message from the

Bulletin editor that more material was needed for the Spring issue.

6. The question of whether the society should bulk purchase popular service items was discussed. It was agreed that as a trial a batch of 1000 high voltage 0.1µF capacitors and batches of twin electrolytics of popular sizes would be purchased and sold at meetings at just under the prices charged by the major distributors. Mail orders accompanied by payment and stamped, self-addressed shipping envelopes might also be accepted, but the service would be at meetings only to start with. The question of organising remanufacture of items such as TV tube Masks was discussed. JE was asked to look into whether original manufacturers still existed and had kept moulds and who could be approached to re-manufacture.
7. The amount of colour in the Bulletin was discussed. The consensus was that more colour would be desirable. MB agreed to obtain quotations from Hastings Print for incremental increases in the number of colour pages.
8. JE expressed disappointment at the lack of response to his mail-out of advance copies of the 2006 DVD to members of the

Committee. JE will contact Carl to expedite delivery of the 2006 DVDs to the Museum, deadline end of January.

JE suggested that the 2007 DVD be dual mode (data and video). A discussion of readability on members' machines followed but no conclusion was reached, however it was agreed that older technology machines should not stand in the way of a more usable member benefit in the form of the new type disk being used and a work around may be possible if numbers of problems are encountered by using two separately copied disks on a very limited basis. If dual mode is adopted TM will be responsible for the video and JE for the data. TM emphasised that proof copies should be ready by the end of October.

9. AOB

MB mentioned his suggestion in "From the chair" that a series of occasional articles "Collection Showcase" would provide a lasting picture of how and what members collect and their interests.

10. Date of next meeting: to be arranged by email, it will be on the conference telephone.

The meeting closed at 20.50.

BVWTM Dulwich Friends Group Review continued from page 31



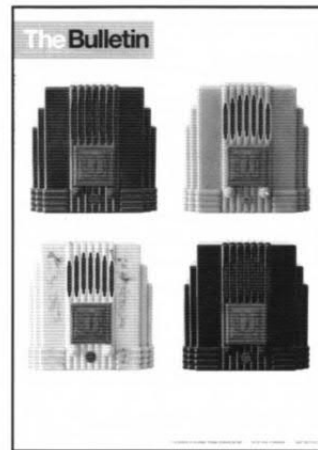
or which feature contributions from Gerry of the amazing life he has led, whether it be from the days when a formal business was run from Rosendale Road to more recent stories of people he has met or known. One aspect that has become popular is a chance to hear some of the many hundreds of records the Museum keeps. Sometimes Gerry will select some records, but more often Gerry will provide

a pile and ask those assembled to choose some to play, or indeed bring their own to play and tell others present why the choices have been made. The monthly evening has become an opportunity to unwind at the end of a week in the company of like minded people enjoying not only the atmosphere of the Museum and its exhibits, but also of the music and talk of years gone by. The picture

accompanying this article shows Gerry at the console ready to play the next request!

Funds received from Friends group members enable the Museum to be maintained in its current form, and pay for various essential insurance's, and other aspects required of a Museum such as signage and maintenance of the buildings and exhibits. The Friends group also means that the unique style of the Museum continues, with Gerry in the role of Curator, so ensuring that all who visit feel welcome in his own inimitable style. The BVWTM Friends Group is affiliated to the British Association of Friends of Museums (BAFM). The BVWTM also seeks to raise funds itself by carrying out repairs and restorations on site, and by the building of replica radios etc. Gerry Wells holds the record as the oldest company producing amplifying equipment still in existence in the U.K. and has newly constructed stereo valve amplifiers for demonstration and sale at the Museum.

Hopefully this short resume will have provided a glimpse into what the BVWTM and its associated Friends Group is about, and why those already supporting the Museum have decided that just £10 is a small price to ensure the continued existence of this unique collection and archive that has been built up by Gerry Wells. An advertisement for the BVWTM appears elsewhere in this Bulletin with contact details for the Museum.



Back issues

Vol 10 Numbers 2, 3 & 4 Inc. The KB Masterpiece, Extinct Species "A Monster Defiant".

Vol 11 Numbers 1, 2, 3, 4 Inc. BTH VR3 (1924) receiver, Marconi's 1897 tests, Origin of the term 'Radio', Baird or Jenkins first with TV?

Vol 12 Numbers 1, 2, 3, 4 Inc. the Emor Globe, The Fultograph, Ekco Coloured Cabinets.

Vol 13 Numbers 1, 2, 3 Inc. Direct action tuning, The Philips 2514, Noctovision.

Vol 14 Numbers 1, 2, 3, 4 Inc. Cable broadcasting in the 1930's, The story of the Screen Grid.

Vol 15 Numbers 2, 3, 4 Inc. The wartime Civilian Receiver, Coherers in action, Vintage Vision.

Vol 16 Numbers 1, 2, 3, 4 Inc. The Stenode, The Philips 2511, Inside the Round Ekcos.

Vol 17 Numbers 1, 3, 4, 5, 6 Inc. Wattless Mains Droppers, The First Philips set, Receiver Techniques.

Vol 18 Numbers 3, 4, 5 Inc. The First Transistor radio, The AVO Valve tester, The way it was.

Vol 19 Numbers 1, 2, 3, 4, 5, 6 Inc. The Birth of the Transistor, Super Inductance and all that, reflex circuits, A Murphy Radio display, restoration.

