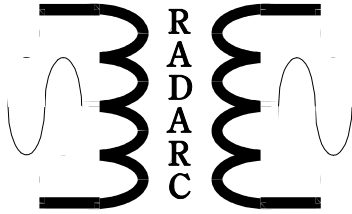


RADIO

*The Journal of the
Reading and District
Amateur Radio Club*



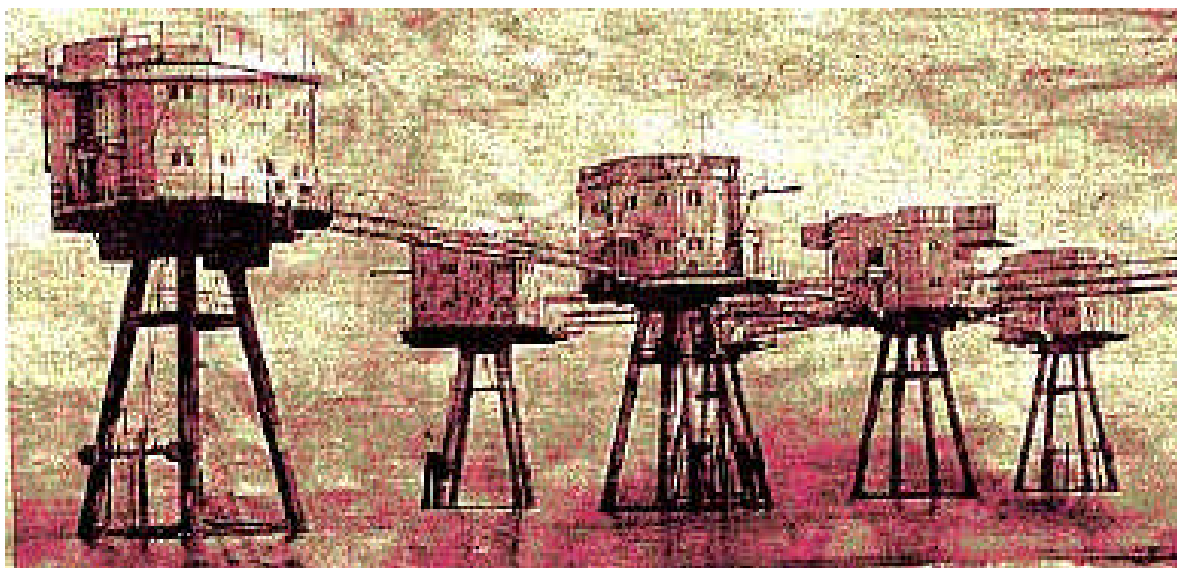
December 1999

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RADIO DECEMBER 1999

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Enquiries about the production and distribution of this newsletter can be addressed to G8FIF, or any other member of the Committee.

Club Members' email addresses are: <callsign>@radarc.org
The Club's Internet Web site is: <http://www.radarc.org>

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EDITORIAL

Well 2000 is nearly upon us, which makes this the last newsletter of the 1900s. It's actually been rather special for me: I've become an uncle – twice (one of each). I'll fill my space this time with some of the other interesting things which have happened to me since last time.

FAB Tour

Now this has absolutely nothing to do with *Thunderbirds*, but I'm sure there were a couple in the "parking lot" (car park) at the time!

My company insists on sending me to the US a couple of times a year and on my last trip I was lucky enough to be taken around the wafer fabrication plant – fab for short. I've dealt with so-called silicon chips for around 20 years, but like most people I'm used to seeing them in little plastic or ceramic packages. This was a chance to see the little bits of material that go into the plastic being made.

In order to be able to get into the area where the chips are made, you have to get kitted up fully so that all the particles that drop off of your body don't mess up the process. This means overshoes, a hair net, hood, a full bunny suit, safety glasses and rubber gloves. Remember that it was 110°F outside so this isn't the most pleasant of working clothes you could find! It's also amazing how quickly you learn how to recognise people just by their height and eyes. Let's put it this way: you don't get any clue what sex they are, so you have to be pretty careful.

It all starts with a slice or wafer of very

pure silicon (not silicone, that's what ladies have implanted...) This can be anywhere from 4" to 12" in diameter – 6", 8" and 12" are the commonest today.

Next you have to change the silicon into n-type and p-type in the right places. Basically, you coat the wafer with a photoresist, shine UV light or X-Rays through a mask and etch away the shadows. It's like making a PCB but on a tiny scale.

When I first made circuit boards at home I always thought that Ferric Chloride (FeCl_3) was pretty nasty stuff. It's nothing compared to what you've got hanging around a fab! For dopants you use something innocuous like Boron, Phosphorous or Arsenic. You'll also have a high concentration Hydrogen Chloride (HCl) in the chamber too, but it gets worse. To actually do the etching you need to use Hydrogen Fluoride (HF). This stuff is so nasty that it eats through practically anything that gets in its way – metal, glass, human flesh, you name it.

We always think that electronics is a reasonably clean activity. It is once the bits have been made, but certainly not before.

Anyway, the etching and doping creates transistors and diodes all over the wafer and they have to be joined up somehow. For this you fire molten aluminium at it to create the tracks. No prizes for guessing how many times you do that when you have a "three layer metal" process...

So now, around 4 weeks after you started with a blank wafer, you've got this disc of silicon containing several hundred



(maybe several thousand) integrated circuits. From here they're tested, cut up into the individual dice and packaged. Once they're sealed in plastic you don't have to be as careful about dust anymore, but static electricity can still cause havoc.

Although it was a fascinating tour, I do admit that I was glad to be out of the place. One because I was not particularly chuffed at finding myself stood beside the HF tank where wafers were being etched and two because it was so blinking hot in those bunny suits!

EA/G8FIF/P

Well, it almost tells the truth – I was QRV 900MHz I suppose!

Sue and I decided to visit Spain this year for the first time. However, not being party animals who lay on the beach during the day we chose to go to the northern part. In the middle of the Picos de Europa in Cantabria to be precise. I'll summarise the week briefly: 24 hours on ferry, 3 nights in an hotel 3000' ASL, plenty of touring across mountain passes, petrol at nearly sensible prices (52p/l for super unleaded) and 24 hours on the ferry home.

