

THE STORY OF PORTISHEAD RADIO

LONG-RANGE MARITIME
RADIO COMMUNICATIONS

1920-1995

1995 sees the 75th anniversary of long-range maritime radio communications in the United Kingdom, which started from humble beginnings in 1920.

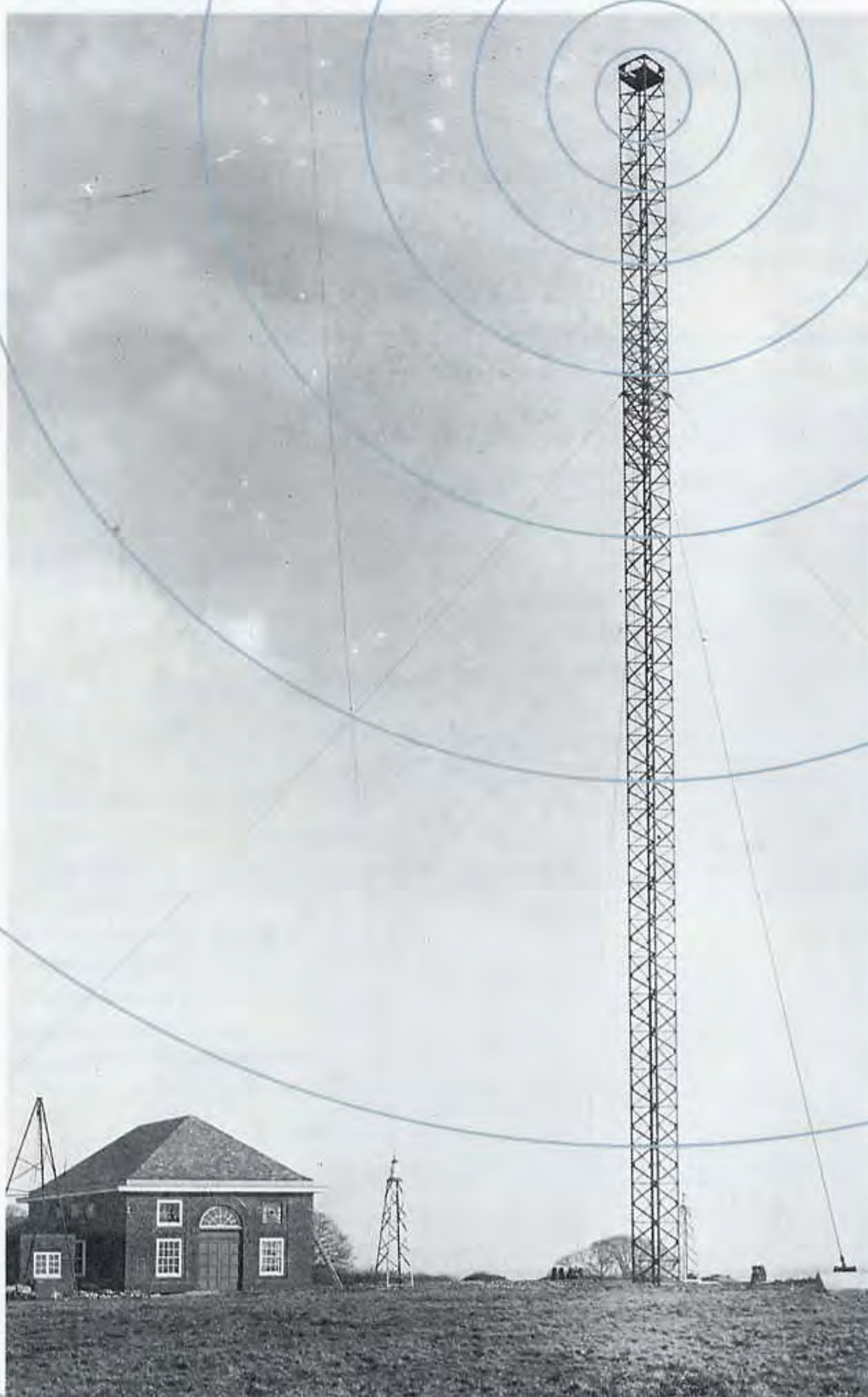


Broadcasting to ships had been taking place since the early days of radio; the GPO's long-wave stations at Poldhu and Caernarvon had been conducting two-way traffic with ships within a few hundred miles of the United Kingdom prior to the First World War. However, no long-range system existed until 1919 when the GPO and the Marconi Wireless Telegraph Company agreed to convert a redundant Imperial Wireless Chain receiving station at Devizes in Wiltshire for long-range maritime use. Comprising of a receiver and a 6-kilowatt valve transmitter, station 'GKT' was opened for service early in 1920, with a guaranteed range of 1,500 miles.



