NEWSLETTER www.g3mdg.org.uk CCLDLALRASS,

JUNE 2023

CHESHAM & DISTRICT AMATEUR RADIO SOCIETY MONTHLY NEWSLETTER

Brill Windmill, this time under new management and some limitation on what and how we do things.

We meet the 2nd and 4th Wednesdays of the month at the Ashley Green Memorial Hall, Ashley Green, HP5 3PP

GB0BWM 80m veritcal Brill Windmill 2023 Lin (M0TCF) has given permission to use his article on an 80m helically wound antenna for small spaces. **NanoVNA** My luck with cheap Chinese electronics seems to continue, yet another item to return to the seller. **Brill Windmill** It's that time of year again!

15 Facts about Morse Code This month we take a look at some interesting facts regarding Morse Code.



Spotlight

It's a James (M0JCQ) QSO from 2021 - Nelson, New Zealand this month.



Want to write something for the newsletter? Then you can contact me on bryanpage1@btinternet.com

If you want something or have anything for sale, why not drop me an email and I'll put it in 'For sale and wanted'.

Morse links

If you're interested in Morse code, here are a few useful links:



FISTS CW Club

Promoting Morse Code for 36 years 1987-2023

https://fists.co.uk

Wikihow	How to learn Morse Code		
	https://www.wikihow.com/Learn-Morse-Code		
The Ham Whisperer	Morse Code Course		
	http://www.hamwhisperer.com/p/morse-code-course.html		
LEARN MORSE CODE	LEARN MORSE CODE in one minute !		
	http://www.learnmorsecode.com/		
Welcome to LCWO.net	Learn Morse Code (CW) Online!		
	https://lcwo.net/		
WISCONSIN A 2014	Tools for learning Morse Code		
AA9PW Amateur Radio	https://www.aa9pw.com/morsecode/		



Celebrating the unique art form of Morse Code

https://cwops.org/



Morse Code by Ray Burlingame-Goff (SK - 29th July 2021)

http://www.g4fon.net/

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Ashley Green Village Fete



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Useful links if you want to learn Morse code.

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- Guy Plunkett (M0GUY)

- Roger Fellows (M7RMF)

Secretary - Malcolm Appleby (G3ZNU)

- James Stevens (M0JCQ)

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All the above are members of the committee and can be contacted on cdars-committee@googlegroups.com

Editor - Bryan Page (M0IHY)

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Welcome

Continuing on 'something' antenna, this month my thanks goes to Linden (M0TCF) who has given me permission to use his "Mono Band (80 Meters) Helically Wound Vertical Antenna" article, this will certainly give you 80m in a very small space. Mike Parkin (G0JMI) who until recently wrote the antenna section for RadCom, wrote something of a similar nature a couple of years ago - I emailed him and he's kindly sent me the PDF for October 2017, seems like a good project for the winter months, at some point I'll be able to rebuild the antenna and report on it.



Unfortunately my intention of continuing with the NanoVNA Network Analyser and installation/upgrading of the firmware and operating software has come to a halt, details on page 6. There are no other reviews this month.

My thanks to Guy (M0GUY) for the photographs of Brill Windmill, it was, to say the least, a cold and blustery day on Saturday with Sunday having the better weather. Logging proved an issue with the Lenovo laptop but surprisingly the HP laptop outperformed it whilst running KLog, this is something I feel the club needs to get on top of and rather than leave it to chance on the day, do a dummy run on the club night prior to the event. On Sunday I did a little calling and to my surprise none of the 5 QSO's I made were in England, 2 in Germany, 1 in the Netherlands, John O'Groats for the 4th and Ireland for the 5th.

This month I've relied on the Internet again for the CW Corner newsletter article, hopefully you'll find some interesting facts there.

We will not be participating in the Ashley Green Village Fete this year for reasons explained by Dave in his emails. My personal thoughts are that as it's Cup Final day the organisers may have got it wrong, I expect most people will be sitting in front of their TV's watching the match. The team running the fete this year is not the same as last year.

Roger (G3MEH) gave an excellent presentation on UK Terrestrial TV Broadcasting, he's kindly supplied his notes which I've included along with 4 of his photographs, I've filled in with information from the Internet on some of the masts he spoke of.

If you'd like to submit something for the newsletter, just drop me an email (details on the front cover) with your article.

Bryan M0IHY

Chairmans Ramble

Another busy month with some radio stuff & (for me) some very non-radio activity.

For me it started in earnest with my Zoom presentation on 'More on HF Antennas' on 3rd May. In spite of it normally being a club net night, we had a good attendance. Thanks to Malcolm for helping me stumble my way through my first 'virtual presentation' (just before he ran off & deserted us to tour the EU for the rest of the month!) My humble efforts are now archived via the club web-site. Oh dear, I can't deny anything about it now!



but bloody freezing in an open cockpit, just a couple of meters behind the prop, with only a 'pockethandkerchief' of a wind-shield to buffer a bit of the 'prop-wash'!

I was at the windmill for the Sunday. The new management at the windmill are definitely a 'new-broom' but seemed very welcoming to us, so all was very satisfactory.

(BTW your chairman was flying again on the 25th; this time from Duxford in a 2-seat Spitfire MK IX, where I took the controls & did a few turns, before my instructor took us up 'above the clouds' for a few aerobatics! Absolutely fabulous; a birthday treat to myself.)

On the 24th Roger G3MEH visited us again; this time to give us a very interesting chat about the history of Broadcast TV & where it is scheduled to go in the future? (I believe Bryan has a brief review with a sample couple of slides elsewhere?) There was a bit of a delayed start, as it appears that we do NOT have a mains extension lead at the club!! CDARS needs to buy one pdq. Bob thankfully only lives 'down-the-road', so whizzed home to fetch one; thanks Bob. A smallish but very appreciative gathering, as quite a few were away on holiday.

Unfortunately we have cancelled our activity at the Ashley Green Fair, for several reasons; maybe next year?

