

RESTRICTED

EXTRACTS FROM BRITISH NAVAL RADIO ORGANIZATION

**Appendix II
to Communication Instructions**

1944

**NAVY DEPARTMENT
Office of Chief of Naval Operations**

(1)

COMMUNICATION INSTRUCTIONS

0-111-1000

TELEPHONE SERVICE CENTER

Office of the

Secretary of State

Washington, D.C.

Attention: Mr. [Name]

1961

Enclosed for you are

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(All times GCT unless otherwise stated.)

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APPENDIX II

100. GENERAL INTRODUCTION

101. Purpose.—Appendix II has been included in Communication Instructions in order to furnish pertinent information regarding the British Naval Radio Organization and other miscellaneous related information to U. S. ships and authorities which may at times be required to make use of these facilities. The data contained herein has been taken from the effective British Admiralty Fleet Orders ("S" series) which are not generally distributed to the U. S. Navy.

102. Supersedes DNC 8.—The information contained in Appendix II supersedes the publication DNC 8.

103. Changes to Appendix II.—Certain information contained in Appendix II is subject to frequent change and will be corrected periodically. Since the lag between changes effected by the Admiralty and corresponding changes issued to this appendix is often great, it is intended that this information be used for reference purposes only.

104. Arrangement of data.—The data contained herein has been arranged to effect the most practical usage. The charts and tables are for the most part self-explanatory. Additional information is included when necessary.

110. GENERAL INSTRUCTIONS ON BRITISH NAVAL (W/T) ORGANIZATION

111. Relaying of messages.—Many of the ship-to-shore waves are common to several Naval Stations. Any Naval W/T Station hearing a call on a ship-to-shore wave will accept the message and relay it by fixed (point-to-point) service to its destination.

112. Answering practice.—

a. When calling shore stations on a common ship-to-shore high-frequency wave, a ship must be prepared to receive an answer:

1. On calling frequency.
2. On appropriate broadcast or intercept.

b. Normal practice is for the shore station to give an answer on the calling frequency and this will always be done when necessary transmitter is available.

c. An answer on broadcast or intercept will be made:

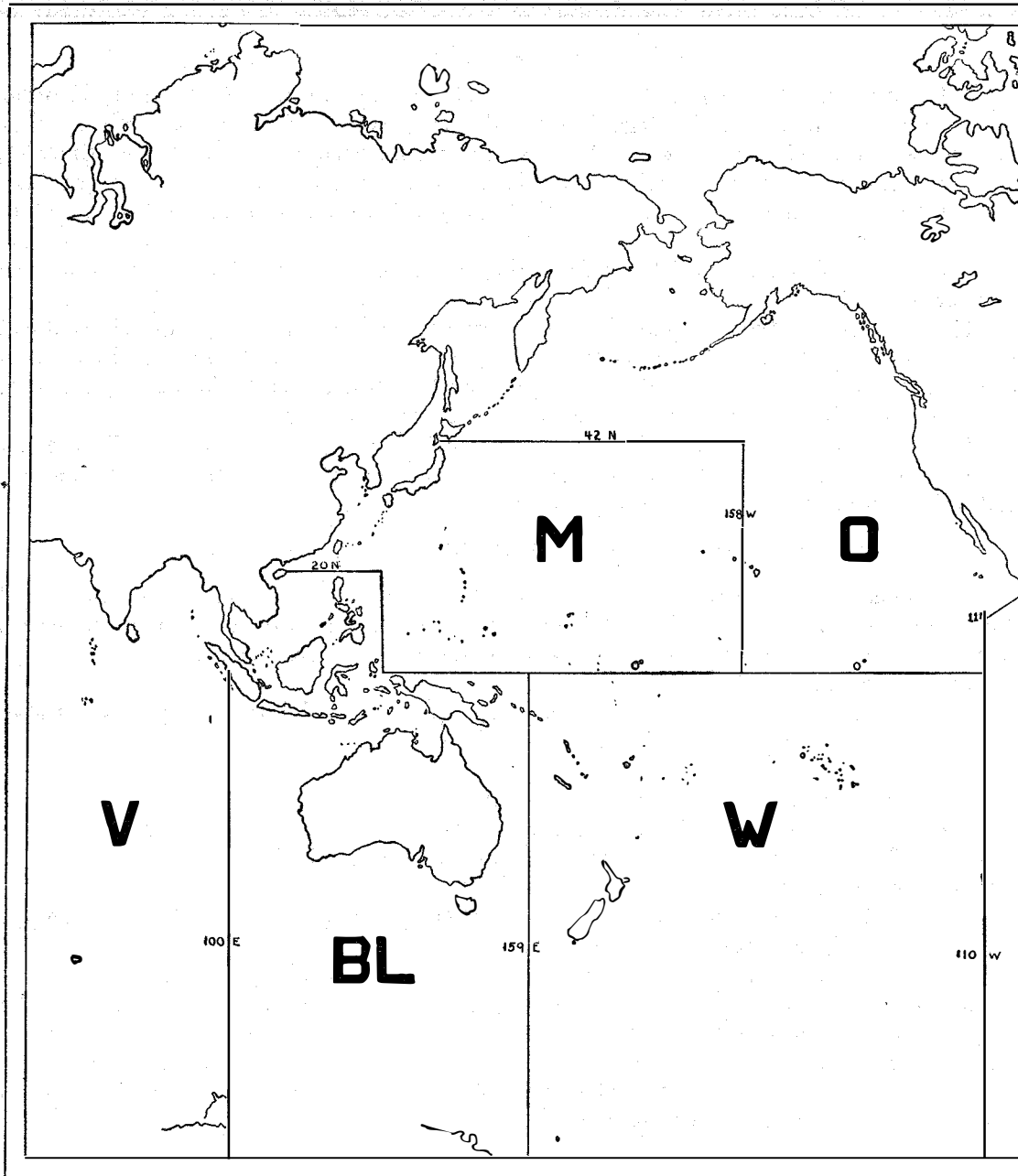
1. Where shore station has no transmitter available on calling frequency.
2. When requested by the ship.
3. When ship does not appear to hear answer on calling frequency.

d. In the event of a ship not receiving an immediate answer to a call on the H/F, the message should always be broadcast (once through), but this in no way relieves the transmitting ship of the responsibility of obtaining an "R" in the normal manner. It does provide, however, for the contingency of a shore station hearing the ship while the latter is unable to hear the shore station answering.

