

SERVICE—For Official Use Only

Communication Instructions

1929

Part IV: PROCEDURE AND EXAMPLES



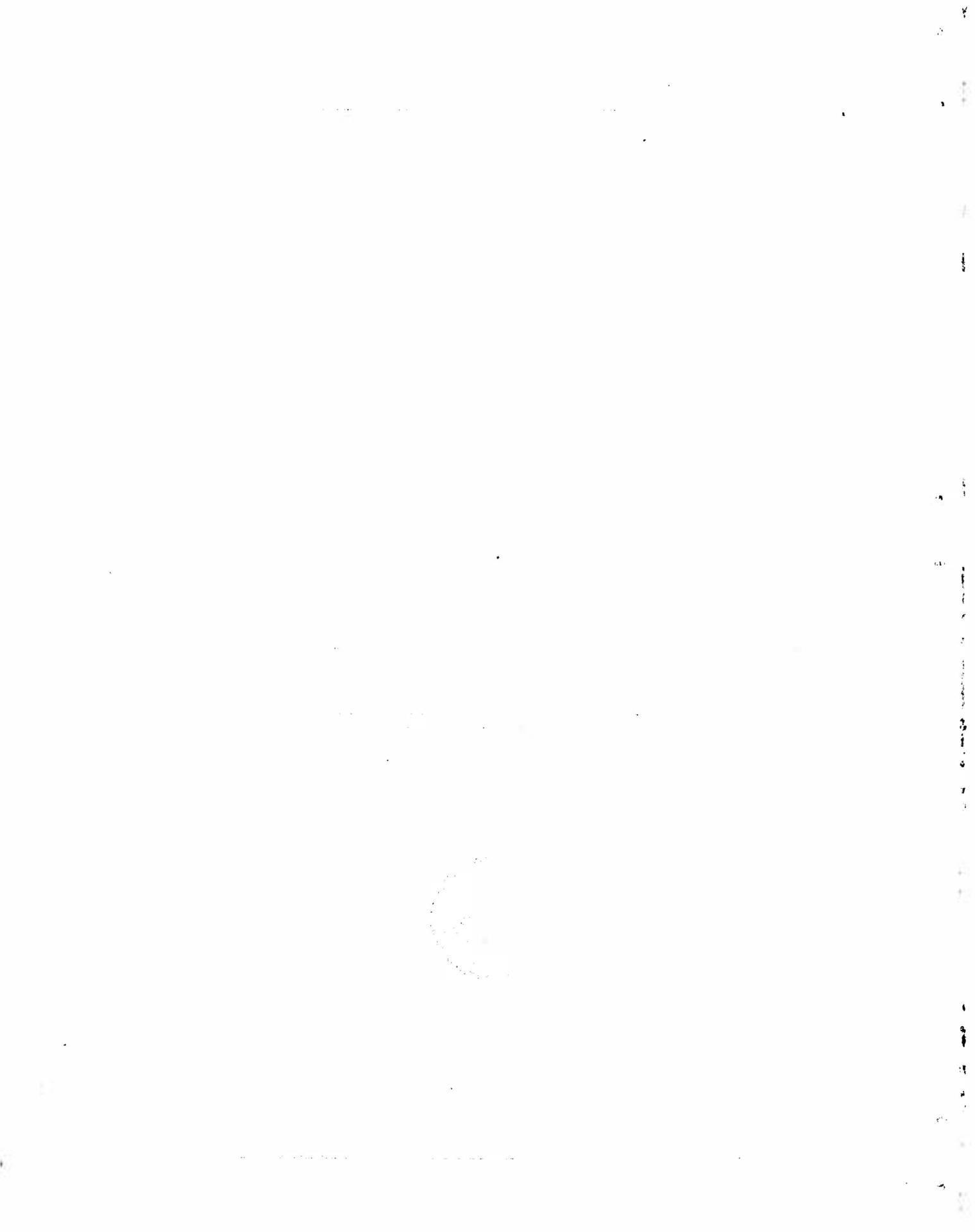
NAVY DEPARTMENT
OFFICE OF NAVAL COMMUNICATIONS

This copy issued to

*Copies of this publication are issued to ships and stations
for official use and shall not be removed therefrom
by officers or men upon detachment*



UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1929



SERVICE—FOR OFFICIAL USE ONLY.

NAVY DEPARTMENT,
OFFICE OF NAVAL OPERATIONS,
Washington, D. C., July 1, 1929.

The Communication Instructions, 1929, are issued by the Chief of Naval Operations in accordance with article 423 (2), United States Navy Regulations, for the guidance of the personnel of the Navy in handling communications. They have the same force and effect as orders issued by the Chief of Naval Operations, but in no way alter or amend any provision of the Navy Regulations or any Navy Department general order.

C. F. HUGHES,
Chief of Naval Operations.

Approved.

C. F. ADAMS,
Secretary of the Navy.

Communication Instructions, 1929, is issued in loose-leaf binder form, and consists of Part I, General; Part II, Radio; Part III, Visual; Part IV, Radio and Visual Procedure.

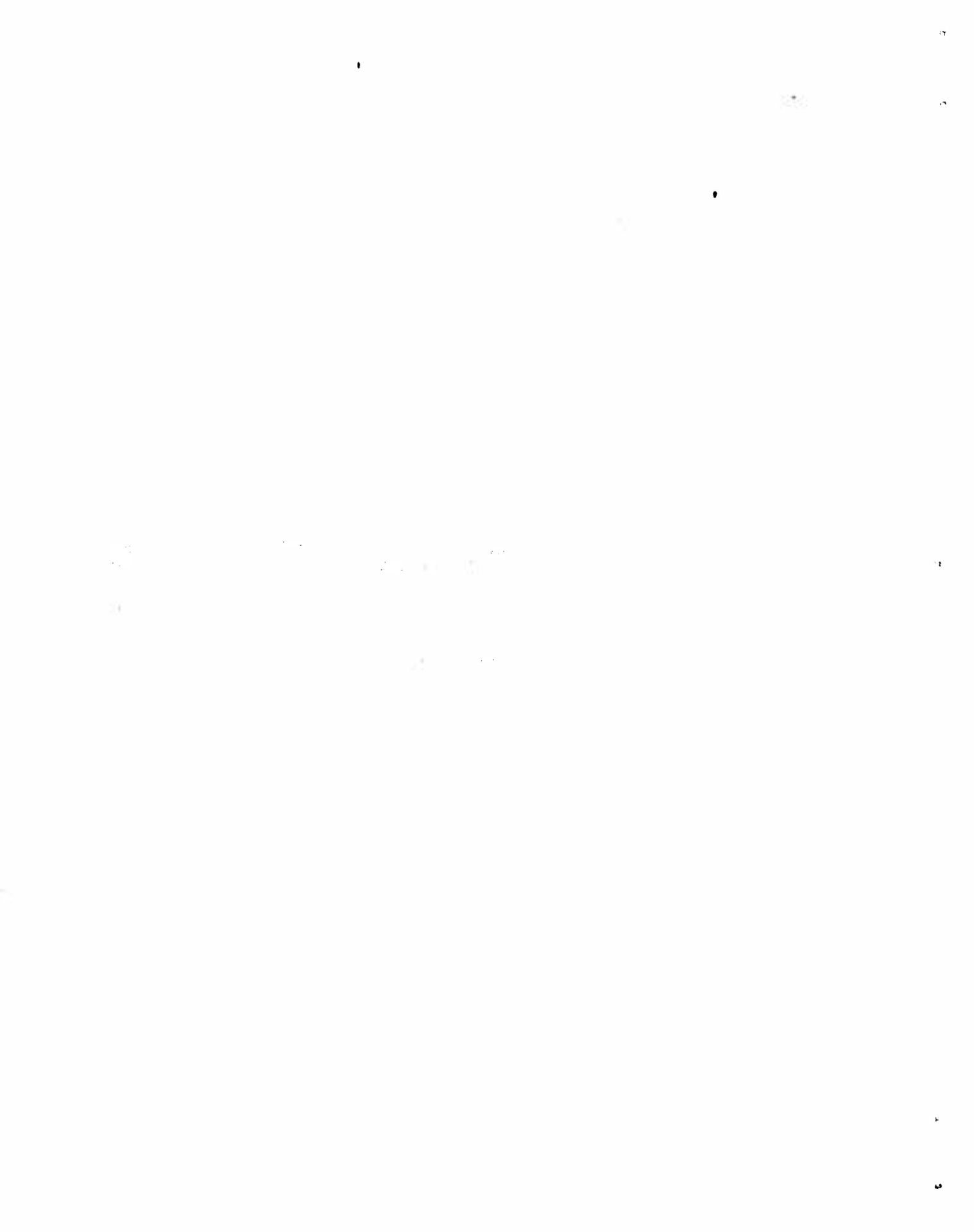
The Radio Manual, consisting of Parts II and IV, is bound in buckram for the use of radio personnel, and the Visual Manual, consisting of Parts III and IV is similarly bound for the use of visual personnel.

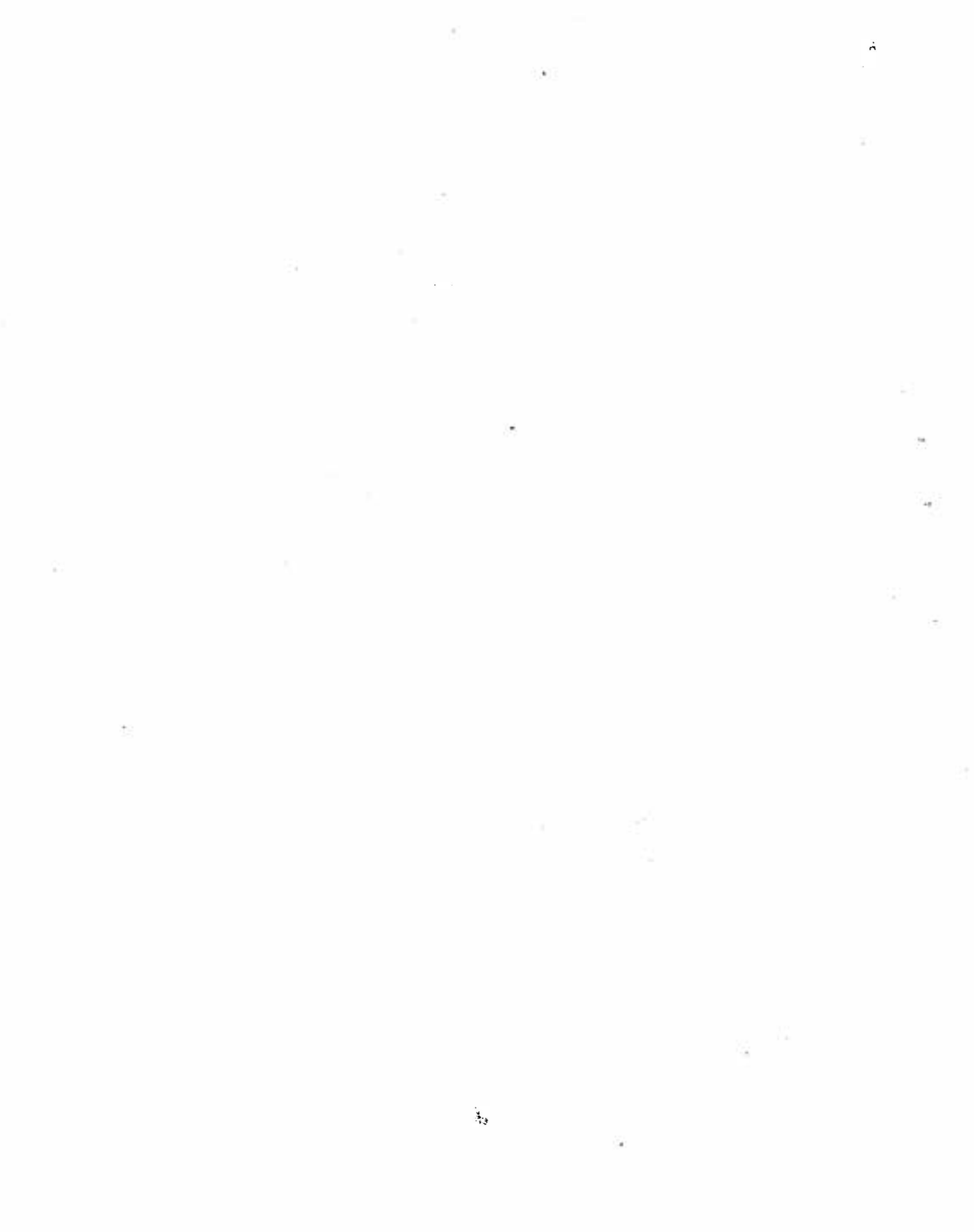
Holes are provided in all parts for the insertion of brass paper fasteners to increase the strength of the binding when new pages are added.

If individual parts are removed from the binder, or if the separately bound copies of the manuals are subject to considerable use or bad weather, additional cover protection should be provided using brass paper fasteners.

CONTENTS

	Page		Page
Index.....	vii	CHAPTER 32 Radio examples.....	18
CHAPTER 30		CHAPTER 33	
General.....	1	Visual examples.....	44
CHAPTER 31		APPENDIX A	
The procedure signs.....	5	Army and Navy communications.....	66





PART IV

PROCEDURE AND EXAMPLES

CHAPTER 30

GENERAL

3001. The following types of procedure are used by naval radio and visual operators:

(a) *Naval procedure* is used for handling all classes of messages over naval radio circuits and over navy visual systems except flag hoist which has special rules as shown in chapter 23. It facilitates and expedites the transmission and servicing of signals and dispatches. The United States Coast Guard is prepared to use naval procedure.

(b) *Army and Navy procedure* is a radio procedure used in handling messages between the Army and Navy. In general, it is similar to naval radio procedure. When the necessity for Army and Navy visual communication arises, this procedure should be followed in so far as it applies. Army and Navy Radio Telegraph Procedure is reprinted herein as Appendix A to Part IV.

(c) *International procedure* is radio procedure used with stations (other than domestic land-wire stations), which do not employ naval or Army-Navy procedure.

(d) *International visual procedure* is laid down in the International Code of Signals. Visual communication with United States merchant vessels is described in Instructions Governing the Signaling between United States Merchant Vessels and United States Government Vessels.

(e) *Domestic land-wire procedure* is a special procedure, the use of which is briefly described in chapter 16.

SPECIAL FORMS OF NAVAL PROCEDURE

3002. The normal form of naval procedure is altered in the following cases:

(a) *Abbreviated procedure* has a two-fold purpose: To indicate the highest possible precedence, and to shorten the transmission. It is invariably to be used for the following kinds of messages:

(1) Signals—other than Signal Vocabulary.

(2) Any message sent by executive method.

(3) Fire observations.

(4) Short concise dispatches of great immediate importance to the operations in progress.

(5) Any message prefixed "urgent."

(6) Signals coded from a signal vocabulary may be sent in either abbreviated or normal procedure as considered desirable, and may be either spelled out or sent as 4-letter code groups at discretion.

(b) *Radio-compass procedure* is a special procedure for obtaining radio-compass bearings, as shown in chapter 14.

3003. When using abbreviated procedure, messages are sent without preliminary call up. The address serves as the call except when a relay is involved. The **GR** sign and count are omitted. This omission instantly distinguishes the form. The office reference and date group is omitted, but a time of origin group may be used when desired. The message shall be presented at once to the action authority. If a repetition of any part of a message sent in abbreviated procedure is desired a complete retransmission shall be requested by the use of **IMI**.

COMPONENT PARTS OF A MESSAGE IN NAVAL FORM

3004. The component parts of a message in naval form are:

(a) The heading, which comprises:

- (1) The call.
- (2) The preamble.
- (3) The address.
- (4) The prefix.

(b) The text.

3005. The *call* consists of the call sign(s) of the receiving station(s) followed by the procedure sign **V** (from), and the call sign of the transmitting station. The use of **N** (less) in calls is to be avoided except under unusual circumstances. When exemptions in a call are necessary **N** may be employed in a manner similar to its use in an address.

3006. The *preamble* consists of the station serial number (when used), procedure signs, procedure signals, and call signs denoting the route of the message. The preamble may be changed during successive transmissions as necessary to indicate to successive receiving stations what has been or is to be done. When the address serves also as the call, there is no preamble.

3007. The *Address* consists of the following in the order shown:

- (1) The procedure sign **Z** (action to).
- (2) The call sign(s) of the action addressee(s).
- (3) The procedure sign **V** (from).
- (4) The call sign of the originator.
- (5) The procedure sign **Q** (information to).
- (6) The call sign(s) of the information addressee(s).
- (7) The procedure sign **N** (less).
- (8) The call sign(s) of *all* exempted addressee(s).

Steps (1) and (5) to (8) are used only when required.

3008. The *prefix* consists of procedure signs, calls, and procedure signals denoting the type of the message, any instructions regarding the message itself, and the group sign (**GR**) followed by numerals indicating the number of groups in the text.

3009. The address, prefix, and text are established by the originator and shall not be changed without his authority.

3010. When the originator and all addressees are in direct communication the address shall serve as the call. When so used the procedure sign **Z** shall be omitted.

3011. Under certain other conditions the address may also serve as the call, but care shall be taken that no confusion will result when the call is eliminated in this manner. For example, to expedite delivery during tactical exercises, if it is necessary to transmit on two frequencies to deliver to all addressees, the address may serve as the call on both frequencies.

3012. Space signs are used as follows:

- (a) To separate the component parts of the heading.
- (b) Normally before and after procedure signs.
- (c) Before and after procedure signals when desirable.

3013. The heading is separated from the text by the procedure sign:

- (a) **BT** (Break)—if the text consists of a plain language or code dispatch.
- (b) **IM** (Signals follow)—if the text is from a signal book, a signal vocabulary, or a contact code.
- (c) **II** (Space)—if the text consists of one or more procedure signals.

3014. Plain language (except the spelling of numerals in semaphore), is not to be employed in the heading. If the addressee or originator can not be wholly expressed by the address the remaining particulars must be included in the text.

3015. The *text* comprises the communication itself and may consist of:

- (a) A dispatch in plain language or code.
- (b) A signal or signals.
- (c) Procedure signal or signals.
- (d) It also may include reference numbers, originator's serial number, and supplementary instructions which can not be conveyed in the heading.

REFERENCE NUMBERS

3016. Reference numbers are placed on messages primarily for the purpose of filing and identification. The use of reference numbers is mandatory on all dispatches other than those sent in abbreviated form, except that on contact reports and unofficial messages the time of origin group only is mandatory. Reference numbers consist of two groups of four numerals each:

- (a) The office reference and date group (O & D) which is placed as the first group of the text of dispatches;
- (b) The time of origin group (T of O), which is placed as the last group of the text.

3017. The office reference and date group is composed as follows:

- (a) The first two numerals of the group indicate the office reference number.
- (b) The last two numerals of the group indicate the day of the month, a zero being placed before dates less than 10.

3018. On all code dispatches the office reference number "00" shall be used.

3019. The office reference and date group shall never be used with signals, procedure signals, and unofficial messages.

3020. The time of origin group is composed as follows:

- (a) The first two numerals of the group indicate the hour (from 00 midnight to 24 midnight.)
- (b) The last two numerals of the group indicate the minutes of the hour.

3021. Except in movement reports the time of origin shall be the time that a message is handed to the communication system for transmission.

3022. The time of origin group may be used with signals, procedure signals, and messages in abbreviated procedure and it shall always be used on contact reports and unofficial messages.

3023. Example: The flag lieutenant prepares a dispatch on the second of the month and it is handed to the communication office for transmission at 5.23 p. m.

1502 (text) 1723

3024. In transmitting reference numbers each digit shall be sent by its Morse equivalent. In semaphore each digit must be spelled out.

RECORDING TIMES

3025. The time of first call (TFC) is the time the transmitting station first calls the receiving station(s) or commences transmission without preliminary call up. The details concerning TFC are in the communication competition rules. TFC shall be recorded on all messages sent.

3026. The time of delivery (TOD) is the time the transmitting station completes the transmission of a message and shall be recorded on all messages sent.

3027. The time of receipt (TOR) is the time the receiving station completes the reception of a message and shall be recorded on all messages received.

3028. These recording times shall be expressed in four numerals as prescribed for the time of origin group and shall be recorded for relayed messages as well as for direct traffic.

3029. These times are not transmitted except when required by the competition rules or by a fleet or force commander's orders. When transmitted they shall be sent at the end of the message and not counted in the group count.

INTERNATIONAL MORSE CODE

3030. All transmissions by radio, sound, and visual systems except flag and semaphore shall be made in the international Morse code.

International Morse alphabet

A	..-	F	..-.-	K	---	P	..-.-.	U	..-	Y	---.-
B	---..	G	---.	L	..-..	Q	---.-	V	..-.-	Z	---..
C	---.-	H	M	---	R	..-.	W	..-.-		
D	---.	I	..	N	--	S	...	X	---.-		
E	.	J	..-.-	O	---	T	-				

International Morse numerals

1	..-.-.-	5	9	---.-.-.
2	..-.-.-	6	---.-.-	10	---.-.-
3	...-.-	7	---.-.-		
4-.	8	---.-.-		

Special characters

<u>KK</u>	..-.-.-.	Parenthesis
<u>RR</u>	..-.-.-.	Quotation
<u>YE</u>	..-.-.-.	Slant (/)
II	Space

3031. The dots, dashes, and spaces bear the following ratio to each other:

- A dot is used as the unit of duration.
- A dash is equal to three units.
- The space of time between any two elements of a symbol is equal to one unit.
- The space of time between two complete symbols is equal to three units.
- The space of time between words or groups is equal to five units.