Our next practical activity will be a 'play-in-a-field' with some antennas, hosted at the QTHR (OX39 4AA) of John G0ODQ (thanks John) on Saturday 10th June. (Although if the weather is forecast to be dire, we might re-schedule to the 24th?) I would like to know who is available for this & what antennas folks might want to try-out? Let me know your availability. John G4CZB (Northampton RC) is hoping to join us as well.

The main thrust will be to practically compare several HF & LF wire antennas with the aid of the 'Reversebeacon-network' and/or 'PSK Reporter'. I hope to be able to have several poles with halyards up so several wires can be up at the same time & to be able to switch between them. I have in mind comparing a conventional Dipole, with OCFD (Off-centre-fed-dipole) & EFHW (End-fed-half-wave) amongst other antennas. Thoughts & requests to me please ASAP, so we can start preparing the hardware etc.

On the evening of the 28th June we are scheduled to visit the NRC at Bletchley Park, instead of a meeting at Ashley Green. I think Malcolm has a provisional list. Please advise/confirm if you intend to join the group, for the tour/demo by Martyn Baker G0GMB.

73 all, Dave K, G8FMC (Chairman & Contest Coordinator)



NanoVNA Antenna Analyser



Firstly let me apologise, I had every intention of going through the installation/upgrading of firmware and running of various software programs, but unfortunately I hit a snag.

On connecting the NanoVNA up to any of my computers I got a "USB device not recognised". I contacted the seller immediately and after almost 6 weeks and 3 requests to "be patient while I contact the supplier" (I thought something was odd when they asked me for the second and third time, suggesting there may have been a known fault) I eventually requested a full refund, this time I didn't get the usual reply of "we can offer you a discount".

Windows 10 has a tool you run at the C: prompt to check onboard devices, this confirmed the USB device was actually faulty, a shame as I quite liked the idea of using the NanoVNA, don't get me wrong, it still works, you just can't upgrade the firmware, or use any computer programs due to the faulty USB although (strangely) you can charge the device via the USB port.

At the end of the day you get what you pay for and if you're happy enough with the fact it measures SWR then so be it, I wanted to use the computer programs that enabled more than 101 point scanning but as the USB device wasn't recognised I couldn't install/run these programs. I'm convinced if I'd paid a higher price I may have got a good one, on speaking to one of the Martin Lynch team they told me they rate these quite highly (but they're more expensive) and actually stock them.

Bryan M0IHY

Brill Windmill 2023

The group looking after the windmill has changed hands and as a consequence we no longer have to fetch the key, unlock the windmill, lock it up when done and return the key, this is all done for us now.

Saturday was particularly cold and windy, I remember listening to the news on the radio on the way over and hearing of sunshine and 21°C and wondering whether it would materialise our way, sadly not. Jeremy always said the bottom of the windmill was the coldest place to be and with both front and back doors open I would think (with chill factor) the temperature was only just above freezing, we improved things by shutting the back door



We no longer have the inner left side for our tea and coffee, our setup (radio only) was to the rear right.

As usual, someone has to get up into the top of the windmill, throw a rope out to connect to the dipole centre and pull it up, this is then followed by erecting the dipole ends. Normally (in previous years) we've set up on a Saturday and left the antenna's up and equipment in the windmill overnight, this allowed us to get on with the business of making QSO's immediately on arrival on Sunday, with the new management this has now changed and the equipment and antenna systems have to be removed on Saturday night and reinstated on Sunday morning.

Tea, coffee and food could be purchased at the van in the car park, although I found this expensive at £3 for half a small cup of coffee (flat white).

One thing I noticed was the lack of the poster we had done, all that was required was the reprinting (I do that on my printer) of the date segment and then sellotape it over the original date, we must find it for next year.



Grey and definitely cold, a scene from the top of the windmill.



Looking out from the top of the windmill.



Roger (M7RMF), Matt (M1DTG), Phil (M0NVS), Peter (2E0PTH), Angie (M6WTL), Bryan (M0IHY) and Adam (M7SMI)



Adam (M7SMI), Phil (M0NVS), Matt (M1DTG), Roger (M7RMF) and Peter (2E0PTH)



Adam (M7SMI), Matt (M1DTG), Phil (M0NVS), Roger (M7RMF) and Peter (2E0PTH)



Rogers (M7RMF) van on the left. Our club flag blowing in the wind on the 2m antenna mast.



The new club flag flying from the 2m antenna mast, the dipole can be seen behind it.



The new club banner

It was certainly different this year with the club not being responsible for the opening and closing of the windmill, I felt we had more control over what happened and when in prior years, especially with the erecting of the antenna's and keeping them up overnight, this takes around an hour to set up each day and maybe longer should the weather be bad, time will tell.

There are lessons to be learned with a dummy run on setting the computer system up prior to the meeting to ensure the smooth running of the logging, maybe the club night at the Ashley Green Village hall before the event.

Saturday was bitterly cold and windy, thankfully Sunday was the opposite!

Thanks should go to Roger (M7RMF), Peter (2E0PTH), Phil (M0NVS), Matt (M1DTG), Adam (M7SMI) and Dave (G8FMC) for the efforts in setting up and breaking down of the radio systems and the putting up and taking down of the antenna systems twice over the weekend.

Bryan M0IHY

Mono Band (80 Meters) Helically Wound Vertical Antenna

Credit and copyright M0TCF 010118

The 'Totem' Pole

Having followed with interest, the articles published in RadCom by Mike Parkin (G0JMI) about his experiments with compact HF antenna's, I decided that it might be a bit of fun to throw my current crop of students & club training team members a bit of a curve ball and challenge them to build me a useable 80m vertical antenna! Previous similar activities have included the ubiquitous 'HF Antenna for a Tenner' (tin foil and brown paper) with which they all scored an European contact with, using less than 2 Watts SSB, as well as 'speed' kit building etc.

In my rush to get things sorted I failed to take note of some of the relevant dimensions of the required parts and substituted a 52mm diameter tube for a 70mm one! Not an auspicious start; anyway, having scrutinised the plans outlined in the article for themselves, the team decided to crack on and give it a go anyway!

