

RESTRICTED

MERCHANT SHIP COMMUNICATIONS IN WARTIME

**Appendix VIII
to Communication Instructions
1944**

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

(1)

COMMUNICATION INSTRUCTIONS

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APPENDIX VIII. WAR TIME COMMUNICATIONS WITH MERCHANT SHIPS

Section A. VISUAL

100. General.—Visual communications with merchant ships in wartime are conducted in accordance with instructions contained in *The International Code of Signals* (H. O. 88). Specific instructions, primarily for ships in convoy are contained in *Wartime Instructions for Merchant Ships*, Vol. I, Visual Signalling Code and Instructions (WIMS-I), a Limited Combined publication held by United Nations merchant ships, men-of-war, and shore authorities, responsible for the safety of merchant shipping.

Section B. RADIO

200. GENERAL

201.—Communications by radio are conducted in accordance with instructions contained in *Wartime Instructions for Merchant Ships*, Vol. III, Radio Procedure (WIMS-III), a Limited Combined publication, distributed to the same holders as WIMS-I. This publication describes the modified commercial procedure which has been adopted for use in wartime communications to and from United Nations merchant ships and Naval Commands, and includes a discussion of the system of Broadcasts for Allied Merchant Ships (BAMS System), written for the guidance of merchant vessels. Supplementary information as to the handling of BAMS messages by naval authorities is contained in the following paragraphs:

300 SHORE TO SHIP COMMUNICATIONS (BAMS SYSTEM)

301. General.—The system of broadcasts for Allied merchant ships (BAMS System) provides for the transmission of official messages to merchantmen of the United Nations in any part of the world.

302. Organization.—The BAMS System is designed for communication by the best employment of radio stations available. The world has been divided into three zones, each of which is covered by a high-powered Zone station. Each zone is divided into areas covered by one or more Area stations. See plate 1—VIII, showing these divisions. In order that local coverage within an area may be as complete as possible, numerous Coastal stations operating on intermediate frequencies also participate.

303. BAMS Area Delineations.—

Area 1A:

Northern limit—the North Pole.

Southern limit—the parallel of 43 degrees North.

Eastern limit—the coast of Europe to the meridian of 80 degrees East in the Arctic Ocean.

Western limit—the meridian of 40 degrees West.

Area 1B:

Northern limit—the parallel of 43 degrees North.

Southern limit—the parallel of 26 degrees 10 minutes North.

Eastern limit—the meridian of Gibraltar.

Western limit—the meridian of 40 degrees West.

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Area 2A:

Northern limit—the North Pole.
Southern limit—the parallel of 32 degrees North.
Eastern limit—the meridian of 40 degrees West.
Western limit—the east coast of the North American continent.

Area 2B:

Northern limit—the parallel of 32 degrees North.
Southern limit—the parallel of 15 degrees South.
Eastern limit—the meridian of 40 degrees West from latitude 32 degrees North to latitude 20 degrees North; thence direct to a position 15 degrees South and 15 degrees West.
Western limit—the east coast of the North and South American continents.

Area 3A:

Northern limit—the parallel of 26 degrees 10 minutes North.
Southern limit—the parallel of 15 degrees South.
Eastern limit—the west coast of Africa.
Western limit—the meridian of 40 degrees West from 26 degrees 10 minutes North to 20 degrees North, and thence to a position 15 degrees South and 15 degrees West.

Area 3B:

Northern limit—the parallel of 15 degrees South.
Southern limit—the South Pole.
Eastern limit—the west and south coast of Africa, and thence down the meridian of Algoa Bay (25°35'30" E.).
Western limit—the meridian of 15 degrees West.

Area 3C:

Northern limit—the parallel of 18 degrees South from the east coast of Africa to Diego Suarez.
Southern limit—the South Pole.
Eastern limit—the west coast of Madagascar, and thence down the meridian of 45 degrees East.
Western limit—the meridian of Algoa Bay (25°35'30" E.).

Area 4:

Northern limit—the parallel of 15 degrees South.
Southern limit—the South Pole.
Eastern limit—the meridian of 15 degrees West.
Western limit—the east coast of the South American continent, and thence down the meridian of 74 degrees West.

Area 5A:

Northern limit—a straight line joining position latitude 0 degrees, longitude 100 degrees East to the coast of northwest Australia at 130 degrees East.
Southern limit—the South Pole.
Eastern limit—the western portion of the Australian coast line and thence down the meridian of 130 degrees East.
Western limit—the meridian of 100 degrees East.

Area 5B:

Northern limit—the parallel of 23 degrees South.
Southern limit—the South Pole.
Eastern limit—the meridian of 160 degrees East.
Western limit—the southeastern portion of the Australian coast line, and thence down the meridian of 130 degrees East.

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Area 5C:

Northern limit—the Equator.

Southern limit—the parallel of 23 degrees South.

Eastern limit—the meridian of 165 degrees East from the Equator to latitude 10 degrees South, thence direct to a position 17 degrees South and 160 degrees East, and thence down the meridian of 160 degrees East.

Western limit—the meridian of 130 degrees East from the Equator to the north coast of Australia, and thence round the northern and eastern coast of Australia.

Area 5D:

Northern limit—the parallel of 20 degrees North.

Southern limit—a straight line joining position latitude 0 degrees, longitude 100 degrees East to the coast of northwest Australia at 130 degrees East.

Eastern limit—the meridian of 130 degrees East.

Western limit—the meridian of 100 degrees East.

Area 6A:

Northern limit—the North Pole.

Southern limit—the parallel of 42 degrees North.

Eastern limit—the north and west coast of the North American continent.

Western limit—the north and east coast of the continent of Asia.

Area 6B:

Northern limit—the parallel of 42 degrees North.

Southern limit—the parallel of 20 degrees North from the coast of Asia to 130 degrees East; thence along the Equator to 110 degrees West; then from position 11 degrees North and 110 degrees West to the coast of the American continent at the border of Mexico and Guatemala.

Eastern limit—the west coast of the North American continent from 42 degrees North to the border of Mexico and Guatemala, and thence down the meridian of 110 degrees West.

Western limit—the east coast of Asia from 42 degrees North to 20 degrees North, and thence down the meridian of 130 degrees East.

Area 6C:

Northern limit—the Equator.

Southern limit—the South Pole.

Eastern limit—the meridian of 110 degrees West.

Western limit—the meridian of 165 degrees East from the Equator to latitude 10 degrees South; thence direct to a position 17 degrees South and 160 degrees East; and thence down the meridian of 160 degrees East.