What impressed me most was the coverage of the mobile telephone networks. We were in a small village called Fuente Dé (IN730D according to the GPS) which was some 23 km / 14 miles from the nearest slightly larger village and surrounded on 3 sides by 6000' high mountains. I had the choice of both service providers – Movistar and Airtel – and with full signal strength. This is better than I can manage in Reading or on some parts of the M4! It makes you wonder why we can't manage to get any type of network – mobile telephone, road or rail – to work

properly in this country.

One warning if you're thinking of going to the Costa Verde though: almost no-one speaks English... ¡pero no puedes tener problemas si has estudiado español en el instituto!

Club Project Board

After I gave my talk on PICs a couple of months ago, several people approached me at the end about using the devices for themselves.

I'm quite happy to get some PCBs made and writing software to do various tasks. Who would be interested in a club project board and what functions would you like it to do? I can see something fairly generic with a PIC, LCD and a few inputs and outputs. Where we go from there is up to you – maybe a frequency counter or a Rugby clock (stop laughing Jim). The choice is yours.

The EU goes bonkers

Last time around we published a spoof article about how we were going to be forced to change English so it sounds just like the way the French or Germans speak it. Little did I realise that it was closer to the truth than it appears.

Did you know that it will be a criminal offence to sell a 3½" floppy disc in January 2000? On top of that, the standard IC spacing of 0.1" is being abolished (well at least made illegal anyway).

Why? Well everything has to be measured in metric units (except, for the time being, miles on a road or pints of beer and milk) and, as far as I can tell, Imperial measures must not appear on the package.



This means that PC World will have to sell “89mm discs” and McDonalds will be offering you a “113.6g-er with cheese”. I’ve noticed that Maplin have only sold 2.54mm pitch stripboard for a couple of years now, although strangely enough my American 0.1” pitch chips fit this stuff perfectly. So much for progress!

...and finally

This will be my last newsletter for a while. I’m standing down from the post this year and hopefully changing job within the committee. So watch out – as Arnie says, “I’ll be back”!

Merry Christmas to you all and enjoy the last year of the 20th Century.

73, Des G8FIF.

THE MARCONI TRAIL – NOVA SCOTIA

Well you should have seen the looks and vague expressions when we said Judith & I had planned a holiday trip to Nova Scotia. Some people even asked where it was in the world and what was there to see and do. (North East Canada for those who need geography lesson).

We had planned a travelling holiday via internet staying in B&B’s through out NS, New Brunswick and Prince Edward Island, it proved to be worth it as hotels & B&B’s were full during August with people sleeping in cars in Halifax and surrounding areas.



I took a Dual Band Handy and had got details of the 2 & 70 repeaters from the FCC handbook and maps from the WWW. Judith has always a problem with me taking the radios and bits for charging them when we fly; but it has never been any real problem in the past; except when a female security guard checked our bags again when did the wrong thing and tried to eat in JFK Airport. This year our journey through security with Judith joking that I would get pulled for all the cables, chargers and bits. Guess what she had her toiletries bag inspected and searched so I had the laugh. It was very quite on the repeaters and simplex was totally dead with only a couple of distant QSO's during our visit where we say plenty of towers and HF beams.

The latter part of our trip was to Cape Breton, the northern part of NS and while taking in and passing the security for traitors and Redcoats at the Fortress of Louisbourg. A reconstructed Canadian National Historic Fortress & shipping port dating back to 1744, we passed through Glace Bay on the Atlantic coast. This was the first site at Table Head that Marconi chose to build his first Transatlantic Radio Station.



Table Head now has a museum run by local Hams for the Canadian National Site which has a working station on site with call sign of VE1VAS & VA1VAS which is much sort after. Sadly there was no operating during our visit where we could view the interactive screens and equipment. The presentation and memorabilia of the first station with its four 80ft wooden towers, which only the concrete blocks remain when it was erected and made the first contact 15th December 1902 across the Atlantic to England. The first station was destroyed by a storm and a second erected further down the coast and this became the main transmitting station. Chatting with the museum staff a student on summer leave gave help and information to all visitors; he was working toward getting his licence so he could operate the station. I wish him the best of luck.



The outside of the station can be seen above with the HF beam, 2&6m beams. The rigs on display and in use where Kenwood TS940S, TL922 Linear Amp, Yaesu FT726R.

This visit will be a memory that I will not forget along with the wildlife Judith and I saw on our travels across NS. Bald Eagle, Seals, Whales, Porcupine and Moose could be found on this relaxed Island which had an abundance of sea food for the eating and I would recommend a trip to the Canadian Maritimes to anybody, but don't think you can cover the country in a few days it is relaxing.

Min G0JMS



HF NATIONAL FIELD DAY 1999

The usual enthusiastic crew turned out for the QRP entry in HF NFD, with some welcome extras. My thanks to G0VQR, G0RPW, G0NMN, G0JMS, G0LGG, G3PGM and G3VMY. Apologies to any other members who turned up - my memory is getting hazy! The site was in one of the Reading University Farm fields in Sonning, the same site we have used for the last four (or is it five) years - thanks to Tom G0VQR for organising the site again.

The weather was kind at first and allowed us to erect the aerial and tent without getting wet, for which we were all thank full. The mast consisted of two 5 metre thin wall scaffolding tubes with a "joiner" giving us the 10 metre height permitted under the HF NFD rules. As the weather forecast had predicted very high winds, I insisted that we used three sets of guys - I did not want the mast on the tent in the middle of the night!

The antenna is basically an inverted 'V' that consists of a dipole at each band (28, 21, 14, 7, 3.5 & 1.8 MHz). Each dipole can be connected to the next dipole by plugging in the relevant 4 mm plugs. This is done by dropping the centre of the antenna, using a pulley and rope, plugging up or unplugging the required dipole and raising the aerial again. This sounds a difficult procedure, but after some practice it is possible to change band in about 2 minutes.

The reason why we use this particular antenna arrangement is that we are in the QRP section of the contest and only have 5 watts of RF power at our disposal. To

maximise our signal we use a resonant dipole on each band. It has served us well in previous years. The dipole is fed by RG58 co-ax with a number of ferrite beads at the feed point to act as a RF choke to prevent RF from being conducted down the outer surface of the co-ax shield. This ensure the aerial is properly balanced.

The rig was a Yaesu FT890 and there was a collection of keyers and keys - each operator brings his own key and keyer. This presents a number of connection problems, but they were solved with the various leads brought along for this purpose. There was also a battery driven loudspeaker that can be driven in parallel with the headphones so that all in the tent can hear.