Initial Construction:

I provided the team with approx 40m of white plastic covered double speaker wire (multi strand 1.5mm), a standard length 3m of 50mm waste tube from a Diy Store, a T200/2 toroid, plastic box, connectors, the usual tool kit and other miscellaneous items found in the shack junk box. The guys split into two teams, one working on the UnUn, the others working on constructing the actual antenna and windings.

Things went reasonably well, with plenty of measuring, marking out, scratching of heads, rubbing out and remarking. It was also noted that due to the variation we'd (I) had introduced into the design in the form of the narrow tube, in all probability the number of turns in the coils and their spacing etc. along with the associated capacitance/inductances were going to produce some really odd results. It might be reasonable to suggest at this point that in the in the true spirit of experimentation, the team completely ignored this point and cracked on! However, they didn't and some in-depth discussion followed; most of which involved the calculation of the circumference of our pipe, the one used in the original article and the percentage difference between the two. From there it was surmised that using the same percentage to increase the number of turns making up the coils would give us a pretty good starting point.

Beer O'clock hove into view all to quickly that evening and the 'under construction' antenna was plonked in the rear of my truck as we set of for the ritualistic after club discussion over a cold beer.

Developments at Home

It was clear that the team had worked wonders, thought about what they were trying to achieve and worked in a reasonably methodical manner. However, some of it could be improved upon, even if it was only for aesthetic reasons. The coils had been covered in white Duct Tape, I'd included enough in the 'kit' for them to cover the tube completely three times over, however being a cautious lot, they'd only used just enough as necessary and bits were beginning to lift etc. The initial solution to me was to remove the tape from one coil at a time and carefully replace it with cable ties. Having also given it a wipe over (to remove grungy finger marks) I then decided it would be best to 'seal' each coil in turn using that last of my dwindling supply of large diameter heat shrink wrap – purchase from Ebay years ago. The overall appearance of the antenna was much improved; I am a firm believer in the saying 'something that look right, probably is!'

Next, that tuning rod. The three screws were removed forthwith and the tube end tidied up. Casting my eye around the garage lead me to the sheet of 10mm acrylic sheeting sitting on the bench that I was using to make spacers for a VHF/UHF antenna project. A quick check to ascertain the internal bore of the plastic pipe and out came a hole cutter (normally used to cut the right size holes in doors to fit Yale Locks). Shortly, I had a pile of 10mm thick, clear acrylic discs sitting on the bench next to me. Some where along the way I got the inkling that the original metal tube we'd used wasn't going to cut the mustard on this job and I rummaged through my small stock of alloy tubing and came up with a 1m long thick wall, 12mm diameter Aluminium tube – perfect! I opted to use three of the spacers I'd just cut, one secured to the end of the ally tube, another fixed to the top of the plastic tube to act as a bung and the third to be a 'tight sliding' spacer, just below the top one to keep everything in place. As it turned out the third spacer was totally unnecessary as it tended to jam the tube during adjustment. Having sorted that issue out, I then began testing in Earnest.

Test Experiments:

I returned to the club a third time and we spent a short period in the car park giving the antenna a good tweaking on the test rig. Purely by chance, it seemed that the antenna was now a lot closer to our target resonant frequency (3.663 MHz – TARS Club Net Freq) due to the meter long alloy tube now inserted two thirds of its length down inside the plastic tube. Further adjustments, easing the tube up and down gave us eventually, an SWR reading of 1.3/4 at 3.655 MHz close enough for now! It also became clear early on that it didn't like being placed next to large metal objects (cars,skips, railings etc) which de-tuned it out of hand.

Given that it had no ground as such, the whole lot being 'unbalanced' we decided to bang an RF choke (a few coils of the coax) next to the UnUn to stop any common mode currents etc. That improved things slightly, so on a hunch I reversed the coax connections (the choke now being at the 'rig' end) and indeed a greater improvement in SWR etc. was again noted. After this further improvement the call came to test it on the club rig! Problem: Club President was running the evening net... Even better, it would give us a chance to compare it to the usual club antenna live on the air, with numerous operators. After a brief interruption the game was on and I retired to the kitchen to make us a brew up (it was freezing cold in that car park). After the net, Club President (G3LHJ) Derrick gave a favourable response to our enquiry 'well'?? 'An S point up on receive and noticeably less background noise' was his summary – Can't say fairer than that we agreed.

A bit more besides: As this really is a experiment (with possible commercial aspirations) I decided to push things a bit and on a fine December afternoon set the antenna up and at the suggestion of an online contact, connected a single 8.5m radial to the UnUn – the SWR lurched lower still – bonus! Next I lowered a 6mm aluminium rod (approx 80cm in length) down inside the 12mm alloy tube, to act as a method of fine tuning, again the SWR shot down and with a little adjustment hit 1:1 – however, I noticed that the usable bandwidth had reduced somewhat.

At its best, the antenna exhibited a very narrow bandwidth, some 70-80khz at most – I take an SWR of 2-1 as the least acceptable, esp for today's modern radio's. However, with the added tuning rod, the SWR bottomed out nicely, but the bandwidth was exponentially reduce also! I removed the rod, deciding to accept a marginally higher SWR and the increased band width it accorded, besides how many adverts for antennas do you see today which say 'SWR better than 1.5:1'? Nobody is going to claim to build a 'unity' radiator, least of all me!

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1:4 UnUn wiring diagram (scan from my notebook) :



The UnUn, in position on the bottom of the antenna tube, but without the radial attached to the 'earthing' point visible on the right hand side of the box.



Layout plan for Coils etc. The gap between the UnUn and the first coil is unspecified, but should be negligible.



50mm White Drain Tube

The dimensions given for the coils are suggested starting points only! Some variation of overall measurements should be expected due to differing materials and construction techniques used.

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The completed project (Less coax & radial).



Concluding thoughts.

Firstly, I'd like to express my gratitude and thanks to Mike Parkin G0JMI for the inspiration behind this experiment – I'm the first to admit that 'I don't do the math' very much! Also huge thanks to the students and training team members of TARS who's enthusiasm for the whole project has been infectious!