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**200. LIMITS OF
Chart 1. GENERAL CHART SHOWING THE**



Mediterranean areas not included on this

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W/T AREAS
LIMITS OF BRITISH RADIO (W/T) AREAS

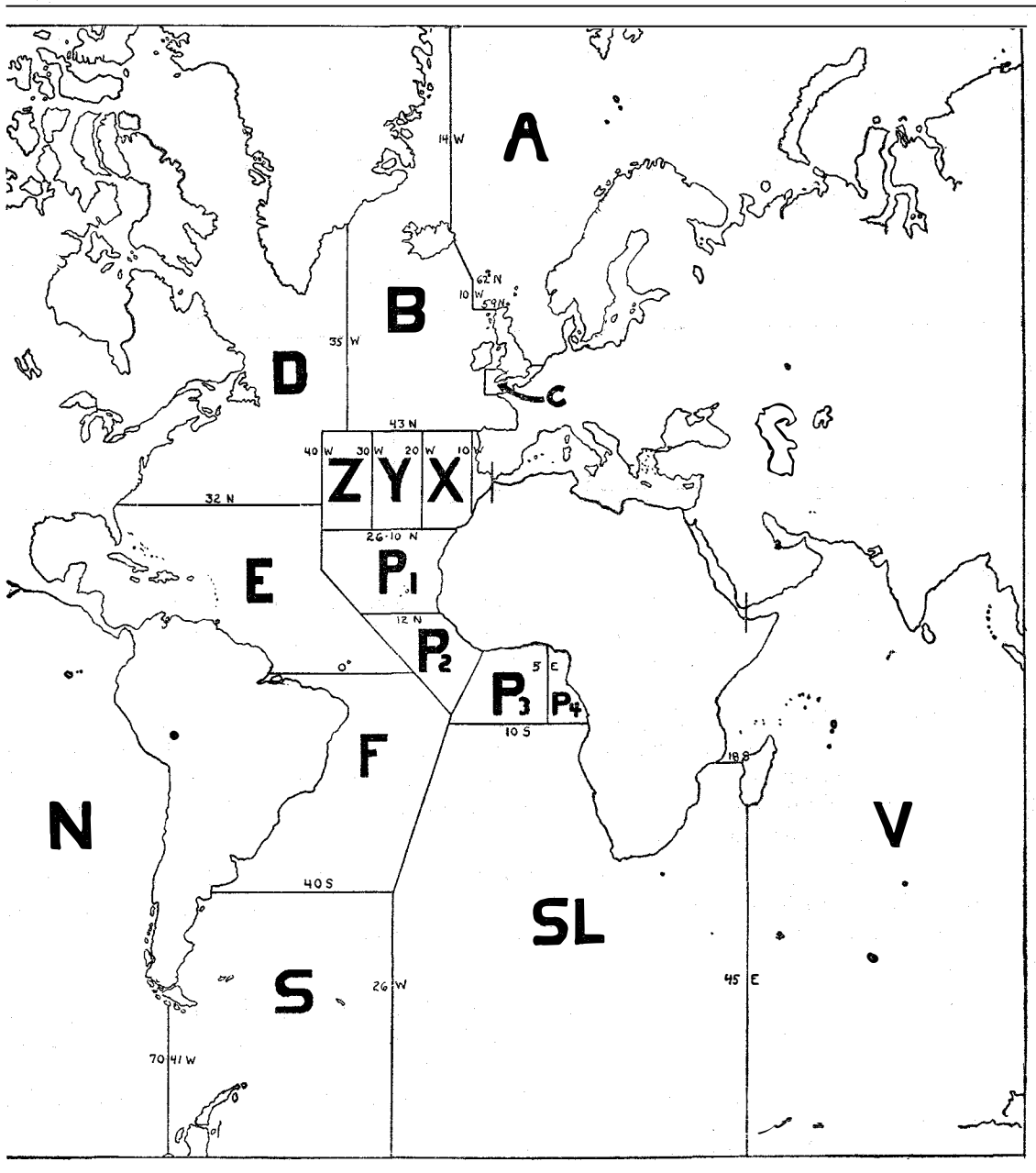
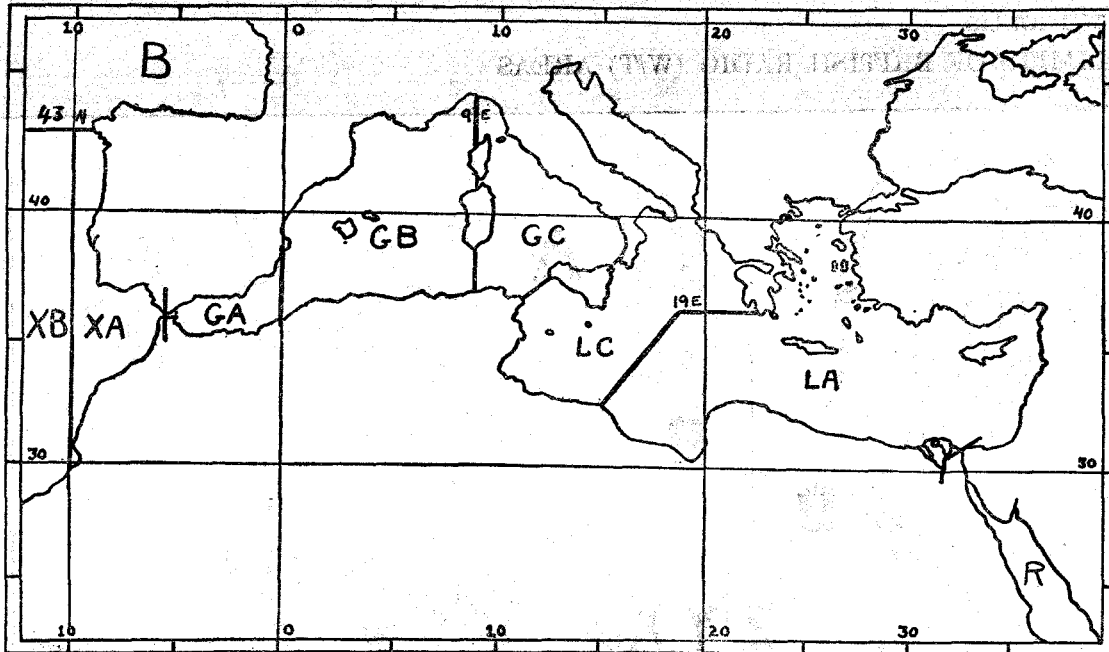


chart are shown on a separate chart.

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Chart 2. AREA LIMITS OF MEDITERRANEAN W/T STATIONS



210. DEFINITION OF LIMITS OF BRITISH W/T AREAS

Area A:

Consists of that portion of the Orkneys and Shetlands Command to the east of the northerly dividing line*, the Rosyth Command and that portion of the Nore Command lying to the north of 51° 40' North.

Area B:

Consists of the Western Approaches Command (except that portion in the Bristol Channel and Irish Sea Area lying to the south of the latitude of Milford Haven); Iceland; that portion of the Orkneys and Shetlands Command lying to the west of the northerly dividing line* and that portion of the Plymouth Command south and west of 48° north and 7° west.