The radio officers at 'GKT' were housed in old army huts, with radiotelegrams being sent to and received from ships up to 5 days from any British port at the rate of 11d (just less than 5p) per word. Radio traffic was keyed to and from the London Central Telegraph office from the operating station for onward delivery.

This two-way 'long-range' service proved to be immensely popular, and by 1924 it became necessary to expand the station at Devizes to cope with the increased demand. The GPO constructed a second long-wave transmitter and built a new receiving station at Highbridge (near Burnham-on-Sea) in Somerset, to which most of the radio officers transferred.



The Highbridge receiving station, near Burnham-on-Sea, Somerset, built in 1924 to cope with increased demand



By 1926, experiments on short wavelengths had established that world-wide communication could take place. The GPO installed the first maritime short-wave transmitter at Devizes, keyed by

operators with receiving equipment at Highbridge that same year. Initial tests proved outstandingly successful, and it became necessary to construct a brand new transmitting station. This station was to be located at Portishead, near Bristol, and thus in 1927 Portishead Radio was born. Three long-wave

transmitters were installed, followed in 1929 by a new short-wave transmitter, ultimately resulting in the closure of the Devizes station.

Throughout the 1930s this long-range service expanded greatly, with a gradual decline in the use of the long-wave (short-range) service. However, new markets were being discovered, including the use of Portishead by the morse code operators on

transmitters, was handling over 3 million words of radio traffic with a staff of 60 radio officers.



Portishead Radio Station rotating beam (1930)



The war years between 1939 and 1945 saw great changes in the role of Portishead Radio, two-way communication with ships changed to a broadcast of traffic without any acknowledgement of receipt. For obvious reasons, transmissions from ships were kept to a minimum so as not to release their positions and destinations. However, distress calls, enemy sighting reports, news of the North Africa landings and clandestine signals from Europe ensured the station was kept busy.

Early in 1943, the workload had increased to such levels that Portishead's civilian staff were augmented by naval operators from HMS *Flowerdown*. Many of the civilian staff were seconded to Government services at home and abroad, not only to man radio stations but to train the many new radio officers needed for convoy work. A special aircraft section was constructed to maintain communications with patrol aircraft in the North Atlantic.

During the war years, communication with ships became one-way only for security reasons

Flying boats were a new market for Portishead



the flying boats, passing traffic from as far away as South America and India. The great liners were also making heavy use of this new service, and by 1936 Portishead Radio, now with 4 short-wave



Peacetime brought a return to commercial activities, and with it a vastly increased demand for long-range communications. An 'area scheme' was established in 1946 to enable British and Colonial registered vessels to use naval stations around the world to relay their traffic to Portishead.

**Burnham (Portishead)
control room map**



1948 saw the opening of two new operating rooms with 32 operating positions, a broadcasting and landline room, and a central control room with a steel plotting map of the world measuring 36 by 16 feet. A bureau file of both ship and aircraft positions was maintained, and many were plotted with magnetic indicators.

During the late 1940s and early 1950s transatlantic liners provided a high volume of traffic, all using radiotelegraphy (morse code) transmissions. The development of the landline telex service enabled customers to deposit and receive traffic directly from Portishead, with high-traffic users installing their own private wires. The Suez crisis in 1956 brought high levels of telegraph traffic in both the to-ship and from-ship directions, leading to increased staffing levels towards the end of the decade.

**Daily Telegraph
transmissions to the QE2
in 1968 were a 'first' for
Portishead**



The 1960s saw the station continue to expand, with increased traffic levels and the development of a telex over radio (TOR) system. A press transmission of news was transmitted by morse to enable ships to produce their own news-sheets. By 1965, 86 radio officers were handling over 11 million words of traffic per year, and communicating with over 1,000 ships each day. The introduction of the *Daily Telegraph* transmissions to the QE2 in 1968 by radiotelex was another 'first' for the station.

**Radiotelegraphy
'A' wing around 1948,
showing 16 operating
consoles**



April 1970 saw the transfer of the radiotelephone service from Baldock to Portishead. This necessitated the use of extra transmitters at Rugby and Portishead, and the temporary use of an additional control centre at Somerton (Somerset).

The area scheme previously mentioned was terminated in 1972, and with it the Naval presence at Portishead. However, traffic figures continued to rise, with the developing oil market and the deepwater fishing industry all providing work for the station. The leisure market continued to expand, with the early round-the-world yacht races providing valuable publicity for Portishead Radio and its services. By 1974, traffic levels had increased to over 20 million words per year, now handled by 154 radio officers.

**High profile
round-the-world
yacht races
provided valuable
publicity for
Portishead**



Further expansion of the present operating area was impossible, so in 1976 work commenced on a purpose-built building to house the various services then available to ships. A new computer-based message handling system was installed, and the manual radiotelex service became more popular, resulting in the development of an automatic system.