Well the contest started and off we went, 28 MHz was a disappointment as it did not seem to open, we worked a few local stations and quickly dropped down a band. G3VMY was on the key and doing well. A few hours after the start of the contest the rain came in. I could see the rain in the distance over Reading coming towards us. The rain static level increased from nothing to S9+5db completely wiping out any possible contacts - amazing.

Then the rain (horizontal stair rods) hit us. We could not hear (let alone work) anybody for about 15 minutes, this was due to the static and to the noise of the rain falling on the tent. Eventually the rain static noise dropped away and we were off again. Fortunately the tent was reasonably rain proof and kept us and the equipment dry.

For the second year (or was it the third?) running we used computer logging (SuperDuper). This means we can spot duplicate contacts (DUPES) immediately,



have real time QSO rate information (very depressing when it is going down) and generate the contest log at the press of a button. The downside of the computer logging is that you need extra batteries, the whole station is run off of massive 12 volt batteries, and the operators need to be able to use the computer. However using the computer is a massive step forward in the efficiency of the logging.

The evening session, mostly Don - GORPW and overnight session. Tom - G0VQR went very well, things slowed down when I took over at about 06:00 hours. Of course I will claim that Tom had worked everybody on 160 and 80 and the other bands were not open!

Later in the morning Eric - G3PGM turned up and I twisted his arm into taking over. He protested at first and then produced a paddle key from his briefcase claiming he had brought it along "just in case"! Unfortunately his key did not have the correct jack connector for the rig. Still, after a quick look in the ice cream box full of connector adapters, we had Eric's keyer up and running.

I agreed to "log" on the computer for Eric as he was unfamiliar with the logging program. I sat back waiting for our QSO rate to increase again. Eric set to and began to go back to the various contest stations calling CQ that we had not worked.

The first few contacts were not successful, I explained to Eric that with QRP you had to be more patient as stations did not always come back first time to our weak signal. Eric muttered something about never having any trouble before when he used the 800 watt linear in contests!

Ten minutes went by, no contacts, fifteen minutes went by, no contacts, twenty minutes went by, no contacts. Eric had gone from enthusiasm to frustration and to depression. At one point he was thrashing away on the key - I asked him what this was all about? He told me that the operator at the other end had called him a LID!!!!!!

Hmmm I thought, "well known veteran Berkshire Morse Examiner called a LID during HF NFD", this would make interesting reading!!

I then decided that perhaps we had a technical problem, so I put a SWR meter in the aerial feed to check that we were delivering power to the antenna. The meter showed that 5 watts was flowing into the antenna.

We changed operator and Loz - G0NMN took over and he decided to use Eric's keyer. Well after about another 15 minutes we had still not made a contact! This was a disaster - our contest score had not moved for forty five minutes. There was a lot of depression about.

I started to realise that we really did have a technical problem and started to think hard. I knew we were delivering power to the aerial as I had measured it, but we could not make contacts. Listening to the other stations I had concluded that they could hear something as they often sent QRZ after we sent our call sign. So perhaps our signal was breaking up or drifting or changing frequency?

Suddenly I had a brain wave, I rushed into the tent and disconnected Eric's keyer and enabled the FT890 internal keyer. Then we called a station and "hey presto" worked him first time, we then worked a string of stations.



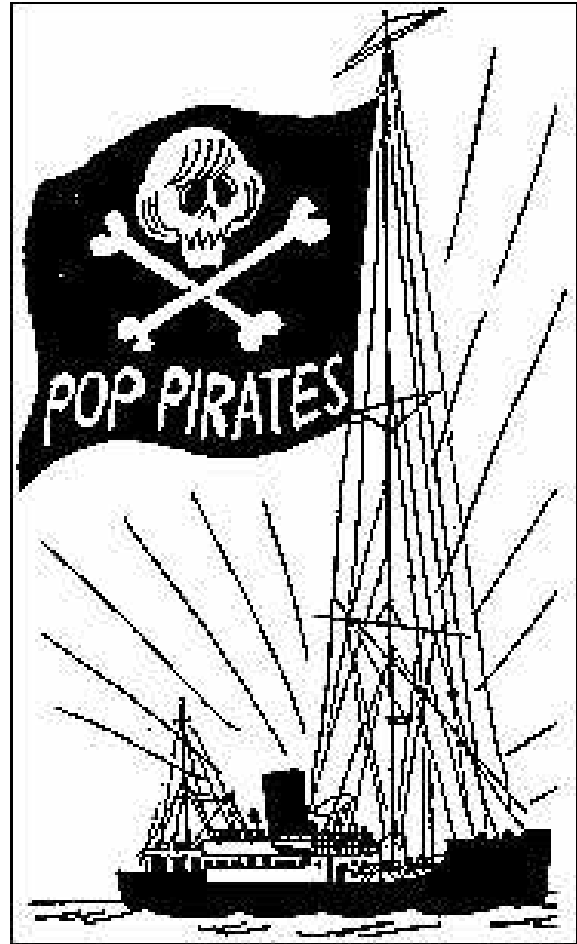
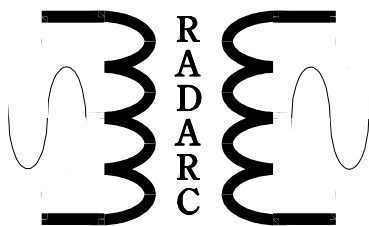
So the problem had been caused by the connection of Eric's keyer, which Loz had continued to use when he took over. Eric looked slightly more relaxed when this news filtered out - at least it was not his operating technique after all. It seems that the way I connected Eric's keyer to the rig was causing only dashes to be sent!. I still find this difficult to believe as the sidetone from the rig and Eric's keyer sounded perfectly fine.

So it was not Eric who was the LID but me! - a technical LID. I should have checked out the connections more carefully before I allowed Eric to waste 30 minutes of his life sending pointless unreadable Morse code.

So I apologise to Eric, the rest of the crew and to all those stations out there who could not make out what we were sending. I will try to not let this happen again.

The rest of the day went reasonable well - we worked more contacts than ever before and we all had fun. Our final score was 1946 points. We came third (out of 4) in the QRP section. However our score would have earned us 21st place out of 28 in the Open section or 25th out of 29 in the restricted section.

Thanks once again to all those who turned out to help. I look forward to seeing you all next year - same time, same place, same equipment -well except I have this great idea about the antenna - hmmm better check it works first.



YO HO HO AND ALL THAT STUFF.