*The northerly dividing line between Areas "A" and "B" is a line from Dunnet Head due north to 59° North, thence due west to longitude 6° West, thence due north to 62° North, thence to Seydisfjord, Iceland, and thence due north.

Area BL:

North..... From Cape Kami, south to latitude 20° North, a line east to longitude 130° East, thence south to Equator, along Equator to longitude 159° East.

West..... The meridian of 100° East from the coast of Sumatra to the south pole.

South..... The pole.

East..... The meridian of 159° East.

Area C:

Consists of the Portsmouth and Dover Commands; that portion of the Plymouth and Western Approaches Commands in the Bristol Channel and Irish Sea south of the latitude of Milford Haven and bounded on the west and south by the meridian of

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7° West and the parallel of 48° North; and that portion of the Nore Command lying to the south of 51° 40' North.

Area D:

North..... The pole.
West..... East coast of North America.
South..... Parallel of 32° North.
East..... Meridian of 40° West to a point 43° North, thence to meridian of 35° West, thence due north.

Area E:

North..... Parallel of 32° North.
West..... Coast of North and Central Americas.
South..... Coast of South America and the Equator.
East..... Meridian of 40° West to a point 20° North, thence down the limits of Area P1 and P2 to the Equator.

Area F:

North..... The Equator.
West..... The coast of South America, along the coast to 40° South.
South..... Parallel of 40° South.
East..... Line drawn from position 40° South and 26° West, to Ascension, thence along the limits of Area P2 to the Equator.

Area G:

North..... Mediterranean coast of Europe.
West..... Meridian of Gibraltar.
South..... Mediterranean coast of Africa.
East..... Line joining Cape Bon to Marsala and in a direction 9° across the Strait of Messina.

This area is divided from west to east into three areas, GA, GB and GC, by the meridian of Greenwich and the meridian of 9° East.

Area L:

North..... Mediterranean coast of Europe and Asia.
West..... Line joining Cape Bon to Marsala and in a direction 9° across the Strait of Messina.
South..... Mediterranean coast of Africa.
East..... Suez.

This area is divided from west to east into two areas, LC and LA, by a line drawn from Misrata in Tripolitania to join a line drawn due west from Cape Matapan in longitude 19° East.

Area M:

North..... The parallel of 42° North.
West..... East coast of Asia from 42° North to 20° North, thence down meridian of 130° East.
South..... The parallel of 20° North from coast of Asia to 130° East, thence along Equator to 110° West, due north to 11° North, thence to the border of Mexico-Guatemala.
East..... The meridian of 158° West.

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Area N:

- North..... Line joining position 11° North and 110° West to border of Mexico-Guatemala.
- West..... Meridian of 110° West.
- South..... The pole.
- East..... West coast of South America, thence down meridian of 70°41' West.

Area O:

- North..... The pole.
- West..... The north and east coasts of Asia.
- South..... The parallel of 42° North to 158° West, due south to the Equator, along the Equator to 110° West, due north to 11° North, thence to the border Mexico-Guatemala.
- East..... The west coast of North America to the border of Mexico-Guatemala.

Area P:

- North..... The parallel of 26°10' North.
- West..... A line drawn from a point 26°10' North and 40° West due south to 20° North, thence to Ascension, and thence to the parallel of 10° South along a line which joins Ascension to a point 40° South and 26° West.
- South..... The parallel of 10° South.
- East..... The coast of Africa.

Area P is further subdivided into areas which are bounded by the limits of Area P and as follows:

- P1..... On the south by the parallel of 12° North.
- P2..... On the north by the latitude of 12° North. On the southeast by line joining Cape Palmas to Ascension.
- P3..... On the west by a line joining Cape Palmas to Ascension.
On the east by the meridian of 5° East.
- P4..... On the west by the meridian of 5° East.

Area R:

From Suez to the meridian of 45°05' East in the Gulf of Aden.

Area S:

- North..... The parallel of 40° South.
- West..... The coast of South America to 70°41' West thence due south.
- South..... The pole.
- East..... The meridian of 26° West.

Area SL:

- North..... Parallel of 10° South in South Atlantic from west coast of Africa to a line which joins Ascension to a point 40° South 26° West. On the east coast of Africa by the parallel of 18° South in the Mozambique Channel.
- West..... Line joining Ascension and a point 40° South 26° West, and the meridian of 26° West.
- South..... The pole.
- East..... The meridian of 45° East from Coast of Madagascar to South Pole.

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Area V:

That portion of the Indian Ocean, east of the meridian of Aden, and including the Persian Gulf, bounded on the west by the coast of Africa, and the limits of the South Atlantic station, SL, and on the east by the meridian of 100° East from the coast of Sumatra to the South Pole.

Area W:

North..... The Equator.
West..... The meridian of 159° East.
South..... The pole.
East..... The meridian of 110° West.

Area X:

North..... The parallel of 43° North.
West..... The meridian of 20° West.
South..... The parallel of 26°10' North and the coast of Africa.
East..... The meridian of Gibraltar.

This area is divided by the meridian 10° West into areas XB to the westward and XA to the eastward.

Area Y:

North..... The parallel of 43° North.
West..... The meridian of 30° West.
South..... The parallel of 26°10' North.
East..... The meridian of 20° West.

Area Z:

North..... The parallel of 43° North.
West..... The meridian of 40° West.
South..... The parallel of 26°10' North.
East..... The meridian of 30° West.

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300. BRITISH RADIO ORGANIZATION

310. PRINCIPAL RADIO (W/T) AREAS

311. Table of principal radio (W/T) areas.—The following table shows an alphabetic listing of the radio (W/T) areas as shown in the general chart with the broadcast methods serving each area and the stations taking part in the service. Explanatory notes follow the table.

TABLE 1

| Area | Broadcast | Stations | Area | Broadcast | Stations |
|------|--|---|------|---------------|---|
| A | GA | RUGBY WHITEHALL | N | NBA | BALBOA |
| | H' HD CN' | | O | NPG | SAN FRANCISCO |
| B | H' | WHITEHALL RUGBY | P | FT GM | FREETOWN RUGBY |
| | BN GA | | R | R | ADEN |
| BL | BL BAKERS | BELCONNEN PERTH | SL | SL | SIMONSTOWN |
| C | CN L GA# | WHITEHALL | S | FI | FALKLANDS |
| | | EDINBURGH HALIFAX RUGBY | V | V GM | CEYLON RUGBY |
| E | NSS GM GA | WASHINGTON RUGBY RUGBY | W | WV'' | WAIOURU WILSON SUVA |
| F | NKX NBS GM | RECIFE WILSON RUGBY | X | G | GIBRALTAR |
| GA | G GD | GIBRALTAR | Y* | G BN | GIBRALTAR WHITEHALL |
| GB | X XD | ALGIERS | Z** | G BN GA | GIBRALTAR WHITEHALL RUGBY |
| GC | X XD | ALGIERS | | | |
| LA | LV | ALEXANDRIA | | | |
| LC | M | MALTA | | | |
| M | NPM | HONOLULU | | | |

NOTES ON TABLE 1

'For the purpose of these broadcasts see table 5.