PROCEDURE SIGNS

3032. Whenever a procedure sign made up of two or more letters is written with an overscore, such as IM, it is said to be topped and is transmitted as one character without a pause between letters. A procedure sign without an overscore, such as GR, is made with the normal pause between the individual letters

CHAPTER 31

THE PROCEDURE SIGNS

\overline{AA}

3101. The "unknown ship" sign is written \overline{AA} and transmitted (. _ . _)

It is used—

(a) As an answer when the call sign of a station calling is not clearly received.

Example: Radio 3.

(b) In visual to call an unknown vessel.

Example: Visual 3.

AA

3102. The "all after" sign is written AA and transmitted (. _ . _)

It is used after the signs C, \overline{INT} , \overline{IMI} , and J.

Examples: Radio 22, 23. Visual 31, 32.

\overline{AAA}

3103. The "blank" sign is written \overline{AAA} and transmitted (. _ . _ . _)

It is used in the heading or text of a message to indicate the position of missing portions. When the missing portions of an incomplete message can not be obtained at once, the message should be passed on immediately, using the "blank" sign to indicate the missing portions. This does not relieve a station of responsibility for obtaining and passing on the complete version as soon as practicable.

Examples: Radio 17. Visual 30.

AB

3104. The "all before" sign is written AB and transmitted (. _ _ . .)

It is used after the signs C, \overline{INT} , \overline{IMI} , and J.

Examples: Radio 22, 23. Visual 31, 32.

\overline{AR}

3105. The procedure sign \overline{AR} is written \overline{AR} and transmitted (. _ . _ .)

It is used at the end of transmission when the end is not otherwise indicated, and means "Am closing off transmission to receive your answer (receipt)."

Examples: Radio 4. Visual 8, 9.

AS

3106. The procedure sign **AS** is written **AS** and transmitted (. — . . .)

It is used—

- (a) After a call or during a transmission to mean "Wait, but stand by for further communication."

Examples: Radio 18a. Visual 34a.

- (b) It is an order when made by a senior; a request when made by a junior. A junior having been told **AS** must wait for **K** before proceeding, but if in the meantime he has been given an urgent or priority dispatch, or if it appears that he has been overlooked, he may call up the senior station and ask permission to transmit.

Examples: Radio 18c, d. Visual 34b.

- (c) *During radio* transmission by "I" or "F" method and followed by **GR** and numerals, to mean "message is being transmitted in portions. Total number of groups transmitted thus far is as indicated. Am waiting one minute or until next schedule."

Examples: Radio 13, b, c, d.

B

3107. The procedure sign **B** is written **B** and transmitted (— . . .)

It is used—

- (a) After a call to mean "Did you receive last message?"

Example: Radio 20g.

- (b) After a call and followed by identification data to mean "Did you receive message indicated?"

Example: Radio 20g.

- (c) When transmitting long messages the text will usually be divided into portions of 100 words of plain language or 50 groups of code. **B** followed by numerals indicating the total number of groups sent thus far, is used at the end of each portion to mean "Has message been received thus far?"

Examples: Radio 13a. Visual 21.

- (d) After completion of a message to mean "There is more to follow—receipt for last message is requested."

Examples: Radio 23d. Visual 21.

- (e) After a transmission, such as the receipt for a message, to mean "There is more to follow."

Examples: Radio 11a. Visual 9.

BT

3108. The "break" sign is written **BT** and transmitted (— . . . —)

It is used to separate the heading and text of dispatches.

Examples: Radio 1, 2. Visual 15, 21, 22.

C

3109. The procedure sign C is written C and transmitted (— . — .)

It is used—

- (a) After a call, by itself, to mean "You are correct."
Example: Radio 11b. Visual 28a, c.
- (b) After a call or address and followed by identification data to mean "Following is correct version of message or groups or portions indicated."
Examples: Radio 14, 22a. Visual 29.
- (c) After a call or address and followed by identification data, when a request for verification and repetition has been previously made, to mean "Following is verification and repetition of message or groups or portions indicated." C shall be used in this manner only with the authority of the originator.
Examples: Radio 22b. Visual 33c.
- (d) After a call, made four times in succession, to mean "Following is correct version of message transmitted without time of origin." In this case relaying stations repeat the entire transmission.
Examples: Radio 30a, b.

DX

3110. The procedure sign DX is written DX and transmitted (— . . — . . —)

It is used—

- (a) *In radio* after a call to mean "Let us work duplex."
- (b) *In radio* after a call and **INT** to mean "Is it practicable for you to work duplex with me?" (See art. 1115.)

EEEEEEEE

3111. The "erase" sign, a succession of eight or more E's, is transmitted (.)

It is used—

- (a) When an error is made in transmission to mean "I will start over commencing with a repetition of the last word correctly made."
Examples: Radio 10a, c. Visual 25.
- (b) When an error is made in the transmission of a signal other than from a signal vocabulary. In this case the repetition of the entire signal is obligatory and the erase sign is used to mean "I will repeat entire signal."
Example: Radio 10b.
- (c) *In radio* to signify that a scheduled transmission was not commenced on time.
- (d) The procedure sign **IMI** must not be used to correct an error in transmission.

F

3112. The "do not answer" sign is written F and transmitted (. . — .)

It is used *in radio*—

- (a) In the preamble to mean "Stations indicated in the call are not to answer this call or receipt for this message."
- (b) In the prefix to mean "Stations indicated in the address are not to receipt for this message."
Example: Radio 13c.

G

3113. The "repeat-back" sign is written **G** and transmitted (— — .)

It is used—

- (a) After a call to mean "Repeat back last transmission I made."
Examples: Radio 16a, 31b.
- (b) After a call and followed by identification data to mean "Repeat back message or portion indicated."
Examples: Radio 16a. Visual 23e.
- (c) In the preamble to mean "All stations indicated in the call are to repeat back this message."
Example: Visual 23a.
- (d) In the preamble after call sign(s) to mean "Station(s) whose call sign(s) precede **G** repeat back this message." This is only used when all stations called are not to repeat back.
Example: Visual 23b.
- (e) In the prefix to mean "Every station handling this message is to repeat it back to the station from which received before retransmitting." The use of **G** in the prefix should be restricted to messages where the phraseology is such that the slightest mistake in reception would be of grave consequence.
Examples: Radio 16b, c. Visual 23d.
- (f) It is used in the prefix on the authority of the originator only. If the originator desires information of the ultimate reception of the message by the addressees an acknowledgment should be required.
- (g) When messages are repeated back they are made through only once, even though the original message was made through twice.

GR

3114. The "group sign" is written **GR** and transmitted (— . . — .)

It is used—

- (a) As the last item in the prefix and followed by numerals to mean "The message contains the number of groups indicated."
Examples: Radio 2a. Visual 2.
- (b) After a call and **GR** to mean "What is number of groups?"
Examples: Radio 11a. Visual 26c.
- (c) After a call and **INT** and followed by numerals to mean "Is not the number of groups as indicated?" When the number of groups received does not correspond with the number after the **GR** sign, the receiving station will immediately challenge the transmitting station in this manner. If, after rechecking the message, the transmitting station finds that the receiving station is correct, the transmitting station will make **C**; otherwise, without further delay, the transmitting station will verify the number of groups by repeating the first letter or numeral of each word or group in succession. Subject to this challenge, the count of the transmitting station is final.
Examples: Radio 11b. Visual 26a, b.
- (d) After a call (with or without identification data) and followed by numerals to mean "Number of groups is as indicated."
Examples: Radio 11a. Visual 26c.

- (e) As the last item in the prefix and followed by **X** to mean "The number of groups will be sent later."

Examples: Radio 14. Visual 27.

- (f) **GR** is obligatory in dispatches and in signals taken wholly from the Signal Vocabulary. It may be used in nontactical signals, particularly where the groups from the Signal Books are augmented by groups from the Signal Vocabulary. It is never to be used in tactical signals, in abbreviated procedure, or in messages consisting of procedure signs and radio operators' signals only.

Examples: Visual 13a, 14.

HM

3115. The "silence" sign is written HM and transmitted five times (. — — — — — — — — — —)

It is to be used only by the senior officer present in the vicinity affected by the silence sign—

- (a) *In radio* after a call to mean "Stations addressed cease all radio transmission."
 (b) *In radio* after a call and followed by identification data to mean "Stations addressed cease all radio transmission on the frequency or frequencies indicated."

Example: Radio 15.

- (c) *In visual* after a call to mean "Stations addressed cease all transmission by system in which this silence sign is made."

Example: Visual 24a.

- (d) *In visual* after a call and followed by identification data to mean "Stations addressed cease all transmission by system(s) indicated."

Example: Visual 24b.

- (e) *Complete visual* silence will be ordered by signal.

II

3116. The "space" sign is written as a short dash (—) and transmitted (. . . .)

It is used—

- (a) Between component parts of the heading.

Examples: Radio 1, 2. Visual 2.

- (b) Between the groups of the text in code dispatches, including signal vocabulary groups when not spelled out.

Examples: Radio 1, 2. Visual 13.

- (c) To separate procedure signs and radio operators' signals from call signs in the heading of messages except preceding and following **V** (from).

Examples: Radio 1, 2. Visual 2.

- (d) The space sign may be used between procedure signs, radio operators' signals, or between a message and a procedure sign or radio operators' signal immediately following, if necessary for clarity. It is not so used ordinarily, and it is never used before **AR**.

- (e) *In radio*, to separate messages sent in strings after a single call up.

- (f) *In radio*, the space sign may be used between the heading and text, if the text consists of procedure sign(s) or signal(s) only, and if this use of the space sign adds to clarity.

Examples: Radio 16b. Visual 2, 13.

IM

3117. The "signal" sign is written **IM** and transmitted (. . — —)

It is used—

- (a) Between the heading and text of all signals, and means that the text following is from a signal book or signal vocabulary.

Examples: Radio 25. Visual 13, 14, 35d, f.

IMI

3118. The "repeat" sign is written **IMI** and transmitted (. . — — . .)

It is used—

- (a) After a call to mean "repeat last message."

Examples: Radio 23d (1). Visual 31b, e.

- (b) After a call followed by identification data to mean "repeat message or portion indicated." If it is necessary to obtain repetition of a portion of the heading a request for repetition of the entire heading must be made.

Examples: Radio 23d (1) (2). Visual 31a, d; 32a, b.

- (c) Between the first and second transmission of a message being sent twice to mean "I am going to repeat this message."

Example: Radio 23a.

- (d) In the body of a plain-language message to mean "I am going to repeat difficult portion just transmitted."

Example: Radio 23b.

- (e) When indicating portions of a code message reference should be made to the number(s) of the group(s) rather than the groups themselves. In plain-language dispatches reference may be made either to the group number(s), or to the words themselves, using more than one word if necessary for definite identification.

Examples: Radio 23. Visual 31b, c; 32c, d.

- (f) Before receipting for a message the receiving station may be doubtful of a portion, in which case the sign **IMI** or **INT** may be employed. These signs do not require the originator to verify the coding or wording. When making repetitions the message or portion of message is to be made through only once even though the original message was made through twice.

- (g) After receipting for a message, **IMI** and **INT** shall not be employed. After receipting for a message, a repetition may ordinarily be obtained only by the addressee authorizing the use of **J** (verify and repeat), or by an appropriate radio operator's signal.

INT

3119. The "interrogatory" sign is written **INT** and transmitted (. . — . —)

It is used—

- (a) After a call and followed by identification data and the doubtful portion of a message, to mean "Did I correctly receive the portion of the message which I am now repeating back?" **INT** will not be used for checking the reception of the greater portion of a message. In such cases a repetition should be requested. If a portion of the heading as received is doubtful, a request for repeat of the entire heading must be made.

Examples: Radio 12a, c; 23d (2). Visual 28a, c, d.

- (b) After a call and followed by **GR**, to mean "What is the number of groups?"
Examples: Radio 11a. Visual 26c.
- (c) After a call and followed by **GR** and numerals, to mean "Is not the number of groups as indicated?"
Examples: Radio 11b. Visual 26a, b.
- (d) After a call and followed by **Y**, to mean "Do you acknowledge last message without reference number(s)?"
Example: Radio 21d.
- (e) After a call or address and followed by **Y** and identification data, to mean "Do you acknowledge message indicated?"
Examples: Radio 21f. Visual 22c.
- (f) After a call or address and followed by radio operators' signal(s) to give an interrogatory sense to the radio operators' signal(s).
- (g) After a call and followed by **K**, to mean "May I transmit?"
Examples: Radio 18c. Visual 34b.
- (h) After receipting for a message, **IMI** and **INT** shall not be employed. After receipting for a message, a repetition may ordinarily be obtained only by the addressee authorizing the use of **J**, (verify and repeat), or by an appropriate radio operators' signal.

IX

3120. The "executive to follow" sign is written **IX** and transmitted (. . . . —)
It is used—

- (a) In the prefix of a message which requires the instant of execution to be indicated. Such a message is said to be sent by the executive method.
Examples: Radio 25e, f; 26b. Visual 10, 11, 12, 35b.
- (b) *In semaphore*, **IX** is used not only in the prefix but also as a "preliminary executive" sign. (See ch. 26.)

5-SECOND DASH

3121. The "executive" sign, a 5-second dash preceded by **IX**, which identifies the long dash, is written _____ and transmitted (. . . . — _____)

It is used—

- (a) After a call to mean "Execute all outstanding messages prefixed **IX**."
Examples: Radio 25g, 27. Visual 10a, 12a.
- (b) After a call and identification data to mean "Execute the message(s), or portion indicated."
Examples: Radio 27. Visual 10b, 12b.
- (c) A message must be identified, if—
- (1) It is one of several outstanding messages which have been preceded by **IX** and is to be executed by itself.
 - (2) There is any possibility of doubt as to which message is to be executed.
 - (3) A considerable time has elapsed between the transmission and the execution of the message.
 - (4) The message carries a time of origin.
Example: Radio 27. Visual 10b, 12b.
- (d) The instant of execution is the termination of the 5-second dash. In semaphore it is at the instant the sign **VA** is made.

- (e) The Executive sign can not be annulled after it has once been made.
- (f) *In visual* when no confusion will result, the call preceding an executive sign may be omitted.
- (g) *In visual* **IX** preceding the 5-second dash may be repeated several times when necessary.

J

3122. The procedure sign **J** is written **J** and transmitted (. — —)

It is used—

- (a) After a call to mean "Obtain a verification from the originator and then repeat last message."
- (b) After a call or address, followed by identification data, to mean "Obtain a verification from the originator and then repeat message or portion indicated."
Examples: Radio 19a, b; 22c. Visual 33a, b.
- (c) *The use of "J" requires the originator to verify the phraseology, and also the coding, (if coded), of the message or portion indicated.*

K

3123. The procedure sign **K** is written **K** and transmitted (— . —)

It is used—

- (a) After a call to mean "Transmit."
Examples: Radio 3. Visual 34c.
- (b) After a call and procedure sign(s) or signal(s) to mean "Transmit."
Examples: Radio 13a. Visual 21.
- (c) After a call and **INT** to mean "May I transmit?"
Examples: Radio 18c. Visual 34b.
- (d) *In radio* followed by numerals (1 to 5) to mean "Transmit. Your signals are of readability indicated."
Example: Radio 4a.

L

3124. The procedure sign **L** is written **L** and transmitted (. — .)

It is used—

- (a) In the preamble to mean "Stations called relay following message to the addressees for which you are responsible."
Example: Radio 6a.
- (b) In the preamble after a call sign(s) to mean "Stations indicated by the call sign(s) preceding **L** relay the following message to the addressees for which you are responsible."
Examples: Radio 6b. Visual 15.
- (c) *In radio* by a ship station to effect delivery through a relay ship to ships for which the relay ship is known to be responsible under the existing fleet radio organization.
Example Radio 6a.
- (d) *In radio* to effect delivery of ALNAV messages.
- (e) *In radio* by a shore station, when delivering fleet traffic direct to senior officer(s) present afloat, if specific arrangements for such delivery have been made.
Example: Radio 6a.

- (f) *In radio* by senior officer(s) present afloat to effect delivery to shore addressees or ships in navy yards, if specific arrangements for such delivery have been made with first shore station receiving such traffic from ship(s).
- (g) *In radio* by a shore station to deliver messages through a shore relay station to shore addressees or to ships in navy yards, when the relay station is known to be responsible for delivery under the existing shore radio organization.
- (h) During maneuvers and at certain other times the communication organization is altered due to changes in either the tactical or administrative organization. During the periods preceding and after such changes and until the communication organization is well settled the use of **L** must be avoided and **T** with specific instructions used instead.

M

3125. The procedure sign **M** is written and transmitted (— —)

It is used—

- (a) In the preamble followed by call sign(s) to mean "Relay this message via the station(s) indicated by the call sign(s) following **M**."
Examples: Radio 7a, b. Visual 19.
- (b) In the preamble after a call sign and followed by a call sign(s) to mean "Station indicated by the call sign preceding **M** relay this message via the station(s) indicated by the call sign(s) following **M**."
Example: Radio 7c.

N

3126. The procedure sign **N** is written **N** and transmitted (— .)

It is used—

- (a) After a call to mean "Not received."
Examples: Radio 20f, g.
- (b) After a call and followed by identification data to mean "Message indicated was not received."
Example: Radio 20f.
- (c) In the address, to modify collective call sign(s) previously employed in the address. When so employed it exempts the station(s) indicated by the call sign(s) which follow it, from answering.
Examples: Radio 1, 2a, 33c. Visual 5.
- (d) The use of **N** (less) in calls is to be avoided except under unusual circumstances. When exemptions in a call are necessary, **N** may be employed in a manner similar to its use in an address.

NITE

3127. The "deferred" sign is written **NITE** and transmitted (— . . . — .)

It is used—

- (a) In the prefix to mean "Transmission of this message may be deferred but must be completed and message delivered to addressee(s) during early forenoon following."
Example: Radio 1.

NR

3128. The "number" sign is written **NR** and transmitted (— . . — .)
It is used—

- (a) In the preamble as the first item and followed by numerals to mean "Station serial number is as indicated."
Example: Radio 21h, 22c.
- (b) In the preamble as the first item and followed by numerals and a station distinguishing word (letter) to mean "I method serial number is as indicated."
Examples: Radio 13d. Visual 20.
- (c) *In radio* following a call and **R**, (or **N**), and followed by numeral(s) to mean "Message(s) numbered as indicated received (or not received)."

O

3129. The "urgent" sign is written **O** and transmitted (— — —)
It is used—

- (a) In the prefix to mean "Following is urgent."
Examples: Radio 1. Visual 1, 34b.
- (b) In the prefix followed by call sign(s) to mean "Following is urgent to station(s) indicated."
- (c) By itself after a call to mean "Have urgent message to transmit."
- (d) **O** is to be used during battle (real or simulated), or when battle is imminent, to indicate that the message following conveys most urgent orders, information, or request. It is required in contact and tactical reports, in signals and dispatches of primary importance referring to operations in the vicinity of the enemy, and those conveying information regarding imminent danger of mines. It is used when reporting serious damage or distress during peace or war.
- (e) Abbreviated procedure must be used when **O** is used.
Examples: Visual 35f.

P

3130. The "priority" sign is written **P** and transmitted (. — — .)
It is used:

- (a) In the prefix to mean "Following is priority."
Examples: Radio 14. Visual 2, 16.
- (b) In the prefix followed by call sign(s) to mean "Following is priority to station(s) indicated."
Example: Radio 21a.
- (c) By itself after a call to mean "Have priority message to transmit."

Q

3131. The "information" sign is written **Q** and transmitted (— — . —)
It is used—

- (a) In the address and followed by call sign(s) to mean "Following is for information to the station(s) indicated."
Examples: Radio 1, 21b, 33b, c. Visual 5, 15.

R

3132. The procedure sign **R** is written **R** and transmitted (. — .)

It is used—

- (a) By itself after a call to mean "Last message or transmission has been received."
Examples: Radio 20a, b. Visual 12a.
- (b) After a call and followed by identification data to mean "Message or transmission indicated has been received."
Examples: Radio 11, 20a, b.
- (c) By itself after a call, after the receipt of **B**, to mean "Transmission has been received thus far."
Examples: Radio 20g. Visual 21.
- (d) **R** shall not be made until the correct group count has been established. (See art. 3114c.)
Examples: Visual 26.
- (e) *In radio* after a call and followed by a numeral from the "readability" table (1-5) to mean "The readability of your signals is as indicated."
- (f) *In visual* the call as used in (a), (b), and (c) may be omitted when no confusion will result.

S

3133. The procedure sign **S** is written **S** and transmitted (. . .)

It is used—

- (a) *In radio* after a call and followed by a numeral from the "signal strength" table (1-5) to mean "The strength of your signals is as indicated." (See art. 1152.)

T

3134. The procedure sign **T** is written **T** and transmitted (—)

It is used—

- (a) In the preamble to mean "Station called transmit the following to *all* addressees."
Examples: Radio 5a. Visual 9.
- (b) In the preamble followed by call sign(s) to mean "Station called transmit the following only to station(s) indicated by call sign(s) following **T**."
Example: Radio 5b.
- (c) In the preamble after a call sign and followed by call sign(s) to mean "Station indicated by the call sign preceding **T** transmit the following to station(s) indicated by call sign(s) following **T**."
Example: Radio 5c.