It all started in the spring of 1964, when lazing on the lawn, listening to my 'tranny', I came upon a test transmission from what was to become the most well known and popular 'off shore Radio Station' - Radio Caroline. The strict order of events that followed may not be 100% accurate due to the 35 years between then and now.

The spirit of adventure and the excitement of the moment inspired me to try my hand at joining in the 'apparent' fun that they seemed to be having. I made some enquiries and after a couple of weeks was invited to make a day visit to the Station to

see what went on and to be interviewed by the Chief Engineer for a post as one of the assistant Engineers. The journey to Frinton-on-Sea in Essex seemed to take forever, and on the strength of that alone, and I'd missed the ferry, I decided against joining Caroline, assuming I had been accepted.

Nothing much happened for a while until the beginning of June. I was tuning across the 160m. band when I came upon a very distorted signal on 1.960 MHz. There was some form of modulation, but almost impossible to read. After about an hour of this, and very carefully listening to each word over and over, it turned out to be another off shore Radio Station testing and asking for reports. It was claiming to be on 980 kHz. although he didn't know that his second harmonic was considerably stronger than his fundamental frequency. A telephone number was given – and by this time I was getting quite angry over this intrusion into one of our bands. I rang the number given, and gave the chap at the other end a real ear bashing. He kept calm and let me vent my anger, and then said, "Could I do anything to improve it?"



It transpired that a group of people including Tom Pepper the man I had spoken to on the phone (his real name was Harry Featherbee, a one time fisherman, now retired) were trying to build up a Pop Station. They were financed by a millionaire businessman. He had bought an 'almost working' Radio Station that nearly became Radio Scotland (or something similar – it hadn't been decided, although a station calling themselves Radio Scotland appeared briefly in 1965) and had sailed the lot down the East coast and into the Thames Estuary.

There were several war-time anti aircraft towers that had been abandoned by the Military in 1956. One of the towers "Radio Sutch" was on the Shivering Sands sandbanks. This one had once been occupied by the late, very colourful,



Tom Pepper



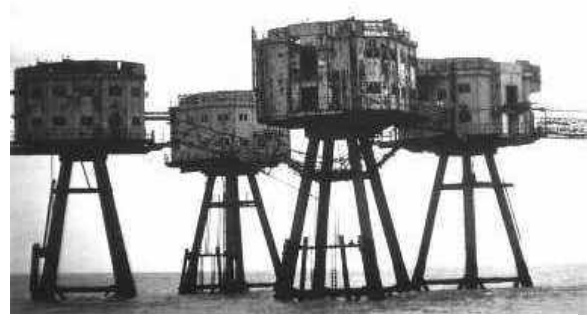


Screaming Lord Sutch, who had a regular band of dedicated listeners that tuned in to hear his nightly readings from *L a d y Chatterley's Lover*, and *Fanny Hill*.

About 5 miles further upstream was another similar group of towers on the Red Sands sandbanks, as yet unoccupied. These groups of towers at one time were a part of the W.W.2. defences of London, and housed an anti-aircraft battery. I don't know how many personnel were involved in each battery, but by the size of the toilet block (the right hand tower in the picture) I would suggest anything up to a hundred. There were 4 bathrooms. 6 toilets, and about a dozen wash basins. The central tower housed the anti-aircraft gun, with the shells stored in the rooms below. There were racks for about a thousand shells. There was a small lift to take the ammunition to the gun crew. On the left hand tower was mounted a search-light. This tower might have been the cookhouse and mess room. Some sources suggest that all 5 of the towers surrounding the central tower had anti-aircraft guns, but if that was the case the ammunition would have to be carried manually from the only tower with storage capabilities. The makeup and grouping of the Towers can be seen in the photo's.



Red Sands Forts



The catwalk going off to the right went to the South tower; which was probably the communications room, and telephone exchange. In this room was a large multi-core cable that went to a typical G.P.O. style distribution board, and the other end of the cable went into the sea towards the mainland.

The catwalk to the left went to two towers that we called North 1 and North 2. N.1 was the admin block, with what appeared to be sleeping quarters on the upper floor, and N.2 was the 'power station'. This consisted of three 50kW. Diesel engine powered generators, one D.C. and two A.C. both 3 phase, but strangely one was star and one was delta output. Also on N.2 were the large diesel and water tanks on the upper floor, sadly both empty when we arrived. All of our diesel oil and fresh water had to be brought from the mainland in Gerry cans and milk churns on the launch like the DAVID pictured here.

It was at this group of towers the group 'set up home' offloading the transmitter, an ex-Government surplus, R.C.A. ET4336, and the studio equipment – a couple of Garrard 401 turntables, a couple of tape recorders, a mixer with audio preamplifier, and a microphone. The group





had tried their best to get the system up and running, but their knowledge of radio was a little bit short of the required standard. The method (as used by the carpenter) to tune up the MEDIUM WAVE transmitter was to use a fish-phone receiver. This had one of its channels a bit below 3MHz. and it was found, purely by random switching of the channels that an indication could be seen on the S meter. Some time later he said to me that he knew it was not the proper way but it was the only indication he could find to suggest transmitter output. He then tuned the TX for maximum receiver S meter reading. (the weak 3rd harmonic of the transmitter!!) Thankfully on low power. The only training he had received had been given by a member of the gang who had provided the receiver, and had gained some experience from using a fish-phone transmitter/receiver on his boat. Luckily an engineer joined the station a week before me, and within a short while had got the basic system 'on line'.

Job Offer!

From that time on the test transmission improved tremendously, and after the Captain gave me the assurance that the Station was NOT a vessel, but a rock solid



structure, I offered my services as an engineer. Without too many questions I was offered the position of 2nd engineer – £20 a week – on or off. I had given up a job paying considerably more in the hope of future riches. Food and lodging (such as it was) all found. So on a beautiful Sunday in June; I made my way to Folkestone in Kent to the home of Tom Pepper. I was treated like royalty, given a slap-up lunch, and then driven across Kent to Faversham Creek on the North coast.

In the creek (not up it!) lying at anchor was the 36 foot launch, DAVID. Provisions stowed we were soon all aboard and heading out to sea. The journey took an hour or so. The towers are about 8 or so miles North of Whitstable and about 5 miles North East of the Isle of Sheppey, well outside territorial waters.

At the towers we were met by two men, the carpenter and the 1st engineer who had been on board for a week sorting out the electrics and, putting the equipment into the now nearly finished studio. On the tender with us was another man who stayed on board with the carpenter and myself for a few days to finish the studio ready for a mid-July launch of the station “**Radio Invicta**”.