''Intercept. (See table 3.)

*Ships in Area Y have a choice of Gibraltar or BN broadcasts.

**Ships in Area Z have a choice of Gibraltar, BN or Rugby GA broadcasts.

#Ships in Area D read Rugby GA only if broadcast L is unreadable.

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320. PRINCIPAL BROADCAST SCHEDULES

321. Table of principal broadcast schedules.—The following table shows the principal British broadcast schedules. The schedules are listed alphabetically by broadcast designations, showing the station, call sign, frequencies, and time. The last column contains further explanatory remarks concerning each schedule.

TABLE 2

| Broad-cast | Station | Call sign | Frequency | Time | Remarks |
|------------|------------------|------------|---|--|---|
| BAK-ERS | PERTH | VIXØ | 437Ø 925Ø 1263Ø | Continuous | Ships proceeding from EI W/T area to southwest Pacific Area are to shift to Bakers broadcast. Subsequent shift to BL broadcast will be ordered by NOi/c Fremantle. |
| BL | BELCONNEN | VHB VHP | 44. Ø 4Ø5Ø 56ØØ 843Ø 1217Ø 1641Ø | Continuous Ø7ØØ-22ØØ Continuous 22ØØ-Ø7ØØ 22ØØ-Ø1ØØ | "Bells" broadcast to call sign GB5 for ships in area BL. VHB (44 kc.) is not used between 22ØØ-Ø1ØØ. During this period an additional frequency of 1641Ø kc. is used. |
| FI | FALKLAND ISLANDS | VPC VPC | 47ØØ 8555 1711Ø 47ØØ 8555 125ØØ 1711Ø | 23ØØ-Ø145 Ø23Ø-Ø33Ø Ø53Ø-Ø8ØØ 1ØØØ-11ØØ * 133Ø-143Ø 181Ø-19ØØ 1945-2Ø3Ø 1ØØØ-11ØØ 23ØØ-Ø145 Ø23Ø-Ø33Ø Ø53Ø-Ø8ØØ 133Ø-143Ø 181Ø-19ØØ 1945-2Ø3Ø 133Ø-143Ø ** | Broadcast to call sign GBXZ for ships in area S. * Frequencies used between 1 October and 31 March. ** Frequencies used between 1 April and 30 September. |
| FT | FREETOWN | VPU | 375 5175 845Ø 1328Ø | Continuous 2ØØØ-Ø8ØØ Continuous Ø8ØØ-2ØØØ | Broadcast to call sign GB3 for ships in area P. |
| G | GIBRALTAR | GYU | 44. 8 16Ø 556Ø or 9975 | Continuous | Broadcast to ships in areas G, X, Y, and Z. |

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TABLE 2—Continued

| Broad-cast | Station | Call sign | Frequency | Time | Remarks |
|------------|-------------------------------------|------------------------------|---|---|---|
| L | HALIFAX LONDON | CFH | 105 9040 5502.5 | Continuous 1200-2200 2200-1200 | Broadcast to ships in area D. Messages broadcast to call sign GB7A. Broadcast of messages once through first transmission; repetition 4 hrs. later. Headings of all messages of 24 hrs. previous at 0500 daily. |
| LV | ALEXANDRIA | MSA | 425 5250 or 11620 | Continuous | Broadcast to ships in area LA. |
| M | MALTA | GYZ | 153 5000 or 11200 | Continuous | Broadcast to ships in area LC. |
| R | Aden | GZQ | 95 7050 or 12400 | Continuous | Red Sea broadcast to ships in area R. |
| SL | SIMONSTOWN | GYK ZSC | { 8590 12831 90 6415 17120 | { Continuous 0400-0800 1600-2000 Continuous 2000-0400 0800-1600 | Broadcast to call sign GBXZ for ships in area SL. |
| V | CEYLON | GZH | 4403 8806 13209 17612 | Continuous Continuous Continuous 0130-1430 | Indian Ocean broadcast to ships in areas NU and V. |
| X | ALGIERS | BRF | 135 5340 or 10085 | Continuous | Broadcast to ships in areas GB and GC. |

322. Additional broadcasts.—The following broadcasts are supplemented by additional broadcasts beginning at 0100 and every 4 hours for ships and auxiliaries with less than 3 operators: Gibraltar (GD); Malta (MD); Aden (RD) Alexandria (LVD); and Algiers (XD).

323. Gaspé Broadcast for ships in St. Lawrence Area. During the navigational season only, Gaspé will broadcast continuously on 174 and 3490 kc. with call sign CFL to ships in the St. Lawrence Area.

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330. PRINCIPAL INTERCEPT SCHEDULES

331. Table of principal intercept schedules.—The following table shows the principal British intercept schedules. The schedules are listed alphabetically by intercept designation, showing station, call sign, frequencies, and time. The last column contains further explanatory remarks concerning each schedule.

TABLE 3

| Intercept | Station | Call sign | Frequency | Time | Remarks |
|-----------|---|------------------------------|---|---|---|
| BN | WHITEHALL LIVERPOOL ICELAND | GYM MAD MAS | 107 | Continuous | For ships in Area B. To be used in event of the failure of BN broadcast only. Messages from Liverpool and Iceland are to be repeated back once by Whitehall. Messages from Whitehall are to be repeated back once by Iceland. |
| FT | DAKAR ASCENSION TAKORADI | FUW ZBI VPG | 375 5175 8450 | Continuous 2000-0800 0800-2000 | To be used in event of the failure of FT broadcast. Takoradi is continuous on 375 kc only during FX periods. |
| WV | WAIOURU WELLING FOR SUVA | ZLO ZBP ZGN | 6872.5 13745 16030 6872.5 13745 | 0700-1700 1800-0600 1800-0600 0700-1700 1800-0600 | For ships in SoPac area. Ships maintaining watch are to continue to keep receiving watch during the two periods each of an hour when group is normally silent. General periods will be at 0200 and every four hours. |

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340. RUGBY GENERAL BROADCAST

341. Table of Rugby schedules carried out on V. L/F transmitters.—The following table shows the time of schedules on the GBZ and GBR transmitters for submarines in Home, Mediterranean, and Gibraltar areas.