**Far right,
an aeronautical
R/T console in
operation**

The Portishead transmitting site was closed in 1978, leaving the sites at Leaffield and Ongar, operating alongside the main transmitting site at Rugby. However, the famous name of 'Portishead Radio' was maintained to provide the maritime community with a familiar and well-known service. The advent of satellite communications in the early 1980s had little initial impact, and in 1983 the new control centre was opened, providing new radiotelephone and radiotelegraphy consoles, with automatic radiotelex being installed later that year. Remotely-controlled receivers and receiving aerials, located at Somerton, were utilised for all services, resulting in the dismantling of the receiving aerials at Highbridge. The old operating rooms were demolished, creating space for administration offices and stores.

**The purpose built
BT Portishead Radio
Station at Highbridge,
Somerset**



By the end of the 1980s, satellite communications were making significant inroads into Portishead's traffic figures. It became clear that a severe rationalisation programme was necessary in order for the station to remain viable, which resulted in the closure of the transmitter sites at Leaffield and Ongar. The number of operating consoles was reduced in line with the decline in radio traffic, and the number of staff employed fell proportionally.

Portishead Radio currently provides employment for 50 radio officers, and around 100 ships a day use the morse code service. This figure is expected to decline during the next few years, and by 1999 morse code communication is expected to be phased out, although there may still be some older vessels still trading who may need to use the facility. The radiotelex and radiotelephone services still, however, maintain a reasonable level of traffic, and the 'bureau' messaging services to our maritime customers remain popular.

Portishead Radio remains the most famous maritime radio station in the world, and the mere mention of its name is likely to provoke fond memories by those radio officers who used the service in its heyday. Whilst the days of receiving weak radio signals from a passenger liner from the South African coast are long since gone, Portishead Radio continues to provide a valuable service to the world's maritime community.



**Far right,
Portishead Radio's
microwave aerial**

1985 saw the opening of a new aircraft service, providing world-wide 'phone patch' and flight information services. This service proved so popular that many land-based industries based in remote locations in Africa used the 'aero' frequencies, culminating in the opening of the *Gateway* service, which continues to flourish to this day. Relief agencies, military units, embassies, and industries still use the service, which acts as a lifeline to those located in countries where normal landline links are poor or non-existent.

**BT's Gateway service
provides important
communications links for
workers in countries
where landline links are
poor or non-existent**



*Offices in Europe, North America,
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Verification Stamp



GKB

Portishead Radio
BT Radio Station
HIGHBRIDGE

Somerset TA9 3JY



Portishead Radio Maritime and Aeronautical Communications Centre

Thank you for your reception report which has been found to be correct and is hereby verified.

Date of reception *4/9/98* Frequency *GKB6* Time *2350 UTC*

Signature *R Marshall*



GKB/CW
GKU/FONE

GKE/TOR
GKX/AERO

Dear Jim,

Thank you for your reception report which is found to be correct and I enclose our QSL-card as verification.

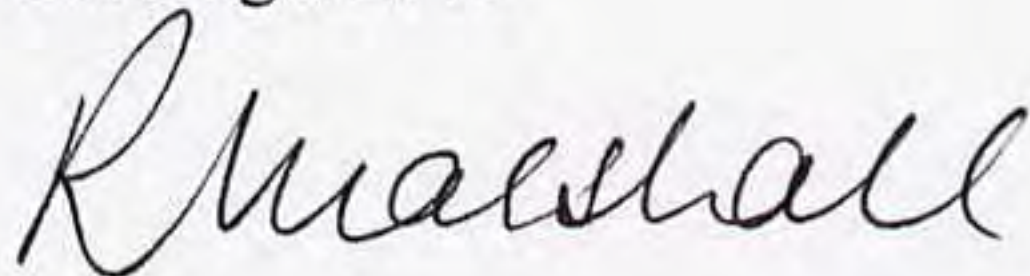
The transmitter used on GKB6 is a QT3A4 c/w a stacked quad antenna with a power output of 5 kilowatts. This is our main broadcast/working transmitter on 16 Mhz with a simultaneous transmission on GKB2 GKB4 GKB5 and GKB7.

The communication centre is located at Highbridge in the south west of England (51.15N 03.00W) which is 40 kilometers south of the city of Bristol. The transmitters are located at Rugby (52.22N 01.11W) and the receivers located at Somerton (51.02N 02.44W)

I also enclose a brochure published in 1995 commemorating our 75th anniversary which I'm sure you will find interesting.

The future of the station is very uncertain and closure during 1999 is a strong possibility therefore the QSL-card may be a collectors item in the near future !

Best regards/73



Roger Marshall
QSL Manager
23/09/98