One of the many reasons I chose to start this project was the result of a plea by a fellow club member who's driving job took him all over the SW of UK and further afield on occasion. Having had little success in the past, he was desperate for an antenna he could take with him, that would all him to join in the club's 80 meter band nets. It appears that our success has inspired him to 'give building the Totem Pole a go'! We don't claim this is a new and unique design by any means (most of us know there is very little that is altogether new in amateur radio) rather more we regard our variation on the original design as a Mk2 development – esp the large tuning rod, which makes SWR adjustment so easy!! We're happy with that!

If you give the 'Totem Pole' a try, then please call in on the 80m band TARS Net and say hello – net timings & details on our website. 73's Lin MOTCF – TARS Training Team.

ED: Thanks Linden for sharing this with us, it's great to see examples of peoples efforts to get on the air with compromised (postage stamp sized) gardens.

Contests/Operating

Several members & 'Friends' took part in the 432MHz Trophy contest on 6th May, which for us was the 2nd qualifying event for the VHF Championship. (There was a 10GHz contest, but none of us are microwave men!)

Results are now published & we did quite well:

In the 'Open' section Matt G0XDI picked up the Certificate for Table Leader. I am not sure Matt intended to enter this category rather than SF(Single-op Fixed) but lets say it was a tactical decision which paid off? 6 of us entered the SF section with a spread of results. A total of 7 entries was second to Hereford, current Championship leaders. We have slipped to overall 3rd place, but only because of the other clubs 10GHz entries.

This proves that it is definitely a 'numbers-game' where every entry however modest does make a difference to the total! Thanks to all who participated.

Some weeks ago I entered the SP DX contest. Not having any HF band (10m, 15m & 20m) antenna up, indifferent weather & apathy suggested that maybe my 'dabble' should be a 'single-band' entry. My 40m Vertical is quite good for DX, with SP just about in that category on 40m. I quite enjoyed the event with the Polish stations being very friendly & needing to work non-polish stations. I ended up a bit more serious & put in an entry for SOSB (single Op, single-band) Phone 40m. It was a pleasant surprise that I recently printed off my Certificate for #1 in England!

Tip: pick a category which few enter, then the opposition is limited!

Finally I had some very welcome news as an additional Birthday Present; my long running saga with the planning people has at last concluded with me having full planning permission for all my antennas – eureka!

73, Dave K, G8FMC

UK Terrestial TV Broadcasting

Roger (G3MEH) gave a talk on Broadcast TV on the 24th of May at Ashley Green Village hall, although the turnout was low (due to many of the club being away on holiday) it was never-the-less an enjoyable evening. As most of photographs are copyrighted I cannot show them here, Roger has provided me with 4 photographs taken by himself.



A very young Roger (G3MEH) behind the controls of a prototype Marconi Mk 7 colour camera



Hemel Hempstead Town TV relay firstly as it was, with a tubular pole on the old Kodak building (14.10.2007)

Features



Temporary tx antennas dropped down the side of the building after it was sold and being converted (25.12.2007)



Lastly of the completed work with the antennas back on the roof of the refurbished building, this time on a lattice mast.

Source: https://blog.scienceandmediamuseum.org.uk/history-of-british-television-timeline/

Although the first public demonstration of television in the UK took place in 1926, it wasn't until November 1936 that the BBC began broadcasting regular high-definition television programmes from Alexandra Palace to the London area. Analogue 405 line monochrome, double interlaced. Scanned L-R (10.125kHz) and top to bottom (50Hz). Display 5:4 aspect ratio to make good use of round CRT displays.

In September 1939 British television is shut down immediately at the advent of the Second World War. It is estimated that there are 20,000 TV sets in Britain at this time, the transmitters were used to disrupt German radio guidance systems. it wasn't until June 1946 that the BBC resumed television operations after the war.

Following are Rogers notes after which I've added a little about some of the transmitting antenna's.

My interest in TV – Marconi (TV1) – rx on 70cm (TV2) amateur TV on 1.3GHz FM – mb21 website contributor.

1936 – Alexandra Palace (TV3), Analogue 405 line monochrome, double interlaced. Scanned L-R (10.125kHz) and top to bottom (50Hz). Display 5:4 aspect ratio to make good use of round CRT displays.

Sound 41.5MHz AM, Vision 45MHz VSB. (TV4) using VP – CH1 of five on band 1

WW2 use of tx to disrupt German radio guidance systems.

After WW2 expanded with Sutton Coldfield (TV5) then high power main stations (VP) in the regions, then infill relays such as Oxford (HP), and Alexandra Palace, north London, was replaced by Crystal Palace, south London.

Band 1 gave interference problems from two main sources. Sporadic E in the summer months (TV6-9) and ignition interference from poorly suppressed petrol engines. Although new vehicles were manufactured with good suppression the 'boy racers' had a habit of replacing the resistive EHT leads with copper leads.

The government sanctioned commercial TV, ITV, starting with London ITV on CH 9, band 3 initially from a temporary 200ft mast at Beulah Hill, Croydon (TV10), replaced by a 500ft mast a few years later (TV11). ITV was then opened up from sites around the regions with different programme contractors by region. (TV12) There was no mast sharing between the BBC and ITV. There's an interesting article at https://transdiffusion.org/2015/09/22/i-found-my-thrill-on-beulah-hill/

The decision was made to phase out 405 line TV in favour of higher definition 625 line and experimental transmissions were made from Crystal Palace on band 4, CH34 (TV13)

The transmission of what became BBC2 from CP on UHF was a success and the whole analogue network was moved to UHF over the following years, with mast sharing. CH4 was added, then CH5. CH5 in London was transmitted from the Beulah Hill, Croydon, site with the result that viewers south of the transmitter suffered ghosting because of a reflection from the BBC's Crystal Palace mast. Beulah Hill was then equipped with standby facilities for the other four channels as a contingency in the event of Crystal Palace being out of action for any reason.