UO

3135. The "negative silence" sign is written **UO** and transmitted five times (. . — — — — —
— — — — — . . — — — — — . . — — — — — . . — — — — —)

It is to be used only by the senior officer present in the vicinity affected by the "silence" sign—

- (a) *In radio* after a call to mean "Stations addressed may resume all radio transmission."
Example: Radio 15e.
- (b) *In radio* after a call and followed by identification data, to mean "Stations addressed may resume radio transmission on the frequency or the frequencies indicated."
Example Radio 15d.

- (c) *In visual* after a call to mean "Stations addressed may resume transmission by system in which this negative silence sign is made."
Example: Visual 24a.
- (d) *In visual* after a call and followed by identification data, to mean "Stations addressed may resume transmission by system(s) indicated."
- (e) General visual silence will be annulled by signal.

V

3136. The procedure sign **V** is written **V** and transmitted (. . . —)

It is used—

- (a) In a call and followed by a call sign to mean "From station indicated."
Examples: Radio 1, 2. Visual 2, 3.
- (b) In an address and followed by a call sign to mean "From originator indicated."
Examples: Radio 1, 2. Visual 2.
- (c) Space signs are not used preceding and following **V**.
- (d) *In visual*, **V** is normally omitted in the call.
Example: Visual 4.

V̄A

3137. The procedure sign **V̄A** is written **V̄A** and transmitted (. . . — . . .)

It is used—

- (a) After a call or message to mean "I have nothing more to transmit."
Examples: Radio 13c. Visual 8.
- (b) *In semaphore* it has a further use immediately following **IX̄** (repeated several times), as the final signal of execution, in lieu of a 5-second dash. (See ch. 26.)

W

3138. The procedure sign **W** is written **W** and transmitted (. — —)

It is used—

- (a) *In radio* after a call to mean "Am being interfered with by other stations."
Example: Radio 23c.
- (b) *In radio* after a call and followed by call sign(s) to mean "Am being interfered with by station(s) indicated."
- (c) *In visual* by itself to mean "Am unable to read your transmission." If signaling by flashing light, it means light not properly trained or burning badly; if signaling by semaphore, it means poor background or interference, such as smoke, etc.
Example: Visual 25.
- (d) *In visual* it may be made by any receiving ship at any stage of the transmission.

WA

3139. The "word after" sign is written **WA** and transmitted (. — — . —)

It is used—

- (a) After the signs **C**, **IMI**, **INT**, and **J** to mean "Word after."
- (b) In referring to plain-language dispatches only, when single word(s) are required.
Examples: Radio 23f. Visual 32a.
- (c) The word(s) used for reference and the desired word following are repeated.

X

3140. The procedure sign **X** is written **X** and transmitted (— . . —)
It is used—

- (a) *In radio* after a call to mean "Am being interfered with by static or noise level."
Example: Radio 23c.

Y

3141. The "acknowledge" sign is written **Y** and transmitted (— . — —)
It is used—

- (a) In the prefix to mean "The following message is to be acknowledged by all addressees." (Action and information.)
Examples: Radio 21b. Visual 20, 22a.
- (b) In the prefix followed by call sign(s) to mean "The following message is to be acknowledged by the addressee(s) indicated."
Examples: Radio 21a. Visual 22b.
- (c) After a call by itself to mean "Your last message sent in abbreviated form without time of origin group is hereby acknowledged."
Examples: Radio 21c, 29a, b. Visual 22d.
- (d) After a call or address and followed by identification data to mean "Your message sent in abbreviated form with time of origin group indicated is hereby acknowledged."
Examples: Radio 21g. Visual 22e.
- (e) After a call or address and following **INT** to mean "Do you acknowledge my last message sent in abbreviated form without time of origin group?."
Examples: Radio 21d, e.
- (f) After a call or address **INT Y** followed by identification data means "Do you acknowledge message indicated?."
Examples: Radio 21f, g. Visual 22c.
- (g) It is not to be placed in the prefix without the authority of the originator.
- (h) It is not to be used as an acknowledgment without the authority of the addressee who is required to acknowledge.

Z

3142. The procedure sign **Z** is written **Z** and transmitted (— — . .)
It is used—

- (a) In the address of messages and followed by call signs to mean "The message following is addressed for action to the addressee(s) indicated."
Examples: Radio 1, 2. Visual 5, 15.
- (b) The sign **Z** in itself is not an order to retransmit the message.
- (c) The sign **Z** does not appear in the address when the address serves as the call.

CHAPTER 32

RADIO EXAMPLES

3200. The following tabulation indicates the nature of the examples hereinafter given. (The space sign (II) is indicated by a short dash (-) in all examples after No. 2.)

No.	Example
1	Parts of a complete message—General.
2	Parts of a complete message—Specific.
3	Establishing communication—Unknown ship.
4	Establishing communication—Known ship. (a) The usual preliminary call up. (b) The call up when communication is especially difficult.
5	Relaying message—Uses of T . (a) Directing transmission to all addressees. (b) Directing transmission to one of several addressees. (c) Directing two stations to retransmit same message.
6	Relaying a message—Uses of L . (a) Usual employment of L . (b) Use of L and T in one heading.
7	Relaying a message—Uses of M . (a) and (b) Indicating routing—one station called. (c) Indicating routing—two or more stations called.
8	Relaying a radio message—By visual.
9	Relaying a visual message—By radio.
10	Errors in transmitting—How indicated. (a) During normal procedure transmission. (b) and (c) During abbreviated procedure transmission.
11	Questioning number of groups. (a) Message received except group count. (b) Use of INT GR —, and lettering.
12	Questioning accuracy of reception. (a) Use of INT —, and C —Code. (b) Whole or major portion of text is doubtful. (c) Use of INT —, and C —Plain language. (d) and (e) Use of C improper when corrections are necessary after use of INT —.
13	Transmitting long messages. (a) Use of B100, B200, etc.—Plain language. (b) Use of AS on I and F transmissions. (c) Use of AS on F transmission—Code. (d) Use of AS on I transmission—Plain language.
14	Transmitting message with undetermined number of groups.
15	Silent periods and negative silence. (a) Absolute radio silence ordered. (b) Radio silence ordered on specific frequencies. (c) Urgent message may be transmitted. (d) Negative silence—On specific frequency. (e) Negative silence—General. (f) Relaying of radio silence command.

No.	Example
16	Repeating back—Uses of sign G . (a) Repeating back last message. (b) Repeating back—By one station. (c) Repeating back—By all stations handling the message—Use of Y .
17	Incomplete message—Use of AAA . (a) Relaying an incomplete message. (b) Relaying the complete message when available.
18	Interrupted communications—Use of AS . (a) When necessary to cease transmitting momentarily. (b) When transmitting long messages by “I” and “F” methods. (c) Controlling communications—Use of AS . (d) Controlling communications—Breaking-in.
19	Verifications—Uses of J . (a) Request for verification and repetition—Code or plain language. (b) Relaying request for verification and repetition—Plain language.
20	Receipting for message—Use of R . (a) Usual form of receipts. (b) Receipting for a string of messages—When reception is complete. (c) Receipting for a string of messages—When reception is incomplete. (d) Unusual form of receipt—Including address. (e) Receipting for messages intercepted. (f) Indicating nonreceipt. (g) Requesting receipt—Use of B .
21	Acknowledgements—Uses of Y . (a) Use of P and Y in heading. (b) Acknowledgment required from <i>all</i> addressees. (c) Acknowledging a message which has no reference numbers. (d) and (e) Requesting acknowledgment—Use of INT Y . (f) and (g) Requesting acknowledgment—Use of INT Y — . (h) Relaying request for acknowledgment.
22	Corrections—Use of C , INT , IMI , and J . (a) Use of C —Correcting a code group. (b) Use of C —Correcting a whole code message. (c) Use of J —Relaying the request. (d) Use of C —Relaying the corrected message. (e) Use of INT —For partial verification without reference to originator.
23	Repetitions—Uses of IMI . (a) Transmitting a message through twice. (b) Transmitting unusual or difficult phrases. (c) Request for repeat of whole message, and use of W , X , and K . (d) and (e) Repetitions—Various examples applicable primarily to code message but which may also apply to plain language. (f) Repetition—Plain-language message—Including use of WA .
24	Abbreviated procedure—Uses of.
25	Transmission of signals—Direct communication. (a) Transmitting signal—Use of IM . (b) Transmitting signals from Signal Vocabulary—Abbreviated procedure—Use of TACK . (c) Transmitting signal from Signal Vocabulary—Normal procedure. (d) Transmitting “interrogatory.” (e) Transmitting signal—Use of IX IM . (f) Transmitting signals—Use of TACK . (g) Executing a signal—Use of IX (5-seconds) . (h) Executing a dispatch—Use of IX BT .

No.	Example
26	<p>Transmission of signals—Specific—Direct and indirect communication.</p> <p>(b) No receipts desired—Signal to a tactical unit and its execution.</p> <p>(c) No receipts desired—Signal to a division, no execution required.</p> <p>(d) Receipts desired—Signal to a tactical unit, no execution required.</p> <p>(e) Receipts desired from division commanders—Signal to a tactical unit—Use of K.</p> <p>(f) Receipts desired—Signal to a division—Use of K.</p> <p>(g) Receipts required from division commanders who are to relay to the tactical unit—Use of L and K.</p>
27	<p>Signals by executive method—Delayed execution—Executing one of several signals.</p>
28	<p>Receipts—Tactical signals.</p>
29	<p>Acknowledgments—Tactical signals.</p> <p>(a) Acknowledgment, but no receipt desired—From a tactical unit.</p> <p>(b) Acknowledgment, but no receipts desired—From division commanders.</p> <p>(c) Acknowledgments and receipts—From a division.</p>
30	<p>Corrections—Abbreviated procedure.</p> <p>(a) Verification and repetitions.</p> <p>(b) Correction before execution—Use of CCCC.</p>
31	<p>Repeating back signals—Uses of G.</p> <p>(a) Method not normally to be used when transmitting maneuvering and gunnery signals.</p> <p>(b) Repeating back—By division commanders.</p>
32	<p>Passing any message to one other than an addressee.</p>
33	<p>Combining call and address—Direct communication.</p> <p>(a) Only action addressee(s).</p> <p>(b) Both action and information addressees.</p> <p>(c) Action, information, and exempted addressees.</p>

3201.

EXAMPLE No. 1

PARTS OF A COMPLETE MESSAGE—GENERAL

Component part	Transmitted	Meaning
Call	{ AB BC etc	Call sign(s) of station(s) called, in alphabetical order.
	{ V GH II	
Preamble	NR, F, G, L, M, T, <u>AAA</u> , ¹ radio operators' signals, call signs.	Procedure signs, radio operators' signals, and call signs used in preamble.
	{ II Z II HK HL etc	Space. Procedure sign used in address. Space. Call sign(s) of action addressee(s) in alphabetical order. HK is a collective call sign including HB, HC, and HD.
Address	{ V QM II Q	From. Call sign of originator. Space. Procedure sign used in address if there are any information addressee(s).
	{ II JK JL etc II N	Space. Call sign(s) of information addressee(s) in alphabetical order. Space. Procedure sign if any addressee(s) previously given are exempted.
Prefix	{ II HC II	Space. Call sign(s) of exempted addressee(s). Space.
	F, G, <u>IX</u> , O, P, NITE, Y, GR, radio operators' signals, call signs.	Procedure signs, radio operators' signals, and call signs used in the prefix. GR is followed by numerals to indicate group count.
Text	<u>BT</u> or <u>IM</u> or II	Separating heading from text.
	Dispatch, signal, procedure signs or radio operators' signals.	Body of message.
	<u>AR</u>	Am closing off to receive your answer.

¹AAA is used wherever necessary in heading or text.

3202.

EXAMPLE No. 2

(a) PARTS OF A COMPLETE MESSAGE—SPECIFIC

Component part	Transmitted	Meaning
Call.....	AB.....	Station called.
	V.....	From.
	BC.....	Station calling.
Preamble.....	II.....	Space.
	M.....	Relay following via.
	II.....	Space.
	EF.....	Call sign of a station.
	II.....	Space.
	T.....	EF transmit this message to all addressees.
	II.....	Space.
	Z.....	Addressed for action to.
	II.....	Space.
	GH.....	Call sign of action addressee (assume to be a collective call sign), including GA, GB, GC.
Address.....	V.....	From.
	LM.....	Call sign of originator.
	II.....	Space.
	Q.....	Addressed for information to.
	II.....	Space.
	HK.....	Information addressee (assume to be a collective call sign including HA, HB, HC).
	II.....	Space.
	N.....	Less.
	II.....	Space.
	GA.....	Exempted addressee—1 included in collective call sign GH.
	HA.....	Exempted addressee—1 included in collective call sign HK.
	II.....	Space.
	P.....	Priority.
	II.....	Space.
Prefix.....	GH.....	To GH (less GA).
	II.....	Space.
	GR27.....	Groups in text 27.
	BT.....	Break—dispatch follows.
	0127.....	Office reference and date group.
	II.....	Space.
	XYZA.....	Code group.
Text.....	II.....	Space.
	etc.....	Other code groups with space sign between each group.
	II.....	Space.
	1725.....	Time of origin group.
	AR.....	Am closing off to receive your answer.

(b) PARTS OF A COMPLETE MESSAGE—SPECIFIC

If LM had transmitted the dispatch given in (a) above *direct* to GH (less GA) and to HK (less HA), LM would have done so as follows:

Component part	Transmission	Meaning
Call and address. (Stations called and addressed, not specifically indicated after Q, are considered to be action addressees.)	GB-----	Stations called and addressed, in alphabetical order.
	GC-----	
	HB-----	
	HC-----	
	V-----	From.
	LM-----	Originator's call sign.
	II-----	Space.
	Q-----	Information to.
	II-----	Space.
	HB-----	Information addressees.
	HC-----	
	II-----	Space.
	P-----	Priority.
II-----	Space.	
Prefix-----	GB-----	Priority addressees.
	GC-----	
Text-----	II-----	Space.
	GR27-----	Groups in text 27.
	BT-----	Break.
	etc., as shown in (a) above.	

3203.

EXAMPLE No. 3

ESTABLISHING COMMUNICATION—UNKNOWN SHIP

AB having heard someone call him, but not being certain who called, makes:

AA AA V AB AR

(NOTE.—**AA** is always made twice as indicated.)

The "unknown ship" (whose call sign is XY) then repeats the call up, as follows:

AB V XY AR, and AB answers: **XY V AB K**

3204.

EXAMPLE No. 4

ESTABLISHING COMMUNICATION—KNOWN SHIP

(a) The usual preliminary call up, when necessary, is made as follows (AB calling CD):

CD V AB AR

and AB answers: **AB V CD K3**

(b) When communication is especially difficult, the preliminary call up is made as follows (AB calling CD):

CD CD CD CD V AB AB AR

3205.

EXAMPLE No. 5

RELAYING MESSAGE—USE OF SIGN T

(a) AB directs BC to transmit the message to CD and DG, in the following manner:

BC V AB - T - Z - CD V AB - Q - DG - GR9 BT etc.

(b) AB directs BC to transmit the message to DG only, in the following manner:

BC V AB - T - DG - Z - CD V AB - Q - DG GR 9 BT etc.

(c) AB directs BC to transmit the message to DG, and FO transmit the message to CD, in the following manner:

BC FO V AB - BC - T - DG - FO - T - CD - Z - CD V AB - Q - DG - GR9 BT etc.

3206.

EXAMPLE No. 6

RELAYING A MESSAGE—USE OF SIGN L

(a) A ship AB desires to deliver a message to ships AX, BX, and FB. BX is known to be responsible for delivery to FB under the existing fleet radio organization and FB and BX are known to be in easy radio touch with each other. AB, AX, and BX are in direct radio communication. To effect delivery to AX, BX, and FB, AB transmits:

AX BX V AB - L - Z - AX BX FB V AB - GR8 BT etc.

and BX makes:

FB V BX - Z - AX BX FB V AB - GR8 BT etc.

(b) A ship AB desires to deliver a message to AB, BC, and CD for whom DE is known to be responsible under existing organization. DE is in direct communication with AB, BC, and CD. AB also desires to deliver the message to XA via XT.

AB transmits:

DE XT V AB - XT - T - XA - DE - L - Z - AB BC CD XA V AB GR18 BT etc.

3207.

EXAMPLE No. 7

RELAYING A MESSAGE—USE OF SIGN M

(a) AB wishes to send a message to BC. The best routing will be via AX and AY. AB and AX are in direct communication, and AX probably does not know the best station to relay via in order to reach BC.

AB transmits:

AX V AB - M - AY - T - Z - BC V AB - GR7 BT etc.

(b) If AB considered it best to route the message to BC via AX, AY, and AZ, then AB transmits:

AX V AB - M - AY AZ - T - Z - BC V AB - GR7 BT etc.

and AX transmits:

AY V AX - M - AZ - T - Z - BC V AB - GR7 BT etc.

(c) If the message is also addressed to AL, and AB and AL are in direct communication, then AB transmits:

AL AX V AB - AX - M - AY AZ - T - BC - Z - AL BC V AB - GR7 BT etc.

and AX transmits:

AY V AX - M - AZ - T - BC - Z - AL BC V AB - GR7 BT etc.

3208.

EXAMPLE No. 8

RELAYING RADIO MESSAGE—BY VISUAL

(See art. 3321, visual example No. 20.)

3209.

EXAMPLE No. 9

RELAYING VISUAL MESSAGE—BY RADIO

The following visual message is required to be transmitted by radio from AN to AL (whose visual call sign is B38), via FX:

Z - B38 B39 V B40 - GR14 BT (text) AR

AN transmits by radio:

FX V AN - T - AL - Z - B38 B39 V B40 - GR14 BT (text) AR

3210.

EXAMPLE No. 10

ERRORS IN TRANSMITTING—HOW INDICATED

(a) In normal naval procedure—AB while transmitting the dispatch “1918 - VOBI - LOBO - 0810” to BC makes a mistake in the course of transmission. The dispatch as transmitted is as follows:

BC V AB - GR4 BT 1918 - VOD EEEEEEEE 1918 - VOBI - LOBO - 0810 AR

(b) In abbreviated naval procedure—AB while transmitting the signal “Sail dog xray” to BC, makes a mistake in the course of transmission. The signal as transmitted is as follows:

BC V AB IX IM SAIL DOG XRU EEEEEEEE IX IM SAIL DOG
XRAY AR

(c) In abbreviated naval procedure—AB while transmitting dispatch “Unable maintain speed greater than ten knots 0915” to BC, makes a mistake in the course of transmission. The dispatch as transmitted is as follows:

BC V AB BT UNABLE MAINTAIN SPEED GREATER TE EEEEEEEE
GREATER THAN TEN KNOTS 0915 AR

3211.

EXAMPLE No. 11

QUESTIONING NUMBER OF GROUPS

(a) In normal naval procedure—AB has just transmitted a message “1019 request *Nebraska* expedite, etc. 2045” to BC. BC copied message except the group count numerals.

BC transmits:

AB V BC - $\overline{\text{INT}}$ GR $\overline{\text{AR}}$

AB transmits:

BC V AB - GR18 $\overline{\text{AR}}$

If BC is satisfied that he has received the message correctly, he receipts for the message 1019 2045 as follows:

AB V BC R or AB V BC R 1019 2045 - B¹

(b) If BC upon being informed that group count is 18 believes that group count should be 20, BC does not receipt for message but makes:

AB V BC - $\overline{\text{INT}}$ GR20 $\overline{\text{AR}}$

If 20 is correct BC transmits:

BC V AB C $\overline{\text{AR}}$

If 18 is the correct count, AB transmits the first letter (or numeral) of each group in succession, as follows:

BC V AB - GR18 - 1 R N E etc. 2 $\overline{\text{AR}}$

If BC now is satisfied that group count is 18 and that he has received the message correctly BC receipts for the message. If not satisfied that he has received the message correctly, BC requests repetitions as necessary.

3212.

EXAMPLE No. 12

QUESTIONING ACCURACY OF RECEPTION

(a) AB has transmitted to BC a code dispatch 0010 1500 of 34 groups addressed to BC from CD. Before giving “R” for the message, BC desires to check his reception of a *portion* of the heading and of the twenty-second group which he has read as ABQC.

BC makes:

AB V BC $\overline{\text{INT}}$ AB1 - BC V AB - Z - BC V CD - GR34 $\overline{\text{BT}}$ 0010 - 22 - ABQC $\overline{\text{AR}}$

AB, finding BC's reception correct, makes:

BC V AB C $\overline{\text{AR}}$

BC then receipts for the message:

AB V BC R

(b) In example (a) above, if AB had desired to question his reception of the text or *major portion* of the text, the sign $\overline{\text{INT}}$ would not be used. The repeat sign would have been used.

(c) AB has transmitted to BC a plain language dispatch 0010 1500. Before giving “R” for the dispatch, BC desires to check his reception of a certain word or phrase in the message, say “forty range finders.”

BC makes:

AB V BC $\overline{\text{INT}}$ forty range finders $\overline{\text{AR}}$

AB makes (BC's reception being correct):

BC V AB C $\overline{\text{AR}}$

BC receipts:

AB V BC R, or AB V BC R 0010 1500

¹ This use of B indicates that BC has more to transmit to AB.

(d) In example (a) above, if BC's repeat back shows incorrect reception, AB must immediately correct the mistake. Suppose the twenty-second group should have been ADQC instead of ABQC. AB would immediately correct the mistake thus:

AB makes:

BC V AB² - 22 - ADQC \overline{AR}

BC then receipts for the message:

AB V BC R

(e) In example (c) above, if "forty range finders" should have been "fourteen range finders," AB would immediately make:

BC V AB² - fourteen range finders \overline{AR}

BC then receipts for the message:

AB V BC R

3213.