Start -Up

There was plenty to do such as sorting out the hundreds of audio tapes, several thousand 45s plus a few hundred LPs and of all things, about two hundred 78s. We ran more recorded (Billy Vaughan and his Golden Saxophones) test transmissions, ‘begging’ for reports. The chosen frequency was 980 kHz. or 306m. but a strong hetrodyne was reported in the early evening, caused by a German station on 981 kHz. The only other crystal available





was one on 985 kHz. so this was substituted as a temporary measure. At the end of my first week I was re-joined by the 1st engineer, and the first of the presenters.

What have I joined?

Although the three presenters brought the head count up to seven, it was important for the station to appear to be well staffed. It was then less likely to be attacked or sabotaged, I became known as a '6 foot 3' Swedish giant, Eric Peterson, I ask you! I was only about 5' 7" even on a good day! (this was Ed Moreno's idea- I think he was a bit paranoid) as well as being known as Ed Laney. DJ.

So the broadcasting staff numbers were artificially swollen by each engineer doubling up as a disc jockey. Each weekday at 12:55pm there was a 5 minute slot called information desk. I am absolutely convinced that it's sole purpose was to give information relating to staff changes and numbers that would perhaps create the impression that there were a couple of dozen people on board where in fact there was only 5 or 6.!

Headlines & News

Several incidents took place out there that in retrospect seem quite amusing, but at the time, were, from a personal point of view, quite serious. Domestic relations were put under tremendous strain -- at all times. "There you are out there enjoying

yourself and there's me, surrounded by kids trying to do all the jobs you are supposed to be doing" etc.

Whilst I was on leave some time in August

1964, my wife and I decided to walk together to the shop for a Sunday newspaper, and what was spread right across the front page of the *News of the World*? 'CAPTAIN OF POP SHIP MARRIES COUPLE ON RADIO INVICTA' and these were BOTH WOMEN!

It then got pretty ugly. Comments from neighbours like 'That's why you went out there' and 'I bet you can't wait to get back', and this is while I'm standing next to my wife. I did my utmost to convince her that I knew nothing about it and it must have happened after I left the Station for my weeks' leave. We did 2 weeks on



Supply time



and 1 week off on a rotational basis. However, my contract says I must return after my leave or forfeit my wages for that week, and my beloved C12 and other personal bits and pieces were still out there. On returning to the forts I was introduced to 'the happy couple' who went under the names of Doreen and John. They had been given the jobs of Cook and Librarian respectively. In all honesty they should have stayed at their old job. 'John', who's real name was Evelyn, was a woman about 25 years old who was being tormented mentally by really believing that she was a man in a woman's body and she was being counselled by medical experts who assured her that she could have a successful sex change. Etc. etc. etc. This was more than I could handle, and the constant fear of the 'knock on effect' from my good lady made me go on the defensive. I just HAD to stay a bit remote. Not easy when you share the same bedroom!!! With hanging blankets providing the only privacy.

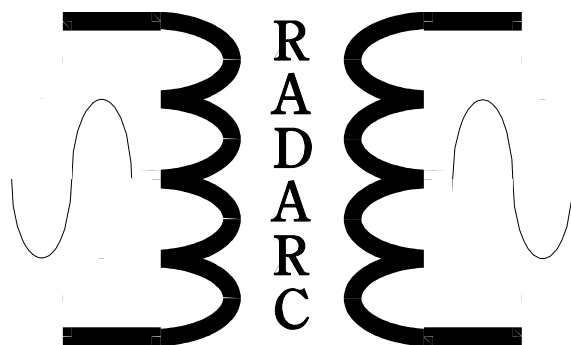
Emergency

On another occasion I had the misfortune to break two toes and several bones in my right foot. I had been trying to improve our winch system to make the taking of provisions from the tender a lot easier. The main winch was electric powered and working, but the motor for pulling the winch along the gantry was burnt out so a manual system had to be made. I had not fixed a hand winch securely enough to the wall and it broke away, falling onto my foot. My faithful C12 came to the rescue, and a call to North Foreland Radio, on 2182kHz. was made. I was put through to a Doctor who did 'radio First Aid'. About an hour or so later, sometime around midnight, the lifeboat Princess Margaret Rose was alongside the station with a

doctor on board. The Radio Doctor must have requested the Southend Lifeboat. The Doctor and two crewmembers were soon aboard the station and attending the open wound on my foot before wrapping me up in a cocoon like stretcher. This prevented me from any movement, and the next thing I saw was the 'boss' on top of the lifeboat's mast waving about in front of me. I was being lowered from the winch platform (at low tide about 80 feet above sea level.) onto the lifeboat. A very strange experience indeed.

We arrived at the Lifeboat Station, which is at the end of Southend pier, about 2.30 in the morning, and there waiting for me was the 'pier train' which took me, the Doctor and the lifeboat crew on the one mile journey back to the mainland and the awaiting ambulance. It's amazing just how many people had put themselves out for me. I was then whisked off to Southend General Hospital where after X-rays, a Penicillin injection, and a local anaesthetic, the bones were re-set. The wound was stitched and plastered up so that I might make my way home in the morning. I was told to see my G.P. or Hospital for further advice.

On the way home from Southend to Fenchurch Street The only other passenger in the compartment was a 'city gent'. The lot -- Pin striped suit, rolled umbrella, Bowler hat, and the Daily Telegraph!! I was more than surprised when he spoke to



me. There was I, in scruffy clothes (I hadn't had a chance to clean up.) and he in such fine attire. I was even more surprised when he showed interest in my recent activities. He told me he could see the towers from his home in Essex and occasionally listened in to the more highbrow programmes when he came across them. I explained there was such a programme on Sunday afternoons, and I would play a record for him, which a couple of weeks later I did. He could see that I was in some discomfort. The next thing that impressed me was the sight of this gentleman carrying my suitcase for me when we reached London, and then hailing (and paying for) a taxi to take me to Paddington railway station. The taxi driver seemed to recognise him, I wonder who he was, I have no idea. My faith in human kindness rose considerably that day.