For compatibility with monochrome receivers, 625 line colour transmissions transmitted the luminance content conventionally and the colour, chrominance, content was transmitted at relatively low definition by means of a sub-carrier at 4.43MHz which was ignored by monochrome receivers.

Then the government decided that analogue TV should be phased out in favour of digital TV, initially with a coding system known as DVB-T (Digital Video Broadcasting – Terrestrial. Later DVB-T2 was introduced which used a more efficient coding system and better capable of supporting High Definition.

Mast sites of interest :-

Hemel Hempstead Town (TV14 - TV18), pages 19 & 20.

Emley Moor (TV19 – TV24) covered on page 23.

Croydon (TV25 – TV26) see below.

Self Helps – the early days of analogue UHF 625 line TV. Two reasons, ghosting or no local coverage. Cost of installation covered by locals but technical advice on planning etc provided by BBC or IBA engineering staff. (TV27 - TV30)

The original UHF allocation was 470MHz to 860MHz, but the decision was made to reduce that to 470MHz to 700MHz with the government selling off use of the liberated spectrum to mobile phone companies. Many sites that used 700-860MHz needed antenna changes to allow operation at lower frequencies, including Oxford.

Current consumers are making increasing use of streaming services. This has meant increased costs to broadcasters to provide streaming facilities while incurring fixed costs for conventional broadcasting over the existing network of sites. The government has taken the decision that terrestrial TV broadcasting shall cease in favour of streaming.

Inter studio Christmas tapes competition (TV99)

Croydon transmitting station

Source: Wikipedia



Features

It was originally used to broadcast the London ITV signal on VHF Band III. When UHF broadcasting began, the nearby Crystal Palace transmitting station was used. VHF television was discontinued in 1985, and the Croydon transmitter was not used for regular TV broadcasting until 1997, when a new directional UHF antenna, designed to avoid interference with continental transmitters, was installed to carry the newly launched Channel 5 in the London area. It carried Channel 5's analogue signal, and the digital terrestrial signal is transmitted from Crystal Palace. Croydon also had reserve transmitters for BBC1, BBC2, ITV and Channel 4, but these were used only in the event of engineering works or a failure at Crystal Palace. Since the digital switchover in April 2012 no television has been broadcast from Croydon, but it is still used as a backup for Crystal Palace for the BBC A & B, Digital 3&4 and COM 4, 5 and 6 multiplexes.

The site is also a maintenance base for transmitter maintenance teams and used to house one of four Regional Operations Centres.

Emley Moor

Source: Wikipedia

The first Emley Moor structure was erected in 1956 to broadcast ITV programmes to Yorkshire.

It was replaced with a second, taller mast eight years later and it was this that came crashing down on 19 March 1969. The new tower consists of 7000 cubic metres of concrete and weighs 11,200 tonnes. It has a hollow centre which has two lifts and an 865-rung ladder. The foundations are 6.1 metres deep.

Emley Moor has been a transmission site since the earliest days of commercial television in the UK. The present concrete tower is the third antenna support structure to have occupied the site.

The first permanent transmitter built there was for ITV, covering much of the north of England. It had a 443 feet (135 m) lattice tower, which provided limited coverage. This original 443-foot (135 m) lattice tower was erected in 1956 to provide Independent Television broadcasts to the Yorkshire area. It entered service on 3 November 1956, transmitting Granada Television programmes on weekdays, and ABC TV programmes at weekends.



Wreckage of the Emley Moor Mast, which collapsed in March 1969, strewn across fields

On 19 March 1969, a combination of strong winds and the weight of ice that had formed around the top of the mast and on the guy wires caused the structure to collapse. The duty engineer wrote the following in the station's log book, demonstrating that failure of the structure was completely unexpected:

- Day [shift]: Lee, Caffell, Vander Byl [surnames]
- Ice hazard Packed ice beginning to fall from mast & stays. Roads close to station temporarily closed by Councils. Please notify councils when roads are safe (!)
- Pye monitor no frame lock V10 replaced (low ins). Monitor overheating due to fan choked up with dust cleaned out, motor lubricated and fan blades reset.
- Evening [shift]: Glendenning, Bottom, Redgrove [surnames]
- 1,265 ft (386 m) Mast :- Fell down across Jagger Lane (corner of Common Lane) at 17:01:45. Police, I.T.A. HQ, R.O., etc., all notified.
- Mast Power Isolator :- Fuses removed & isolator locked in the "OFF" position. All isolators in basement feeding mast stump also switched off. Dehydrators & TXs switched off.

The collapse left sections of twisted mast strewn over the transmitter site, and across the junction of Common Lane and Jagger Lane, and the surrounding fields. Although a falling stay cable cut through the roof of a local church and across the transmitter site buildings, no one was injured. It completely disabled the BBC2 UHF transmitter and the ITV VHF transmitter, leaving several million people without service.

New tower

After the setting up of temporary masts, erection of the current concrete tower began in 1969. It was not built on the site where the original mast had stood, but slightly to the south-east at 53.612056°N 1.664390°W. UHF (625-line colour) transmissions commenced on 21 January 1971, and the older VHF (405-line black and white) system became operational on 21 April 1971. Local residents did not wish to see another mast on Emley Moor, and a departure from usual designs was called for. The new structure consists of a tapered cylindrical pillar, 902 feet (275 m) tall, constructed of reinforced concrete, and is topped by a 180 feet (55 m) steel lattice mast which carries the antennae.

In 2002, English Heritage granted the tower Grade II listed building protection under UK law, being the lowest and most common of three categories, for meeting its criteria of significant architectural or historic interest.

The structure is a tapered, reinforced concrete tower. It is the tallest freestanding structure in the United Kingdom at a height of 1,084 feet (330 m), 66 feet (20 m) taller than The Shard.



Holme Moss transmitting station

Source: Wikipedia

The Holme Moss transmitting station is a radio transmitting station at Holme Moss in West Yorkshire, England. The mast provides VHF coverage of both FM and DAB to a wide area around the mast including Derbyshire, Greater Manchester, South Yorkshire and West Yorkshire.