EXAMPLE No. 13

TRANSMITTING LONG MESSAGES

(a) A ship AB is transmitting to a shore station BC, a long plain-language message by "R" method:

AB V BC - NR7 - T - Z - EF V GH - GR312 \overline{BT} 1032 STRANDING OF KANSAS, etc. ----- BADLY ("badly" is group 100) - B 100

AB answers:

BC V AB R - K (or requests repetitions, or questions accuracy of reception, as appropriate).

BC continues:

AB V BC - BADLY PENDING REMOVAL (etc. to 200 words) - B200

AB answers:

BC V AB R - K (or as appropriate)

BC continues:

AB V BC - SALVAGE CHARLES WILL (etc. to 300 words) - B300

AB answers:

BC V AB R - K

BC continues:

AB V BC - BY NOON (etc. to end) 1140 \overline{AR}

AB answers:

BC V AB R NR7

(b) In transmitting by "T" and "F" methods, in order to afford receiving operators opportunity to check copy in hand and compose themselves for remainder of message, each portion will be followed by the sign \overline{AS} , followed by figures representing the total number of groups transmitted so far. A pause of one minute will then ensue before continuing the transmission.

(c) A shore station BC transmitting a code message to any United States ship AB by F method:

AB AB V BC - Z - CD V EF - F - GR83 \overline{BT} 0010 VOBUX - IQUQI - XYLYL (etc. to 50 groups) - \overline{AS} 50

BC then waits one minute and resumes, commencing with the last groups previously transmitted:

AB V BC - TYNAN - QORUX (etc. to end) 1800 \overline{MI} - \overline{AS} 83

* The sign "C" is not necessary in these cases and should be omitted.

BC then waits one minute and resumes:

AB V BC - Z - CD V EF - F - GR83 - BT 0010 VOBUX - IQUQI - XYLYL
(etc. to 50 groups) - AS 50

BC then waits one minute and resumes, commencing with the last group previously transmitted:

AB V BC - TYNAN - QORUX (etc. to end) 1800 - VA

(d) A shore station WX transmitting a plain-language message to another shore station XY in a series by the intercept method:

XY V WX - NR56 AFIRM - G - Z - AB V PQ - GR127 BT 0010
ARTICLE FOUR TWO (etc. for 100 words) - AS 100

WX then waits one minute and then resumes, commencing with the last group previously transmitted:

XY V WX - PRIVILEGES CANNOT BE (etc. to end) 1430 - NR57 AFIRM,
etc.

When XY repeats back, the same procedure is followed.

3214.

EXAMPLE No. 14

TRANSMITTING MESSAGE WITH UNKNOWN NUMBER OF GROUPS

In order not to delay transmission of a long priority dispatch which AB wishes to transmit to BC, AB does not take time to count the groups, but transmits:

BC V AB - P - GRX BT 1012 (text) 0845 AR

Later, AB determines that there are 97 groups in the text and transmits:

BC V AB - C - 1012 0845 - AB1 - BC V AB - P - GR97³ AR

3215.

EXAMPLE No. 15

SILENT PERIODS AND NEGATIVE SILENCE

(a) The commander in chief AB requires all ships of the fleet BC and a shore station CD to keep absolute radio silence.

AB makes:

BC CD V AB HM HM HM HM HM

(b) The commander in chief desires to silence on 600 and 1,430 kilocycles the same stations as in (a).

AB makes:

BC CD V AB HM HM HM HM HM - 600 - 1430

(c) The silence sign has been made by the commander in chief, AB, but a ship of the fleet EF, has an *urgent* message for AB. EF transmits his message without preliminary call up to AB. If not receipted for, the message may be repeated once.

(d) The silence sign having been made to BC by the commander in chief, AB, the latter desires to open the 600 kilocycle frequency to communication.

AB makes:

BC V AB UO UO UO UO UO - 600

(e) The silence sign having been made to BC by the commander in chief, AB, the latter desires to annul the silence sign.

AB makes:

BC V AB UO UO UO UO UO

* "BT 1012" should be omitted if the "office reference and date" group appears in the identification data employed.

(f) The commander in chief, AB, desires all ships of the fleet, BC, to keep absolute radio silence. AB desires major unit commanders (UC) of the fleet to relay to their respective units, the silence command.

AB makes:

BC V AB - HM HM HM HM HM - UC V AB - L

or

UC V AB - L - Z - BC V AB HM HM HM HM HM

3216.

EXAMPLE No. 16

REPEATING BACK—USE OF SIGN G

(a) A station AB has transmitted a message to a station BC.

In order to assure himself that BC has the message correctly, AB may direct BC to repeat back thus:

BC V AB G AR (meaning "Repeat back last message")

or

BC V AB G 1300 AR (meaning "Repeat back message with 'time of origin' group 1300")

(b) AB has a message for BC which is to be repeated back by BC.

AB transmits:

BC V AB - G - GR12 (text) AR

BC then transmits:

AB V BC - BC V AB - G - GR12 (text) AR

Then if the message has been correctly repeated back, AB transmits:

BC V AB - C

If the message has not been correctly repeated back by BC, AB indicates the correct version to BC. BC repeats back the correction and, if now correctly repeated back, AB makes:

BC V AB C

(c) AB desires to transmit a message to BC via CX and wishes each station handling the message to repeat it back to the station from which received. In order that AB may know that BC ultimately receives the message and understands it, AB requires BC to acknowledge the message.

AB transmits:

CX V AB - T - Z - BC V AB - G - Y - GR8 BT (text) AR

CX transmits:

AB V CX - CX V AB - T - Z - BC V AB - G - Y - GR8 BT (text) AR

AB transmits:

CX V AB - C

CX transmits to BC. BC repeats back to CX. When BC has been informed by CX that BC repeated back the message correctly, BC (the action addressee), acknowledges receipt of message to AB (the originator).

* See art 3115 (f) relative to use of space sign.

3217.

EXAMPLE No. 17

INCOMPLETE MESSAGES—USE OF \overline{AAA}

(a) AB has received a message for BC which is incomplete. AB being unable immediately to get the complete message, transmits the message to BC as follows, the missing portions being indicated by the "blank" sign \overline{AAA} :

BC V AB - Z - BC V \overline{AAA} \overline{BT} 1025 request reply from \overline{AAA} for sonic depth finder 1020

(b) When AB has received the message completely, he transmits it so to BC, or if the dispatch is lengthy and can be properly identified, AB need transmit only the portions missing, using procedure sign C. If a portion of the heading is missing, the whole heading must be repeated when the missing portion is obtained.

3218.

EXAMPLE No. 18

INTERRUPTED COMMUNICATIONS—USE OF \overline{AS}

(a) While AB is transmitting to BC, he finds it necessary to stop transmitting for a short time.

AB transmits:

BC V AB - GR13 \overline{BT} 1920 radio officers confer with - \overline{AS}

When AB is ready to resume transmission he makes:

BC V AB - with fleet radio officer today tuesday fourteen hundred 0927 \overline{AR}

(b) For use of \overline{AS} during transmission of long dispatches, see example No. 13, article 3213.

(c) AB having called up BC, if BC desires AB to go ahead, BC makes:

AB V BC K

If BC desires AB to wait, BC makes:

AB V BC \overline{AS}

If BC is a junior, AB will decide whether to wait or to go ahead with his communications.

If BC is a senior, AB must cease transmitting until told by BC to K.

AB has been told \overline{AS} by a senior station BC, but has apparently been overlooked.

AB makes:

BC V AB \overline{INT} K \overline{AR}

(d) AB is senior station. BC has a message for CD. Without requesting permission to transmit, BC will call, or transmit his message to, CD. If AB desires to break the communication, AB makes long dashes and—

BC V AB \overline{AS}

3219.

EXAMPLE No. 19

VERIFICATIONS—USE OF J

(a) AB having receipted for a long code message 0010 1500 from CD, later desires a verification and repetition of:

(1) A portion of the heading; and

(2) Group No. 7; and

(3) Groups Nos. 18 to 25.

AB transmits:

CD V AB - J - 0010 1500 - AB1 - 7 - 18 to 25 \overline{AR}

CD answers:

AB V CD R

BC having submitted the request to the originating officer, later transmits the verification or correction to AB, using the sign C.

(b) AB having receipted to BC for a plain-language dispatch "0010 1500 - Z - AB V CD" desires a "verification and repetition" of certain words in the text which appear to be erroneous. Assume that the language of the text as received reads "Ship immediately BY SATURN for repair and return to you FORTY range finders." AB doubts the correctness of the parts, "by Saturn" and "forty."

AB asks thus:

BC V AB - T - Z - CD V AB BT - J - 0010 1500 - Z - AB V CD - im-
mediately to for repair - WA you AR

BC makes:

AB V BC R

BC transmits the message to CD, the originator, who verifies or corrects the words in question, and informs AB using the sign C.

3220.

EXAMPLE No. 20

RECEIPTING FOR MESSAGE—USE OF R (ALSO B AND N)

(a) AB having received a message from BC, AB makes:

BC V AB R

BC does NOT answer.

AB having received a message carrying station serial number 7 from shore station BQ, AB makes:

BQ V AB R NR7

BQ does NOT answer.

(b) AB has made a string of five messages to BC. The messages carried no station serial numbers. BC receipts for all five messages thus:

BC makes:

AB V BC R, or AB V BC R 1018 1105 - 1018 1108 - 1018 1207 - 0017
2339 - 0018 1233

AB does NOT answer.

AB has made a string of 10 messages to BC, station serial numbers 10 to 19, inclusive. BC has received them all.

BC makes:

AB V BC R NR10 to 19

AB does NOT answer.

(c) AB has made a string of five messages to BC, station serial numbers 39 to 43. BC has received numbers 39 to 41; desires a repetition of number 42; desires a repetition of first group of number 43, and from "has been" to "midnight."

BC makes:

AB V BC R NR39 to 41 - IMI NR42 - NR43 - 1 - has been to midnight AR

(d) BC may inform AB that he (BC) has received message "1022 1300 - Z - CD V EF" thus:

BC makes:

AB V BC R 1022 1300 - Z - CD V EF AR

AB answers:

BC V AB R

BC does NOT answer.

(e) AB has heard XY pass three messages to CD for relay to him (AB). The messages carried station serial numbers 7, 8, and 9 to CD from XY. The next three numbers to AB from CD will be 3, 4, and 5. AB desires to inform CD that he (AB) has received these messages, thus obviating the necessity for CD's retransmitting them.

AB makes:

CD V AB R NR7 to 9 - CD V XY - ZMF⁵ NR3 to 5 - AB V CD \overline{AR}

CD answers:

AB V CD R

AB does NOT answer.

(f) AB informs CD that he (AB) has not received the last transmission thus:

CD V AB N \overline{AR}

AB informs CD that he (AB) has not received message "0010 1500 - Z - CD V EF" thus:

AB makes:

CD V AB N 0010 1500 - Z - CD V EF \overline{AR}

In each of these two instances, CD makes:

AB V CD R

(g) The sign B is used to determine whether or not the last or a certain message has been received. AB having made a transmission to BC, and BC having failed or being slow to answer;

AB makes:

BC V AB B \overline{AR} (meaning "Did you receive last transmission?")

or

BC V AB B 1300 \overline{AR} (meaning "Did you receive message 1300?")

If BC has received the subject transmission, BC makes:

AB V BC R

or

AB V BC R 1300

If BC has not received the subject transmission, BC makes:

AB V BC N

or

AB V BC N 1300

(h) See also example of use of B in article 3213.

3221.

EXAMPLE No. 21

ACKNOWLEDGMENTS—USE OF SIGN Y

(a) The following heading indicates the use of Y on a dispatch which is addressed by ML for action to AB and CD; priority to AB; and to be acknowledged by AB:

Z - AB CD V ML - P - AB - Y - AB - GR10 \overline{BT} etc.

(b) If a dispatch is to be acknowledged by all action addressees (AB and CD), and by all information addressees (DA and DB), then the heading should be as follows:

Z - AB CD V ML - Q - DA DB - Y - GR12 \overline{BT} etc.

⁵ ZMF means "Use"

(c) CD having received a message from AB which carried no reference numbers, and wishing to acknowledge it, makes:

AB V CD Y \overline{AR}

AB makes:

CD V AB R⁶

(d) AB having transmitted a message in abbreviated procedure to CD which required acknowledgment and CD being slow to acknowledge, AB makes:

CD V AB \overline{INT} Y \overline{AR}

BC answers:

AB V CD R

and when ready to acknowledge CD makes:

AB V CD Y

(e) AB having transmitted a message in abbreviated procedure to CD which did NOT require acknowledgment but later wishing to obtain one makes:

CD V AB \overline{INT} Y \overline{AR}

BC answers:

AB V CD R

and when ready to acknowledge CD makes:

AB V CD Y

(f) AB having transmitted a message 0010 1500 to CD which required acknowledgment and CD being slow to acknowledge, AB makes:

CD V AB \overline{INT} Y 0010 1500 \overline{AR}

CD answers:

AB V CD R

and when ready to acknowledge CD makes:

AB V CD GR5 \overline{BT} 1010 YOUR 0010 1500 1535 \overline{AR}

(g) AB having transmitted a message 0010 1500 to CD which did NOT require acknowledgment but later wishing to obtain one, AB makes:

CD V AB \overline{INT} Y 0010 1500 \overline{AR}

CD answers:

AB V CD R

and when ready to acknowledge, CD makes:

AB V CD - GR5 \overline{BT} 1910 YOUR 0010 1500 1540 \overline{AR}

(h) AB has transmitted a message 0010 1500 to CD which required acknowledgment. CD has failed to acknowledge. AB can communicate with CD through a shore station XY.

AB makes:

XY V AB - NR7 - T - Z - CD V AB \overline{INT} Y 0010 1500 \overline{AR}

XY answers:

AB V XY R NR7

⁶ The receipt for the "acknowledgment" or the receipt for the "request for acknowledgment" is not necessary in maneuvering. When receipt is not desired in these instances, omit \overline{AR} .

3222.

EXAMPLE No. 22

CORRECTIONS—USE OF C, INT, IML, AND J

(a) Assume that AB has made the following message to BC which BC has received for:

BC V AB - GR6 BT 1017 - BOTUS - NUFAT - TORAC - BALOT - 0817
AR

Subsequently, AB finds that he has made a mistake in coding or wording and that the third group should be "LADOX."

AB sends the correct version thus:

BC V AB - C - 1017 0817 - 3 - LADOX AR

(b) BC, on decoding the message, doubts whether the wording is correct. BC has requested of AB by means of J, a verification and repetition of the whole message. AB verifies the coding and text and finding it correct subsequently makes:

BC V AB - C - 1017 0817 - BOTUS - LADOX - TORAC - BALOT AR

Subsequent to transmitting the dispatch given above, AB finds that he has incorrectly transmitted the group TORAC as TORAK. Desiring to correct this, AB makes:

BC V AB - C - 1017 0817 - 4 - TORAC AR

In all cases, BC answers:

AB V BC R

(c) Ship EF requires verification from originator GH of the following, pertaining to dispatch 0010 1500, which contained 50 groups:

- (1) A portion of the heading;
- (2) Group number 3;
- (3) Groups from 5 to 8;
- (4) Groups numbers 12 and 23; and
- (5) All after group number 48.

Assume EF can not communicate with GH direct, but must pass his message through a shore station BC. EF transmits to BC:

BC V EF (- NR3)⁷ - T - Z - GH V EF - J - 0010 1500 - Z - EF V GH -
AB1 - 3 - 5 to 8 - 12 - 23 - AA48 AR

(d) GH upon receiving this request for verification and repetition shall carefully check the coding and the language of the parts indicated. The following reply might be made through BC to EF (corrections, if any, having been made):

BC V GH - NR5 - T - Z - EF V GH - C - 0010 1500 - AB1 - Z - EF V
GH - P - GR50⁸ - 3 - BOQU - 5 to 8 - KUPY - FOQU - MUCU - KAWC - 12 -
JOLO - 23 - BOCA - 48 - LAGO - CUXA - 1500 AR

(e) CD in receiving a message (1018 2300) from AB is doubtful of the second group which he has read as "ABCD."

CD makes:

AB V CD INT 2 - ABCD AR

If ABCD is correct, AB makes:

CD V AB C AR

If ABCD is not correct (second group should be ABCX), AB makes:

CD V AB - 2 - ABCX AR

When CD believes he has received message correctly, CD receipts for the whole message as follows:

AB V CD R 1018 2300

⁷ Part in parentheses would be omitted if BC were not a shore station.

⁸ "BT 0010" should be omitted as first group appears in identification data.

3223.

EXAMPLE No. 23

REPETITIONS—USE OF \overline{IM}

(a) A ship AB, transmitting through twice the dispatch "1021 - VOBI - etc. - 1040" to the ship BC for retransmission to addressees EF and GH, makes:

BC V AB - T - Z - EF GH V AB - GR42 \overline{BT} 1021 - VOBI - etc. - 1040
 \overline{IM} BC V AB - T - Z - EF GH V AB - GR42 \overline{BT} 1021 - VOBI - etc. -
 1040 \overline{AR}

(b) AB transmitting a dispatch containing an unusual or difficult expression, such as "MOSCIEWCZ R A SC," may do so as follows:

BC V AB - GR13 \overline{BT} 1014 EFFECTS OF MOSCIEWCZ R A SC \overline{IM}
 MOSCIEWCZ R A SC SHIPPED BY etc.

The above is not to be confused with the case in which transmitting operator makes an error in sending, the procedure for which is shown in article 3210.

(c) AB misses the greater portion of a message from CD owing to too fast sending plus static, and local interference. AB requests repetition of whole transmission and indicates receiving conditions as follows:

CD V AB \overline{IM} - W - X - K3.

(d) BC has made the following code dispatch to a shore station CD:

CD V BC - NR7 - T - Z - EF V GH - P - GR10 \overline{BT}

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)										
0010	-	JAPY	-	BOQU	-	LAJY	-	KUPY	-	FOQU	-	MUCU	-	KAWC	-	GUXO	-	1500	B ⁹

Any repetition that can possibly be required must fall within one or more of the following categories:

(1) THE WHOLE DISPATCH

CD asks thus:

BC V CD \overline{IM} \overline{AR}

or

BC V CD \overline{IM} 0010 1500 \overline{AR}

BC answers:

CD V BC - NR7 - T - Z - EF V GH - P - GR10 \overline{BT} 0010 - JAPY -
 BOQU - LAJY - KUPY - FOQU - MUCU - KAWC - GUXO - 1500 \overline{AR}

(2) THE HEADING OR ANY PORTION OF THE HEADING

[It should be noted that the whole heading must be repeated when any portion of it is required to be repeated]

CD asks thus:

BC V CD \overline{IM} AB1 \overline{AR}

BC answers:

CD V BC - NR7 - T - Z - EF V GH - P - GR10 \overline{BT} 0010 \overline{AR}

(3) THE WHOLE TEXT

CD asks thus:

BC V CD \overline{IM} AA1 \overline{AR}

BC answers:

CD V BC - 0010 - JAPY - BOQU - LAJY - KUPY - FOQU - MUCU -
 KAWC - GUXO - 1500 \overline{AR}

* This use of \overline{B} indicates to CD that BC has other messages to transmit to CD.

COMMUNICATION INSTRUCTIONS, 1929

(4) ALL AFTER GROUP NO. 4

CD asks thus:

BC V CD **IMI** AA4 **AR**

BC answers:

CD V BC - 4 - LAJY - KUPY - FOQU - MUCU - KAWC - GUXO - 1500
AR

(5) ALL AFTER THE GROUP LAJY

CD asks thus:

BC V CD **IMI** AA LAJY **AR**

BC answers:

CD V BC - LAJY - KUPY - FOQU - MUCU - KAWC - GUXO - 1500 **AR**

(6) ALL BEFORE GROUP NO. 4

CD asks thus:

BC V CD **IMI** AB4 **AR**

BC answers:

CD V BC - NR7 - T - Z - EF V GH - P - GR10 **BT** 0010 - JAPY - BOQU -
LAJY **AR**

(7) ALL BEFORE THE GROUP LAJY

CD asks thus:

BC V CD **IMI** AB LAJY **AR**

BC answers:

CD V BC - NR7 - T - Z - EF V GH - P - GR10 **BT** 0010 - JAPY - BOQU -
LAJY **AR**

(8) GROUPS FROM NO. 1 TO NO. 4

CD asks thus:

BC V CD **IMI** 1 to 4 **AR**

BC answers:

CD V BC - 1 - 0010 - JAPY - BOQU - LAJY **AR**

(9) GROUPS FROM 0010 TO KUPY

CD asks thus:

BC V CD **IMI** 0010 to KUPY **AR**

BC answers:

CD V BC - 0010 - JAPY - BOQU - LAJY - KUPY **AR**

(10) GROUP NO. 4

CD asks thus:

BC V CD **IMI** 4 **AR**

BC answers:

CD V BC - 4 - LAJY **AR**

(11) GROUPS NO. 4 AND 8

CD asks thus:

BC V CD **IMI** - 4 - 8 **AR**

BC answers:

CD V BC - 4 - LAJY - 8 - KAWC **AR**

In all cases, when CD is satisfied, CD makes:

BC V CD R NR7

(e) Combinations of the 11 cases shown in (d) above will be required. Consider a dispatch of 15 groups "0020 0530 - Z - DB V NX - P - GR15 BT, etc." If DB requires from AD:

- (1) A portion of the heading;
- (2) Groups 3 to 5; and
- (3) All after group 13.