TABLE 4 A

| Routine | Time | Transmitter used |
|---------|--|---|
| HS | First 20 min. of each hr. Long routines at: 0000-0120 1000-1040 1400-1440 2000-2120 | GBZ (15.46 kc.): 0000-0120 1200-1400 2000-2120 GBR (16 kc.): All routines outside above periods. |
| MS | Second 20 min. of each hr. Long routines at: 0120-0240 1120-1200 1520-1600 2120-2240 <i>0620-0700</i> | |
| GS | Third 20 min. of each hr. Long routines at: 0240-0400 1040-1120 1440-1520 2240-0000 | |

342. Rules for transmission on Rugby V. L/F transmitters.—The following rules on transmission apply to Table 4A:

a. During the long routines, QRU, or new urgent operational traffic will be made at 00, 20, and 40 minutes past each hour to the submarines whose routines normally start at these times, interrupting the long routines in progress for this purpose.

b. All routines start with traffic list.

c. Messages without precedence will be transmitted on next two long night routines after receipt.

d. Messages with precedence will be transmitted at first routine after receipt and repeated on short routines as often as time allows.

e. All messages transmitted first time at short routine will be repeated at the next long routine (day or night).

f. All messages originated after second long night routine will be repeated at both long night routines of the following night.

g. All messages originated between first and second long night routines to be repeated on first long night routine on the following night.

h. MS Long Routines at 0620-0700 is MS traffic previously transmitted on short routines since 0240 will be retransmitted during this routine.

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343. Table of Rugby schedules carried out on L/F and H/F transmitters.—The following table shows the schedules of the transmitters used on the Rugby GA and GM broadcasts. The frequencies of the transmitters shown will be found in paragraph 344.

TABLE 4B

| Time | Broad-cast | 1 Mar. to 31 Oct. | 1 Nov. to 28 Feb. |
|----------------------|------------|----------------------|--------------------|
| 1800-1800 | | | |
| 0800-1000 | | | |
| 0200-0300 | GA | } GBZ, GIC, GID, GIH | GBZ, GIC, GIH, GYD |
| 0300-0400 | GM | | |
| 0600-0700 | GA | GBZ, GAD, GID, GIH | GBZ, GIC, GIH, GYD |
| 1000-1100 | GA | } GBZ, GAD, GID, GIH | |
| 1400-1500 | GA | | |
| 1500-1800 | GM | | |
| 1800-1900 | GA | } GBZ, GIC, GID, GIH | GBZ, GIC, GIH, GYD |
| 2200-2300 | GA | | |

344. Frequencies of transmitters.—The frequencies of the transmitters shown in Table 4 B are as follows:

| | |
|----------|------------|
| GBZ..... | 15.46 kc. |
| GYD..... | 4,775 kc. |
| GIC..... | 8,640 kc. |
| GIH..... | 10,650 kc. |
| GID..... | 13,555 kc. |
| GAD..... | 19,480 kc. |

345. Rules of transmission on Rugby GA and GM broadcasts.—The following rules apply to Table 4 B:

- a. The following sequence will be followed at each routine—
 - 1. New priority traffic general message.
 - 2. New non-basegram general messages.
 - 3. Second run general messages.
 - 4. Basegram general messages.
- b. Messages (non-basegram) will be transmitted once through at one a. m. and one p. m. transmission.
- c. Messages (basegram) will be made at one transmission only.
- d. QRU with the last series number is made on the completion of 2, 3, and 4 of note a above.

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346. Failure of transmitters.—In the event of the failure of the GBR and GBZ transmitters, the broadcast schedules will be as follows:

a. Failure of GBR transmitter—

1. All submarine schedules will be carried out on GBZ, except during BAMS schedules, at 0000-0120, 1200-1300, 2000-2120, and between 0800-1000, when there will be no schedules. HS and MS will be continued at 2120 and 0120 and will overlap GS at these schedules if necessary.

2. GA schedules will be carried out at 0200-0300 and every four hours, being interrupted as required for submarine schedules.

3. GM schedules will be carried out on H/F only.

b. Failure of GBZ transmitter—

1. Submarine schedules normally on GBZ will not take place. HS and MS schedules will be combined at 2120 and 0120 and will overlap GS at these schedules if necessary.

2. GA schedules will be carried out on GBR, being interrupted as required for submarine schedules.

3. GM schedules will be carried out on H/F only.

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350. WHITEHALL GENERAL BROADCAST FOR HOME STATION

351. Table of Whitehall general broadcast.—The following table shows the Whitehall general broadcasts, showing call sign, frequency and time of each broadcast. Additional information is found in the last column. The BN broadcast will be supplemented by the BN intercept (as shown in table 3) in the event of failure of the broadcast.

TABLE 5

| Broad-cast | Call sign | Frequency | Time | Remarks |
|------------|-----------|------------------------------|--|---|
| BN | GYE | 107 6845 9305 14820 | Continuous (Continuous when ordered). | Ships in Area B. See notes 1 and 2. Repetition of 24 hours previous will be made at 0500. |
| CN | GYB | 100 | Continuous | Ships in Area C. See note 1 a. <i>and 2c</i> |
| H | GYB | 95 plus H/F | Continuous or as ordered. | For CinC, Home Fleet or other Senior Officers when ordered by Adm. See note 3. |
| HD | GYB | 78 | Continuous | Ships in Area A. See notes 1 and 2. |

NOTES ON TABLE 5

1. Transmission rules:
 - a. Messages of a general nature will be made or repeated from 0100 to 0230 and every 4 hours. These transmissions will be concluded with "QNG." Greenwich time signal is emitted every hour as traffic permits. At 0100 and every 4 hours, the heading of all messages during the preceding 4 hours will be repeated.
 - b. If broadcast BN goes out of action due to damage, it will be replaced without orders by BN intercept. If broadcast HD goes out of action shift will be automatic to 138 kc. This procedure is to be carried out, also, if broadcast HD becomes unreadable due to enemy jamming.
2. Repetition of transmissions:
 - a. BN broadcast: at 0230 and every 4 hours, repetitions of all signals made during the preceding 4 hours on 107 kc. will be transmitted on 46.9 kc.
 - b. HD broadcast: at 0230 and every 4 hours, repetitions of all signals made during the preceding 4 hours will be transmitted on 51.5 kc.
3. H/F waves to be used by H broadcast: When so ordered by Admiralty, the following H/F waves will be used by H broadcast:
 - 14, 100 kc.—Day.
 - 11, 150 kc.—Day.
 - 6, 805 kc.—Night.
 - 4, 605 kc.—Night.

Time of change from day to night frequency will be as ordered by signal.

 c. CN Broadcast: at 0230 and every 4 hours, repetitions of headings of all messages made during the preceding four hours will be transmitted on 145 kc.

