

History of Ships Naval Wireless Systems VII

Shore to Ship and Ship to Shore

Shore to Ship

British Naval Wireless Stations had three functions:

1. Fixed Services with the U.K. and each other.
2. Sending messages to ships either direct or via a broadcast.
3. Receipt of messages from ships.

In the early wireless years, CW or morse code was the only method of communicating to and from ships at sea and in 1938, the Royal Navy wireless network consisted of Primary and Secondary W/T stations throughout the globe.

1. Home Station:

Whitehall
Rugby
Cleethorpe
Flowerdown
Horsea

2. America and West Indies Station:

Halifax
Bermuda
Esquimalt

3. Mediterranean Station:

Gibraltar
Malta

4. Africa Station:

Simonstown

5. East Indies Station:

Aden
Ceylon

6. China Station:

Singapore
Hong Kong

7. Australia Station:

Melbourne

8. New Zealand Station:

Wellington

In the later years and in its heyday, the British Commonwealth Communications system consisted of the following stations utilising CW and Radioteletype:

1. United Kingdom:

Whitehall GYA

2. Mediterranean:

Malta GYX

Gibraltar GYW

3. Indian Ocean:

Mauritius GXO

Aden GZQ

Karachi

Bombay

Matara, Ceylon GZP

Simonstown ZSJ

4. Atlantic Ocean:

Halifax CFH

Bermuda GYG

Simonstown ZSJ

5. Far East Station:

Singapore GYL

Hong Kong GZO

6. Australia:

Canberra VHK

Darwin VHM

Exmouth VH?/NW Cape NWC (Joint RAN/USN)

7. New Zealand:

Waiouru ZLO

8. North East Pacific:

Esquimalt CKN

The Primary Station in each area provided simultaneous keying of several HF frequencies to cover their area of responsibility. Ships were able to read either a CW or RATT broadcast depending upon their communications fit. RATT broadcasts started in the (non-secure) off-line mode but as technology became available, these changed to secure (on-line) transmissions. For a while, the NZ Station provided CW, secure and non-secure RATT broadcasts.

Ship to Shore

In order to provide a guide for operators in selecting the appropriate shore station to pass radio traffic, the Admiralty brought out an Admiralty Fleet Order - S Series - S7. This was a thin publication which came out quarterly, covered a three month period and was in three parts:

Part I - Commonwealth Naval Ship-Shore Organisation. (Listed all Commonwealth Ship/shore stations, frequencies and times that they were monitored.)

Part II - Guide to Optimum Frequencies for High-Frequency Ship-Shore Communications.

Part III - Guide to Optimum Frequencies for High-Frequency communication over transmission distances 0-1600 nautical miles.

Parts II and III enabled the operator to follow different tables by using known Lat. and Long. and selecting the appropriate shore station(s). It wasn't foolproof but it was better than nothing.

The S Series of publications were replaced by RN Communications Publications and S7 became RNCP7 - a hard covered publication with removable pages. The quarterly supplements were able to be taken out and replaced as appropriate.

The withdrawal of British Forces east of the Suez Canal in the early 70's made it difficult for RNZN units deployed to SE Asia. The ANZUK Force based in Singapore was able to keep providing broadcast and ship/shore facilities with Hong Kong only able to provide a HF Mobile Fixed Service (secure, duplex RATT) for one ship. However, after January 1 1974, Australia and UK withdrew from Singapore and the NZ Forces Communications centre was only able to provide a CW and SSB Voice circuit. Neither was ideal for passing traffic to the Command ashore. Hong Kong maintained their Mobile Fixed Service until the UK handed the Island back to Communist China in 1999. Naval communications support from Darwin wasn't ideal particularly when ships transited further away from Singapore. Some support was available with US naval facilities in Subic Bay.

During the deployment of HMNZ Ships **Canterbury** and **Waikato** to the Indian Ocean/Gulf of Oman 1982/83, HF communications support was available from RAF base Episkopi, Cyprus and during transit to and from the patrol area, communications were maintained with NAVCALs Exmouth. HF Mobile Fixed Services were maintained with both stations by **Canterbury**. **Waikato** was fortunate enough to be fitted with Fleet Satellite Communications (receive only) before she left NZ. This was a US Navy Satellite which had one of its channels loaded with the RAN A11B broadcast Channel 3.

Mobile Fixed Services were engineered using a Marconi booklet on HF propagation conditions. This came out quarterly, covered a three month period and was superior to RNCP7. Engineering of High Frequency services at sea and ashore at Waiouru had become the norm. This was to change with full satellite communications facilities becoming available in the late 80's/early 90's. This will be dealt with later.