DB makes:

AD V DB IMI AB1 - 3 to 5 - AA13 AR

AD will frame the repetition as follows:

DB V AD - Z - DB V NX - P - GR15 BT 0020 - 3 to 5 - FOBO - NOLO -
UXBY - 13 - LUBA - ZAKA - 0530 AR

(f) Consider the dispatch—

Z - FA FB V NX - P - FB - Y - FB - GR11 0121 CARRY OUT PLAN
NUMBER FIVE COMMENCING ZERO ONE THIRTY 0039

which NX has transmitted to FA and FB. Before receiving FB requires from NX:

- (1) The first group; and
- (2) The word after "carry."

FB transmits:

NX V FB IMI - 1 - WA CARRY AR

NX transmits:

FB V NX - 1 - 0121 - CARRY OUT AR

And FA requires from NX:

- (1) The fourth group; and
- (2) From "commencing" to "thirty."

FA transmits:

NX V FA IMI - 4 - COMMENCING TO THIRTY AR

NX transmits:

FA V NX - 4 - PLAN - COMMENCING ZERO ONE THIRTY AR

3224.

EXAMPLE No. 24

ABBREVIATED PROCEDURE, USES OF

(See visual examples, art. 3336, all of which are applicable to radio.)

3225.

EXAMPLE No. 25

TRANSMISSION OF SIGNALS—DIRECT COMMUNICATION

(a) AB makes a signal from the signal book in abbreviated procedure without preliminary call up:

BC V AB IM CAST ROGER GEORGE AR

and BC transmits to AB:

R V BC

(b) AB makes two separate signals coded from a signal vocabulary in abbreviated procedure without preliminary call up. The first signal consists of three 4-letter groups—the second of two.

BC V AB IM TARE ROGER DOG KING - TARE KING JIG MIKE -
KING HYPO YOKE JIG TACK MIKE QUACK TARE ZED - FOX HYPO
KING YOKE - 1300¹⁰. AR

and BC transmits to AB:

R V BC

¹⁰ Use of "time or origin" group is optional.

(c) AB makes a signal coded from a signal vocabulary in *normal* procedure with or without preliminary call up:

BC V AB - GR17 IM BXLO - QSNT - XTLK - BQFN - etc. - LXFQ - 1300¹¹ AR

and BC transmits:

AB V BC R

(d) Signal "interrogatory" to ship BC from AB is transmitted:

BC V AB IM INT AR

and BC receipts to AB:

R V BC

(e) Signal to ship BC from AB, execute to follow, "Course 258" is transmitted:

BC V AB IX IM CORPEN TWO FIVE EIGHT

BC does NOT answer since transmission did not end with an AR.

(f) Signals to ship BC from AB, execute to follow, "Dog fox love desig B6" and "Dog sail tare desig D6," would be transmitted:

BC V AB IX IM DOG FOX LOVE DESIG BAKER SIX TACK DOG SAIL TARE DESIG DOG SIX AR

(g) Signal to a division BQ from AB, "IX IM Corpen 8 Ans," has been made thus:

BQ V AB IX IM CORPEN EIGHT ANS - K

BA and BN, ships of division BQ, receipted:

R V BA and R V BN.

When ready to execute, AB makes:

BQ V AB IX (5 seconds).

If there may be any doubt as to which message the "executive" sign refers; or if a considerable time has elapsed since the sending of the signal; or if another signal requiring the "executive" sign has been sent in the interim, AB repeats the signal when executing; thus:

BQ V AB IX IM CORPEN EIGHT ANS IX (5 seconds).

(h) Dispatch "BC V AB IX BT Fire the red rocket 1300" having been made, when AB is ready to execute, AB makes:

BC V AB 1300 IX (5 seconds).

3226.

EXAMPLE No. 26

SIGNALS—SPECIFIC—DIRECT AND INDIRECT COMMUNICATION

(a) A senior officer is handling a tactical unit composed of three divisions of three ships each. Call signs are as follows:

Senior officer.....	SO	Collective call sign for division 2.....	D2
Collective call sign for tactical unit.....	TU	Commander division 3.....	CD3
Commander division 1.....	CD1	Collective call sign for division 3.....	D3
Collective call sign for division 1.....	D1	Collective call sign for division commanders...	DC
Commander division 2.....	CD2	Call sign for flagship of senior officer.....	SX

Ships composing division 1 (D1).....	AF (CD1 on board)
	AG
	AH
Ships composing division 2 (D2).....	BF (CD2 on board)
	BG
	BH
Ships composing division 3 (D3).....	CF (CD3 on board)
	CG
	CH

¹¹ May be sent through twice.

(b) *No answers (receipts) desired:*

"Tactical unit from senior officer—Executive to follow—Signal turn 3."

SO makes:

TU V SO - IX IM TURN THREE

Since more than one ship is addressed by a collective call sign no ships answer. When ready to make the executive sign, it is sent to the radio room thus:

"Tactical unit from senior officer—Execute."

SO makes:

TU V SO IX (5 seconds).

(c) *No answers (receipts) desired:*

"Division 3 from commander division 3—Signal George Baker."

CD3 makes:

D3 V CD3 IM GEORGE BAKER

Since more than one ship is addressed by a collective call sign, no ships answer.

(d) *Message to be answered (receipted for) by all ships:*

"Tactical unit from senior officer—Signal love unit."

(No mention need usually be made relative to answers being required or not required, as in each command either one system or the other will be used almost invariably.)

SO makes:

TU V SO IM LOVE UNIT - K

Ships answer as follows:

	V	AF
	V	AG
	V	AH
	V	BF
R or IMI or J as required-----	V	BG
	V	BH
	V	CF
	V	CG
	V	CH

SO does NOT answer.

(e) *Message to be answered by division commanders.*

"Tactical unit from senior officer—Signal love Xray—Division commanders answer."

SO makes:

TU V SO IM LOVE XRAY - DC V SO K

CD1, CD2, and CD3 answer:

	V	CD1
R or IMI or J as required-----	V	CD2
	V	CD3

SO does NOT answer.

(f) *Message to be answered by all ships of the division.*

"Division 2 from commander division 2—Signal 5 William 8—Answer."

CD2 makes:

D2 V CD2 IM FIVE WILLIAM EIGHT - K

BG and BH answer (CD2 is on board BF):

R	V	BG
	V	BH

CD2 does NOT answer.

(g) In (d) above if division commanders are to relay to their respective divisions on division frequencies, SO makes:

DC V SO - L - Z - TU V SO **IM** LOVE XRAY - K

or

TU V SO **IM** LOVE XRAY - DC V SO - L - K

Division commanders receipt for message as follows:

R V CD1

R V CD2

R V CD3

Division commanders immediately relay to their respective divisions.

CD1, for example, transmits:

D1 V CD1 - Z - TU V SO **IM** LOVE XRAY - K

and D1 receipts to CD1 as follows:

R V AG

R V AH

Since AF is flagship of CD1, there is no radio receipt from AF to CD1.

3227.

EXAMPLE No. 27

SIGNALS BY EXECUTIVE METHOD—DELAYED EXECUTION—EXECUTING ONE OF SEVERAL SIGNALS

(a) Signals, BC from AB, "**IX IM** Div Form 1 Ans Desig B6 tack form Y2 Desig D6," having been made, if AB desires to execute both of these signals simultaneously, AB makes:

BC V AB **IX** (5 seconds)

If AB desires to execute only the first signal, AB makes:

BC V AB **IX IM** DIV FORM ONE ANS DESIG BAKER SIX **IX** (5 seconds)

The same procedure should be followed when the second signal is executed. Thus:

BC V AB **IX IM** FORM YOKE TWO DESIG DOG SIX **IX** (5 seconds).

3228.

EXAMPLE No. 28

RECEIPTS—TACTICAL SIGNALS

(a) When receipts are required from some or all addresses, the form of receipt is:

R V AB

(b) (See art. 3226 (e), (f), and (g).)

3229.

EXAMPLE No. 29

ACKNOWLEDGMENTS—TACTICAL SIGNALS

(a) *Message to be acknowledged but not to be answered.*

"Tactical unit from senior officer—Acknowledge—Signal love unit."

SO makes:

TU V SO - Y **IM** LOVE UNIT

Since more than one ship is addressed by a collective call sign, no ships transmit acknowledgment until directed to do so. When ready to receive acknowledgments, SO makes:

TU V SO **INT Y AR**

PART IV: PROCEDURE AND EXAMPLES

Ships acknowledge as follows:

SO V AF Y
 SO V AG Y
 SO V AH Y
 SO V BF Y
 SO V BG Y
 SO V BH Y
 SO V CF Y
 SO V CG Y
 SO V CH Y

Normal order of answering should be preserved if possible.

SO does NOT answer.

(b) *Message to be acknowledged by division commanders but not to be answered.*

"Tactical unit from senior officer—Division commanders acknowledge—Signal love xray."

SO makes:

TU V SO - Y - DC IM LOVE XRAY

Since more than one ship is addressed by a collective call sign, no ships answer, and division commanders do not acknowledge until directed to do so. When ready,

SO makes:

DC V SO INT Y AR

CD1, CD2, and CD3 make:

SO V CD1 Y

SO V CD2 Y

SO V CD3 Y

SO does NOT answer.

(c) *Message to be acknowledged and answered by ships of the division.*

"Division 2 from commander division 2—Acknowledge—Signal love yoke—Answer."

CD2 makes:

D2 V CD2 - Y - IM LOVE YOKE - K

Ships of D2 answer (receipt) at once :

R V BG

R V BH

CD2 does NOT answer.

When ready to acknowledge, BG and BH make:

CD2 V BG Y

CD2 V BH Y

CD2 does NOT answer.

3230.

EXAMPLE NO. 30

CORRECTIONS—ABBREVIATED PROCEDURE

(a) AB has made to BC:

IM BAKER GEORGE UNIT ONE TACK ONE TWO.

(1) BC has missed the whole (or a portion) of the message.

BC makes:

IM V BC.

AB repeats the whole message exactly as first sent.

(2) BC desires that the whole or any portion of the message be verified.

BC makes:

J V BC.

AB makes:

BC V AB R

and

AB refers the message to the originator for verification.

(3) Upon verifying the message, AB finds that "one two" should have been "one six."

AB transmits the correction as follows:

BC V AB CCCC IM BAKER GEORGE UNIT ONE TACK ONE SIX AR

and BC transmits to AB:

R V BC.

(b) AB has made to BQ "IX IM Corpen eight ans." Desiring to correct this to "Corpen nine" before the executive sign is made, AB makes:

BQ V AB CCCC IX IM CORPEN NINE AR

This same procedure would have been followed if anyone had made "J" after the original signal was made.

3231.

EXAMPLE No. 31

REPEATING BACK SIGNALS

(a) The "repeat back" method should not be used for transmitting maneuvering and gunnery signals except in unusual cases where it is justifiable to sacrifice speed to extreme accuracy.

(b) *Signal to be repeated back by division commanders.*

"Tactical unit from senior officer—Division commanders repeat back—Signal negative."

TU V SO IM NEGAT - DC V SO - G.

Since more than one ship is addressed by a collective call sign, no ships repeat back. When ready to receive "repeat back," SO makes:

DC V SO - K

CD1, CD2, and CD3 repeat back:

TU V SO IM NEGAT	}	V CD1
		V CD2
		V CD3

SO does NOT answer unless some ship repeats back incorrectly.

3232.

EXAMPLE No. 32

PASSING MESSAGE TO ONE OTHER THAN AN ADDRESSEE

A station AB intercepts a message being passed between two stations "XY from WZ" and considers that the message so intercepted is of sufficient importance to be passed to BC, even though BC was not included in the address.

(a) If in direct communication with BC, AB makes:

BC V AB - Z - XY V WZ - GR10 BT (text)

(b) If in communication with BC through CD, AB makes:

CD V AB - T - BC V AB - Z - XY V WZ - GR10 BT (text)

(c) CD passes message to BC as follows:

BC V CD - BC V AB - Z - XY V WZ - GR10 BT (text)

3233.

EXAMPLE No. 33

COMBINING CALL AND ADDRESS—DIRECT COMMUNICATION

(a) *Only action addressee(s).*—When the origin and addressees are in direct communication with each other the address is used as the call (i. e., the call serves also as the address), and there is no preamble:

BC V AB (-GR7)¹² BT (message) AR

(b) *Both action and information addressees.*—In cases of direct communication, if there are any information addressees, these will be included in the call and all stations called are to understand that the message is for their action unless the sign "Q" followed by call signs appears later to specifically indicate certain information addressees.

BC CD V AB - Q - CD (-GR7)¹² BT (message) AR

(c) *Action, information, and exempted addressees.*—The following message is addressed for action to BC and LF (less LA). LF is a collective call sign including LA, LB, LC, and LD. The message is addressed for information to CD. AB is in direct communication with BC, CD, and LF.

BC CD LF V AB - Q - CD - N - LA (-GR7)¹² BT (message) AR

This same heading might also have been composed as follows:

BC CD LF V AB - N - LA - Z - BC LB LC LD V AB - Q - CD
(-GR7)¹² etc.

¹² Omitted in abbreviated form.

CHAPTER 33

VISUAL EXAMPLES

3301. In all examples the space sign is represented by a short dash (-).
 In examples 9 to 34, inclusive, it is assumed that communication has been established.

No.	Example
1	Parts of a complete message—General.
2	Parts of a complete message—Specific.
3	Establishing communication—Unknown ship.
4	Establishing communication—Known ship.
5	Establishing communication: (a) With a division—Collective call. (b) With a division—Less a ship—Plus an information addressee.
6	Establishing communication with two or more divisions—Collective call.
7	Establishing communication with two or more ships—Individual calls.
8	Exchanging calls.
9	Exchanging calls through a relaying ship.
10	Signal by executive method: (a) One division. (b) Delayed execute.
11	Signal by executive method—Two or more divisions.
12	Fleet signals: (a) By executive method. (b) Executing one of several outstanding signals. (c) Not requiring executive method.
13	Signal not by executive method: (a) To one ship—Use of Signal Vocabulary. (b) To more than one ship.
14	Signal not by executive method—Combined use of General Signal Book and Signal Vocabulary.
15	Relayed message—To all ships for which responsible.
16	Relayed message—Through one ship.
17	Relayed message—To a unit less a ship.
18	Relayed message—For one of two addressees.
19	Relayed message—Requiring further relay.
20	Relaying radio messages by visual.
21	Long messages—More than one message.
22	Acknowledgements: (a) By all addressees. (b) By one of several addressees. (c) Request for acknowledgment. (d) A signal to be acknowledged. (e) A signal, with time of origin group, to be acknowledged.
23	Repeating back: (a) By stations originally called. (b) By one ship. (c) Groups repeated back incorrectly. (d) By every station handling a message. (e) Late request for a repeat back.

No.	Example
24	Silent periods and negative silence: (a) Affecting searchlight only. (b) Affecting more than system of transmission.
25	Error in transmitting.
26	Questioning number of groups: (a) When challenge contains incorrect group count. (b) When challenge contains correct group count. (c) When group count is not received.
27	Transmitting message with unknown number of groups.
28	Questioning accurate reception: (a) Code message, quoted correctly. (b) Code message, quoted incorrectly. (c) Plain language, quoted correctly.
29	Corrections.
30	Incomplete messages.
31	Repetition of code dispatch—Use of IMI , -AA , and -AB : (a) The heading. (b) Specific groups. (c) Inclusive groups. (d) All the text. (e) Entire dispatch. (f) Office reference and date group.
32	Repetition of plain-language dispatch—Use of IMI , WA , AA , and AB : (a) Specific groups. (b) Entire dispatch. (c) Inclusive groups, by number. (d) Inclusive groups, by quotation. (e) Office reference and date group.
33	Verification: (a) Certain parts and groups. (b) Entire message. (c) Transmitting a verification.
34	Interrupted communication: (a) To delay further transmission. (b) Requesting permission to transmit an urgent message after having been ordered to delay. (c) To resume delayed transmission.
35	Abbreviated procedure: (a) Short concise dispatch of immediate importance. (b) Dispatch by executive method. (c) Signal by executive method. (d) Signal not requiring executive method. (e) Signal vocabulary, not requiring executive method. (f) Enemy contact report.

3302.

EXAMPLE No. 1

PARTS OF A COMPLETE MESSAGE—GENERAL

Component part	Transmission	Significance	
Call.....	B35.....	} Call sign(s) of ship(s) called.	
	B42.....		
	V.....		From.
	B38.....		Ship calling.
Preamble.....	■.....	Space.	
	NR, G, L, M, T, procedure signals, call signs.	Serial number, procedure signs, procedure signals, and call signs denoting the route of the message, including space signs as appropriate.	
	■.....	Space.	
	Z.....	Addressed for action to the following.	
	■.....	Space.	
	B39.....	} Call sign(s) of action addressee(s).	
	B36.....		
	B Div 5.....		
	V.....		From.
	Address.....	J14.....	Call sign of originator.
■.....		Space.	
Q.....		Addressed for information to the following.	
■.....		Space.	
B40.....		Call sign(s) of information addressee(s).	
■.....		Space.	
N.....		Less.	
■.....		Space.	
B45.....		Call sign(s) of ship(s) exempted.	
■.....		Space.	
Prefix.....	G, IX, O, P, Y, radio operators' sig- nals.	Procedure, procedure signs, procedure signals, and call signs used in prefix denoting the type of message and any instructions regarding the message itself, includ- ing space signs as appropriate.	
	GR27.....	Group count.	
Text.....	BT, IM, or ■.....	Procedure signs separating heading from the text.	
	{ Dispatch, signal, or procedure signal AR.....	Am closing off to receive your answer.	

3303.

EXAMPLE No. 2

PARTS OF A COMPLETE MESSAGE—SPECIFIC

Component part	Transmission	Significance
Call	B40	Ship called.
	V	From.
	B38	Ship calling.
	—	Space.
Preamble	M	Relay following via.
	—	Space.
	B39	Ship B39.
	—	Space.
	T	B39 transmit following to all addressees.
	—	Space.
Address	Z	Addressed for action to.
	—	Space.
	B37	Ship B37.
	V	From.
	B35	Originator B35.
	—	Space.
	Q	Addressed for information to.
	—	Space.
Prefix	B41	Ship B41.
	—	Space.
	P	Priority to.
	—	Space.
	B37	Ship B37.
	—	Space.
Text	GR72	Groups in text 72.
	BT	Break-dispatch follows.
	O127	Office reference and date group.
	—	Space.
	HBNK, etc.	Code groups.
	1725	Time of origin.
	AR	Am closing off to receive your answer.

3304.

EXAMPLE No. 3

ESTABLISHING COMMUNICATION—UNKNOWN SHIP

*B40**Unknown ship*

(1) Makes \overline{AA} (until answered by unknown ship).

(2) \overline{AA} V B43.

(3) Makes B43 V B40 \overline{AR} .

(4) B40 \overline{VA} .

NOTE.—The Navy visual procedure as shown in the example above is different from the procedure shown in Instructions Governing Communication between United States Merchant and United States Government Vessels. The procedure for merchant vessels is based on the international code of signals.

3305.

EXAMPLE No. 4

ESTABLISHING COMMUNICATION—KNOWN SHIP

B40 has a message for B43.

*B40**B43*

- | | |
|--|------------------|
| (1) Makes B43 (until repeated by B43). | (2) Repeats B43. |
| (3) Makes B40 (until repeated by B43). | (4) Repeats B40. |
| (5) -, (Only when there is an address, preamble, or prefix to follow). | (6) Flash. |
| (7) Proceeds with message. | |

NOTE.—In visual, V (From), is normally omitted from the call.

3306.

EXAMPLE No. 5

ESTABLISHING COMMUNICATION WITH A DIVISION—COLLECTIVE CALL

(a) Combatdiv 4 has a message for Batdiv 4—desires to use collective call and make only one transmission.

*Combatdiv 4**Ships of Batdiv 4*

- | | |
|---|--|
| (1) Makes Div 4. | (2) Each ship repeats Div 4 and turns on a steady flash when ship(s) for which responsible have repeated correctly and turned on the steady flash. |
| (3) After ships have turned on the steady flash, makes a flash. | (4) Turns off steady flash. |
| (5) Makes Div B4. | (6) Each ship repeats Div B4. |
| (7) Proceeds with message. | |

NOTE.—In examples 5 (a) and 6 only one collective call is employed and each ship flashes back on the call. If more than one collective call or a collective call plus one or more individual calls is employed, the system shown in example No. 7 must be used. Example 5 (b) illustrates this case, and also covers information and exempted addressees which necessitates the address being made in addition to the call.

(b) In this example if Combatdiv 4 desired to send the message to Batdiv 4 less *Idaho* and to Combatdivs for information and make only one transmission—*CBD 4**Ships of Batdiv 4 (including Idaho)**CBDs (J14)*

- | | | |
|--|--------------------------------|----------------------|
| (1) Makes in succession Div 4
J14. | (2) Each ship repeats Div 4. | (3) Repeats J14. |
| (4) Makes Div B 4. | (5) Each ship repeats Div B 4. | (6) Repeats Div B 4. |
| (7) Makes - Z - Div 4 V Div
B4 - Q - J14 - N - B42 -
GR27 BT and the text. | | |

NOTE.—In example (b) the address can not serve as the call, therefore both call and address must be made as shown. In both examples (a) and (b), "Div" being used as a call is transmitted by its Morse equivalent (-----.)