Holme Moss transmitting station was launched on 12 October 1951.

Of historic and technical interest, this operated on the 405 line VHF system, with black and white transmissions originally on British System A, Channel 2, with vision 51.75 MHz, 45 kW and sound 48.25 MHz, 12 kW. The mast survived until the end of the Band I TV broadcasts in 1985, with a replacement mast being constructed, adjacent, in 1984. In early 1986, there was concern that heavy blocks of ice could bring down the old mast - February 1986 had been one of the coldest months on record, but demolition contractors worried that a sudden burst of warm weather could loosen lumps of ice, with the shock of the fall possibly buckling the old mast at its badly rusted centre. This in turn threatened to damage the new mast just 100 yards away and put all its FM broadcasts off air.

In the event, a gradual thaw alleviated the problem, and the old mast was taken apart as planned.





Winter Hill transmitting station

Source: Wikipedia

The Winter Hill antenna

The Winter Hill transmitting station is a broadcasting and telecommunications site on Winter Hill, at the southern boundary of the Borough of Chorley, Lancashire, England, and above Bolton. It is owned and operated by Arqiva.

The original mast at Winter Hill was a 140-metre (450 ft) tower that came into service on 3 May 1956, and carried the programmes of Granada Television (weekdays) and ABC Weekend Television. In 1966 services were transferred to a new higher mast erected adjacent to the original tower. The main mast structure is 309.48 metres (1,015.4 ft) tall and has a diameter of 2.75 metres (9.0 ft). During the period of parallel digital and analogue transmissions, the DTT antenna attached to the top of the mast brought the overall height to 315.4 metres (1,035 ft), however as part of the Digital Switchover plans, this antenna has now been removed, reducing its overall height to 309.48 metres (1,015.4 ft). It is one of the tallest structures in the United Kingdom, the tallest being Skelton mast; however, at 778.1 metres (2,553 ft) above sea level, Winter Hill has the highest television transmitting antenna in the United Kingdom and is higher than Green Hill, the highest hill in Lancashire.

Unlike most masts, which are of a lattice design, Winter Hill mast is of a tubular construction. Five other masts in England share this design (Belmont, Bilsdale, Mendip, Waltham and the original ill-fated structure at Emley Moor).

Support wires, to hold the mast vertical, are pitched at 120° when viewed from above. These are connected at five heights, giving 15 supports in total. These wires have been strengthened, and 152 metric tons (150 long tons) of dampening chains have been fitted by Arqiva (then NTL Broadcast) to reduce the oscillations caused by high winds that were a factor in the collapse of Emley Moor's original structure in 1969. During 2007 - 2009, the mast was strengthened to allow the installation of the new heavier digital transmission aerials. Its ropes weigh 85 tons, made by British Ropes, with steel from Steel, Peech and Tozer of Templeborough in southern Yorkshire. The column weighs 210 tons and has 375 segments, with steel from United Steel Companies at Scunthorpe in northern Lincolnshire.

Belmont transmitting station

Source: Wikipedia

The Belmont transmitting station is a broadcasting and telecommunications facility next to the B1225, 1 mile (1.6 km) west of the village of Donington on Bain in the civil parish of South Willingham, near Market Rasen and Louth in Lincolnshire, England (grid reference TF217837). It is owned and operated by Arqiva.

It has a guyed tubular steel mast, with a lattice upper section. The mast was shortened in April 2010 and is now 1,154 feet (351.7 m) in height.[1][2] Before this it was 1,272 feet (387.7 m) high and was considered to be the tallest structure of its kind in the world (taller masts, such as the KVLY-TV mast in the United States, use steel lattice construction), and the tallest structure of any type in the United Kingdom. After the top section was removed, the mast's reduced height relegated it to the secondhighest in the UK after Skelton.

Despite the mast being shortened it can be seen in daylight on clear days from most areas close to and within the Lincolnshire Wolds. On clear nights its bright red aircraft warning lights can be very widely seen across much of Lincolnshire from as far north as the River Humber and Barton-Upon-Humber; from the



west of the county it can be seen from Lincoln, Gainsborough and Grantham; from the south of the county it can be seen from Spalding and Bourne; and from the east it can be seen from Skegness, Mablethorpe and most areas along the Lincolnshire coast. The lights can also be seen from many parts of Nottinghamshire, coastal areas of North West Norfolk and a few parts of Derbyshire on very clear nights.

CW corner

Credit: Ethan Nelson, the-daily-dabble.com

15 Awesome Morse Code Facts You Should Know



Morse code is often underappreciated by those who don't know its impact on history.

It was a critical piece in long-distance communication for over a hundred years and helped pave the whole way to what technology we have today.

Here are 15 Morse code facts that you should know that will help you gain a new respect for it.

1. Morse Code Was Invented for the Telegraph



The telegraph could just send electric pulse signals over a wire so the inventors needed to figure out how to use those to communicate.

Morse code was invented to translate those pulses into English by assigning a combination of short and long signals to each letter and number.

The telegraph and Morse code changed long-distance communication forever.

2. Morse Code is Still Used Today

Amateur radio operators still use the code today even though it is no longer required to know it to get a ham radio license.

Many people still learn Morse code as a fun skill or just an interesting hobby.

People even still use the universal Morse code SOS signal to get help by spelling out the letters on the beach. It can still be a versatile way to communicate in different ways.

3. Two People Created Morse Code Together

Samuel F.B. Morse invented the code with the help of his friend and assistant Alfred Lewis Vail.

Vail ended up helping immensely in helping him work out the kinks. It was dubbed Morse code after Samuel because he came up with the original idea.

4. The First Official Telegram in Morse Code was Sent in 1844



To test the recording telegraph in Washington, D.C., in front of government officials, Samuel Morse sent the first recorded US telegram.

He sent it to his assistant Alfred Vail in Baltimore and it read "What hath God Wrought?" It was a biblical phrase that was simply suggested to Morse by an onlooker.