Arrival Home

Upon my arrival at home sometime around lunchtime, I received another shock. The Captains wife, Francois, sent a massive bunch of flowers and a Get Well Soon card. Not only was she a good cook, but was also very kind. I didn't stay too long at home because it would have meant only one engineer on board instead of two. There were always jobs to do outside of broadcasting hours, to improve living conditions. This would take him well into the evening and the duty engineer's day starts at 5.30a.m. First start the generators, and then switch on the transmitter. This all had to be done carefully because 866 Mercury Vapour rectifiers do not take kindly to full power being switched on too soon. They need thoroughly warming up first, or there might be a big bang.! A job that could not be done by the broadcasting staff. Just one of the reasons for having two engineers on, and one on leave.

5.30am to 6pm plus housekeeping in the evening is too much for one man, so alternative weeks we did 5.30am to 2pm and 2pm to 'generator switch off'.

I did a few more trips but by the end of October/early November conditions at sea were getting a bit rough at times with strong winds and heavy seas. The 'riches' that had been forecast did not materialise and my family were suffering, so after a top level discussion with my wife and children, I made the decision to quit. I returned to the station for the last time to pick up my bits and pieces but I was persuaded to leave my C12 for a degree of safety. I handed in my notice and was asked if I knew anyone who could replace me. At the time I didn't, but after returning home, now out of work, I was called by an old Radio friend who had heard of my decision to quit. He had a burning ambition to work on a 'pop ship'. I explained the situation to him and he almost begged me for an introduction. Having done that it was up to him, and he joined the station in early December. It must have been the 1st or 2nd.

Tragedy

On the 16th December 1964, Tom Pepper (Harry Featherbee) took supplies out to the fort in the 36-foot launch "DAVID. Having done that and changed crews (presenters and engineers) he started the return journey home at 11:10am with the third engineer Martin Shaw G3SDP, and DJ Simon Ashley. As the launch slowly disappeared into the distance, staff on the fort could hear the engine giving problems. Late that night the body of Tom Pepper was found washed up on Reeves Beach, Whitstable, Kent. Despite a helicopter search the other bodies were not found. The station was not aware of the tragedy until the following evening. They had been



transmitting normal programmes all day, which I could not understand. I had a nightly sked, on CW with the other engineer on board, (another Radio Amateur) and gave them the full story. They immediately called North Foreland using the C12, and were given an open channel for a considerable time, free of charge, so that everyone could phone home. This is another instance where our coast stations put aside their dislike of us and showed humanity. We owe them a lot.

The picture below shows the DAVID being prepared for the homeward journey on the 25th November 1964. On that journey was Simon Ashley, 'Doreen and John' and myself.

Just three weeks later Simon Ashley, Martin Shaw (the new engineer), having completed his first two weeks on duty, and Tom were all drowned. I had resigned, but the 3 week rotation would have meant me being on board that fateful day had I not done so. I don't know why Doreen and John never went back to the fort. If they had been 'paid off' lady luck must have smiled on them also.

Some months later, a badly decomposed body was washed up in Spain. A tape belonging to Radio Invicta, which was on the body was the only clue to its origin.



THE FIRST CLASS CW OPERATORS' CLUB

MORSE CAMP 1999

This article is the text of a handout given to the attendees of this summer's Morse Camp. The layout of the text has been changed from that of the original in order to fit in with the style of the rest of the newsletter, however the text is unchanged. It is reproduced with the permission of the First Class CW Operators' Club (FOC) who retain copyright.

Hello, and welcome to the Morse Camp! We all hope that you have a really great time and get that all-important Morse pass under your belt.

Once you've got your Morse test pass-slip, what are you going to do with your new found skill? You may be thinking "Morse Code is old hat! Get that damned test out of the way and forget it" or words to that effect. FOC would like to encourage you to think about Morse in a different light!

Morse Code still works!

Morse code remains to this day, one of the most effective means of communicating with other radio amateurs around the world. Consider this:

- At any time of the day or night, there is

likely to be as much Morse (CW) activity on the HF bands as all the other modes put together. Just think what you'd be missing!

- Every major DXpedition operates CW and most make more QSOs on CW than they do on SSB. Why is that? Well at least one reason is that CW gets through where SSB cannot, so more people are able to work the DXpedition on CW than can get through on SSB.
- CW overcomes language barriers. Anyone who has tried to understand a Japanese operator who is trying to use English phonetics will know exactly what I mean! Morse is a truly international language and you can have a meaningful QSO with another amateur even if he speaks practically no English.
- On VHF, many of the unusual propagation modes work so much better on CW. Working a CW station on Aurora is a breeze – just keep going at the same speed, whereas SSB copy is very difficult. Almost all Moon-bounce activity is on CW. Most meteor scatter work is on CW.
- On HF, almost all QRP work is done on CW. Many third-world countries, often the rarest and most difficult to find, can only afford CW equipment, so if you want to work them you've got to be on CW.
- The 30m band (10.1MHz) is one of our most exciting bands, offering DX and local contacts round the clock. It is also very narrow, so wide-band modes like SSB are not permitted. CW is the mode that everyone uses, naturally! You could be missing out on this FB band.
- CW operators are generally much better behaved on the bands. Why is this? Perhaps because it requires a

little more effort to become proficient at CW, so the LID (poor operator) element doesn't bother. Any old fool can pick up a microphone and yell into it. Unfortunately many do!

But isn't Morse dead?

"Yes, all this is fine", you may be thinking, "but CW is ancient, antiquated, not used any more. What do I want to be messing around with a dead mode for?"

Is CW really dead? I think not! Every year the level of participation in CW contests increases. You will always be able to find plenty of CW on the bands any day of the year. There are many clubs promoting the use of CW and their membership continues to grow every year. Examples, here in the UK, include FISTS, MEGS and, of course, FOC.

"Well if it's so great, how come the commercial guys don't use CW any more?" This argument is frequently used by the anti-CW fraternity but it is completely irrelevant to amateur radio, as we shall see over the page...

- Actually, commercial CW is far from dead. Certainly there is not as much of it as there used to be but you'll still find plenty around – just look between, say, 4MHz-7MHz: you'll be amazed!
- Just because it is less used commercially, doesn't mean that it should not be used by radio amateurs. As amateurs, we are enjoying our hobby, doing it for the fun of it. There are no commercial pressures to do things cheaper, quicker, more easily. We do it for fun – and be quite certain about it, being proficient in CW is *enormous fun!*
- Most commercial traffic does not use



SSB any more, either. SSB is over fifty years old and FM is even older. Are these, likewise, ancient technologies that radio amateurs should not use any more? Of course not.