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352. Organization of the Whitehall broadcast for Special Operations.—

During large scale Fleet operations in which ships from several commands may be co-operating, Admiralty may promulgate details of the W/T organization in the following form:

a. Messages for ships taking part in current operation are being routed on broadcast "HD." Intercommunication waves are Fleet wave and 4740 kc. Enemy reports affecting ships on convoy duty will be repeated on broadcast "BN" by CinC Western Approaches, in cases where this has not already been done by the W/T station receiving the original report. CinC Western Approaches will then be responsible for routing on broadcast "HD" any signals to convoys which may affect ships taking part in current operations.

b. If Plymouth W/T station or any other shore W/T station is ordered to set watch on the Fleet wave the fact will be promulgated and such W/T stations will send call sign MTA a few times in a manner similar to Scapa W/T station.

c. Once the enemy is being reported regularly retransmission of such reports on Fleet wave by shore W, T stations is to cease as they are liable to "jam" original reports.

APPENDIX II

360. PRINCIPAL SHIP-TO-SHORE FREQUENCIES

361. Table of principal ship-to-shore frequencies.—Table 6 A contains the principal British ship-to-shore frequencies. It is subdivided by frequencies into five tables. Each table lists alphabetically the stations keeping watch, with their call signs and the schedules of the watch. Additional information is given in the notes following each table. Rules for the transmission of call signs on each frequency are given in article 362. Australian and New Zealand are listed separately in table 6 B of article 363.

TABLE 6 A

1. 4740 kilocycles:

| Station | Call Sign | Periods keeping W/T watch | | |
|----------------|----------------|---------------------------|------------|------------|
| | | August | September | October |
| Alexandria | MSA | Continuous | Continuous | Continuous |
| Algiers | BRF | Continuous | Continuous | Continuous |
| Ascension | ZBI | | | 2200-0800 |
| Bermuda | GYG | 0000-1000 | 0000-1000 | 2200-1200 |
| Bombay | VWF | 1600-0400 | 1400-0200 | 1400-0200 |
| Canada | { CZP CGE } | Continuous | Continuous | Continuous |
| Ceylon | GZH | 1600-0200 | 1400-0200 | 1400-0200 |
| Falklands | VPC | 2000-1200 | 2200-1200 | 2200-1000 |
| Gibraltar | GYU | Continuous | Continuous | Continuous |
| Iceland | MAS | Continuous | Continuous | Continuous |
| Kilindini | MXT | | | 1600-0200 |
| Malta | GYZ | Continuous | Continuous | Continuous |
| Mauritius | VRS | | 1400-0400 | 1600-0200 |
| Naples | GQT | Continuous | Continuous | Continuous |
| N. Russia | MGD | 1600-0600 | 1600-0800 | 1800-0600 |
| South Africa | { ZSD ZSC } | 1600-0600 | 1400-1000 | 1400-1000 |
| St. Helena | ZHH | | | 2200-0800 |
| United Kingdom | GYD | Continuous | Continuous | Continuous |
| West African | MTD | 2200-0800 | 2000-0800 | 2000-0800 |

Notes.—Stations answer on calling frequency. West African stations answer on Broadcast "FT" in addition. 4205 kc. will be available in the Mediterranean; otherwise it will not be manned at shore W/T stations.

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TABLE 6 A—Continued

2. 6300 kilocycles:

| Station | Call Sign | Periods keeping W/T watch | | |
|----------------|-----------------------|---------------------------|------------|------------|
| | | August | September | October |
| Aden | GZQ | 1600-0600 | 1600-0400 | 1400-0600 |
| Alexandria | MSA | Continuous | Continuous | Continuous |
| Algiers | BRF | Continuous | Continuous | Continuous |
| Ascension | ZBI | 2000-0800 | 1800-0800 | |
| Canada | { CGX CZP } | Continuous | Continuous | Continuous |
| Falklands | VPC | Continuous | 2200-1200 | 2200-1000 |
| Gibraltar | GYU | Continuous | Continuous | Continuous |
| Iceland | MAS | 2000-0800 | | |
| Kilindini | MXT | 1800-0400 | 1600-0400 | |
| Malta | GYZ | Continuous | Continuous | Continuous |
| Mauritius | VRS | 1400-0400 | | |
| N. Russia | MGD | | 0800-1600 | 0600-1800 |
| South Africa | { ZSC ZSD } | 1600-0600 | 1800-0600 | 1800-0600 |
| St. Helena | ZHH | 2000-0800 | 1800-0800 | |
| United Kingdom | GZZ | Continuous | Continuous | Continuous |
| West Africa | { VPU FUW VPG } | 2200-0800 | 2000-0800 | 2000-0800 |

Notes.—Stations answer on calling frequency. West African Stations answer on Broadcast "FT" in addition.

TABLE 6 A—Continued

3. 8290 kilocycles:

| Station | Call Sign | Periods keeping W/T watch | | |
|----------------|-----------------------|---------------------------|------------|------------|
| | | August | September | October |
| Alexandria | MSA | Continuous | Continuous | Continuous |
| Ascension | ZBI | 0800-2000 | 0800-1800 | 0800-2200 |
| Awarua | ZLB | Continuous | Continuous | Continuous |
| Bermuda | GYG | Continuous | Continuous | Continuous |
| Bombay | VWF | Continuous | Continuous | Continuous |
| Canada | { CGX CZP } | Continuous | Continuous | Continuous |
| Ceylon | GZH | Continuous | Continuous | Continuous |
| Falklands | VPC | | 1200-2200 | 1000-2200 |
| Gibraltar | GYU | Continuous | Continuous | Continuous |
| Iceland | MAS | 0800-2000 | 0800-2000 | 0800-1800 |
| Kilindini | MXT | 0400-1800 | 0400-1600 | 0200-1600 |
| Malta | GYZ | Continuous | Continuous | Continuous |
| Mauritius | VRS | Continuous | Continuous | Continuous |
| N. Russia | MGD | 0600-1600 | | |
| South Africa | { ZSC ZSD } | Continuous | Continuous | Continuous |
| St. Helena | ZHH | 0800-2000 | 0800-1800 | 0800-2200 |
| United Kingdom | GZZ | Continuous | Continuous | Continuous |
| West Africa | { FUW VPG VPU } | Continuous | Continuous | Continuous |

Notes.—Stations answer on calling frequency. West African stations answer on Broadcast "FT" in addition. Awarua answers calls on 8250 kc.

