THE OFFSHORE RADIO MASTS

Ian Anderson

In Offshore Echo's 150, I explained how in the Summer of 2007 I decided to settle something that had bugged me about Radio London's radio mast ever since the time I first saw a picture of the Galaxy in 1965. In that article, and in the follow-up in Offshore Echo's 151, I established that the radio masts of the Galaxy and the Olga Patricia (Laissez Faire), two Texan financed and Miami-built radio ships, were much shorter than claimed, but that most of the other offshore radio masts were more or less as previously claimed.

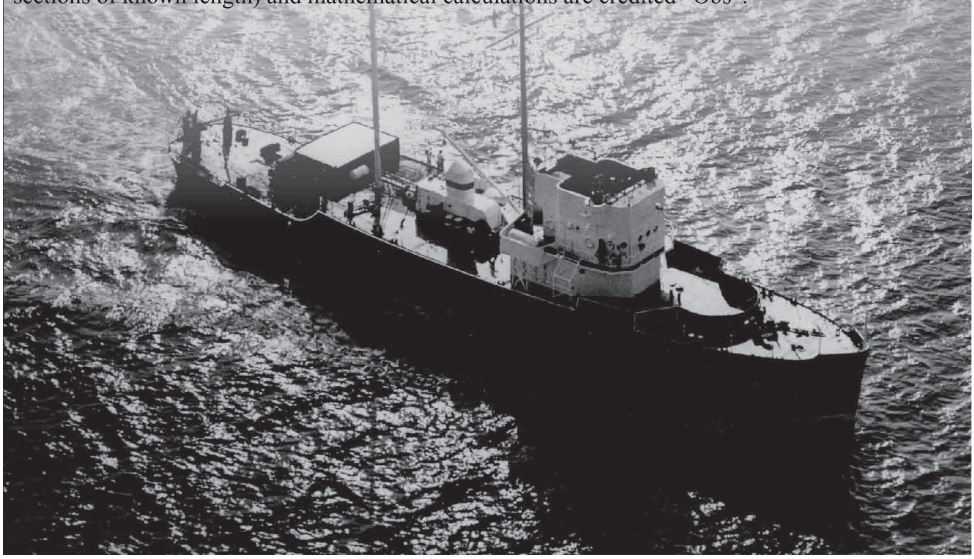
Since then I have been trying to establish the precise heights of those other masts. First of all I had to decide what was meant by height, with the top of the mast to keel level, to sea level and (with the towers in the Thames Estuary) to sea-bed level all quoted in various articles and books. After some consultation I decided the height had to be from the mast deck level, just like ground level on land.

Almost in every case several heights were quoted for a mast. For example in Jack Kotschack's (JK) book on Radio Nord, the two masts (only one was erected) are described variously as 40 metres and 43 metres, whereas the correct height was 37 metres.

Some of the masts made use of what was already there, or was readily available. The existing ships' masts were used for the bottom section on the Fredericia and the Olga Patricia, the lantern tower was used on the Comet, the surviving part of the Radio Nord radio mast was used for the bottom section of Mi Amigo masts of 1964 and 1966, and the test mast of the racing yacht Norsaga was used for both of the Ocean VII masts, that being the only section to survive the collapse of the first mast when the rigging was over-tensioned, against advice.

Only European AM offshore radio stations have been included in the list, with the final non-offshore days of the Communicator added for completeness. I have excluded those European AM stations that used existing ships masts with relatively minor modification and the tower-based stations that used short scaffold-like poles and temporary masts.

In my quest I want to thank (alphabetically) Norman Barrington (NB), Derek Burroughs jnr (DB), Paul Graham (PG), Ralph C Humphries (RH), Hans Knot (HK), Bob Le-Roi (BLR) - and in turn Lawrence Bean (LB) and Tony Pine (TP) - Dave Miller (DM), Peter Murtha (PM), Bob Preedy (BP) - and in turn Harry Spencer (HS) - and Paul Rusling (PR) as well as Chris Edwards for the wealth of information in Offshore Echo's. Measurements from observations (including counting sections of known length) and mathematical calculations are credited "Obs".



Offshore Radio Masts, 1960s-1970s ships			*all heights from deck level*	
Radio station	**Ship**	**Erected**	***feet***	***metres***
01 Radio 270	Oceaan VII	Guernsey 1966	161	49
02 Radio 270	Oceaan VII	Grimsby 1966	151	46
03 Radio Atlanta	Mi Amigo	Greenore 1964	141	43
04 Radio Caroline (North)	Fredericia	Greenore 1964	155	47
05 Radio Caroline South	Mi Amigo	Zaandam 1966	162	49
06 Radio Caroline/Seagull	Mi Amigo	at sea early 1973	164	50
07 Radio Caroline	Mi Amigo	at sea late 1973	157	48
08 Radio England/Britain Radio	Olga Patricia	Miami and Lisbon 1966	160	49
09 Radio London	Galaxy	Miami 1964	150	46
10 Radio Nord	Bon Jour	Copenhagen1960	120	37
11 RNI	Mebo II	Slikkerveer 1969	144 (137 + 7)	44 (42 + 2)
12 Radio Scotland	Comet	Guernsey 1965	145	44
13 Radio Veronica	Norderney	Zaandam 1966	64 & 64	19 & 19
14 Voice of Peace	Cito/Peace	New York 1972	144 (137 + 7)	44 (42 + 2)