Area 7A:

Northern limit—the south coast of the continent of Asia.

Southern limit—the parallel of 18 degrees South from the east coast of Africa, through Diego Suarez, to longitude 80 degrees East; thence direct to a position latitude 0 degrees and longitude 100 degrees East.

Eastern limit—the meridian of 100 degrees East.

Western limit—the east coast of Africa, as far west as the meridian of Aden.

Area 7B:

Northern limit—the parallel of 12 degrees South.

Southern limit—the South Pole.

Eastern limit—the meridian of 80 degrees East.

Western limit—the east coast of Madagascar, and thence down the meridian of 45 degrees East.

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Area 7C:

Northern limit—a straight line joining position 12 degrees South and 80 degrees East to position latitude 0 degrees and 100 degrees East.

Southern limit—the South Pole.

Eastern limit—the meridian of 100 degrees East.

Western limit—the meridian of 80 degrees East.

Area 8:

Northern limit—a straight line joining position 11 degrees North and 110 degrees West to the coast of the American continent at the border of Mexico and Guatemala.

Southern limit—the South Pole.

Eastern limit—the west coast of the South American continent, and thence down the meridian of 74 degrees West.

Western limit—the meridian of 110 degrees West.

Area 9:

Area 9 is divided into areas 9A and 9B. Area 9A consists of the Mediterranean Sea, with its western limit on the meridian of Gibraltar. The dividing line between areas 9A and 9B passes across the Suez Canal. Area 9B consists of the Red Sea, with its southeastern limit on the meridian of Aden.

304. Operation.—Zone and Area stations broadcast at routine times, on intermediate and high frequencies, general and individually addressed messages for ships in their own zone or area respectively. Coastal stations are utilized for the broadcast of messages to merchant ships believed to be within range, except at times when broadcast schedules for their particular zone or area are in progress. Coastal stations call on 500 kc. and shift to their working frequency for the transmission of BAMS messages. See table showing Zone, Area, and Coastal stations in art. 330.

305. Arranging Authorities.—Transmissions of messages for merchant ships via Zone, Area, and Coastal stations are arranged by certain designated shore-based "Arranging Authorities." See table in art. 320. These Arranging Authorities are responsible for seeing that BAMS messages passed to them are transmitted by Zone and Area stations assigned to them and by any Coastal station specified, in accordance with instructions contained in the message heading. In addition, Arranging Authorities are responsible for the transmission by Coastal stations under their control of such messages as are considered necessary, even though the originator may not have specified such transmission.

306. Originator's responsibility.—The originator of a BAMS message is responsible for routing the message to the Arranging Authorities controlling the Zone and Area stations

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In addition, the originator of a BAMS message is responsible for routing the message for information to authorities concerned.

of BAMS traffic, it is not necessary to send a dispatch to all the Arranging Authorities listed in any area if it is not desired to utilize all the radio stations assigned for the transmission of BAMS traffic for the area concerned. Traffic should be sent only to those Arranging Authorities whose radio stations cover the plotted position of the addressee; if, however, an originator considers that an Arranging Authority needs to know the contents of a BAMS dispatch but does not need to arrange for its transmission via the station(s) under his control, the message is to be addressed as shown in article 315 (c). In the case of general messages, the Zone and Area station at least would always be utilized, and in the case of individually addressed messages the Area station and appropriate Coastal stations at least should be utilized, with the Zone

307
When ships are passing from one area to another, messages which concern them shall be routed via the Area stations of both areas and via the appropriate Zone station.

BAMS SYSTEM

311. Operating signals.—In order to facilitate the handling of BAMS messages

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between naval authorities, Combined Operating Signals for world-wide use have been allocated as follows:

- QJL** Pass to ——— for information only.
- QLP** Pass to ——— for BAMS transmitting action only.
- QHX** Pass to ——— for information and BAMS transmitting action.

These procedure signals are to be used in connection with unenciphered U. S. Navy call signs or combined call signs as appropriate. All transmission of BAMS messages between naval authorities must carry appropriate procedure signal(s) except where messages are transmitted to radio stations for broadcast where no intermediate relaying station is involved.

312. BAMS headings.—A modified commercial procedure is utilized for the address of BAMS messages and immediately follows the procedure signal(s), radio station call sign(s), and station serial number. Component parts of this BAMS heading should always appear in the following order:

- a. BAMS instructional group.
- b. Optional inserts:
 1. Name or call sign of coastal station from which transmission is desired (see art. 315 (b)).
 2. The phrase "HAS BEEN BROADCAST BY ———" for the information of Arranging Authorities addressed. See article 315 (c).
- c. BAMS area(s) to which message is to be transmitted. Example: BAMS2B.
- d. Collective or individual call signs as appropriate.
- e. Precedence indicator in plain language. (U. S. or British designations, depending on the nationality of the originating authority.)
- f. Name of originator in plain language preceded by FROM.
- g. Group count. Example: CDE25, if encoded dispatch; CK25, if plain language includes text between BT's.

313. The BAMS Instructional Group consists of two elements; the first and second letters should be considered together as should the third, fourth, and fifth letters, as shown in the following table:

First and second letters of group	Third, fourth, and fifth letters of group
AA Broadcast this message (or text and time of origin of message quoted) to ——— on zone or area broadcast routines for number of transmissions indicated.	
BB Broadcast this message (or time of origin and text of message quoted) to ——— on receipt and repeat at single operator periods. Total number of transmissions to be as indicated.	GGG For two transmissions. JJJ For three transmissions.
CC Arrange transmission of this message (or text and time of origin of message quoted) to ——— from Zone and/or Area station(s) for whom you are responsible, and if Coastal stations are indicated arrange transmissions from these stations. Number of transmissions from each station to be as indicated. In addition, irrespective of whether or not specific Coastal stations are indicated, you should, if considered necessary, arrange transmission from appropriate Coastal station(s) for which	KKK For four transmissions. LLL For twenty-four hours.

NOTE.—Should a merchant ship carry less than three radio operators, the fifth letter of the BAMS instructional group is to be replaced by Y or Z which are allocated meanings as follows: *(addition to art. 313)*

Y—Transmit at special single-operator periods.

Z—Transmit at special two-operator periods.

Originators of BAMS traffic normally possess information as to number of operators carried. If this is not known messages should be treated as for a single-operator ship.

Authority and may also be only when addressing Arranging Authority. as appropriate, before he group CC it is not ad, if so, the station(s) dual call signs may

be used to address BAMS messages.