You've got this far and you have learned a new skill. It opens up a whole world of amateur radio that is denied to those who cannot read Morse code. Take the trouble to use it on the air for a while and you never know, you may just find, as I did, that you really do enjoy it. It will become one of those fundamental skills, together with your other radio capabilities that make you a more complete and capable radio amateur. The message is simple: *Just do it!*

How do I get started?

At five words per minute, you can have great QSOs already. If you listen at the low end of the bands you'll hear people sending Morse so fast that it sounds like teleprinter! Don't go there for your first QSOs – go instead to the HF end of the CW sub-bands where you'll find plenty of people going at a much more moderate pace. A good starting point is +60kHz (e.g. 3560kHz, 14060kHz etc.) which is the QRP calling channel. Plus or minus 10kHz you should find plenty that you can copy.

Use CW for a bit and you'll soon find that your speed increases. Soon you'll be at 12WPM and ready for the faster test. Not long after that you can get to 20WPM and then you really can go and play at the LF end of the bands and have great fun into the bargain.

If you are a member of the RSGB (and as a keen radio amateur you certainly ought to be), then there are lots of excellent tips on getting started in G3XTT's article in the

September edition of RadCom. Well worth a read.

A bit about FOC

The First Class CW Operators' Club is a British club dedicated to excellence in the art of Morse code. Membership is through sponsorship by existing members and is open to radio amateurs anywhere in the world. Membership is limited to a maximum of 500 active members.



FOC has played a significant role in the licensing debate here in the UK which has led to the creation of the Class A/B licence. As a club that is dedicated to CW excellence, it may surprise you that FOC is not adamantly against the eventual scrapping of Morse as a licence requirement. What FOC is against is the continual erosion of standards in our magnificent hobby.

Find out more by visiting the Club's web site: <http://members.aol.com/focuk>

In conclusion

We hope you have found this leaflet of interest and that it has given you some food for thought. Especially, we hope that you will give CW a try, on the air, when you get your new ticket. Like riding a bike, you can only learn by doing and once you have learned, it opens up untold opportunities for enjoyment and exploration.

There are a number of FOC members here today, supporting Morse Camp. If you have any questions about CW in general, or FOC in particular, don't be shy... just ask!



Have a great weekend.

John Linford, G3WGV
10 Sept. 1999

RADARC 1998 AGM MINUTES

Members Present

G0LIE, G4JNY, G4JTR, G6IJK, G8FRC,
M0BIY, G7UZY, G8NXJ, G0JMS,
G0LGG, G0LHZ, G0TKV, G8ZTZ,
G4ELY, G1HBD, G0VQR, Bill Lush

Apologies Received

G0PUB, G8FIF, G4CCC

Quorum

The constitution requires that 20% of the membership to be present at an AGM. The total membership is 42, 20% of 42 is 9. There were 17 members present, so the meeting was able to proceed.

The Chairman presented his report.

The Secretary presented his report.

The Treasurer presented his report. A copy of the 1998 accounts is attached.

Awards

The following awards were made;

Fox Hunt Trophy was presented to Chris - G4CCC by G8NXJ

Chairmen's Award was presented to Tom - G0VQR

G5KV Award was presented to Eric - G4PGM. The nominees for this award were discussed by those present at the meeting. The members present decided to make the award to G4PGM

Lifetime Membership was awarded to Eric - G4PGM

Subscriptions

After a lively discussion the members voted (15 votes for to one against) to set the subscriptions as follows;

Full Member	- £12.00 per year
Concessions	- £ 6.00 per year

1999 Committee

No other nominations others than those presented during the Chairman's report were received. The Chairman's list was accepted and the 1999 committee is as follows;

Chairman	Nick G0LGG
Secretary	Jim G0LHZ
Treasurer	Min G0JMS
Publicity	Pete G8FRC
Newsletter Editor	Des G8FIF
Ordinary Member	Tom G0VQR

Any Other Business

Bill Lush asked whether a "Novice" meeting could be held in which less experienced members could receive help and guidance. The committee will consider this.



Jim GOLHZ asked whether a mobile tower for Field days could be purchased. Jim was asked to make available some information on the type of tower to be considered.

Peter G4JNU proposed a vote of thanks for the 1998 committee which was endorsed by the members present.

The meeting was closed and Beer and Cheese were served.

Jim Carter - RADARC Secretary
2/Jan/99

READING AND DISTRICT AMATEUR RADIO CLUB

CLUB CONSTITUTION

This is the revised Constitution, as amended by the EGM held at Woodford Park on 9th January 1997.

1. Name

The society shall be known as the Reading and District Amateur Radio Club.

2. Aims

The aims of the society shall be to further the interests of its members in all aspects of amateur radio and directly associated activities.

3. Membership

Membership shall be open, subject to the discretion of the committee, to all persons interested in the aims of the society.

Members will pay the full subscription unless they are Students or Senior Citizens who will pay a reduced subscription, or Honorary Life Members who will not pay a subscription.

Students are defined as being under 25 years of age and in full-time education.

Senior Citizens are defined as men over the age of 65 or ladies over the age of 60 years.

Honorary Life Membership may be granted to any person who, in the opinion of the Committee, has rendered outstanding service to the Society, either directly or indirectly. Such membership shall carry the rights of full membership but shall be free from subscriptions.

Members may invite guests to meeting free of charge. No guest may attend more than three meetings in each year. All members shall abide by the Constitution of the Society.

The Committee shall have the power to refuse the membership renewal of any person whose conduct, in the opinion of at least two thirds of the full Committee, renders them unfit to be a member of the society.

4. Subscriptions.

The annual subscriptions for membership shall be set by the Committee and agreed by the AGM.

All subscriptions shall be due and payable at the beginning of the financial year.

Members in arrears have no voting rights. The financial year shall run from the 1st of January to 31st of December each year.



The Committee shall have the power to waive or reduce the subscription in special circumstances for a period not exceeding one year at a time.

The committee shall have the powers to extend membership for a limited period into a new financial year in extra-ordinary circumstances. This period will not exceed two calendar months and such powers if invoked will apply universally to all members.

5. Finance

All money received by the Society shall be promptly deposited in the Society's bank account. Withdrawals from the bank of up to £50 require only the signature of either the Chairman, Treasurer or Secretary. Withdrawals of more than £50 require the signature of any two of the aforementioned officers of the Society.

6. Committee Membership

The Society's affairs shall be administered by a Committee elected at the AGM. The members will elect individuals to specific offices.