5. The Inventor of Morse Code was a Painter

Samuel Morse made his living as an artist before he even started inventing his telegraph.

He famously painted a portrait of Marquis de Lafayette, the famous Revolutionary War hero.

Mr. Morse was not only well known and respected in the art world but also recognized as a gifted inventor.

6. We have the SOS Signal Because of Morse Code

In the early 1900s, wireless telegraphy was implemented on ships, and the traffic on the seas was increasing.

It soon became clear there needed to be an international distress signal to help with ship rescue.

Morse was used widely already so the SOS signal was chosen because it was easy to remember and understand within the code.

It is simply three dots for the "S", three dashes for the "O", and another three dots for the last "S."

7. You can Speak Morse Code



It was designed just to translate audio pulses into English, but Morse code can be verbally spoken.

You simply have to learn how to pronounce the dot and dash signal combinations.

The dot is spoken as "di" unless it's at the end of the signal like "di-di-dit." Then the dash is spoken as "dah"(daw).

The letter "R" for example is dot-dash-dot so it would be pronounced "di-dah-dit."

8. Morse Code was the First Text Message

That first biblical telegram message sent by the inventors was literally the first text message.

The receiving end of the recording telegraph they used actually moved and wrote down the Morse signals.

All the receiver would have to do then is translate the signals into English.

9. Morse Code is not a Language

Many people don't realize that Morse code is not a language, but just a code.

It was made to code the alphabet with electric signals that could be translated back into English.

It turned out to be a brilliant way to communicate over long distances for a long time.

10. Morse Code Helped put the Pony Express out of Business



Before Morse, people communicated through letters sent via horse, coach, or by train and could take a long while to get to their destination.

The invention of the telegraph, with Morse code, grew rapidly as people were then able to send and receive messages within minutes.

The Pony Express was just too slow to stay in business and officially ceased operations in 1861.

11. You can Communicate Morse Code by Blinking

Morse code work with any pulse signal like flashing a flashlight on and off or blink SOS if you are in trouble but can't speak.

Who knows when you will actually use these skills, but people have before. In fact, a US prisoner of war in Vietnam actually blinked the word "TORTURE" in Morse code when he was on camera.

This let the US Government know their prisoners were not being treated as nicely as portrayed. He was released years later and was eventually awarded the Navy Cross.

12. Morse Code Covers Punctuation Too

Morse code not only covers letters but also numbers, punctuation, and special characters. Some of these characters were added in later updates of the code.

This was important to add because we know punctuation can clear up meaning and show how the sentence should be exactly read.

13. Morse Code was Once Sent Over Electric Lines in the Sea



A copper telegraph cable was successfully stretched 2,000 miles across the Atlantic Ocean, in 1858. After much trial and error that cable still broke and had to be replaced by stronger ones.

This first transatlantic cable still let the U.S President communicate with the Queen of the united kingdom for a short period. Wireless telegraphy eventually eliminated the need for wired telegraphy.

14. The Original Morse Code isn't Used Anymore

The first version of it became known as the American Morse code and was used a ton by the railroad.

It was eventually replaced by a more user-friendly version with updates to make it more universal and simple.

This International Morse Code was the new version that is still learned and used today.

15. There are Korean and Japanese Versions of the Code

The Korean Morse equivalent is called SKATS, short for Standard Korean Alphabet Transliteracy System.

The Japanese have the Wabun Code, which puts their characters and pronunciations into Morse code signals.

Otherwise, the code can work with languages using the Latin alphabet.

We hope you enjoyed these fun facts about Morse code!

Spotlight - Nelson, New Zealand

QSO with ZL2BX, Alan Cressswell, Nelson, New Zealand

 Band:
 20m

 Mode:
 FT8

 Date:
 19th March 2021

 Time:
 09:20z

QTH: Coordinates: Time Zone: Population: Nelson 7096, New Zealand 41°16'15"S 173°17'2"E UTC+12/13 54.500



Source: Wikipedia

Nelson (Maori: Whakatu) is a city on the eastern shores of Tasman Bay / Te Taio-Aorere. It is the oldest city in the South Island and the second-oldest settled city in New Zealand; it was established in 1841 and became a city by royal charter in 1858.

Nelson City is bordered to the west and south-west by Tasman District Council and to the north-east, east and south-east by Marlborough District Council. The Nelson urban area has a population of 50,800, making it New Zealand's 15th most populous urban area.

Nelson is well known for its thriving local arts and crafts scene; each year, the city hosts events popular with locals and tourists alike, such as the Nelson Arts Festival. The annual World of Wearable Art Awards began near Nelson and up until May 2020 a local museum showcased winning designs alongside a



Coat of Arms

collection of classic cars. This has been replaced by the Nelson Classic Car Museum since August 2020.



Nelson city

Early settlement

Settlement of Nelson began about 700 years ago by Maori. There is evidence that the earliest settlements in New Zealand were around the Nelson-Marlborough regions. Some of the earliest recorded iwi in the Nelson district are Ngati Hawea, Ngati Wairangi, Waitaha and Kati Mamoe. Waitaha people developed the land around the Waimea Gardens, are believed to have been the first people to quarry argillite in around Nelson. They also developed much of the Waimea Gardens complex – more than 400 hectares on the Waimea Plains near Nelson. In the early 1600s, Ngati Tumatakokiri displaced other te Tau Ihu Maori, becoming the dominant tribe in the area until the early 1800s. Raids from northern tribes in the 1820s, led by Te Rauparaha and his Ngati Toa, soon decimated the local population and quickly displaced them.

Today there are eight mutually recognised tribes of the northernwestern region: Ngati Kuia, Ngati Apa ki te Ra To, Rangitane, Ngati Toarangatira, Ngati Koata, Ngati Rarua, Ngati Tama and Te Atiawa o Te Waka-a-Maui.

Historic places

There are three main historic places located in Nelson, New Zealand. They are Broadgreen Historic House, Isel House, and Founders Heritage Park. The Broadgreen Historic House was originally built in 1855 for Mr

and Mrs Edmund Buxton, additionally with their six daughters. The house was later sold to a Fred Langbein in 1901, who lived there with his family until 1965. In 1965, the house was bought by the Nelson City Council and is now used/operated as a museum for the general public.