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a. Convoy call signs.—Messages for a particular convoy or unit thereof are addressed by a two-letter group assigned before sailing. A different group is assigned each convoy. This key group is used in conjunction with the following letter-number combinations to form convoy call signs:

- D1—Commodore.
- D2—Vice Commodore.
- D3—The whole convoy.
- D4—The Commodore's portion of the convoy.
- D5—The Vice Commodore's portion of the convoy.
- D6—The Senior Officer of the Escort.
- D7—
- D8—
- D9—Stragglers from the convoy.

Example

Group XY having been assigned, the call sign used to address the whole convoy is XYD3.

b. Collective call signs, other than Convoy collective call signs discussed in *a.* above, utilize the four letters BAMS followed by a BAMS area designation if appropriate.

Example

BAMS—All United Nations Merchant Ships.

BAMS 2A—All United Nations Merchant Ships in BAMS AREA 2A.

c. Individual call signs.—A United Nations merchant ship is individually addressed by its wartime radio call sign.

315. Addressing BAMS traffic.—

a. The authority originating a BAMS message, addresses it as appropriate, in accordance with the foregoing and transmits it to Arranging Authorities and/or radio stations concerned. See table contained in article 320.

Example

A BAMS message is originated by Commander, Tenth Fleet (Convoy and Routing), and transmitted to Commander, Panama Sea Frontier, for the information of the latter authority and for transmission via the Area station controlled by him:

**NBA V NSS NR10—QHX—JOPE—
CCGGG BAMS2B STOP BAMS2B
BAMS2B PRIORITY FROM COM 10th
FLEET CDE141 BT TEXT BT 171216Z**

b. If broadcast by specific Coastal station(s) is desired by the originator, the call sign of the station(s) or name in plain language should be inserted immediately following the five-letter BAMS instructional group.

Example

A BAMS message is originated by Commander, Tenth Fleet (Convoy and Routing), transmitted to Commander, Panama Sea Frontier, for BAMS transmission via the Area station controlled by the latter, and, in addition, for transmission via Coastal station at Belize, message not for information of Commander, Panama Sea Frontier.

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**NBA V NSS NR6—QLP—JOPE—
CCGGG VPP (OR RADIO BELIZE)
BAMS2B STOP KFCG KFCG
PRIORITY FROM COM 10TH FLEET
CDE 51 BT TEXT BT Ø81111Z**

The Commander, Panama Sea Frontier will arrange transmission on Naval Radio Balboa Area broadcast, and in addition will transmit to Radio Belize for broadcast at other than scheduled times. The BAMS instructional group must be changed to AAGGG when the message is passed to Radio Balboa and to BBGGG for Radio Belize. The Procedure signal is omitted in the transmission to Radio Belize as complete instructions for that station are included in the BAMS instructional group.

c. Originating authorities should not normally pass messages directly to Coastal stations for transmission, but, if this is done, originators must indicate to the authority arranging the area transmission the action taken. Such indication will be in plain language immediately following the five-letter BAMS instructional group.

Example

A BAMS message is originated by the Commander, Panama Sea Frontier, transmitted via Naval Radio Guantanamo for broadcast and to Commander, Tenth Fleet (Convoy and Routing), for information only.

Transmission to Radio San Juan for relay to Radio Guantanamo:

**NAU V NBA NR6—QLP—NAW—
BBGGG BAMS2B STOP WXYZ WXYZ
PRIORITY FROM COMPASEAFRON
CDE17 BT TEXT BT 141611Z**

Transmission from Radio San Juan to Radio Guantanamo:

**NAW V NAU NR2
BBGGG BAMS2B STOP WXYZ WXYZ
PRIORITY FROM COMPASEAFRON
CDE17 BT TEXT BT 141611Z**

Transmission to COM 10th Fleet (C & R):

**NSS V NBA NR7—QJL—TUBA—
CCGGG HAS BEEN BROADCAST BY
NAW BAMS2B STOP WXYZ
WXYZ PRIORITY FROM COMPASEAFRON
CDE17 BT TEXT BT 141611Z**

Inasmuch as the first two letters of the BAMS instructional group, CC, are normally employed when addressing an Arranging Authority, CCGGG is used in the example of the transmission to COM 10th Fleet as shown above. It is emphasized that whenever the operating signal QJL is used in the headings of BAMS messages, the BAMS instructional group is not to be considered as an instruction to transmit, but is included only for the sake of uniformity.

316. Instructions to broadcasting stations.—

a. *Zone and Area stations.*—Zone and Area stations transmit BAMS traffic at scheduled times as listed in article 330. Transmissions shall not exceed a speed of 15 words or code groups per minute. If no traffic is on hand at a scheduled transmission period, Zone and

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Area stations will transmit their call letters and the International Operating Signal QRU for a period of not less than 5 minutes. Traffic lists precede zone and area broadcast schedules and consist of call signs (transmitted twice) and date time groups of messages awaiting transmission transmitted in the sequence in which messages will be broadcast. Traffic is to be broadcast in the following sequence:

1. Messages addressed to collective call signs in order:

- Zone call signs
- Area call signs
- Convoy call signs (in alphabetical sequence).

2. Messages addressed by individual call signs in (alphabetical sequence).

The makeup of the traffic list is of great importance since it tells merchant ship radio operators what messages will be addressed to them on the schedule that follows. Ships are permitted to discontinue covering BAMS schedules once they have received messages addressed to them as listed in the traffic list. Traffic lists must be correct and completely compiled and schedules following must correspond thereto. In the event that a BAMS message of higher than Routine precedence is received during the transmission of a BAMS schedule Zone and Area stations may transmit such message provided that it can be inserted in correct order in the traffic being broadcast. When transmissions of this nature are made, they shall be considered as extra and the transmission on the following schedule, in which the message is included in the traffic list, shall be considered as the first official transmission of the message for the purpose of determining the number of times the message is to be broadcast. Zone and Area stations transmit messages in the sequence indicated by the traffic lists—each message being preceded by the call sign of the addressee (transmitted twice). Each message is transmitted once through. On completion of the transmission of all messages indicated in the traffic list, new messages will be repeated in the same sequence as they were broadcast at the first transmission.

The BAMS instructional groups are omitted in the transmission by the broadcasting station.