Vol 20 Numbers 1, 2, 4, 5, 6 Inc. Radio Instruments Ltd., Japanese shirt pocket radios, Philco 'peoples set', notes on piano-keys, the story of Pilot Radio, the Ever Ready company from the inside, the Cambridge international, the AWA Radiolette, this Murphy tunes itself!

Vol 21 Numbers 1, 2, 3, 4 Inc. Marconi in postcards, the Defiant M900, GPO registration No.s, Personal portables, the transmission of time signals by wireless, the Ekco A23, historic equipment from the early marine era, the birth pains of radio, inside the BM20, plastics, Ferdinand Braun, pioneer of wireless telegraphy, that was the weekend that was, the first bakelite radios, BVWS - the first five years, the world of cathedrals, Pam 710.

Vol 22 Numbers 1, 2, 3, 4 Inc. Another AD65 story, the Marconiphone P20B & P17B, listening in, communication with wires, the story of Sudbury radio supply, French collection, Zenith Trans-oceanics, Farnham show, Alba's baby, the first Murphy television receiver, AJS receivers, Fellows magneto Company, Ekco RS3, Black Propaganda.

Vol 23 Numbers 1, 2, 3, 4 Inc. Sonora Sonorette, Bush SUG3, RNAS Transmitter type 52b, North American 'Woodies', Why collect catalin, Pilot Little Maestro, Theremin or Electronde, The Radio Communication Company, Early FM receivers, an odd Melody Maker, Black propaganda.

Vol 24 Numbers 1, 2, 3, 4 Inc. The Superhet for beginners, Triode valves in radio receivers, History of GEC and the Marconi - Osram valve, KB FB10, Great Scotts!, Riders manuals.

Vol 25 Numbers 1, 2, 3, 4 Inc. Repair of an Aerodyne 302, Henry Jackson, pioneer of Wireless communication at sea, Zenith 500 series, Confessions of a wireless fiend, RGD B2351, John Bailey 1938

Alexandra palace and the BBC, Ekco during the phoney war, Repairing a BTH loudspeaker, The portable radio in British life.

Vol 26 Numbers 1, 2 Inc. How green was your Ekco?, The Amplion Dragon, Crystal gazing, The BVWS at the NEC, Installing aerials and earths, novelty radios, Machine-age Ekco stands of the 1930s, Volksempfänger; myth & reality.

Supplements:

- 1 'The story of Burndept'.
- 2 'WW 1927 data sheet'
- 3 'Seeing by wireless' the story of Baird Television
- 4 Reproduction Marconi catalogue

Earlier Bulletins and supplements are priced at £2:00 each + postage. Bulletins from volume 21 onwards are priced at £2.50 each. + postage.

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News and Meetings

GPO registration Numbers

Martyn Bennett is the custodian of the BVWS GPO Registration Numbers list. As many members know, the project of assembling this list was started in the early days of the BVWS and was carried on by the late Pat Leggatt. Members are strongly urged to help build the list, whenever they get the opportunity, particularly as it is something that will help with the identification of vintage wireless in years to come. The list is by no means complete and the GPO no longer have a record of the numbers granted to wireless manufacturers. The BVWS Handbook contains the current listings - one in numerical order and one ordered by name. Please let Martyn have any additions, or suggestions for corrections, by mail or over the phone.

Martyn Bennett, 58 Church Road, Fleet, Hampshire GU13 8LB
telephone: 01252-613660 e-mail: martyB@globalnet.co.uk

2007 meetings

- 15th April** West of England Vintage Wireless fair
- 22nd April** Gerald Wells Workshop British Vintage Wireless and Television Museum
- 22nd April** Radiophile Swapmeet, Cowbit
- 29th April** NVCF at Warwickshire Exhibition Centre
- 2nd June** Garden Party: British Vintage Wireless and Television Museum
- 3rd June** Swapmeet at Harpenden
- 1st July** Swapmeet at Wootton Bassett
- 8th July** Gerald Wells Workshop British Vintage Wireless and Television Museum
- 22nd July** Radiophile Swapmeet Sambrook
- 17th August Friday Night** is Music Night, British Vintage Wireless and Television Museum
- 2nd September** Audiojumble at the Angel Centre, Tonbridge
- 16th September** Table top sale, British Vintage Wireless and Television Museum
- 23rd September** Radiophile Swapmeet Shifnal

- 30th September** Swapmeet at Harpenden
- 21st October** Gerald Wells Workshop British Vintage Wireless and Television Museum
- 21st October** Radiophile Swapmeet, Cowbit
- 2nd December** Wootton Bassett

Workshops, Vintage Wireless and Television Museum:

For location and phone see advert in Bulletin. 11:00 start.

Harpenden: Harpenden Public Halls, Southdown Rd. Harpenden. Doors open at 10:00, tickets for sale from 09:30, Auction at 13:30. Contact Vic Williamson, 01582 593102

West of England Vintage Wireless Fair:

Willand Village Hall (J27/M5). Doors open 10:30. Contact Barrie Phillips, 01392 860529

NVCF: National Vintage Communications Fair

See advert in Bulletin. www.nvcf.co.uk

Wootton Bassett: The Memorial Hall, Station Rd. Wootton Bassett. Nr. Swindon (J16/M4). Doors open 10:30. Contact Mike Barker, 01793 536040

For more details with maps to locations see the BVWS Website:
www.bvws.org.uk/events/locations.htm

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