Dagenham School of Marine Radio and Radar

The Marine Radio course at Dagenham was a Department of Trade approved 2 year full time course of study, leading to a 2nd or 1st class certificate of competency in Marine Radio. These certificates enabled one to operate a marine radio station, and were therefore essential for a future Marine Radio Officer. The 1st class was required if one wanted to be the chief operator on a passenger ship. My aspirations did not then extend that far. I was being supported entirely by my parents, who did not have much money to spare, so I decided that the shorter term of study for a 2nd class would be sufficient. Further study would always be possible, perhaps even company sponsored.

The school was housed on the top floor of the Dagenham College of Further Education in Longbridge Road. It consisted of several rooms for theoretical instruction, as well as a large room with Morse keys, headphones and paper tape morse readers and transmitters. It also contained a couple of RCA AR88 receivers for listening to live Morse transmissions. We also had a completely fitted out ships radio room, with receivers, transmitters antenna switches etc. Another room contained a couple of marine radar systems. The radio and radar antennas were on the roof of the building, at a height similar to that of a normal ship installation.

For the first few months, we just studied the theoretical aspects of radio. Also, right from the very beginning however, we were started on an intensive course of Morse code training. This comprised the first four hours of every morning, where we, unhappy students, first had to learn the code, then had seemingly never-ending practice with receiving and rhythmic sending. The result was however, that at the end of only 4 months, everyone without fail was up to a speed of nearly 20 Words per Minute sending and receiving. Our main instructor was an ex Scheveningen Radio operator, and could send beautiful Morse code at 25 WPM for hours without tiring. He was the perfect example for us.

As we became more advanced in our technical theory, we graduated on to instruction and fault finding using the equipment in our radio cabin. Here we became quite good not only at finding faults, but also reading the minds of our instructors. Each had his own set of favourite problems. A dud valve might be inserted, or a piece of paper wrapped around a valve pin so it didn't make contact. Some would unsolder a component or remove a wire. "Use your eyes and nose" was drummed into us, until it became second nature to thoroughly examine visually before laying on hands. It was great experience, and helped me no end later at sea. We were also introduced to the "keep one hand in your pocket" rule when dealing with high voltages. I think this has saved me from a number of rather unpleasant – and potentially fatal - electric shocks. It is impossible to service equipment without the occasional slip!

I also had a sort of "second hand" connection with marine radio through working at Chelmsford Metals, a scrap metal yard in Chelmsford, during my college holidays. Here I found large quantities of old, scrapped marine radio or radar equipment from Marconi. A lot of their obsolete equipment ended up there, as well as various electronic components, valves and a considerable quantity of ex post office equipment too. It was a veritable gold mine for me. Without really trying, I obtained a real "inside view" of magnetrons, RF power valves, CRT's, coils, variometers, variable capacitors etc. I could dissect broken valves and other components to see how they were made. It was also very hard physical work, but the pay was good for a student, and it kept me fit. I sometimes used to buy a scrapped transmitter or receiver, and use it for my Amateur Radio interest. This way I became familiar with some of the older equipment, its circuits and in using it to listen to some of the ships and marine radio stations at home. The Seagull and Seamew (ex trawler 2 MHz R/T equipment), some old lifeboat radios and old radar sets such as the Quo Vadis were taken apart and the parts used

for my own projects. An old Marconi CR150 receiver, using wartime EF50`s with 2 tuned RF stages, was salvaged and got working. It was heavy, big and ugly, but I still consider it to be one of the finest receivers I have ever owned.

One of my favourite frequency bands was the so called "Trawler band" around 2 MHz where the fishing boats used to talk to each other. This also included the amateur "Top band" as well as the R/T distress and calling frequency and various marine coastal station frequencies. Living near the East Coast, I became quite familiar with the voices at Northforeland Radio (GNF), Humber (GKZ), Niton (GNI), as well as those a little further away, Landsend (GLD), Cullercoats (GCC), Wick Radio etc. Even foreign stations became familiar, Scheveningen (PCH) Norddeich (DAN) and Ostende (OST) amongst others. The R/T distress frequency (2182 KHz) was sometimes monitored in bad weather, and I experienced some exciting, breathless moments when men and ships were in danger - and sadness too, when ships sank, the voices stilled, and people lost their lives. It all came very much closer to home, and gave a true sense of what I would be doing. After I had improved my Morse skills, I also used to listen to the 410 – 512 KHz MF band, especially the 500 KHz distress and calling frequency, as well as the various HF frequencies of Portishead Radio and other foreign marine coast stations.

Not being content with just listening, I improvised my own low power medium wave music broadcast station, using an old radio receiver local oscillator and a tape recorder. Later I migrated to the 40 meter broadcast band with a bit more power from a number 19 set, which was a wartime army tank transceiver with about 15 watts output, and an indoor 6ft whip antenna. I couldn't transmit long however as my two small 6 volt motor cycle batteries were empty within 10 or 15 minutes. The 19 set rotary transformer needed POWER! It then took several hours to charge them up again. Probably my only audience were school friends in the neighbourhood, but it was great fun. I used to love lighting fluorescent lamps 2 or 3 feet away from the whip. No worries about radiation in those days. That it was also illegal never really occurred to me at that time.

I then started having contacts on the amateur bands. This was my downfall, as the family TV set used to go totally white when I transmitted on a bigger antenna! I used to only transmit during the day when my parents were not watching it. One of the local amateurs however contacted my parents who promptly put a stop to my "pirate" activities.

Still wanting to "go on the air" however, I studied for, and passed, my City and Guilds Radio Amateurs Examination, as well as the Post Office amateur Morse test in 1966. This enabled me to receive my amateur call sign G3VCH shortly after. It was then that I really started to learn about the practical aspects of radio frequency design and engineering. Learning by doing! I found out that theory and practice were two very different things, and that one did not necessarily agree fully with the other! I built HF and VHF radio transmitters, receivers and converters. A number of them did not work as planned (if at all!) and on occasions, the results of my home brew attempts were highly spectacular to say the least! They say that valves were very forgiving, however some of the ones I used never forgave me for what I did to them! It all served to help me towards my goal however, and made some things much easier to understand than if I had not had my amateur licence to experiment with.