Example

**BAMS2B BAMS2B DE NSS BT BAMS2B BAMS2B PRIORITY FROM
COM 10TH FLEET CDE20 BT TEXT BT 161217Z.**

b. Coastal stations will broadcast BAMS messages upon receipt if zone or area schedules for the BAMS area concerned are not in progress or about to commence. If zone or area schedules are being transmitted, Coastal stations shall await the completion of the scheduled broadcasts before commencing transmissions. Coastal stations call on 500 kc., transmit call signs and date and time groups of messages to be transmitted and shift by international Q signal to their working frequencies, as listed in article 330, pausing for two minutes before the transmission of messages. During this 2-minute period Coastal stations shall transmit their call letters on their working frequency. Messages shall be repeated for the total number of times indicated by the BAMS instructional group spaced at appropriate intervals such as 4 or 6 hours and conforming to the single-operator periods. Transmission shall not exceed a speed of 15 words or code groups per minute. The BAMS instructional group is omitted when messages are transmitted by Coastal stations as in the example shown in *a* above. If more than one BAMS message is on hand for transmission by a Coastal Station, messages are to be broadcast in the same sequence as directed by (a) above for Zone and Area Station broadcasts.

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317. Correcting BAMS messages.—All corrections to BAMS messages shall take the form of a new dispatch. Dispatches containing corrections shall be transmitted to original addressee(s), using BAMS heading appearing in the original transmission(s). Corrections modifying the text of BAMS messages shall take the form of new enciphered messages. Corrections to errors in the transmission of code groups shall take the form of new plain language dispatches containing appropriate instructions as to the changes to be made as in the following example:

**MY 171025 CORRECT GROUP 3 5 AND 6 TO READ 54219 17254 33172
BT 171834Z.**

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1. This document is classified "RESTRICTED" because it contains information that is not to be disseminated outside the Department of Defense without the approval of the appropriate authority.

2. This document is to be controlled in accordance with the provisions of the Department of Defense Information Security Manual (DDISMAN), Volume 1, Part 1, and the Department of Defense Information Security Manual (DDISMAN), Volume 2, Part 1.

3. This document is to be controlled in accordance with the provisions of the Department of Defense Information Security Manual (DDISMAN), Volume 1, Part 1, and the Department of Defense Information Security Manual (DDISMAN), Volume 2, Part 1.

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320.

ARRANGING AUTHORITIES STATION RESPONSIBILITY

Area	Arranging authority	Zone station	Area station	Coastal station
1A	Admiralty	Rugby	Rugby PORTISHEAD	All stations.
1B	Admiralty Flag Officer Commanding, Gibraltar	Rugby	Rugby, Portishead.	Gibraltar.
2A	Commander in Chief, Canadian North-west Atlantic. COM 10th Fleet, C & R	Washington	Louisberg Washington	All Canadian stations. (Amagansett. Bermuda. Boston. Charleston. Norfolk.
2B	COM 10th Fleet, C & R COMPASEAFRON	Washington	Washington Balboa	(Barbados. Bermuda. Georgetown. Kingston. Miami. New Orleans. North Post, Trinidad. Olinda (Recife). San Juan. Guantanamo. Belize.
3A	Admiralty Naval Officer in Charge, West Africa	Rugby	Freetown, Dakar.	All stations.
3B	Admiralty Commander in Chief, South Atlantic	Rugby	Simonstown	All stations.
3C	Admiralty Commander in Chief, South Atlantic	Rugby	Simonstown DURBAN	All stations.
4	Naval Officer in Charge, Falkland Islands. GOM 10th Fleet, C & R COMDT., NOB Rio de Janeiro	Washington	Falklands Rio de Janeiro	Falklands. Juncao, Rio de Janeiro.
5A	Admiralty Naval Officer in Charge, Fremantle	Rugby	Perth	All stations.
5B	COMHAWSEAFRON Australian Commonwealth Naval Board.	Oahu	Sydney	All stations.
5C	COMHAWSEAFRON Australian Commonwealth Naval Board.	Oahu	Townsville	All stations.

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ARRANGING AUTHORITIES STATION RESPONSIBILITY—Continued

Area	Arranging authority	Zone station	Area station	Coastal station
5D	COMHAWSEAFRON Australian Commonwealth Naval Board. Naval Officer in Charge, Fremantle	Oahu	Darwin Perth	
6A	COMHAWSEAFRON COMWESTSEAFRON	Oahu	Oahu San Francisco	Astoria. Bull Harbor. Dutch Harbor. Estevan. Kodiak. Prince Rupert. Puget Sound. Victoria. <i>KETCHIKAN</i> Victoria.
6B	COMHAWSEAFRON COMWESTSEAFRON	Oahu	Oahu San Francisco	Honolulu (Coast Guard). Eureka, San Diego.
6C	COMPASEAFRON COMHAWSEAFRON COMSOPAC New Zealand Naval Board	Oahu	Balboa Auckland	(Bora Bora. Espiritu Santos. Noumea. Tutuila. All British stations.
7A	Admiralty Flag Officer, Ceylon	Rugby	Colombo	All stations.
7B	Admiralty Flag Officer, Ceylon	Rugby	Colombo	All stations.
7C	Admiralty Flag Officer, Ceylon	Rugby	Colombo	
8	Naval Officer in Charge, Falklands COM 10th Fleet, C & R COMPASEAFRON	Washington	Falklands Balboa	<i>ANTOKAGASTA</i> <i>VALPARAISO</i> <i>TALCAHUANO</i> <i>ARICA</i>
9A	Admiralty Flag Officer Commanding, Gibraltar Rear Admiral, Alexandria Vice Admiral, Malta	Rugby	Gibraltar Alexandria Malta	Gibraltar. Alexandria, Larnaca. Malta.
9B	Admiralty Naval Officer in Charge, Aden Rear Admiral, Alexandria	Rugby	Aden Alexandria	Aden, Port Sudan. Alexandria, Port Sudan.

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330.