Note

01 Radio 270: Top 100 feet of welded-section alloy Sparlight yachting mast plus bottom 61 feet of alloy test mast from the racing yacht Norsaga. Wire cage series feed antenna. Top 100 feet collapsed at sea in April 1966. (RH, BP, HS et al)

02 Radio 270: Top 90 feet of welded-section alloy Sparlight yachting mast plus bottom 61 feet of alloy test mast from the racing yacht Norsaga. Wire cage series feed antenna. Claim of 154 feet was from waterline. (RH, BP, HS et al)

03 Radio Atlanta: Top 91 feet of welded-section alloy Sparlight yachting mast plus bottom surviving 50 feet of Radio Nord mast. Wire cage series feed antenna. Claimed to be 163 feet. Also Radio Caroline South. (RH, HS et al)

04 Radio Caroline (North): Top 120 feet tubular welded-section steel plus bottom 35 feet of original ship's mast. Wire cage series feed antenna. Claim of 168 feet was to the bottom of the keel. Planned to be 200 feet high. (RH, HS et al)

05 Radio Caroline South: Top 91 feet of welded-section alloy Sparlight yachting mast plus added 21 feet alloy middle section and bottom surviving 50 feet of Radio Nord mast. Designed as wire cage series feed antenna but top 112 feet of the mast was tuned and used instead. Claimed to be 168 feet. Collapsed at sea in November 1972. (RH, HS et al)

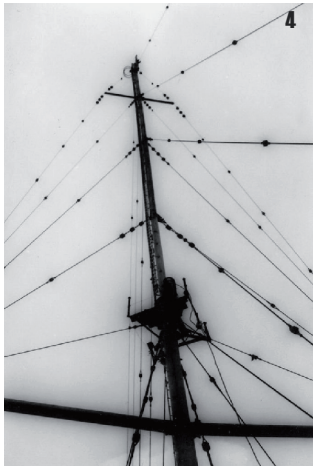
06 Radio Caroline/Seagull: Triangular tapered bolted-section lattice steel. Topped with steel pole and capacity hat. Series feed antenna when complete but it was shunt feed at one stage of completion. Claimed to be 175 feet or higher. The mast took over six months to complete, as funds permitted, and was tuned-up to come on air at various stages of construction, including as an inverted L. Collapsed at sea September 1973. Final 26 feet came off base insulators October 1973. Also Radio Veronica and Radio Atlantis. (NB, PM et al)

07 Radio Caroline: Square telescopic-section steel. Shunt feed antenna. About half of the unstayed top section was lost 1974 and was replaced by steel pole and capacity hat. This survived the sinking in 1980 and lasted until the mast collapsed across the vessel on the seabed in 1986. Also Radio Mi Amigo. (NB, PM et al)

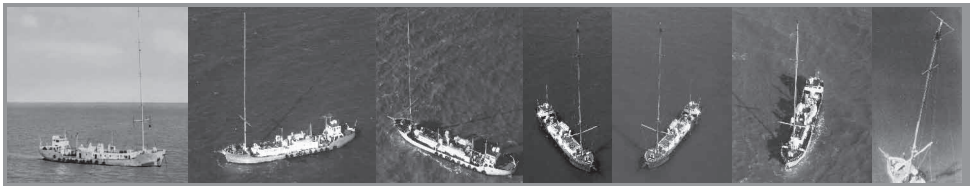
08 Radio England/Britain Radio: Top 123 feet tubular tapered welded-section steel plus bottom 37 feet of original ship's mast. Separate wire cage series feed antennae for both services. Claimed to be 210 feet high. Most of the mast collapsed in transit at sea between Miami and the Azores, and was dragged alongside by the stays, to be re-assembled in Lisbon in April 1966. Storm damage to the mast in February 1967 required a visit to Zaandam for repairs. Also Radio Dolfijn, Radio 227 and Radio 355. (DB et al)

09 Radio London: Tubular tapered welded-section steel. Shunt feed antenna. Claimed to be 212 feet high and planned to be 215 feet high with capacity hat. (Obs, PG et al)