3307.

EXAMPLE No. 6

ESTABLISHING COMMUNICATION WITH TWO OR MORE DIVISIONS—COLLECTIVE CALL

Comdesron 11 has a message for Desron 11—desires to use collective call and make only one transmission.

*Comdesron 11**Ships of Desron 11*

- (1) Makes Squad 11.
- (2) Each ship repeats Squad 11 and turns on a steady flash when ship(s) for which responsible have repeated correctly and turned on the steady flash.
- (3) After unit leaders or adjacent ships have turned on steady flash, makes flash.
- (4) All turn off steady flash.
- (5) Makes Squad D 11 until repeated by responsible ships.
- (6) Division and section leaders repeat Squad D 11.

NOTE.—This system of call up is appropriate for signals even though all vessels can not receive direct because *responsible ships*, (unit and section leaders), are required to repeat the transmission of signals.

Dispatches are not repeated, and therefore this system of call up should not be employed unless all vessels can receive the transmission direct. If all vessels are unable to receive direct, the dispatch should be relayed through unit commanders or appropriate ships.

3308.

EXAMPLE No. 7

ESTABLISHING COMMUNICATION WITH TWO OR MORE SHIPS—INDIVIDUAL CALLS

Combatdivs has a message for three ships—desires to call each ship individually and make only one transmission.

*CBDs**B40, B41, B42*

- (1) Makes in succession B40, B41, B42.
- (2) Each ship repeats own call.
- (3) Makes J14.
- (4) Each ship repeats J14.
- (5) Proceeds with message.

NOTE.—In establishing communication with a number of addressees on different bearings from the originator, in a directive system such as searchlight, the transmission is expedited and errors are avoided by calling each addressee individually and sending the message with a complete address in the heading

3309.

EXAMPLE No. 8

EXCHANGING CALLS

B40 standing in is visible to J3 who is senior officer present in harbor.

*B40**J3*

- (1) Makes \overline{AA} until answered.
- (2) Makes \overline{AA} V J3.
- (3) Makes J3 V B40 \overline{AB} .
- (4) Makes B40 \overline{VA} .

NOTE.—If a flag officer is aboard an incoming vessel his call shall be made, and not the call of the vessel.

3310.

EXAMPLE No. 9

EXCHANGING CALLS THROUGH A RELAYING SHIP

B40 standing in is visible to B36 but not to J3 who is senior officer present in harbor.

- | <i>B40</i> | <i>B36</i> | <i>J3</i> |
|---|---------------------------------------|---|
| (1) Makes \overline{AA} until answered. | (2) Makes \overline{AA} V B36. | |
| (3) Makes B36 V B40 \overline{AR} | (4) Makes B40. | (6) Repeats J3. |
| | (5) Relays to SOP; makes J3. | (8) Repeats B36. |
| | (7) Makes B36. | (10) R - B. |
| | (9) - Z - J3 V B40 \overline{AR} . | (11) - T - Z B40 V J3 \overline{AR} . |
| | (12) Makes R. | |
| (14) Repeats B40. | (13) Makes B40. | |
| (16) Repeats B36. | (15) Makes B36. | |
| (18) Makes R or R - B as case may be. | (17) - Z - B40 V J3 \overline{AR} . | |

NOTE.—This example differs from example No. 8 in step (4), in that: As B36 is not the senior officer present he does not make \overline{VA} upon receiving B40's call.

3311.

EXAMPLE No. 10

SIGNAL BY EXECUTIVE METHOD—ONE DIVISION—DELAYED EXECUTE

(a) Combatdiv 4 sends signal "Speed 09" to the ships of his division. Previous call up has established the address.

- | <i>DivB4</i> | <i>Each ship of Batdiv4</i> |
|---|---|
| (1) Makes - IXIM Speed Zero Nine \overline{AR} . | (2) Each ship repeats - IXIM Speed Zero Nine \overline{AR} . |
| | (3) When signal is understood and all ships for which it is responsible have made R, each ship makes R. |
| (4) When all ships have made R, makes R.
The signal is now ready to execute. | |
| (5) Makes BDiv4 V DivB4 (several times if considered necessary). | |
| (6) Makes IX followed by a 5-second dash. | (7) Each ship makes 5-second dash with flagship. |
| (8) Turns off 5-second dash. | (9) Turns off 5-second dash with flagship. |
| The signal has now been executed. | |

NOTE.—The repetition of the address as shown in step (5) may be omitted when no confusion will result.

(b) In the previous example, after the signal was ready to be executed, assume that a considerable time elapsed, making it advisable to identify the signal before executing it. In this case the steps commencing with (5) would be:

- (5) Makes BDiv4 V DivB4 (several times if considered necessary).
- (6) Makes - **IXIM** Speed Zero Nine - **IX** 5-second dash.
- (7) Each ship makes 5-second dash with flagship.
- (8) Turns off 5-second dash.
- (9) Turns off 5-second dash with flagship.

The signal has now been executed.

3312.

EXAMPLE No. 11

SIGNAL BY EXECUTIVE METHOD—TWO OR MORE DIVISIONS

Comdesron 11 sends signal "Form W 1 Desig F 37" to his squadron. Previous call up has established the address.

- | <i>Comdesron 11</i> | <i>Division leaders (and section leaders
in destroyers)</i> | <i>All other ships of Desron 11</i> |
|--|---|--|
| (1) Makes - IXIM Form
William One Desig Fox
Three Seven AR . | (2) Each leader repeats -
IXIM Form William
One Desig Fox Three
Seven AR . | (3) When signal is understood
and all ships for which it
is responsible have made
R , each ship makes R . |
| (5) When all division leaders
have made R , makes R .
The signal is now ready to
be executed. | (4) Same as (3). | |
| (6) Makes D Squad 11 V
Squad D11. | (7) Repeats D Squad 11 V
Squad D11. | |
| (8) Makes IX followed by 5-
second dash. | (9) Makes IX 5-second dash
with flagship. | (10) Each ship makes 5-second
dash with flagship. |
| (11) Turns off 5-second dash. | (12) Turns off 5-second dash. | (13) Turns off 5-second dash. |

The signal has now been executed.

NOTE.—The repetition of the address as shown in steps (6) and (7) may be omitted when no confusion will result.

In step (3) if a ship fails to make **R** promptly, the division (or section) leader should repeat the signal until the ship in question makes **R**.

For signals to more than one division, the signal is not repeated by each individual ship as shown in example 10 because the repetition of the signal by force and column (section) leaders in a large formation should easily insure reception by all concerned.

3313.

EXAMPLE No. 12

FLEET SIGNALS BY EXECUTIVE METHOD—EXECUTING ONE OF SEVERAL

(a) CinC USFlt sends signal "Speed 4 tack SVR 1" to the fleet in company composed of 3 Batdivs, 2 Desrons acting as separate units, and Train (2 columns of 3 ships each). The call up is also shown.

<i>CinC US Flt</i>	<i>CinC BF Desron Comdr</i>	<i>Comdesrons Comdrs Train</i>	<i>Batdiv Leaders Leaders, (Section Leaders DDs) Train Leaders</i>	<i>Desdiv</i>	<i>All other ships</i>
(1) Makes F.	(2) Repeats F.	(3) Repeats F.	(4) Each ship repeats F and turns on a steady flash when ship(s) for which responsible have repeated correctly and turned on the steady flash.		
			(5) Turns on steady flash when ship(s) for which responsible have turned on the steady flash.		
			(6) Same as (5).		
(7) After all leaders have turned on the steady flash, makes a flash.					
	(8) Turns off flash.	(9) Turns off flash.	(10) Turns off flash.		
(11) Makes V J1.	(12) Repeats V J1.	(13) Repeats V J1.			
(14) Makes - IXIM Speed four tack sail vice roger one AR .	(15) Repeats - IXIM Speed four tack sail vice roger one AR .	(16) Repeats - IXIM Speed four tack sail vice roger one AR .			

CinC US Flt

<i>CinC</i>	<i>BF</i>	<i>Comdesrons</i>	<i>Baldiv</i>	<i>Leaders</i>	<i>Desdiv</i>
<i>Desron</i>	<i>Comdrs</i>	<i>Train</i>	<i>Leaders,</i>	<i>(Section</i>	<i>Lead-</i>
<i>Comdr</i>			<i>ers</i>	<i>DDs)</i>	<i>Train</i>
			<i>Leaders</i>	<i>Leaders</i>	

All other ships

(17) When signal is understood and all ships for which it is responsible have made **R**, each ship makes **R**.

(18) Same as (17).

(19) Same as (17).

(20) When all leaders have made **R**, makes **R**.

The signal is now ready to be executed.

(21) Makes F V J1.	(22) Repeats F V J1.	(23) Repeats F V J1.	
(24) Makes IX followed by 5-second dash.	(25) Makes IX 5-second dash with flagship.	(26) Makes IX 5-second dash with flagship.	(27) Makes 5-second dash with flagship.
(28) Turns off 5-second dash.	(29) Turns off 5-second dash.	(30) Turns off 5-second dash.	(31) Turns off 5-second dash.

The signals have now been executed.

NOTE.—If a ship fails to make **R** promptly, the division (or section) leader should repeat the signal until the ship in question makes **R**.

(b) After the signals shown under (a) were ready to be executed the CinC desired to execute the speed 4 but to withhold the execution of the SVR 1. In this case the procedure would be:

(21) Makes F V J1 - IXIM Speed four AR .	(22) Repeats (21).	(23) Repeats (21).	
(24) Makes IX followed by 5-second dash.	(25) Makes IX 5-second dash with flagship.	(26) Same as (25).	(27) Makes 5-second dash.
(28) Turns off 5-second dash.	(29) Turns off 5-second dash.	(30) Turns off 5-second dash.	(31) Turns off 5-second dash.

(c) If the signals sent in (a) above did not require the "executive method," the transmission would be the same as steps (1) to (20), inclusive, except that the "**IX**" would be omitted from steps (14), (15), and (16). Steps (21) to (31) are also omitted.

3314.

EXAMPLE No. 13

SIGNAL NOT BY EXECUTIVE METHOD

(a) Combatdiv 2 sends a signal to one ship that does not require the executive method. This example also illustrates the use of Signal Vocabulary. Previous call up has established the address.

<i>CBD 2</i>	<i>Receiving ship</i>
(1) -	(2) Flash
(3) GR 3	(4) Flash
(5) IM	(6) Flash
(7) UTMF -	(8) Flash
(9) LUYS -	(10) Flash
(11) 1315	(12) Flash
(13) AR	(14) R

NOTE.—A fleet signal "not by executive method" is shown in 3313 (c).

(b) If the signal as shown in (a) above is to be sent to more than one ship, the flashes as shown for the receiving ship(s) are omitted.

3315.

EXAMPLE No. 14

SIGNAL NOT BY EXECUTIVE METHOD

CinC Batft sends a signal to one or more ships that does not require the executive method. This example also illustrates the combined use of the General Signal Book and the Signal Vocabulary. Previous call up has established the address.

<i>CinC BF</i>	<i>Receiving ship</i>
(1) -	(2) Flash
(3) GR 6	(4) Flash
(5) IM	(6) Flash
(7) William	(8) Flash
(9) Love	(10) Flash
(11) Xray	(12) Flash
(13) Tack	(14) Flash
(15) XFUY -	(16) Flash
(17) 1500	(18) Flash
(19) AR	(20) R

NOTE.—Where there is more than one receiving ship the flashes are omitted.

3316.

EXAMPLE No. 15

RELAYED MESSAGE—TO ALL SHIPS FOR WHICH RESPONSIBLE

CinC US sends message to Batft for action and to Scoft for information. He wishes CinC BF and Comscoft to relay the message to their respective forces. Previous call up by CinC US has established direct communication with CinC Batft and Comscoft.

CinC US makes:

- J3 J4 - L - Z - K3 V J1 - Q - K4 - GR 10 **BT** (text) **AR**

In retransmitting J3 and J4, after establishing communication with the ships of their force, make:

- Z - K3 V J1 - Q - K4 GR 10 **BT** (text) **AR**

3317. EXAMPLE No. 16

RELAYED MESSAGE—THROUGH ONE SHIP

The *California* (B44) sends a priority message to the *Idaho* (B42) and must relay through the *Tennessee* (B43).

Previous call up has established direct communication between B44 and B43.

B44 makes

- T - Z - B42 V B44 - P - GR 10 $\overline{\text{BT}}$ (text) $\overline{\text{AR}}$

In retransmitting B43, after establishing direct communication with B42, makes:

- Z - B42 V B44 - P - GR 10 $\overline{\text{BT}}$ (text) $\overline{\text{AR}}$

3318. EXAMPLE No. 17

RELAYED MESSAGE—TO A UNIT LESS A SHIP

CinC Batflt (J3) sends a message to Batdiv 4 less *Idaho* (B42) and must relay through *Arizona* (B39). Previous call up has established direct communication between CinC BF and B39.

CinC BF makes:

- T - Z - BDiv4 V J3 - N - B42 - GR 15 $\overline{\text{BT}}$ (text) $\overline{\text{AR}}$

In retransmitting B39, after establishing direct communication with ships of Div 4 except B42, makes:

- Z - BDiv4 V J3 - N - B42 - GR 15 $\overline{\text{BT}}$ (text) $\overline{\text{AR}}$

NOTE.—A message is not delivered to ship(s) exempted. In this example if it were desired that the *Idaho* (B42) also be furnished the message for information, B42 should be in the address as an information addressee.

3319. EXAMPLE No. 18

RELAYED MESSAGE—FOR ONE OF TWO ADDRESSEES

CBD4 sends a message to the *Mississippi* (B41) for action and to *Idaho* (B42) for information, and must relay through the *New York* (B34) to action addressee only. Previous call up has established direct communication with B34 and B42.

CBD4 makes:

- B34 - T - B41 - Z - B41 V DivB4 - Q - B42 - GR 12 $\overline{\text{BT}}$ (text) $\overline{\text{AR}}$

In retransmitting B34, after establishing direct communication with B41, makes:

- Z - B41 V DivB4 - Q - B42 - GR 12 $\overline{\text{BT}}$ (text) $\overline{\text{AR}}$

3320. EXAMPLE No. 19

RELAYED MESSAGE—REQUIRING FURTHER RELAY

CinC Batflt has a message for the *Tennessee* (B43) and the *Maryland* (B46). The message is sent to the *Mississippi* (B41), who is directed to further relay the message to the addressees through the *Colorado* (B45). Previous call up has established direct communication between CinC BF and B41.

CinC BF makes:

- M - B45 - T - Z - B43 B46 V J3 - GR 10 $\overline{\text{BT}}$ (text) $\overline{\text{AR}}$

In retransmitting B41, after establishing direct communication with B45, makes:

- T - Z - B43 B46 V J3 - GR 10 $\overline{\text{BT}}$ (text) $\overline{\text{AR}}$

In retransmitting B45, after establishing direct communication with B43 and B46, makes:

- Z - B43 B46 V J3 - GR 10 $\overline{\text{BT}}$ (text) $\overline{\text{AR}}$

NOTE.—In visual signaling it is generally better to deliver a message to a certain ship with instructions to pass the message on (giving her discretion as to its further route) rather than stipulate the complete path of the message as shown above.

3321.

EXAMPLE No. 20

RELAYING RADIO MESSAGES BY VISUAL

The *Arizona* (B39), radio guardship, receives a radio message from Comdesrons BF (radio call A6P), addressed to:

Combatdiv 4 (radio call A90), for action and acknowledgment.

Comdesdiv 40 (radio call F9P), for action and acknowledgment.

Pennsylvania (B38) (radio call NADX), for information.

Radio procedure received by B39:

NPM V NPL - NR 232 Hypo - Z - A90 F9P V A6P - Q - NADX - Y - A90 F9P - GR 20 **BT** (text) **AR**.

B39 wishes to relay this message by visual through the *New York* (B34), who is so situated that she can send direct to all addressees. B39 adds visual preamble and after establishing direct communication with B34 makes:

- T - DivB4 DivD40 B38 - NR232 Hypo - Z - A90 F9P V A6P - Q - NADX - Y - A90 F9P - GR 20 **BT** (text) **AR**.

B34 after establishing direct communication with the addressees makes:

- NR232 Hypo - Z - A90 F9P V A6P - Q - NADX - Y - A90 F9P - GR 20 **BT** (text) **AR**.

NOTE.—The radio call is not repeated. The visual calls incident to each step are made in accordance with previous instructions. The radio preamble is normally not repeated, but when the serial number is followed by a letter identifying the message as one of a particular schedule, such information is necessary to ships in keeping their files. In such a case the radio preamble must be transmitted. If the message is to be relayed through another ship by visual, a double preamble is necessary on the original visual transmission, the visual preamble preceding the radio preamble and separated from it by a space sign.

3322.

EXAMPLE No. 21

LONG MESSAGES—MORE THAN ONE MESSAGE

The *Milwaukee* (L05), sends two plain-language dispatches to the *Trenton* (L11). The first consists of 220 groups, the second of 25. The long message is broken into portions of 100 groups. Previous call up has established direct communication.

L05

L11

(1) - GR 220 **BT** 1024 Upon arrival San Pedro (continues text until 100 groups have been sent). Makes - B100.

(2) When certain of complete and accurate reception, including check of number of groups sent thus far, makes R - K. (Or, if repetition is necessary, makes **IMI**.)

(3) If no repetitions are desired, continues with groups 101 to 200. Makes - B200.

(4) Same as (2).

(5) If no repetitions are desired, continues with group 201 to end of text 1028. Makes - B.

(6) When certain of complete and accurate reception, including group count, makes R - K. (Or, if repetition is necessary, makes **IMI**.)

L05

L11

- (7) If no repetitions are desired, sends second message: - GR 25 BT 1024 (text) 1050 AR.

- (8) When certain of complete and accurate reception, including group count, makes R. (Or, if repetition is necessary, makes IMI.)

NOTE.—If the first dispatch had been in code it would have been broken into portions of 50 groups.

3323.

EXAMPLE No. 22

ACKNOWLEDGMENTS

The *Lexington* (H02), sends a message to the *Langley* (H01), and to the *Richmond* (L09), and wishes it acknowledged by both addressees. Previous call up has established direct communication.

H02

H01, L09

- (a)
- (1) Makes - Z - H01 L09 V H02 - Y - GR 10 BT 1020 (text) 1930 AR.
- (2) Makes R and sends message below.
- (3) After receiving authority from commanding officer, makes: - GR 5 BT 1020 Your 1020 1930 1945 AR.

(b) If in (a) acknowledgment is desired only from H01:

- (1) Makes - Z - H01 L09 V H02 - Y - H01 - GR 10 BT 1020 (text) 1930 AR.
- (2) H01 makes R and sends message below.
- (3) After receiving authority from commanding officer, makes: - GR 5 BT 1020 Your 1020 1930 1945 AR.

(c) If no acknowledgment was originally required but after sending the message it appears that an acknowledgment is necessary, or if in (a) the addresses are slow in acknowledging:

- (1) Makes - BT INT Y 1020 1930 AR.
- (2) If not ready to give the acknowledgment, makes R.
- (3) After receiving authority from the commanding officer, makes: - GR 5 BT 1020 Your 1020 1930 2005 AR.

(d) The *Lexington* (H02) sends a signal to the *Langley* (H01), and wishes it acknowledged. Previous call up has established direct communication.

- (1) Makes - Y - IM Fox William Love AR.
- (2) Makes R and sends signal to commanding officer.
- (3) After receiving authority from the commanding officer, makes Y AR.

(e) If the signal in (d) had contained a time of origin group, 1025. the acknowledgment would be made as follows:

Y 1025 AR.

NOTE.—The forms of acknowledgment shown in (d) and (e) are restricted to acknowledging transmissions which have been made in abbreviated form.

3324.

EXAMPLE No. 23

REPEATING BACK

(a) CinC Batflt sends a message to Batdivs 3 and 4 via the division commanders and wishes the message repeated back by both division commanders. Previous call up has established direct communication with CBD 3 and CBD 4.

J3

DivB3, DivB4

(1) Makes: - G - T - Z - BDiv3 BDiv4 V
J3 - GR 20 BT (text) AR.

(2) Each flagship repeats back entire message.

(3) If correct, makes C.

(4) Each flagship makes following to ships of his division: - Z - BDiv3 BDiv4 V
J3 - GR 20 BT (text) AR.

NOTE.—“G” as used in the preamble in (1) only requires the stations originally called to repeat back. If the division flagship considered a repeat back from the ships of the division advisable, the procedure shown in (4) above would also include a “G” in the preamble, and each ship would repeat back.

(b) In the preceding example a division commander might desire one ship of his division (B42), to repeat back thus allowing all ships of the division to check their reception on B42's repeat back. Previous call up has established direct communication with all ships of his division.

CBD4

Ships of Batdiv 4

(1) Makes: - B42 - G - Z - BDiv3 BDiv4
V J3 - GR 20 BT (text) AR.

(2) B42 repeats back entire message.

(3) If correct, makes C.

(4) Other ships make R.

(c) If in (b) B42 repeated back groups three to seven incorrectly.

(3) C 3 to 7 when practice has been completed
AR.

(4) Repeats back “3 to 7 when practice has been completed AR.”

(5) If correct, makes C.

(6) Other ships make R.

(d) CinCBatflt sends a message to the *Tennessee* (B43), must relay through the *Idaho* (B42), and wishes the message repeated back by every station handling the message. Previous call up has established direct communication with B42.

J3

B42

(1) Makes: - T - Z - B43 V J3 - G - GR
20 BT 0004 (text) 1020 AR.