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Table 6A—Continued

4. 12685 kilocycles:

| Station | Call Sign | Periods keeping W/T watch | | |
|----------------|-----------------------|---------------------------|-----------|-----------|
| | | August | September | October |
| Aden | GZQ | 0600-1600 | 0400-1600 | 0600-1400 |
| Awarua | ZLB | 1800-0400 | 1800-0400 | 1800-0400 |
| Bermuda | GYG | 1000-0000 | 1000-0000 | 1200-2200 |
| Bombay | VWF | 0400-1600 | 0200-1400 | 0200-1400 |
| Canada | { CGX CZP } | 1000-0000 | 1000-0000 | 1200-2200 |
| Falklands | VPC | 1200-2000 | 1200-2200 | 1000-2200 |
| Gibraltar | GYU | 0800-2000 | 0800-1800 | 0800-1800 |
| Mauritius | VRS | 0400-1400 | 0400-1400 | 0200-1600 |
| South African | { ZSC ZSD } | 0600-1600 | 0600-1800 | 0600-1800 |
| United Kingdom | GZZ | 0600-0000 | 0600-2200 | 0800-2200 |
| West Africa | { FUW VPG VPU } | 0800-2200 | 0800-2000 | 0800-2000 |

Notes.—Stations answer on calling frequency. West African Stations answer on Broadcast "FT" in addition. Awarua answers calls on 12600 kc.

5. 16845 kilocycles:

| Station | Call Sign | Periods keeping W/T watch | | |
|----------------|----------------|---------------------------|-----------|-----------|
| | | August | September | October |
| Bombay | VWF | 0400-1600 | 0200-1400 | 0200-1400 |
| Canada | CGX | | 1200-0000 | 1200-2000 |
| Ceylon | GZH | 0200-1600 | 0200-1400 | 0200-1400 |
| Gibraltar | GYU | 0800-2000 | 0800-1800 | 0800-1800 |
| South Africa | { ZSC ZSD } | 0600-1600 | 1000-1400 | 1000-1400 |
| United Kingdom | GKS | 1000-2000 | 1200-2000 | 1200-2000 |
| West Africa | VPU | 0800-2200 | 0800-2000 | 0800-2000 |

Notes.—Stations answer on calling frequency. West African Stations answer on Broadcast "FT" in addition. Ceylon W/T answers on Area Broadcast and not on calling frequency.

APPENDIX II

362. Transmission of call signs on ship-to-shore frequencies.—Call signs transmitted on the ship-to-shore frequencies, as given in table 6 A, are to be made in accordance with the following table. They are not to be made more than five times except on 16845 kc. when they may be transmitted for not more than 1 minute.

| Fre- quency | W/T Station | Times of transmission |
|------------------------|----------------|---|
| 4740 12685 16845 | United Kingdom | 00 and 30 minutes past each hour |
| | Mediterranean | 25 and 55 minutes past each hour |
| | West African | 50 minutes past each hour |
| | Canadian | 15 and 45 minutes past each hour |
| | South African | 20 and 40 minutes past each hour |
| | East Indies | As ordered by C-in-C E. F. |
| 6300 8290 | United Kingdom | 00 each hour |
| | Mediterranean | 30, 90, 105 minutes past each EVEN hour |
| | West African | 45 minutes past each EVEN hour |
| | Canadian | 15, 75 minutes past each EVEN hour |
| | South African | 10, 50, 85 minutes past each EVEN hour |
| | East Indies | As ordered by C-in-C E. F. |

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363. Table of Australian and New Zealand ship-to-shore frequencies.—The following table contains the Australian and New Zealand ship-to-shore frequencies. The notes in article 361 correspond to table 6 B, also.

TABLE 6 B

| Station | Call sign | 4235 | 8470 | 12705 | 16940 |
|-------------------------------|-----------|--------------------|--------------------|--------------------|--------------------|
| AUCKLAND ⁴ | ZLE | N | X | | D |
| BELCONNEN | VHC | X | X | X | 2200 to 1000 |
| COONAWARRA | VHL | 1000 to 2200 | X | 2200 to 1000 | |
| DARWIN RADIO ¹ | VID | 1000 to 2000 | | | 2000 to 1000 |
| ESPERANCE RADIO ¹ | VIE | | 1000 to 2200 | 2200 to 1000 | |
| FLINDERS NAVDEP | VHJ | X | X | | |
| GARDEN ISLAND | VHD | 1000 to 2200 | | | 2200 to 1000 |
| HOBART RADIO ¹ | VIH | 1000 to 2200 | 2200 to 1000 | | |
| PORT MORESBY (BRAND RDO) | VHZ | 1000 to 2200 | 2200 to 1000 | | |
| SYDNEY RADIO ¹ | VIS | 1000 to 2200 | X | 2200 to 1000 | |
| THURSDAY ISLAND ² | VLM | X | | | |
| THURSDAY ISL RDO ¹ | VII | | X | | |
| TOWNSVILLE | VIF | | X | | |
| TOWNSVILLE RDO ¹ | VIT | X | | | |
| SUVA ^{3 4} | ZGN | N | | D | |
| WAIOURU ³ | ZLO | | | | |

NOTES ON TABLE 6 B

¹ Commercial station.

² Shifts to fixed service at 0000 and every 2 hours.

³ Answers on intercept WV.

⁴ "N" represents a night schedule as follows:

0430 to 1830—1 April to 31 October.

0600 to 1700—1 November to 31 March.

"D" represents a day schedule as follows:

1830 to 0430—1 April to 31 October.

1700 to 0600—1 November to 31 March.

APPENDIX II

370. BRITISH "PORT WAVES"

371. Table of principal British "Port Waves."—The British "Port Waves" correspond in general to "Harbor Frequencies" used in some U. S. areas. The following table shows the station, call sign, and frequencies of the principal "Port Waves" in the listed areas. Stations marked with an asterisk (*) have additional notes following the table. The use of the frequencies listed are subject to local regulations which should be obtained by U. S. ships. Guards are continuous unless otherwise stated.