LIST OF BRITISH AND U. S. RADIO STATIONS IN BAMS SYSTEM

Area	Station	Call sign	Working frequency	Time (GCT)		
1A	<i>Zone Station</i>					
	Rugby	GBR GKU GAY GIH	16 kc 149 kc 8910 kc 10650 kc	}0000.		
		GBR GKU GID GAD	16 kc 149 kc 13555 kc 19480 kc		}1200.	
		GBR GKU GAY GYD10	16 kc 149 kc 8910 kc 8910 kc <i>4775 kc</i>			}2000.
	<i>Area Stations</i>		(Frequencies and schedules same as for zone station).			
	Rugby					
	Portishead	GKU GKU4 GKU1	149 kc 4025 kc 7355 kc	}0200, 0600, 2200.		
		GKU GKU1 GKU3	149 kc 7355 kc 12455 kc		}1000, 1800.	
		GKU GKU3 GKU2	149 kc 12455 kc 17685 kc			}1415.
	<i>Additional Coastal Stations</i>					
	Burnham-on-Sea	GRL	476 kc			
	Cullercoats	GCC	484 kc			
	Humber	GKZ	467 kc			
	Malin Head ¹	GMH	421 kc			
	Niton	GNI	464 kc			
	North Foreland	GNF	418 kc			
	Portpatrick	GPK	461 kc			
	Seaforth	GLV	447 kc			
	Stonehaven	GND	421 kc			
	Valentia ¹	GCK	429 kc			
	Wick	GKR	435 kc			
	<i>ORMESBY</i>	<i>NFOI</i>	<i>600 kc</i>			
	1B	<i>Zone Station</i>				
Rugby.		(See Area 1A.)				
<i>Area Stations</i>						
Portishead.		(See Area 1A.)				
Rugby.	(See Area 1A.)					
<i>Additional Coastal Station</i>						
Gibraltar	GYW	470 kc				

¹ These stations are situated in NEUTRAL territory, and may NOT be used for belligerent communications. They will handle distress traffic, however, but apart from this are available for commercial purposes only. Any communications with these stations must be conducted by normal international commercial procedure, using international call signs.

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LIST OF BRITISH AND U. S. RADIO STATIONS IN BAMS SYSTEMS—Continued

Area	Station	Call sign	Working frequency	Time (GCT)	
2A	<i>Zone Station</i>				
	Washington.....	NSS	122 kc..... 4390 kc..... 9425 kc..... 12630 kc.....	} 0500, 1100, 1700, 2300.	
	<i>Area Stations</i>				
	Louisberg.....	VAS	111 kc..... 8490 kc..... 111 kc..... 12500 kc.....	} 0100, 0930. } 1300, 2130.	
	Washington.....	(Frequencies and schedules same as for zone station.)			
	<i>Additional Coastal Stations</i>				
	Amagansett.....	WSL	474 kc.....		
	Belle Isle.....	VCM	417 kc.....		
	Bermuda.....	VRT	451 kc.....		
	Boston.....	NAD	106 kc.....		
	Camperdown, N. S.....	VCS	441 kc.....		
	Charleston.....	NAO	145 kc.....		
	Fame Point.....	VCG	200 kc 484 KCS		
	Father Point.....	VCF	400 kc 484 KCS		
	Norfolk.....	NAM	102 kc.....		
	Quebec.....	VCC	441 kc.....		
Yarmouth.....	VAU	417 kc.....			
2B	<i>Zone Station</i>				
	Washington. (See Area 2A.)				
	<i>Area Stations</i>				
	Balboa.....	NBA	24 kc..... 148 kc..... 5515 kc..... 11080 kc..... 17690 kc.....	} 0400, 0800, 1400, 2200.	
	Washington. (See Area 2A.)	51 KCS* automatic Retran mission VIA RADIO TRINIDAD			
	<i>Additional Coastal Stations</i>				
	Barbados.....	VPO	425.5 kc.....		
	Belize.....	VPP	500 kc.....		
	Bermuda.....	VRT	451 kc.....		
	Georgetown.....	VRY	400 kc.....		
	Guantanamo.....	NAW	106 kc.....		
	Kingston.....	VQI	460 kc.....		
	Miami.....	WAX	482 kc.....		
	New Orleans.....	WNU	448 kc.....		
	North Post, Trinidad.....	VPL	440 kc. or 392 kc.....		
	Olinda.....	PPO	461.5 kc.....		
San Juan.....	NAU	127 kc.....			

APPENDIX VIII

LIST OF BRITISH AND U. S. RADIO STATIONS IN BAMS SYSTEM—Continued

Area	Station	Call sign	Working frequency	Time (GCT)		
3A	<i>Zone Station</i>					
	Rugby. (See Area 1A.)					
	<i>Area Station</i>					
	Freetown.....	VPU	143 kc..... 6610 kc..... 143 kc..... 9295 kc.....	} 0130. } 0730, 1330, 1900.		
	Dakar.....	FUW	143 kc..... 6610 kc..... 143 kc..... 9295 kc.....		} 0430, 2230. } 1030, 1630.	
	<i>Additional Coastal Stations</i>					
	Ascension Is.....	ZBI	400 kc.....			
	Dakar.....	FUW	480 kc.....			
	Freetown.....	VPU	143 kc.....			
	Lagos.....	VPY	425 kc.....			
	Port Etienne.....	FGB	425 kc.....			
	Takoradi.....	VPG	385 kc.....			
	3B	<i>Zone Station</i>				
		Rugby. (See Area 1A.)				
<i>Area Station</i>						
Simonstown.....		ZSC	143 kc..... 6464 kc..... 8333 kc..... 143 kc..... 8333 kc..... 12645 kc..... 143 kc..... 8333 kc..... 16666 kc.....	} 0145, 2100. } 0500, 1700. } 0900, 1300.		
<i>Additional Coastal Stations</i>						
Algoa Bay.....		ZSQ	461 kc.....			
Simonstown.....		ZSC	353 kc.....			
St. Helena.....		ZHL	425 kc.....			
Tristan da Cunha.....		ZHP	375 kc.....			
Walvis Bay.....		ZSV	425 kc.....			

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COMMUNICATION INSTRUCTIONS

LIST OF BRITISH AND U. S. RADIO STATIONS IN BAMS SYSTEM—Continued

Area	Station	Call sign	Working frequency	Time (GCT)	
3C	<i>Zone Station</i>				
	Rugby (See Area 1A.)				
	<i>Area Station</i>				
	Durban -----	ZSD	138.25 kc. 8800 kc. <i>4690 kc.s</i> 8800 kc. 138.25 kc. 8800 kc. 4690 kc. <i>71100 kc.s</i>	} 0130, 0530, 2130. } 0930, 1330, 1730.	
	<i>Additional Coastal Stations</i>				
	Algoa Bay-----	ZSQ	461 kc-----		
	Diego Suarez-----	MPH	450 kc-----		
	DURBAN -----	ZSD	425 kc-----		
	4	<i>Zone Station</i>			
		Washington. (See Area 2A.)			
<i>Area Stations</i>					
Rio de Janeiro-----		PPR	408 kc----- 8310 kc----- 16915 kc-----	} 0130, 0630, 1330, } 2030.	
Falklands-----		VPC	125 kc----- 4700 kc----- 125 kc----- 8555 kc----- 17110 kc-----		} 0400. } 1230, 1600.
<i>Additional Coastal Stations</i>					
Falklands-----		VPC	405 kc-----		
Juncao-----		PPJ	416 kc-----		
Rio de Janeiro-----		PPR	408 kc-----		
5A		<i>Zone Station</i>			
	Rugby. (See Area 1A.)				
	<i>Area Station</i>				
	Perth-----	VIP	125 kc----- 12375 kc----- 6240 kc-----	} 0218, 0618, 1018, } 1418, 1818, 2218.	
	<i>Additional Coastal Stations</i>				
	Broome-----	VIO	440 kc-----		
	Esperance-----	VIE	435 kc-----		
Geraldton-----	VIN	420 kc-----			
Perth-----	VIP	405 kc, 6240 kc-----			