(3) If correct, makes C.

(2) Repeats back entire message.

(4) Relays message to B43.

(5) Stands by to receive B43's repeat back.

(6) If B43 repeats back correctly, makes C.

(e) In (d) if a repeat back had not been required but it later appeared advisable to request a repeat back from B42.

J3

B42

(1) Makes: - G 0004 1020 AR.

(3) If correct, makes C.

(2) Repeats back the entire message.

3325.

EXAMPLE No. 24

SILENT PERIODS AND NEGATIVE SILENCE

(a) ComScoFlt (senior officer present), wishes the *Arkansas* (B33), and the *Florida* (B30), to cease all signaling by searchlight. Previous call up *by searchlight* has established direct communication with B30 and B33.

ComScoFlt

B30, B33

(1) Makes by *searchlight*: - HM HM HM
HM HM AR.

(3) Later desires to send a message by searchlight to B33. Calls B33 and sends message by searchlight.

(5) Desires B33 and B30 to resume signaling by searchlight. Calls B33 and B30 by searchlight and makes: - UO UO UO
UO UO AR.

(b) ComScoFlt (senior officer present), wishes the fleet in company to cease all signaling by blinker and searchlight.

ComScoFlt

Fleet

(1) Makes: - HM HM HM HM HM
Blinker and searchlight AR.

(2) Each ship makes **R** by *searchlight*, and sends no more messages by searchlight.

(4) B33 answers call and takes message by searchlight, then resumes searchlight silence.

(6) Each ship makes **R** by searchlight and resumes signaling by searchlight.

(2) Each ship makes **R** and ceases use of blinker and searchlight.

3326.

EXAMPLE No. 25

ERROR IN TRANSMITTING

B44, while transmitting a message, UTRQ - XMFY - WBVR - QUBY, from the signal vocabulary, to B43 makes an error in transmitting the third group. Previous call up has established direct communication.

B44 makes—

- (1) - GR 6
- (3) **IM**
- (5) 1020
- (7) UTRQ -
- (9) XMFY -
- (11) WBU (mistake made)
- (12)
- (14) XMFY -
- (16) WBVR -
- (18) Trains light properly and repeats last group WBVR -
- (20) QUBY -
- (22) 1330
- (24) **AR**

B43 makes—

- (2) Flash
- (4) Flash
- (6) Flash
- (8) Flash
- (10) Flash
- (13) Flash
- (15) Flash
- (17) B44s light is trained poorly so B43 makes W
- (19) Flash
- (21) Flash
- (23) Flash
- (25) R

3327.

EXAMPLE No. 26

QUESTIONING NUMBER OF GROUPS

The *Sharkey* (D281), has received a message from the *Flusser* (D289). The *Flusser* transmitted:

- GR9 **BT** 1027 Patrol will be landed on arrival Newyork 1020 **AR**

The *Sharkey* recorded "New York" as two words, counts 10 groups and challenges the count thus:

D281

D289

(a)

(1) Makes **INT GR 10 AR**.

(2) Recounts, and finding 9 correct, makes:

- GR 9 - 1 PWBLOAN 1 **AR**

(3) After checking, makes R.

(b) If in (a) the *Flusser* had transmitted "New York" as two words but had counted it as only one, and therefore had sent GR 9:

D281

D289

(1) Makes **INT GR 10 AR**.

(2) Recounts and finding 10 correct, makes

C **AR**.

(3) Makes R.

(c) If in (a) the *Sharkey* did not receive the group count:

D281

D289

(1) Makes **INT GR AR**.(2) Makes - GR 9 **AR**.

(3) After checking, makes R.

3328.

EXAMPLE No. 27

TRANSMITTING MESSAGE WITH UNKNOWN NUMBER OF GROUPS

A message is being dictated to a signalman who is transmitting the text as he receives it. The number of groups is at present unknown. The signalman makes:

- GR X BT Transfer observers at conclusion of practice 1020 - B

The receiving ship then makes R.

After the message has been completely sent, the groups are counted and found to be 7, and the following is then made:

C - GR 7 AR.

The receiving ship checks the number of groups and if correct, makes R.

NOTE.—If considerable time elapses before the group count can be sent the entire heading must be repeated when making the correction.

3329.

EXAMPLE No. 28

QUESTIONING ACCURATE RECEPTION

CinC Batflt sends a code message to the *Tennessee* (B43). The *Tennessee* is doubtful of the second group which he has read XOBA.

B43

J3

(a)

(1) Makes INT 2 - XOBA.

(2) If XOBA is correct, makes C AR.

(3) Receipts for whole message by making R.

(b)

(2) If XOBA is incorrect and should be XOBU, makes 2 - XOBU AR.

(3) Receipts for whole message by making R.

(c) CinC Batflt sends the following plain-language dispatch to the *Tennessee*:

- GR 9 BT 0118 Direct Lieutenant Doe report on board flagship 1110 AR.

B43

J3

(1) Wishes to know if words "Lieutenant Doe" as received are correct. Makes INT Lieutenant Doe AR.

(2) Being correct, makes C AR.

(d)

(1) Receives "Lieutenant Roe" and wishes to know if it is correct. Makes INT Lieutenant Roe AR.

(2) Being incorrect, makes Lieutenant Doe AR.

3330.

EXAMPLE No. 29

CORRECTIONS

CinC Batflt (J3) has sent a code message 1524 1017 to the *Maryland*. (B46). Subsequently he finds that the third group which was transmitted LABOG should have been LADOX. J3 calls B46 and makes:

C 1524 1017 - 3 - LADOX AR.

3331.

EXAMPLE No. 30

INCOMPLETE MESSAGES

B43, in receiving a message from B44 for relay to B42, has missed the fourth group, and is at present unable to obtain it. B43 relays the message to B42 thus:

- Z - B42 V B44 - GR 8 IM STVC - TMYQ - XKLD - AAA - WTLZ -
DVBX - FMBU - 1519 AR.

As soon as possible, B43 obtains the complete version from B44 and transmits the complete version to B42.

3332.

EXAMPLE No. 31

REPETITION OF CODE DISPATCH—USE OF IMI, AA, AND AB

CinC Batflt sends the following code dispatch to the *Pennsylvania* (B38), for action and acknowledgment, and to the *New York* (B34), for information, and must relay to the *Pennsylvania* through the *Arizona* (B39). CinC BF sends the following to the *Arizona*:

B39 V J3 - T - B38 - Z - B38 V J3 - Q - B35 - Y - B38 GR 10 BT
0014 JAPY - BOQU - LAJY - KUPY - FOQU - MUCU - KAWL - GUXO - 1500
AR.

B39

J3

(a) Desires heading repeated.

(1) Makes IMI AB 1 AR.

(2) Makes B39 V J3 - T - B38 - Z - B38
V J3 - Q - B35 - Y - B38 GR 10
BT AR.

(3) Makes R.

(b) Desires BOQU and FOQU repeated.

(1) Makes IMI 3 - 6 AR.

(2) Makes 3 - BOQU - 6 - FOQU AR.

(3) Makes R.

(c) Desires BOQU to FOQU repeated.

(1) Makes IMI 3 to 6 AR.

(2) Makes 3 to 6 - BOQU - LAJY - KUPY -
FOQU AR.

(3) Makes R.

(d) Desires all the text repeated.

(1) Makes IMI AA BT AR.

(2) Makes 0014 JAPY - BOQU - LAJY -
KUPY - FOQU - MUCU - KAWL -
GUXO - 1500 AR.

(3) Makes R.

B39

J3

(e) Desires entire dispatch repeated.

(1) Makes **IMI** **AR**.

(2) Repeats entire transmission.

(3) Makes **R**.

(f) Desires office reference and date group repeated.

(1) Makes **IMI** 1 **AR**.(2) Makes 1 - 0014 **AR**.(3) Makes **R**.

3333.

EXAMPLE No. 32

REPETITIONS OF PLAIN LANGUAGE DISPATCH—USE OF **IMI** AND WA, AA, AB

The *Moody* (D277), after previous call up establishing the address, has sent the following message to the *Henshaw* (D278):

- **GR** 15 **BT** 1019 Range number four will not be available until after installation of new targets 1533 **AR**

D278

D277

(a) Fails to get the following: "four" and "targets 1533."

(1) Makes **IMI** WA number - AA new **AR**.(2) Makes Number four - new targets 1533 **AR**.(3) Makes **R**.

(b) Desires repetition of entire dispatch.

(1) Makes **IMI** or **IMI** 1019 1533 **AR**.

(2) Repeats entire transmission.

(3) Makes **R**.

(c) Misses groups 5 to 7, inclusive.

(1) Makes **IMI** 5 to 7 **AR**.(2) Makes 5 to 7 will not be **AR**.(3) Makes **R**.

(d) Misses groups between "four" and "until" inclusive.

(1) Makes **IMI** four to until **AR**.(2) Makes four will not be available until **AR**.(3) Makes **R**.

(e) Desires office reference and date group repeated.

(1) Makes **IMI** 1 **AR**.(2) Makes 1 - 1019 **AR**.(3) Makes **R**.

3334.

EXAMPLE No. 33

VERIFICATION

Arkansas (B33) has receipted for message 9017 1525 from Comscoft (J4) and later desires a verification and repetition of the heading, group 7 and groups 18 to 22.

B33

J4

(a)

(1) Makes J 9017 1525 - AB1 - 7 - 18 to
22 AR.

(2) Makes R and sends to originator for verification.

(b) In case B33 desires verification of entire message.

(1) Makes J 9017 1525 AR.

(2) Makes R and sends to originator for verification.

(c) In both cases above, after the originator has verified the phraseology (and coding, if in code), the verification and repetition is made as follows:

C 9017 1525 - followed by verified portions or the entire message as requested.

3335.

EXAMPLE No. 34

INTERRUPTED COMMUNICATION

(a) CinC Batflt is receiving a message from the *Nevada* (B36), when it becomes necessary to interrupt the *Nevada* and delay further transmission.

(1) Makes - AS AR.^{J3}

B36

(2) Makes R and ceases transmission.

(b) The *Nevada* later receives a message prefixed "O," which is to be relayed to J3.

(2) Makes R - K.

(1) Makes J3 V B36 - O - INT K AR.

(4) Makes R.

(3) Transmits urgent message to J3.

(c) After necessity for interruption of communication with *Nevada* has ceased and CinC BF is ready to receive the message originally delayed:

(1) Makes B36 V J3 - K AR.

(2) Makes R and continues transmission of previously interrupted message.

3336.

EXAMPLE No. 35

ABBREVIATED PROCEDURE—FORM OF

(a) The *Tennessee* desires to send a short, concise dispatch of immediate importance to the operations in progress to the *California*. The form follows:

B44 V B43 **BT** Shift targets expeditiously **AR**

(b) The *Arkansas* desires to send a dispatch by the executive method to the *Wyoming*. The form follows:

B32 V B33 - **IX BT** Fire the red rocket 1950 **AR**

The dispatch is now ready to be executed.

(c) The *Colorado* desires to send a signal by executive method to the *Tennessee*. The form follows:

B43 V B45 - **IXIM** Turn nine **AR**

The signal is now ready to be executed.

(d) Comscoft desires to send a signal not requiring an execute to the *Arkansas*. The form follows:

B33 V J4 **IM** Unit Mike Vice **AR**

If action is required by the signal it is taken at the appropriate time.

(e) The *Idaho* desires to send a signal from the Signal Vocabulary by the executive method to the *Arizona*. The form follows:

B39 V B42 - **IXIM LQYB - WDXZ AR**

The signal is now ready to be executed.

(f) The *Meyer* (D279) has an enemy contact report for transmission to the CinC BF. The form follows:

J3 V D279 - **O - IM** Code groups 1015 **AR**

If J3 does not make **R** promptly the entire transmission is repeated.

PART IV
APPENDIX A

CHAPTER VI

COMMUNICATIONS

SECTION A

POLICY FOR COORDINATION OF RADIO ACTIVITIES OF THE ARMY AND NAVY

1. Joint Board reports, J. B. No. 319 (Serial No. 183), of January 16, 1923, "Utilization of the radio services of the War and Navy Departments for the transmission of Government dispatches," and J. B. No. 319 (Serial No. 263), "Proposed draft of Executive Orders re regulation of radio in the event of war or national emergency," are rescinded. The following policy, approved by the Secretary of War and the Secretary of the Navy, is published for information and guidance:

I. Purpose of Radio Policy.

2. The purpose of this statement of policy is to establish an authoritative basis for the coordination of the Army and Navy in the development of radio material, the establishment of radio stations, and in the conduct of radio activities.

II. Basic Policy.

3. The Army and Navy shall provide, control, and operate such transmitting and receiving stations as, augmented by private and other Government-owned radio facilities, will insure the existence and availability upon the outbreak of war or other national emergency of a militarily controlled, thoroughly indoctrinated radio system adequate to meet the requirements of national defense, having in view the prevention of undesirable duplication and the practical and definite limitation on expenditure imposed by economy.

III. Primary Responsibility of the Army and the Navy in Radio Activities.

4. (a) The assignment of *primary responsibility* to the Army or to the Navy for radio activities serving a definite area or purpose imposes upon the designated service the responsibility for the establishment and efficiency of radio serving such area or purpose, but allows the other service to use radio to serve the same area or its own purposes of a similar nature, provided no serious radio interference is caused thereby.

(b) In war time paramount interest in certain areas or theaters of operation will be assigned to the Army or the Navy, in accordance with the approved war plans, and radio activities therein will be coordinated by the responsible commander of the service having paramount interest.

(c) In order to avoid uneconomical duplication in time of peace:

(1) The Navy only shall operate radio apparatus of high power (10 kilowatts in the antenna or greater).

(2) The Army shall not handle overseas radio communications commercially or for other Government departments except between the United States and Alaska, nor operate upon frequencies which will cause serious interference with fleet or Navy overseas circuits.

IV. Assignment of Primary Responsibility.

5. Subject to the provisions of subparagraphs (a) and (b) of the preceding paragraph, primary responsibility is assigned as follows:

(a) To the Army in radio communication—

(1) With and between Army units wherever located.

(2) Within the Territory of Alaska.

(3) With and between Army vessels, excluding such vessels as may be placed under Navy control.

(b) To the Army in radio intelligence—

(1) For the Army wherever operating.

(c) To the Navy in radio communication—

(1) For the establishment, maintenance, and operation of an overseas radio service for efficient communication with and between Navy units wherever located; this service to be available to all departments of the Government and for commercial purposes.

(2) For communication with insular possessions, the Panama Canal Zone, and with foreign territory occupied by the Navy.

(3) With and between ships at sea, exclusive of Army vessels, except such of the latter as may have been placed under Navy control in case of war or national emergency.

(4) For the establishment and operation of radio-compass stations along the coasts of the United States, Alaska, overseas possessions, or occupied foreign territory.

(d) To the Navy in radio intelligence—

(1) For the Navy wherever operating.

V. War-Time Jurisdiction over Nonmilitary Radio.

6. In time of national emergency, when directed by the President according to law, the Army and the Navy will assume jurisdiction as follows:

(a) The Army and Navy shall each assume complete control over such nonmilitary radio stations as may be allocated to them by the President to augment their peacetime facilities.

(b) For purposes of censorship and supervision over such nonmilitary radio stations as are permitted to operate:

(1) The Army will assume jurisdiction over all nonmilitary stations within the United States, Alaska, and foreign territory occupied by the Army except the stations assigned to the Navy in the following paragraph:

(2) The Navy will assume jurisdiction over all nonmilitary stations wherever located that are permitted to communicate overseas, with ships, or with aircraft flying over the sea other than Army aircraft, and over all nonmilitary stations in Panama, the insular possessions, and in foreign territory exclusively occupied by the Navy.

(c) For the purpose of suppression of unauthorized radio:

(1) The Army will assume jurisdiction over the continental United States, Alaska, Panama, and in insular possessions or foreign territory occupied by the Army.

(2) The Navy will assume jurisdiction over shipping and over insular possessions or foreign territory occupied exclusively by the Navy.

VI. Principles to be Observed in Radio Coordination.

7. Coordination in radio operation will be effected:

(a) In the development of types of radio equipment suitable for intercommunication.

(b) By the assignment of call letters, frequencies, transmitting time periods, the adoption of a common procedure, and the formulation of codes and ciphers for joint Army and Navy communication.

(c) All air radio stations of the Navy and air radio stations of the Army along the coast and in the insular and outlying possessions shall be equipped to send and receive on a common intermediate frequency and a common high frequency, and all aircraft carrying radio, except fighting and pursuit planes, shall as soon as practicable, consistent with proper economy, be equipped to send and receive on one of these common frequencies.

(d) The radio field sets provided for the use of the Marine Corps on shore shall be capable of intercommunication with the radio provided for the operation of similarly equipped units of the Army.

(e) The radio communication equipment provided for the vessels of the Army Transport Service shall be of a character normally provided for commercial shipping of the same general class and shall be capable of sending and receiving on at least two frequencies assigned by the Navy Department for Naval Transportation Service communication.

VII. Coordination with Radio Stations of Other Departments and Civilian Stations During Peace.

8. Coordination of the operation of Government radio stations with each other and with the operation of civilian radio stations in time of peace will be governed by the provisions of the radio act of 1927 (secs. 6, 8, and 25).

VIII. Coordination of Development Programs.

9. The Chief Signal Officer of the Army and the Director of Naval Communications will coordinate the peace-time radio operation and operational development of the two services. The Chief Signal Officer of the Army and the Chief of the Bureau of Engineering of the Navy Department will coordinate their recommendation for the procurement programs of the Army and the Navy and will coordinate technical radio matters of joint concern to the two services.

Approved by the Secretary of War and the Secretary of the Navy June 24, 1927.

SECTION B

JOINT ARMY AND NAVY RADIOTELEGRAPH PROCEDURE

	Paragraphs
I. General.....	1-3
II. Call up.....	4-6
III. Answering the call up.....	7-9
IV. Normal form of message.....	10-19
V. Procedure signals.....	20-44
VI. Control of artillery fire by radio.....	45-49
VII. Strength and readability of signal.....	50-58
VIII. Z signals.....	54
Index.....	Last page.

I. General.

1. Details for intercommunication by radio between the Army and the Navy shall be made by the senior officers of the two services in the area concerned.

2. Address and signature.

(a) Address and signature codes will not be used between the Army and the Navy.

(b) Messages intended for an addressee on board ship or in a unit of command will be routed by call letters of the station concerned. Delivery to proper officer or office is a function of the command addressed. When believed necessary to secure proper delivery, more complete address may be included in the body of the message.

(c) All official messages will be authenticated in the name of the commanding officer. This signature is not ordinarily transmitted.

3. Use of clear and secret language.

(a) In time of peace, messages are transmitted in clear or in secret language as directed by the writer.

(b) (1) In time of emergency, all messages, except as noted below, are transmitted in secret language.

(2) When the tactical situation is such that time can not be spared for cryptographing, and when the information to be transmitted, if intercepted by the enemy could not be acted upon in time to influence the situation in question, a commanding officer or his authorized representative may order the transmission of a message in plain language by a radio station serving his headquarters.

II. Call Up.

4. (a) The call up shall consist of the call sign(s) of the receiving station(s) transmitted not more than three times, the letter "V" and the call sign of the calling station transmitted not more than three times. This may be followed by certain signals to indicate the purpose of the call up.

(b) The call up may be:

(1) Single-station, as NA V BA K.

(2) Collective, as DAB DAB DAB V BA BA BA K. DAB in this example might be the "net call," in which case all nonsilent stations in the net would answer; or it might be a "group call," in which case all nonsilent stations in a particular preassigned group would answer.

(3) Multiple, as NA NA NB NB V BA K, in which case NA and NB both answer.

(4) *General.*—The general call for Navy and Marine Corps stations shall be USN, and for Army stations USA. The general call shall be used to establish communication in case the call letters of the station with which communication is desired, are not known. Example: USN USN USN V BA K.

5. In order to avoid undue interference with other communications, the following rules will be observed in calling:

(a) The call signs of the receiving and transmitting stations are made once only except when great distance or poor transmitting conditions make repetition desirable.

(b) If the receiving station fails to answer, the first call up may be repeated once.

(c) If the second call up is not answered, the transmitting station will wait at least two minutes before repeating the call up.

(d) If the receiving station still fails to answer after this further call up, it may be called at intervals, but not more frequently than once in five minutes, except for the transmission of an urgent or priority message, in which case no restriction is placed upon the repetition of the call up.

(e) When two stations are known to be within easy radio range of one another, it is unnecessary first to call up such station before sending the message.

6. If the calling station has an urgent or a priority message for the called station it shall indicate that fact by adding the signal O or P to the call up. Example: NA V BA O K.

III. Answering the Call Up.

7. (a) The station called shall reply by transmitting not more than three times the call sign of the calling station, the letter V, its own call sign, and, if it is ready to receive traffic, the letter K.

(b) A net, group, or general call up requiring an answer is answered by the called stations in the alphabetical order of their call signs; a multiple call up requiring an answer is answered in the order in which the stations were called. If a called station fails to answer in its turn, the next station in the order of answering, after waiting 15 seconds, will answer and the delinquent station will not answer until all other stations have finished.

8. If the station is busy or is otherwise unable to take the message, it shall replace the letter K in the reply formula by the signal \overline{AS} followed if desirable by a number indicating in minutes the probable duration of the wait.

9. (a) If the calling station has indicated that it has an urgent message for the called station, the latter will answer as indicated in (b) below even if by so doing it must interrupt traffic of lower priority.