TABLE 7

| Area and stations | Call sign | Frequency | Area and stations | Call sign | Frequency | |
|-----------------------------------|-----------|-----------|--|-----------|-----------|------|
| Western Approaches: | | | Mediterranean: | | | |
| Aultbea..... | GXB | 1740 | Ajaccio..... | FUY | 2150 | |
| Belfast*'''..... | MSF | | Alexandria..... | MSA | | |
| Greenock..... | GXU | | Algiers..... | BRF | | |
| Holyhead..... | MFN | | Beirut*''..... | MIB | | |
| Liverpool..... | MAD | | Benghazi*''..... | MJF | | |
| Londonderry*'''..... | MGK | | Bone..... | BRH | | |
| Milford Haven..... | MAE | | Bougie..... | BRF | | |
| Portrush*'''..... | MGP | | Bizerta..... | BRG | | |
| Australia and New Zealand: | | | Casablanca..... | NJC | | |
| Adelaide*..... | VIA | 425 | Gibraltar..... | GYU | | 2150 |
| Auckland..... | ZLD | 2940 | Haifa*''..... | MAT | | |
| Brisbane..... | VHF | 425 | Malta..... | GYZ | | |
| Darwin..... | MTH | 425 | Messina..... | GQW | | |
| Hobart..... | VHA | 425 | Oran..... | BRD | | |
| Newcastle..... | VHE | 425 | Palermo..... | NZH | | |
| Freemantle..... | VIXØ | 425 | Philippeville..... | FAZ | | |
| Melbourne..... | VHH | 425 | Port Said*''..... | MIP | | |
| Sydney..... | VHD | 425 | Tripoli..... | MIR | | |
| Port Moresby..... | VHZ | 425 | Salerno..... | NXG | | |
| Townsville..... | VIF | 425 | Suez..... | MID | | |
| Waiouru..... | ZLG | 3000 | East Indies and South Atlantic: | | | |
| West Africa: | | | Bombay..... | VWF | 3000 | |
| Ascension..... | ZBI | 500 | Capetown..... | ZXQ | 1579 | |
| Dakar..... | FUW | 2200 | Calcutta..... | VTF | 3000 | |
| Pointe Noire..... | FHH | 500 | Ceylon..... | GZH | 3000 | |
| Takoradi..... | VPG | 2200 | Chittagon..... | VVE | 3000 | |
| Western Atlantic: | | | Cochin..... | VTN | 3000 | |
| Gaspe*'..... | CFL | 425 | Diego Suarez..... | MXX | 3000 | |
| Halifax..... | CFH | 425 | Durban..... | ZSD | 2333 | |
| Louisberg..... | VAS | 143 | Karachi..... | VTD | 3000 | |
| Quebec*'..... | CFI | 425 | Kilindini..... | MXT | 2333 | |
| Sydney*'..... | CZE | 425 | Madras..... | VUS | 3000 | |
| St. John, N. B.*..... | CZC | 425 | Simonstown..... | ZSC | 425 | |
| St. John, N. F..... | CZP | 1740 | Trincomalee..... | MTR | 3000 | |
| Rimouski..... | CZR | 425 | Vizagapatam..... | VTO | 3000 | |
| Trinidad..... | MHK | 1650 | Zanzibar..... | GXV | 3000 | |
| | | | St. Helena..... | ZHH | 500 | |
| | | | Walvis..... | QAO | 1579 | |

NOTES ON TABLE 7

- *Adelaide and St. John, N. B., answer calls on 500 kc.
- **Gaspe, Quebec, and Sydney keep guard during the summer only.
- '''Beirut, Haifa, Benghazi, and Port Said keep R/T watch only.
- ''''Londonderry and Belfast are remote controlled by Portrush.

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380. BRITISH MEDITERRANEAN W/T ORGANIZATION

381. The following articles are in amplification of details listed previously and are published to assist U. S. ships temporarily entering the Mediterranean on Convoy Escort duty. Details of the broadcast schedules and limits of W/T areas are listed in articles 220-322; ship-to-shore frequencies are listed in article 361 and table 6 A; Port Waves are given in Table 7.

382. Waves for Convoy Escorts.—The following table shows waves for convoy escort listing the type of ship, the normal watch they keep and the watch that will be kept in the event of U-Boat or aircraft attack. The signification of the letters used are explained in the notes following the table.

TABLE 8 A

| Unit | Normal | U-Boat or Aircraft attack |
|-----------------------------------|-----------------|---------------------------|
| Destroyers and above..... | L, R/TS, G..... | L, R/T, G. |
| Sloop, frigate..... | L, R/TS, G..... | L, R/T, G. |
| Corvette, trawler, minesweeper.. | L, R/TS..... | L, R/T. |
| Ship with less than 3 operators.. | R/TS..... | R/T. |
| | | |

NOTES TO TABLE 8 A

L: Area broadcast (see table 2).

R/T: Convoy R/T (voice wave): on 2410 kc. continuous.

R/TS: Convoy R/T (voice wave): on 2410 kc. loudspeaker watch.

G: W/T guard on one of the following:

1. Port Wave.
2. Commercial wave (500 kc.)
3. Convoy H/F
4. Adjacent area broadcast.
5. Coastal guard.

APPENDIX II

383. Additional frequencies.—The following table shows additional frequencies in use in the Mediterranean which may be required by Convoy Escorts.

TABLE 8 B

| Frequency | Use | Remarks |
|----------------------|---|--|
| 2150 kc. | Port Wave | Additional watch is to be maintained for 2 hours before entering and 1 hour after leaving harbor at ports where this wave is kept. (See table 7.) Watch is kept also at Fighter Sector H. Q's. |
| 2410 kc. | Convoy R/T | Watch is to be set for A/S hunting if not already kept. A/S A/C may cooperate in hunt on this wave. |
| 3925 kc. 6666 kc. | Convoy H/F (Night) (Day) | A/C on convoy escort keep watch on this wave and transmit direct to their ground stations who repeat back the messages. Any enemy reports are retransmitted on naval waves. |
| 103.725 mc. | Inter Fighter Directory Officers Wave | In addition to normal function this wave may be used by day and night for passing Radar reports. |
| 112.86 mc. | Coastal Guard VH/F | For communication with shore based fighters. |
| 116.1 mc. | VH/F World Guard | |
| 124.02 mc. | Naval Guard | |
| 65.74 mc. | TBS Convoy R/T | Watch kept in convoys (except central Mediterranean) when all escorts and the Commodore's ships are suitably equipped. It may be kept in addition to 2410 kc. |
| 60 mc. | Central Mediterranean TBS Convoy R/T | |

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384. **Fighter control.**—The fighter control rooms controlling day fighters on 112.86 mc./s. are established as follows:

| <i>Location</i> | <i>R/T Call Sign</i> | <i>W/T Call Sign</i> |
|------------------|----------------------|----------------------|
| Ajaccio..... | Foodshop..... | 48Q |
| Alghero..... | Colgate..... | 73Y |
| Algiers..... | Oxter..... | Ø1G |
| Bastia..... | Blacktop..... | 87H |
| Benghasi..... | Beeswing..... | QP5 |
| Bizerta..... | Whipsnade..... | 47S |
| Bone..... | Label..... | 39G |
| Cagliari..... | Bunting..... | 32J |
| Casablanca..... | Brightside..... | 5ØG |
| Catania..... | Porpoise..... | 94L |
| Djidjelli..... | Cousin..... | 98P |
| Foggia..... | Cardclub..... | 52J |
| Malta..... | Gondar..... | GFZ |
| Misurata..... | Carpet..... | 1MM |
| Naples..... | Chaprone..... | 28Y |
| Oran..... | Bradshaw..... | 29K |
| Palermo..... | Dookey..... | 66P |
| Taranto..... | Larboard..... | 62G |
| Tobruk..... | Firmer..... | 3KR |
| Tripoli (L)..... | Berlin..... | KN8 |