10 Radio Nord: Tubular stepped welded-section steel. Single wire series feed antenna held off the



1 - Radio Nord
2 - Radio Caroline North
3 - Radio Caroline South 1964-66
4 - Mi Amigo mast 1966-1972
5 - Bottom part of Radio Caroline South while in Amsterdam in 1966. It is also the bottom part of the Radio Nord mast (top part lost in January 1964). This was used in Greenore in 1964 and in Zaandam in 1966 for the bottom part of the new and the extended masts



mast with spreaders. Claimed to be 131 feet and also 141 feet high. Top 70 feet collapsed in transit at sea in January 1964. The original design was for two masts and a Marconi T wire antenna. (Obs, JK et al)

11 RNI: Triangular bolted-section lattice steel. The capacity hat steel pole varied from 7 feet to 25 feet and sometimes did not have a capacity hat on top. Shunt feed antenna. Claimed to be 150 feet to 170 feet and, as the Socialist People's Libyan Arab Jamahiriyah Broadcasting Corporation, up to 186 feet high. (Obs et al)

12 Radio Scotland: Top 120 feet of welded-section alloy Sparlight yachting mast plus bottom plus bottom 25 feet of original lantern tower. Wire cage series feed antenna. Planned to be 200 feet high. (RH, HS et al)

13 Radio Veronica: Wood laminate for a modified Marconi T antenna, two top wire lengths for "192" and five for "538". (Obs et al)

14 Voice of Peace: Triangular bolted-section lattice steel, based in the Mebo II design. Shunt feed antenna. 7 foot capacity hat steel pole. The top 50 feet collapsed at sea in March 1980. (Obs, HK et al)

Offshore Radio Masts, 1960s forts			*all heights from deck level*	
Radio station	**Fort**	**Erected**	***feet***	***metres***
15 Radio 390	Red Sands	on fort 1965	150	46
16 Radio City	Shivering Sands	on fort 1965	200	61

Notes

15 Radio 390: Triangular bolted-section lattice steel. Series feed antenna. Claim of 200 feet was from average sea level and claim of 270 feet was from seabed level. The fort had impedance to ground of 13 ohms. (BLR, LB, TP et al)

16 Radio City: Triangular bolted-section lattice steel. Shunt feed antenna. Claim of 240 feet was from average sea level. The fort had impedance to ground of 13 ohms. (BLR, LB, TP et al)

Offshore Radio Masts, 1980s-1990s ships			*all heights from deck level*	
Radio station	**Ship**	**Erected**	***feet***	***metres***
17 Radio Caroline	Ross Revenge	Solares 1984	275	84
18 Radio Caroline	Ross Revenge	at sea 1989	100 & 80	30 & 24
19 Laser 558 etc	Communicator	at sea 1984/5	120 & 110	37 & 34
20 Holland FM etc	Communicator	Ijsselmeer 1994	180	55

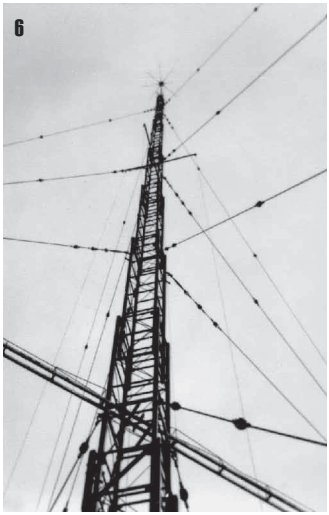
Notes

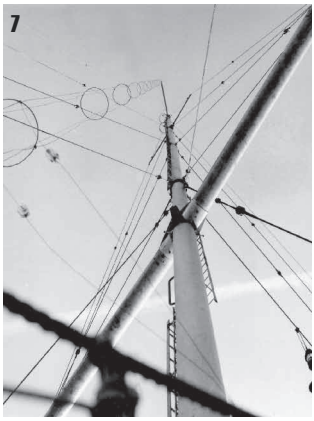
17 Radio Caroline: Triangular tapered welded-section steel. Continued through the deck to the inside-bottom of the hull. Shunt feed antenna. Claimed to be 300 feet. Collapsed at sea November 1987. Also Radio Monique, Radio 558, Radio 819 and various versions of Radio Caroline. (PM et al)

18 Radio Caroline: Lower two parts doubled-up triangular bolted-section lattice steel, upper 3 parts single sections. Final 20 foot section of the rear mast not installed and was lashed to the lower section with the gin pole still in place on the fourth section of the mast. Wire Marconi T antenna. (Obs et al)

19 Laser 558 etc: This followed the failed balloon system. Triangular bolted-section lattice steel. Inverted L series feed antenna. Collapsed at sea February 1985 (one mast), April 1985 (one mast) and January 1987 (both masts). (PR et al)

20 Holland FM etc: Tubular tapered bolted-section steel. 9 used of 10 mast sections for a planned two mast Marconi T system and part erected as such in Portugal. Wire skirt series feed antenna. Also Holland FM, Hitradio Veronica, Q Radio, Q the Beat and Superstation. (Obs, DM et al)





6 - Mi Amigo mast in 1978
7 - Mi Amigo mast 1964-1966
8 - Ross Revenge mast 1984