APPENDIX VIII

LIST OF BRITISH AND U. S. RADIO STATIONS IN BAMS SYSTEM—Continued

Area	Station	Call sign	Working frequency	Time (GCT)
5B	<i>Zone Station</i>	NPM	16.68 kc. ² -----	} 0000. ³ 0500. 1700. 2000.
	Oahu-----		9090 kc-----	
			14390 kc-----	
			17370 kc-----	
			16.68 kc. ² -----	
			4525 kc-----	
			6380 kc-----	
			9090 kc-----	
			16.68 kc. ² -----	
			6380 kc-----	
	<i>Area Station</i>	VIS	9090 kc-----	} 0130, 0530, 0930, 1330, 1730, 2130.
	Sydney-----		14390 kc-----	
<i>Additional Coastal Stations</i>	VIA VIB VIH VIM VIS	Adelaide-----		
Brisbane-----		425 kc-----		
Hobart-----		435 kc. 6240 kc-----		
Melbourne-----		415 kc. 6250 kc-----		
Sydney-----		430 kc. 6220 kc-----		
		405 kc. 6245 kc-----		
5C	<i>Zone Station</i>	VIT VIC VII VIT VIG	Oahu. (See Area 5B.)	} 0030, 0430, 0830, 1230, 1630, 2030.
	<i>Area Station</i>		Townsville-----	
	<i>Additional Coastal Stations</i>		Cooktown-----	
	Thursday Island-----		405 kc-----	
	Townsville-----		415 kc., 6250 kc-----	
	Port Moresby-----		430 kc., 6225 kc-----	
			415 kc-----	
5D	<i>Zone Station</i>	VID VID	Oahu. (See Area 5B.)	} 0018, 0418, 0818, 1218, 1618, 2018.
	<i>Area Stations</i>		Darwin-----	
	Perth. (See Area 5A.)			
	<i>Additional Coastal Stations</i>		Darwin-----	
6A	<i>Zone Station</i>	NPG	Oahu. (See Area 5B.)	} 0300, 0900, 1600, 2100.
	<i>Area Stations</i>		San Francisco-----	
	Oahu. (See Area 5B.)		115 kc----- 9255 kc----- 12540 kc-----	

² In the event of failure of 16.68 kc. at any time, BAMS schedules will be transmitted automatically on 56 kc.

³ 56 kc. will replace 16.68 kc. on this schedule, Thursday only.

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LIST OF BRITISH AND U. S. RADIO STATIONS IN BAMS SYSTEM—Continued

Area	Station	Call sign	Working frequency	Time (GCT)	
6A (cont.)	<i>Additional Coastal Stations</i>				
	Astoria.....	NPE	148 kc.....		
	Bull Harbor.....	VAG	410 kc.....		
	Dutch Harbor.....	NPR	128 kc.....		
	Estevan.....	VAE	405 kc.....		
	Kodiak.....	NHB	106 kc.....		
	Prince Rupert.....	VAJ	400 kc.....		
	Puget Sound.....	NPC	112 kc.....		
	W. J. H. KETCHIKAN Victoria.....	W. J. H. VAK	112 kc 425 kc 441 kc.....		
6B	<i>Zone Station</i>				
	Oahu. (See Area 5B.)				
	<i>Area Stations</i>				
	San Francisco. (See Area 6A.)				
	Oahu. (See Area 5B.)				
	<i>Additional Coastal Stations</i>				
	Honolulu.....	NMO	425 kc.....		
	San Diego.....	NPL	128 kc.....		
	San Francisco.....	NPG/NMC	{ 115 kc..... 480 kc.....		
	6C	<i>Zone Station</i>			
Oahu. (See Area 5B.)					
<i>Area Stations</i>					
Balboa. (See Area 2B.)					
Auckland.....		ZLD	445 kc..... 7850 kc..... 14730 kc.....	} 0030, 0430, 0830, 1230, 2030.	
<i>Addition Coastal Stations</i>					
Apia.....		ZMA	375 kc.....		
Auckland.....		ZLD	445 kc.....		
Awarua.....		ZLB	405 kc.....		
Bora Bora.....		NXO	468 kc.....		
Espiritu Santo.....		NUB	468 kc.....		
Noumea.....		NXZ	468 kc.....		
Pitcairn Island.....		ZKG	395 kc.....		
Raratonga.....		ZKR	375 kc.....		
Suva.....		VRP2	441 kc.....		
Tutuila, Samoa.....		NPU	104 kc.....		
Wellington.....	ZLW	385 kc.....			

APPENDIX VIII

LIST OF BRITISH AND U. S. RADIO STATIONS IN BAMS SYSTEM—Continued

Area	Station	Call sign	Working frequency	Time (GCT)	
7A	<i>Zone Station</i>				
	Rugby. (See Area 1A.)				
	<i>Area Station</i>				
	Colombo.....	GZH	123 kc..... 4110 kc..... 8220 kc..... 12330 kc..... 123 kc..... 8220 kc..... 12330 kc..... 16440 kc..... 20550 kc.....	} 0130, 2100. } 0500, 0800, 1300, 1700.	
	Bombay ⁴	VWF	155 kc.....		} 0600, 1400, 2200.
	<i>Additional Coastal Stations</i>				
	Addu Atoll.....	MGJ	400 kc.....		
	Aden.....	GZQ	445 kc.....		
	Bahrein.....	VTE	460 kc.....		
	Bombay.....	VWB	420 kc.....		
	Calcutta.....	VWC	420 kc.....		
	Colombo.....	GZH	445 kc.....		
	Diego Suarez.....	MHP	450 kc.....		
	Karachi.....	VWK	410 kc.....		
	Madras.....	VWM	475 kc.....		
	Mombasa.....	VPQ	460 kc.....		
	Seychelles.....	ZCQ	440 kc.....		
7B	<i>Zone Station</i>				
	Rugby. (See Area 1A.)				
	<i>Area Station</i>				
	Colombo. (See Area 7A.)				
	<i>Additional Coastal Stations</i>				
Diego Suarez.....	MHP	450 kc.....			
Mauritius.....	VRS	468 kc.....			