The Committee, in whom the society's property shall be vested, shall consist of:-

- A Chairman who will preside at all meetings at which he is present.
- A Secretary who will be responsible for:
 - 1) Arranging all meetings of the Society throughout the year. These meetings run from February of the year of election to the following February.
 - 2) Ensure all correspondence is correctly handled.
 - 3) Keep the minutes of all Committee meetings of the Society.

- 4) Acting as the Chairman in the absence of the Chairman.
- 5) Publicising the club meetings in the amateur radio press and media
- 6) Keeping the RSGB services such as RadCom, GB2RS etc informed of all club activities
- 7) Arranging local publicity
- 8) Entering candidates to sit the RAE or NRAE at appropriate examination centres.

- A Treasurer who will be responsible for:
 - 1) Keeping the Society's accounts.
 - 2) Advising the Committee on all financial matters.
 - 3) Preparing the accounts and presenting them at the AGM.
 - 4) Maintaining a list of members.

A minimum of one and a maximum of three Ordinary Members, the number of whom shall be decided at or before the AGM, and whose duties shall be determined from time to time.

The committee shall be responsible for producing a club news letter from time to time. This shall be distributed to all members.

The committee shall have the powers to delegate any of their duties to other members of the society with the agreement of that member, for example production of the newsletter, RAE/NRAE entries and librarian. Such delegation will terminate at the end of each year at which time it may be renewed by the incoming committee.

The Committee, at its discretion, may co-opt members to the committee. If these members are additional to the normal Committee strength they will have no Committee voting rights.



If a full committee member resigns, or leaves the Committee within the second half of the year, the Committee may co-opt a member to fill the post without calling and EGM or an election. In this case the co-opted member will have full voting rights.

7. Committee Standing Orders

The quorum for the Committee shall be four people, or if the committee is comprised of only four people, then the quorum shall be three people. In the absence of a quorum business may be dealt with, but any decisions taken only become valid after ratification at the next meeting at which a quorum exists.

Committee meeting may be called by the Chairman or any three members of the committee.

The Chairman may vote. In the event of a tie the Chairman has a second casting vote.

8. Annual General Meeting

The Annual General Meeting shall normally be held at the first club meeting in December each year. At least 21 Days notice shall be given to members in writing. If the AGM cannot be held during December it shall be held in the following January, and the Committee shall have the powers to extend the membership and voting rights to include the AGM.

The quorum for the AGM shall be 20% of the membership.

The agenda of the meeting shall be:

- 1) Apologies for absence.
- 2) Acceptance of the Minutes of the previous AGM.
- 3) Chairman's report.
- 4) Secretary's report.

5) Treasurer's report and adoption of the accounts.

6) Any Other Business.

Items i to v on the agenda shall be chaired by the retiring Chairman, item vi by an acting chairman who is not standing for election to office, the remaining business by the newly elected Chairman.

A member is eligible for election to Committee if nominated by two members, and agreed in writing by the nominee, prior to the closing date for nominations. If there are Committee posts for which eligible nominations have not been received, nominations and agreements in writing may be requested at the AGM.

Agenda items to be raised by members under Any Other Business must be notified in writing not less than 7 days before the AGM.

9. Extraordinary General Meeting

An EGM may be called by the Committee or by not less than 10 members of the Society. The committee shall call an EGM within 28 days of receiving a valid request. NO other business may be transacted at the EGM.

The quorum for an EGM shall be one third of the membership.

At least 14 days notice shall be given to all members who were not party to the EGM being called. This notice shall be given in writing.

10. Amendments to the Constitution

The Constitution may only be amended at an EGM called for that purpose.

11. Winding up of the Society

The decision to wind up the Society may



only be taken at and EGM or AGM.

In the absence of a quorum at such a meeting a motion signed by 10 members shall constitute the same decision.

The funds of the Society shall, after the sale of assets and the payment of all outstanding debts, be disposed of as directed by the members at the final EGM, or as agreed by the members present when the motion in 11b was signed.

E&OE.

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CAR ELECTRICS EXPLAINED FOR THE AMATEUR

A sheet of paper crossed my desk the other day and as I read it, realisation of a basic truth came over me. So Simple! So obvious we couldn't see it.

John Knivien, an amateur radio group member had discovered how IC circuits work. He says that SMOKE is the thing that makes IC circuits work because every time you let the smoke out of an IC circuit, it stops working! He claims to have verified this with thorough testing.

I was flabbergasted! Of course! Smoke makes all things electrical work.

Remember the last time smoke escaped from your Lucas voltage regulator? Didn't it quit working? I sat and smiled like an idiot as more of the truth dawned.

It's the wiring harness that carries the

smoke from one device to another in your Mini, MG or Jag. And when the harness springs a leak, it lets the smoke out of everything at once and then nothing works. The starter motor requires large quantities of smoke to operate properly and that's why the wire going to it is so large.

Feeling very smug, I continued to expand my hypothesis.

Why are Lucas electrics more likely to leak than say Bosch, HMMMM. Aha! Lucas is British and all things British leak. British convertible tops leak water, British engines leak oil, etc. etc. So naturally, British electrics leak smoke.

I thought this might help explain some of the mysteries of electrical components.

73, Jim

Y2K COMPLIANCE NOTICE

Our staff has completed the 18 months of work on time and on budget. We have gone through every line of code in every program in every system. We have analysed all databases, all data files, including backups and historic archives, and modified all data to reflect the change.

We are proud to report that we have completed the "Y-to-K" date change mission, and have now implemented all changes to all programs and all data to reflect your new standards:

Januark, Februark, March, April, Mak, June, Julk, August, September, October, November, December

As well as:



Sundak, Mondak, Tuesdak, Wednesdak,
Thursdak, Fridak, Saturdak

I trust that this is satisfactory, because to be honest, none of this Y to K problem has made any sense to me. But I understand it is a global problem, and our team is glad to help in any way possible. And what does the year 2000 have to do with it? Speaking of which, what do you think we ought to do next year when the two digit year rolls over from 99 to 00?

We'll await your direction.

Sincerely,

I. M. A. Aggie
IT Director

... AND FINALLY

This is it – the end of the last magazine at the end of the 1990s. Don't forget the next Club meeting on 13th January where we will be discussing the year ahead.

Don't over-do the celebrating this year – we've still got one more to go before the end of the millennium!

Enjoy this selection of photographs from the 1990s. How many can you recognise and remember?