Isel House is a local historical building located in Nelson. It was home to one of Nelson's first families, the Marsdens. Many of the rooms have been transformed into displays for the public to view. The restoration of Isel House is managed by Isel House Charitable trust under the supervision of Sally Papps, but the house and the park ground surrounding it are owned by the Nelson City Council.

Founders Heritage Park is a local historical visit in Nelson. This interactive park shows visitors the history of Nelson, New Zealand. The park is set up as a village filled with buildings set in a historical time, including well established gardens. Throughout the park, there are stories to be learned about the history of this town.



City

Church Steps (sometimes called the Cawthron Steps) from Trafalgar Street up to the 60's bell tower of Nelson's Christ Church Cathedral

Nelson township was managed by the Nelson Provincial Council through a Board of Works constituted by the Provincial Government under the Nelson Improvement Act 1856 until 1874. It was proclaimed a Bishop's See and city under letters patent by Queen Victoria on 27 September 1858, the second New Zealand city proclaimed in this manner after Christchurch. Nelson only had some 5,000 residents at this time. Edmund Hobhouse was the first Bishop. The Municipal Corporations Act 1876 stated that Nelson was constituted a city on 30 March 1874.

The Nelson Province as constituted in 1853

From 1853 until 1876, when provincial governments were abolished, Nelson was the capital of Nelson Province. The province itself was much larger than present-day Nelson City and included all of the present-day Buller, Kaikoura, Marlborough, Nelson, and Tasman, as well as the Grey District north of the Grey River and the Hurunui District north of the Hurunui River. The Marlborough Province split from Nelson Province in October 1859.

Nelson provincial anniversary

Nelson Anniversary Day is a public holiday observed in the northern half of the South Island of New Zealand, being the area's provincial anniversary day. It is observed throughout the historic Nelson Province, even though the provinces of New Zealand were abolished in 1876. The modern area of observation includes all of Nelson City and includes all of the present-day Buller, Kaikoura, Marlborough, Tasman districts as well as the Grey District north of the Grey River / Mawheranui and the Hurunui District north of the Hurunui River. The holiday usually falls on the Monday closest to 1 February, the anniversary of the arrival of the first New Zealand Company boat, the Fifeshire on 1 February 1842.

Anniversary celebrations in the early years featured a sailing regatta, horse racing, running races, shooting and ploughing matches. In 1892, the Nelson Jubilee Celebration featured an official week-long programme with church services, sports, concerts, a ball and a grand display of fireworks.



Diocese of Nelson Christ Church Catherdral on Church Hill, central Nelson.

James - M0JCQ

Regulars

Contest Corner

June			
HF			
Day	Date (2023)	Time UTC	Contest Name
Sat-Sun	03-04 Jun	1500-1500	NFD
Mon	05 Jun	1900-2030	80m CC DATA
Wed	14 Jun	1900-2030	80m CC CW
Thu	22 Jun	1900-2030	80m CC SSB
Mon	26 Jun	1900-2030	RSGB FT4 Contest
VHF			
Day	Date (2023)	Time UTC	Contest Name
Tue	06 Jun	1800-1855	144MHz FMAC
Tue	06 Jun	1900-2130	144MHz UKAC
Wed	07 Jun	1900-2100	144MHz FT8 AC
Thu	08 Jun	1900-2130	50MHz UKAC
Sun	11 Jun	900-1300	2nd 144MHz Backpackers
Tue	13 Jun	1800-1855	432MHz FMAC
Tue	13 Jun	1900-2130	432MHz UKAC
Wed	14 Jun	1900-2100	432MHz FT8 AC
Thu	15 Jun	1900-2130	70MHz UKAC
Sat-Sun	17-18 Jun	1400-1400	50MHz Trophy Contest
Tue	20 Jun	1900-2130	1.3GHz UKAC
Sun	25 Jun	900-1200	50MHz Contest CW
Sun	25 Jun	1400-1600	70MHz Cumulatives # 4
Tue	27 Jun	1830-2130	SHF UKAC
July HF			
Day	Date (2023)	Time UTC	Contest Name
Mon	03 Jul	1900-2030	80m CC CW
Wed	12.Jul	1900-2030	80m CC SSB

Day	Date (2023)	Time UTC	Contest Name
Mon	03 Jul	1900-2030	80m CC CW
Wed	12 Jul	1900-2030	80m CC SSB
Sun	16 Jul	900-1600	International Low Power Contest
Mon	17 Jul	1900-2030	RSGB FT4 Contest
Thu	27 Jul	1900-2030	80m CC DATA
Sat-Sun	29-30 Jul	1200-1200	IOTA Contest

VHF

Day	Date (2023)	Time UTC	Contest Name
Sat-Sun	01-02 Jul	1400-1400	VHF NFD
Sun	02 Jul	1100-1500	3rd 144MHz Backpackers
Tue	04 Jul	1800-1855	144MHz FMAC
Tue	04 Jul	1900-2130	144MHz UKAC
Wed	05 Jul	1900-2100	144MHz FT8 AC
Tue	11 Jul	1800-1855	432MHz FMAC
Tue	11 Jul	1900-2130	432MHz UKAC
Wed	12 Jul	1900-2100	432MHz FT8 AC
Thu	13 Jul	1900-2130	50MHz UKAC
Sat	15 Jul	1400-2000	70MHz Trophy Contest
Tue	18 Jul	1900-2130	1.3GHz UKAC
Thu	20 Jul	1900-2130	70MHz UKAC
Tue	25 Jul	1830-2130	SHF UKAC
Sat	29 Jul	1400-1800	4th 144MHz Backpackers

For sale and wanted

If anybody has anything for sale, or wants anything, then this is the place to ask, photo's and descriptions will help, email me at bryanpage1@btinternet.com.

Any other business

Ashley Green Village Fete



We will not be attending the fete this year.