⁴ Bombay repeats traffic for Area 7A which has previously been transmitted by Colombo. Ships may read Bombay in lieu of Colombo if reception from the latter station is not satisfactory.

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COMMUNICATION INSTRUCTIONS

LIST OF BRITISH AND U. S. RADIO STATIONS IN BAMS SYSTEM—Continued

Area	Station	Call sign	Working frequency	Time (GCT)
7C	<i>Zone Station</i> Rugby. (See Area 1A.) <i>Area Station</i> Colombo. (See Area 7A.)			
8	<i>Zone Station</i> Washington. (See Area 2A.) <i>Area Stations</i> Balboa. (See Area 2B.) Falklands. (See Area 4.) <i>Additional Coastal Stations</i> ARICA Antofagasta..... Valparaiso..... Talcahuano.....	 CCA CCF CCL CCT	 425KCS - - - - 150 kc..... 150 kc..... 150 kc.....	
9A	<i>Zone Station</i> Rugby. (See Area 1A.) <i>Area Stations</i> ⁵ <i>Additional Coastal Stations</i> Alexandria..... Gibraltar..... Larnaca..... Malta.....	 SUH GYW ZFE VPT	 458 kc..... 470 kc..... 447 kc..... 458 kc.....	
9B	<i>Zone Station</i> Rugby. (See Area 1A.) <i>Area Stations</i> ⁵ <i>Additional Coastal Stations</i> Aden..... Alexandria..... Port Sudan.....	 GZQ SUH STP	 458 kc..... 458 kc..... 458 kc.....	

⁵ All traffic for merchant ships operating in the Mediterranean is transmitted via the Zone Station Rugby and Coastal Stations.

APPENDIX VIII

400. SHIP TO SHORE COMMUNICATIONS

401. Merchant ships in time of war are authorized to transmit the following types of messages:

- a. Distress message.
- b. An amplifying report.
- c. Cancellation message.
- d. Message relaying a distress message or amplifying report originated by some other ship.
- e. An enemy report.
- f. A message of extreme urgency.
- g. A reply to a message from a naval authority which contains specific orders to break radio silence.
- h. A request for a repetition of a message, specifically addressed, portions of which the addressee is unable to decode.
- i. A request for D/F bearings (only in emergency).
- j. A message in accordance with special instructions received from naval authorities before sailing.

Passing instructions will not be included in the headings of distress messages, amplifying reports, cancellation messages, messages relaying distress messages or amplifying reports originated by some other ship, enemy reports, or requests for D/F bearings.

410. DISTRESS MESSAGES

411. When in distress, merchant ships sailing in convoy transmit a distress message for the information of the Convoy Commodore and Escort Commander. Convoy distress messages are transmitted on 500 kc. Distress messages transmitted by vessels proceeding without escort will be *broadcast* on 500 kc. and on high frequency if the ship is so equipped.

412. **Special distress signals** for use with plain language messages reporting distress are shown in the following table. These signals indicate that the message is of urgent precedence, identify the type of attack or sighting, and serve as an ultimate address indicator. Letters are transmitted as separate characters. Messages are preceded by the appropriate distress signal transmitted three times.

Distress signal	When used
AAAA	When attacked by enemy aircraft or upon sighting aircraft which cannot be identified as friendly.
QQQQ	When attacked by a hostile merchant ship or upon sighting a merchant ship believed to be a disguised raider.
RRRR	When attacked by an enemy warship or upon sighting any naval vessel which cannot be identified as an Allied or neutral ship.
SSSS	When in distress due to attack by submarine, upon sighting any evidence of submarine activity or when striking a mine.
SOS	International distress signal used when in distress and in immediate danger from causes not due to enemy activity.

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413. The nature of the attack is normally described by one of the following words:
 BOMBED.
 GUNNED.
 MINED.
 TORPEDOED.
 SUSPICIOUS (used only by ships proceeding without escort to indicate the sighting of forces which cannot be identified as friendly). Brief additional information may also be included.

414. Components of distress messages.—

a. Ships in convoy:

1. The distress signal. See article 412.
2. The letters DE followed by the ship's convoy call sign.
3. Single words indicating nature of distress. See article 413.

b. Ships proceeding without escort:

1. Distress signal.
2. DE followed by ship's wartime call sign.
3. Position of the ship.
4. Single word indicating nature of attack (may be followed by brief additional information).
5. Weather report (U. S. ships only—coded from CIMS-42 Appendix D).
6. Date-Time Group of *attack* (U. S. ships only).

415. Example of distress message transmitted by ship not under escort.

SSSS SSSS SSSS DE WXYZ WXYZ WXYZ BT 2004 NORTH 2658
 WEST TORPEDOED WX 24272 BT 081111Z

NOTE: British-managed ships transmit war call once only and omit break signs, weather report and date-time group.

416. Example of distress message transmitted by ship in convoy.

SSSS SSSS SSSS DE XY25 TORPEDOED STARBOARD BEAM

417. Action to be taken by coastal station.

Type of message intercepted	Action to be taken
<p><i>a.</i> AAAA, QQQQ, RRRR, SSSS, SOS. } transmitted on 500 kc-----</p>	<ol style="list-style-type: none"> (1) Rebroadcast immediately on 500 kc. exactly as received adding at the end of the message a break sign followed by the date and time of intercept plus the call letters of the intercepting station. (2) This rebroadcast is to be made by the controlling station, which is normally the nearest station to the position given in the distress message. (3) All stations intercepting a distress message shall relay exactly as received (plus date/time of intercept) at least to the Sea Frontier Commander and District Commandant in whose Sea Frontier or Naval District the intercepting station is located; or, if the intercepting station is not located within the limits of a Sea Frontier or Naval District, at least to the cognizant Area Commander.
<p><i>b.</i> AAAA, QQQQ, RRRR, SSSS, SOS. } transmitted on high frequency---</p>	<ol style="list-style-type: none"> (1) Distress messages intercepted on high frequency are to be acknowledged on the calling frequency but not rebroadcast. (2) All stations intercepting a distress message shall relay to the appropriate naval authority as directed by <i>a.</i> 3 above. It is the responsibility of the Sea Frontier Commander or Area Commander concerned to relay distress messages intercepted on high frequency to the responsible Naval authority located in the geographical locality of the distress.

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Type of message intercepted	Action to be taken
c. Convoy distress messages.....	(1) Convoy distress messages intercepted by shore radio stations shall not be rebroadcast or acknowledged. (2) Intercepting coastal station shall relay to the appropriate Naval authority as directed in a. (3) above.
d. Distress messages from..... neutral sources.	Same procedure as in b. above.
e. Distress messages from..... enemy sources.	Same procedure as in c. above.
f. Automatic distress transmissions....	Same procedure as in c. above.

418. Unofficial communications shall not be initiated by Coastal Stations which have established communication with merchant ships as a result of distress transmissions. Any message addressed to a ship in distress must be originated by the appropriate naval authority.

419. Auto alarm signal.—

a. Ships in distress are directed that, if no acknowledgment is heard, the standard auto alarm signal (12 4-second dashes spaced 1 second apart) shall be transmitted.

b. Coastal radio stations rebroadcasting distress traffic shall not preface such transmissions with the auto alarm signal.

420. ENEMY SIGHTING REPORTS

421.—Occasionally a merchant vessel sights enemy units which do not in turn sight the merchant vessel concerned. Under these conditions merchant ships are permitted to maintain radio silence until clear of immediate danger. At this time an enemy sighting report may be originated. This report is encoded and addressed by the danger signal (DR). Coastal Stations intercepting messages addressed by DR shall acknowledge the transmission and relay the message to the cognizant Area Commander or Sea Frontier Commander and District Commandant.

422. Cancellation of distress messages and sighting reports.—Plain language cancellation messages shall be acknowledged by the station controlling the original distress message. Plain language cancellations shall not be rebroadcast. A plain language cancellation of a distress message shall be relayed to the same addressees as was the original distress message. Merchant ships are directed to confirm plain language cancellation messages by the transmission of an encoded cancellation transmitted approximately 1 hour after the plain language cancellation message.

430. INDEFINITE CALL SIGNS USED WITH ENCODED MESSAGES

431.—The signification "Any United Nations' Merchant Ship" has been assigned the call sign: NUMS 1 to NUMS 9, inclusive. All encoded messages originated by merchant ships will carry an indefinite call sign selected at random from NUMS 1 to NUMS 9. In order to indicate the ship of origin, merchant ships are directed that the ship of origin encode her wartime call sign as the first part of message text. Coastal stations shall acknowledge encrypted messages received from merchant vessels. If passing instructions are included in the heading, messages will be relayed as instructed. If no passing instructions are included, enciphered messages shall be immediately relayed to the Sea Frontier Commander or cognizant Area Commander. If such authority cannot take action upon the message he is responsible for relaying it to the appropriate Naval Command.

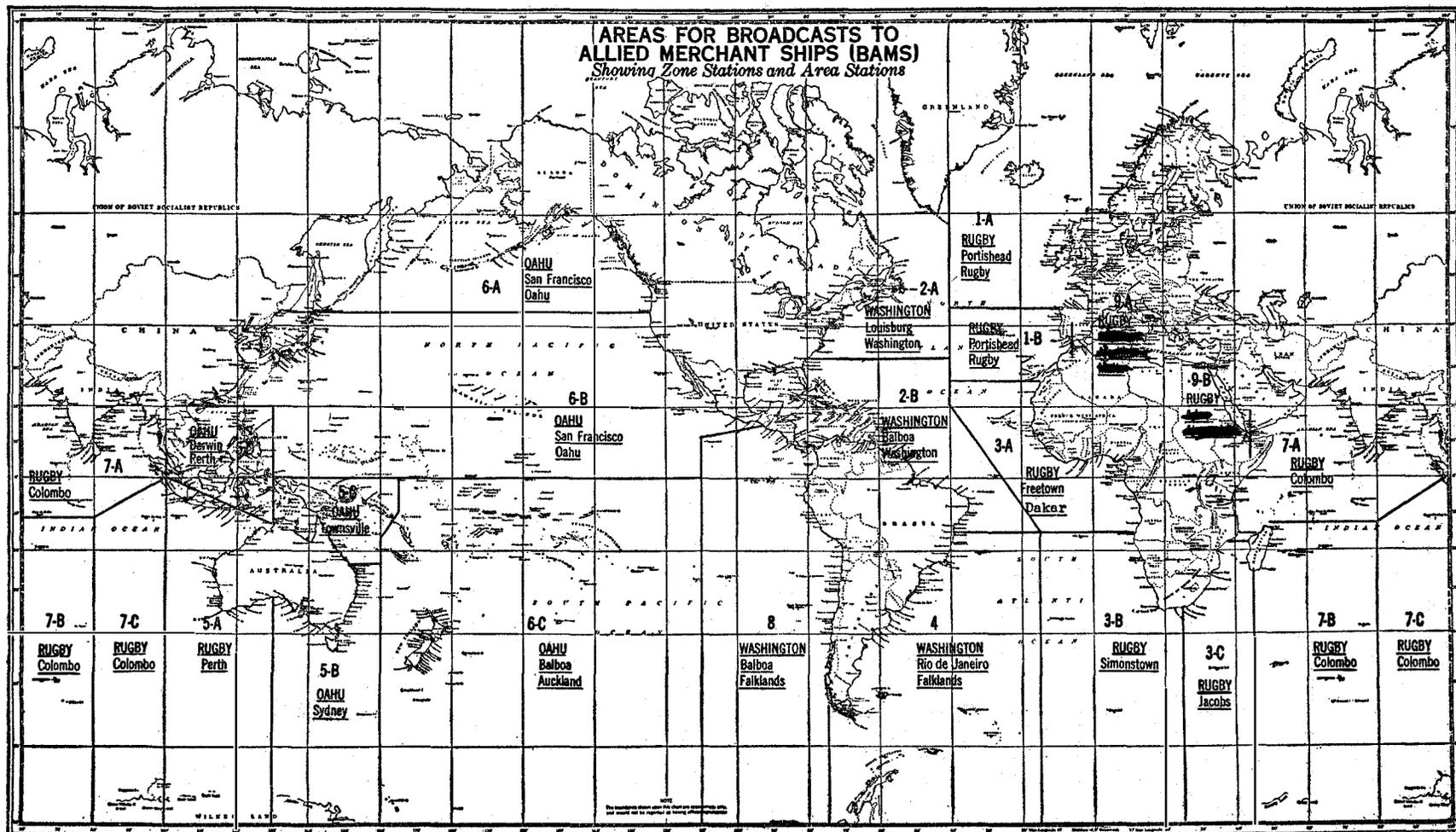


Plate 1-VIII