(b) Example of answering the call up: BA V NA K.

IV. Normal Form of Message.

10. The normal form of message for transmission between Army and Navy stations shall be as follows:

Part	Example	When used	Para- graph
Call	NA V BA	Always	11
Number	NR 3	Usually	12
Operating instructions		Special cases only	13
Class		Urgent or priority messages only	14
Check	GR 7	Usually	15
Break	\overline{BT}	Always	16
Text	The message in secret or clear language.	do	17
Time of origin	0923	Usually	18
Ending signal	\overline{AR} (followed by K, B, \overline{VA} , etc.)	Always	19

11. *Call*.—The call consists of the call sign(s) of the station(s) called (in alphabetical order), followed by "V" and the call sign of the station calling, each call sign being made once.

12. *Number*.—(a) The message number is a serial number of a separate series, beginning at midnight, for transmission to each station worked and another separate series for reception from each station worked. Thus, since midnight on a certain day BA has transmitted three messages to NA and has received five messages from him. His next message to NA is NR 4 and his next message from NA is NR 6.

(b) The message serial number is a material aid in the handling of traffic. Its primary purpose is to prevent the omission of messages; it is also useful in identifying messages for repetitions, omissions, etc.

(c) The message number may be omitted at the discretion of the transmitting office, which, however, assumes responsibility for any error which may occur thereby. The message number is usually unnecessary in fire control and aircraft work, and in messages consisting of procedure signals. It may also be omitted in the case described in paragraph 3 (b) (2) above.

13. *Operating instructions*.—Operating instructions are special instructions for operating and for relaying the message when relay is necessary. (See F, par. 27; G, par. 28; T, par. 38.)

14. *Class*.—(a) Messages are classified to show the relative order in which they shall be transmitted. This order is as follows:

Class:	Symbol
Urgent.....	O
Priority.....	P
Routine.....	None.

(b) The *urgent* classification is reserved for messages requiring the greatest speed of handling. Urgent messages will be sent immediately upon receipt, except when communication involving another urgent message is being carried on. The urgent classification is used only in combat or when combat is imminent, real or simulated, to indicate that the message following conveys most urgent orders, information or request pertaining to the combat.

(c) The *priority* classification is used for messages of less urgency than those entitled to urgent classification but of such nature as to warrant precedence over routine messages. Priority messages will be transmitted before such routine messages as may be waiting to be sent but communication of a message will usually not be interrupted to send a priority message.

(d) The *routine* classification is used for messages which require no special precedence. They are transmitted in the order in which they are received or in such order as will clear the traffic in the shortest time. No signal to indicate routine classification is transmitted.

(e) In the absence of specific instructions to the contrary messages of the same class, whether they originate in Army or Navy, will be handled in order of filing or of receipt for retransmission.

15. *Check*.—(a) In plain-language messages, each dictionary word of the text is counted. The writer's message number is counted as one word; the time or origin or any continuous group of letters, numerals, or of letters and numerals is counted as one word.

(b) In code or cipher messages each group of the text, whether numeral, letter, or mixed numerals and letters, is counted, including, when sent, the writer's message number, the code or cipher indicator, and the time of origin.

(c) When a message is to be transferred to or from a communication system which uses a method of word count other than that prescribed in (a) and (b) above, the military or naval office which handles the transfer is responsible that the text of the message is correctly transferred. The check in the other system will be made by the office of that system which first receives the message.

(d) The purpose of transmitting the check of a message is to prevent the omission of any word or part of the message.

(e) The check may be omitted under the same circumstance as the message serial number. (See par. 12 (c).)

16. *Break*.—The break sign **BT** will be used to separate the heading from the text of the message.

17. *Text*.—(a) The text of the message will be transmitted as written in secret or clear language (without space signs separating the words).

(b) The writer's message number, if given, and the code or cipher indicator, if the message is in secret language, are transmitted in the order named as the first words of the text.

18. *Time of origin*.—(a) The time of origin is the time at which the message is signed by the writer, unless the writer fails to note the time on his message, in which case time of origin is the time at which the message is filed at the first message center or communication office through which it passes.

(b) Time of origin is transmitted as a group of four figures, the first two digits representing the hours from midnight and the last two the minutes past the hour. Examples 0600 is 6 a. m.; 1943 is 7.43 p. m.

(c) The time of origin usually appears in official messages. It is not used, however, with messages consisting of—

- (1) Procedure signals.
- (2) Corrections to messages.
- (3) The executive signal.
- (4) Messages which are going to be followed by the executive signal.

19. *Ending signal*.—An ending signal will be used to terminate each transmission and will indicate the transmitting operator's desire with respect to the transmission which is to follow.

V. Procedure Signals.

20. The following procedure signals are prescribed for communication between the Army and Navy:

Sign	Meaning	Par.
AAA-----	Blank, representing missing or doubtful portions-----	21
AA-----	All after (to be used in requesting a repetition or verification)-----	32, 34
AB-----	All before (to be used in requesting a repetition or verification)-----	32, 34
AR-----	End of message-----	22
AS-----	Wait-----	8, 23
B-----	There is more to follow-----	24
BN-----	All between (to be used in requesting a repetition or verification)-----	32, 34
BT-----	Break, separating heading and text-----	16
C-----	You are correct-----	25
E-----	Error-----	26
F-----	Do not answer-----	27
G-----	Repeat back-----	28
GR-----	Group(s)-----	29
HM-----	Silence-----	30
II-----	Space-----	31
IMI-----	Repeat; I will repeat; interrogatory-----	32
INT-----	Is this correct?-----	33
IX-----	Message following is a preparatory command; not to be carried out until the signal (command) of execution is received-----	47
5-second dash-----	Signal (command) of execution-----	48

Sign	Meaning	Par.
2-second dash	Salvo mark (battery fired, i. e., on the way)	49
J	Verify and repeat	34
K	Go ahead (i. e., answer—an ending signal)	35
N	Nothing (or not) received	36
NR	Number	12
O	Urgent	14
P	Priority	14
R	Received or readability (according to context)	37, 52
S	Signal strength	51
T	Transmit to	38
T of O	Time of origin	39
TOR	Time of receipt	40
U	Radio guard (Navy); net control station (Army)	41
UO	Negative silence	30
V	From	4, 11, 38
VA	End of communication; finished (an ending signal)	42
W	Interference	43
WA	Word after (to be used in requesting a repetition or verification)	32, 34
X	Static interference	44

AAA

21. AAA is used in conjunction with "ZCL," the groups missed being indicated by AAA. Use is made of this signal when the receiving station is unable to get a repetition.

Example: BA has sent a message to NA for relay to NB but NA failed to receive two groups and was unable to obtain a repetition from BA. In order not to delay the message, NA sends it to NB as follows:

NB V NA NR7 NB V BA ZCL GR 11 BT
 NR2 DFC4 JOFX RABU AAA
 RUHG MILZ YSIP AAA XUBO
 1433 AR K

AR

22. AR is used at the end of every message. It means: "This is the end of this particular message." It is used at the end of all other transmissions in normal radio procedure which do not conclude with one of the procedure signals "B," "C," or "R." The signal AR is followed by another message or by AS, K, or VA, which signals indicate the operator's desire with respect to the transmission which is to follow. AR may be written thus: †

AS

23. (a) AS is an ending signal meaning "wait." It may be used in answer to a call up, (see paragraph 8); to stop transmission because part of the message has been missed or because there is interference or other reason requiring delay, or to notify the receiving station that the transmitting station is unable to continue.

(b) The station receiving this signal does not answer.

(c) Whenever a transmitting station has been asked to wait it resumes transmission at the signal "K."

B

24. (a) B is an ending signal meaning "There is more to follow."

(b) When transmitting a long message, it may be convenient to send it in portions. In order to insure that each portion has been received before proceeding with the next, the letter "B" is made at the end of each portion.

Example: NA V BA NR3 GR137 \overline{BT}

First 50 groups in text II B 50 K

NA answers: BA V NA R 50 K

BA continues: NA V BA II Next portion of text.

(c) When a message is sent in portions, the "B" is followed immediately by figures indicating the number of groups thus far transmitted.

(d) Long radio messages in plain language (i. e. press dispatches, etc.) made by ship and shore stations when not broadcasting on schedule and not employing the break system will be sent in portions, each of which will not exceed six minutes' duration.

C

25. (a) C is an ending signal meaning "You are correct."

(b) It is used in connection with G, \overline{INT} , and J to signify the correctness of the message or portion of a message which has been repeated back or the coding of which has been checked and correctly repeated.

Example: NA, having repeated back correctly a message from BA, which was prefixed with "G," BA transmits: NA V BA C.

EEEEEEEEEE

26. *E (ten times)*.—This signal is used to erase a word or group which has been incorrectly transmitted. Should a station while transmitting a message make a mistake in a word, group, or letter, it must immediately make the "erase" sign; then make the last word or group which was correctly transmitted, and continue the message. The repeat signal (\overline{IMI}) is *not* to be made when a mistake is made in transmission. The "erase" signal will be used exclusively to correct these mistakes.

F

27. *F*.—(a) The letter "F" used in the heading signifies "Message following is *not* to be answered."

(b) *When the letter "F" is used in the heading of messages, the groups of the message are invariably to be made through twice.*

(c) When the letter "F" is used in the heading, stations are not to ask for repetitions or corrections of the message without the authority of the commanding officer in each case.

(d) The \overline{VA} sign is *always* used to indicate the end of a message or series of messages sent by the "F" method.

Example: BA has a message for NA, but does not wish NA to answer.

BA makes:

NA NA V BA BA NR1 NR1 F F GR2 GR2 \overline{BT} \overline{BT} VOBV VOBV
1235 \overline{VA} \overline{VA}

NA does not answer.

G

28. (a) The signal "G" used in the heading means "Repeat back." When repeating back or correcting repetitions, the text or groups concerned are made only once, notwithstanding that the original message may have been made twice.

Example: BA has a message VUBO ABYZ 1010 for NA and wishes the message to be repeated back.

NA V BA NR1 G GR3 \overline{BT} VUBO ABYZ 1010 \overline{AR} K
 NA, having received the message correctly, transmits:

BA V NA NR1 G GR3 \overline{BT} VUBO ABYZ 1010 \overline{AR} K

BA answers:

NA V BA C \overline{VA}

NA does not answer.

(b) When G occurs in the heading of a long message which is sent in sections, each section is acknowledged by the receiving station by R followed by the number of the last group or word received, as R 50, R 100, etc. When the last portion of the message has been received, the entire message is repeated back.

GR

29. *GR*.—The group signal followed by a number is used in the heading of a message to signify: "The text contains the number of words or groups indicated." (See par. 15 for check.)

\overline{HM} and \overline{UO}

30. When necessary a station may silence a whole net, certain stations in a net, or all stations on a certain frequency, by use of the silence signal \overline{HM} . The silence signal is a command and must be obeyed. Its use is confined to those stations in authority such as airplanes and net control stations. It will not be used until other less drastic methods of obtaining order have been tried. *It will be annulled as soon as the emergency has ceased to exist.*

Example: (1) PL, an airplane, working in a net whose net call is DAB, wishes to silence the net. PL sends:

DAB DAB V PL \overline{HM} \overline{HM} \overline{HM} \overline{HM} \overline{HM} \overline{HM} \overline{VA} .

All stations in the net stop transmitting and remain silent. They will not transmit again except to send urgent traffic or to answer a call from the silencing station or the U station until the silence signal is annulled. To annul the silence signal PL sends:

DAB DAB V PL \overline{UO} \overline{UO} \overline{UO} \overline{UO} \overline{UO} \overline{UO} \overline{VA}

NOTE.—A single station may be silenced, and the silence annulled by substituting the station's call sign for the net call of the examples above.

II

31. The space signal (the letters "II" made separately) is used for the separation of procedure signals or other parts of the transmission when it is feared that confusion of the signals might otherwise result. Space signals are not used to separate the words or groups of the text; they are sometimes useful in the heading of a message or in messages consisting of procedure signals. A common use of the space signal is shown by the example under B, Paragraph 24.

\overline{IMI}

32. (a) When the reception of a part of a message is doubtful or completely missed, the receiving station may request repetition of the doubtful portion by the use of \overline{IMI} followed by AA, AB, BN, WA, GR —, or GR — to GR —, and the doubtful or missing passage.

Example: BA has transmitted a plain-language message to NA containing the following sentence in the text: "Prepare to sail for Constantinople at ten a. m. Monday twentieth August." NA having entirely missed the word "Constantinople" transmits:

BA V NA \overline{IMI} WA for K.

BA replies:

NA V BA WA for Constantinople K.

(b) Repetition of an entire message may be requested by the use of IMI followed by the number of the message as:

BA V NA IMI NR6 K.

INT

33. When the reception of a part of a message is doubtful, the receiving station may question his reception by the use of INT followed by the questioned word or passage.

Example: Same as that of 32 (a) above except that NA has received but is not quite satisfied with the accuracy of the word "Constantinople." He transmits:

BA V NA INT for Constantinople K.

BA replies:

NA V BA C K.

J

34. When the cryptographing office finds difficulty in decryptographing a received message, verification of the cryptographing may be requested of the originator by the use of J followed by AA, AB, BN, WA, GR —, GR — to GR —, and the passage to be checked. (If the entire message is to be checked, J is simply followed by the number of the message.)

Example: NA has received the following message from BA:

NA V BA NR7 GR14 BT NR2 DFC4 YSIP NAWU LEGT ERUV
LIOP OHIO RAEQ LATU JOFX GISN TUVI 1150 AR.

The cryptographing office at NA finding it impossible to decode "OHIO," NA transmits:

BA V NA J NR7 GR8 K.

The cryptographing office at BA checks the encoding, finds "OHIO" erroneously written for "OHIG" and BA transmits:

NA V BA C NR7 GR8 OHIG II OHIG K.

K

35. K is an ending signal meaning "Go ahead"; "answer."

N

36. (a) When a station does not immediately answer a message which requires an answer or does not proceed with a message after "K" has been made in answer to a call up, the signal "N" may be used.

Example: BA calls up NA:

NA V BA K.

NA replies:

BA V NA K.

But BA fails to proceed. NA transmits:

BA V NA N K.

(b) The signal "N" followed by a serial number means "Message NR—has not been received."

Example:

BA V NA N NR16 K.

R

37. (a) The signal "R" used by itself means "last message" or "last transmission" received.

Example: NA having received a transmission from BA answers BA V NA R. If NA has a message for BA, he follows the "R" by "B" or "ZAR." BA does not answer (unless he desires NA to wait) and NA proceeds to transmit his message.

(b) The signal "R" followed by NR and a serial number means, "Message number—has been received." This form is preferable to that of (a) above to receipt for a numbered message.

Example: BA V NA R NR16 \overline{VA} . (For use of R to indicate readability of signals see par. 52.)

T

38. The signal "T" is used in the heading and means "Transmit the following to ——."

Example: BA has a message for NB, and as he can not communicate directly with NB he sends it to NA for retransmission to NB. BA transmits thus:

NA V BA NR5 T NB V BA GR2 \overline{BT} POLP 0845 \overline{AR} K

NA having receipted for the message, calls NB and being given the "go ahead" signal transmits:

NB V NA NR10 NB V BA GR2 \overline{BT} POLP 0845 \overline{AR} K

Note that T is omitted when the message is being transmitted to the station of the addressee. Note also that NR5 is BA's number to NA while NR10 is NA's number to NB, the number being reassigned in its own series by each relaying station.

T OF O

39. "Time of Origin" is transmitted as a four-figure group, the last word of the message. (See par. 18.) The abbreviation "T of O" is not used in the original message but is employed in conjunction with the signals \overline{IMI} and \overline{INT} in connection with repetitions and corrections.

TOR

40. The "time of receipt" signal, the letters "TOR" made separately (— — — — . — .), is used in conjunction with a four-figure group similar in composition to the time of origin number, to denote the time at which the message is received. It is written TOR.

The time of receipt is entered in the proper space on the message blank, but is *not* transmitted except upon request. The time of receipt is entered when the message is received at a station, whether it is received by radio, land line, visual, messenger, telephone, or any other means.

A message received at station A by messenger at 10.40 a. m. would immediately be noted by the proper person as being received at 1040, and he would enter on the blank "1040." This message is transmitted by radio to station B at 1045. The operator at B enters on the blank "1045." If the operator at B then sends the same message to station C by land line at 1050, the land line operator at C enters "1050" in the proper place.

The time of receipt is never used in referring to messages in the same way as is done with serial numbers and the time of origin. The time of receipt is useful in tracing delays.

When transmitted by radio the "time of receipt" signal follows the time of origin. In cases where the radio procedure requires that messages be transmitted twice in succession, the time of receipt signal (when used) follows the last transmission only.

U

41. The signal "U" following a station's call letters indicates that that station is being announced as the net control station (Army) or radio guard (Navy).

VA

42. VA is an ending signal meaning "end of communication"; "finished." When used, it indicates that the transmitting operator expects no answer, that he believes the series of transmissions completed.

W

43. (a) The signal "W" by itself signifies "Am being interfered with by other stations." A call signal following W denotes that the interference is being caused by the station indicated.

Examples: NA is prevented from receiving a message from BA owing to interference from other ships or stations. NA transmits:

BA V NA IMI W K

Again NA is being interfered with by transmissions from NB. NA transmits:

BA V NA IMI W NB K

(b) Such steps as are possible are taken by the transmitting station to overcome the interference.

X

44. (a) The signal X signifies "Am being interfered with by static." It is used in a manner similar to that of W in the first example, paragraph 43.

(b) It rests with the transmitting station to take such steps as are possible to assist the receiving station (i. e., by changing power, note, or frequency; by sending in portions; or by using "G" in the heading).

VI. Control of Artillery Fire by Radio.

45. An abbreviated form of message is authorized for the exchange of communications controlling or directing the fire of artillery. Its use makes possible the control of fire by radio, when the radio station of the observer and the radio station of the battery are in direct touch. It is practically impossible to relay fire-control messages through linking radio stations. The term "radio station of the battery" is used to indicate the battalion radio station which will be in direct communication with the battery firing, either by voice or telephone.

Example:

NA V BA BT Text AR K.

46. When the nature of the answer to a fire-control message is such as to clearly indicate that the previous transmission has been received, the "Received" signal "R" need not be transmitted.

IX

47. The signal "IX" which is inserted just before BT means "Message following is a preparatory command, and is not to be carried out until the signal of execution is given."

Example:

NA V BA IX BT Text AR K.

FIVE-SECOND DASH

48. (a) The five-second dash is the signal of execution and means, "Execute the last preparatory command."

(b) It should be sent by the observer only.

(c) It is always preceded by a call and followed by AR. It is never canceled or annulled.

Example:

NA V BA five-second dash AR.

(d) If the observer desires, he may send the call at any time previous to the five-second dash. He can then keep contact with the battery, by using the "wait" signal \overline{AS} until in a position to observe, when the five-second dash will be sent.

Example:

NA V BA \overline{AS} ----- \overline{AS} ----- \overline{AS} ----- five-second dash.

TWO-SECOND DASH

49. (a) The two-second dash is the salvo mark, and means "Battery fired" (i. e., "On the way"). This is sent by the operator at the battery radio station just as the battery fires.

(b) It may be followed by a numeral indicating the time of flight of the projectile in seconds.

(c) It is never preceded by a call.

Example: Upon receiving the five-second dash, command of execution signal (see par. 48), the battery fires and the operator at the battery makes the two-second dash.

VII. Strength and Readability of Signal.

50. It may facilitate the transmission of message traffic if a station, which is to work with another, knows the strength and readability of his signal at the other station.

51. Strength of signal is indicated by the procedure signal "S" (signal strength) followed by an appropriate figure from the table below. The table may be used also with the procedure signal "X" (static) to indicate strength of static and "W" (interference) to indicate strength of interference.

1. Very weak, hardly audible.
2. Moderately weak.
3. Medium strength.
4. Moderately strong.
5. Strong.

Example:

AB V BC S5 K.

52. Readability of signals is indicated after the procedure signal "R" by means of the table below:

1. Unreadable.
2. Poor but readable; plain language twice; code unreadable.
3. Fair; readable; plain language once, slowly; code twice.
4. Good; readable; plain language or code once.
5. Perfectly readable.

Example:

AB V BC R4 K.

53. Signals may be strong but readability poor for various reasons; conversely signal strength may be moderately weak but readability good. The tables given above can be used to show such cases.

Example: AB V BC S5 II R2 K.

VIII. Z Signals.

54. The following signals in addition to the procedure signals listed in paragraph 20 are prescribed for communication between the Army and Navy:

Signal	Meaning
ZAB	Are you in communication by visual with -----?
ZAD	Am in communication by visual with ----- (through -----).
ZAF	Are you in communication by radio with -----?
ZAG	Am in communication by radio with ----- (through -----).

Signal	Meaning
ZAK	Call me again at _____ (on _____ KCS).
ZAL	Can you hear _____? If so, what is his signal strength?
ZAM	Can hear _____; his signal strength is _____.
ZAN	Did _____ send anything for me? If so, please repeat.
ZAO	Following is what _____ sent (at _____ o'clock).
ZAP	Have (or _____ has) been calling you since _____ (on _____ KCS).
ZAR	Have _____ messages for _____ (if blanks not filled, means, "Have a message for you").
ZAU	I (or _____) will call you again as soon as I (he) can (or at _____ o'clock) (on _____ KCS).
ZAV	_____ is calling you (on _____ KCS).
ZAW	Inform _____ that I am calling him (on _____ KCS).
ZAX	Nothing received from _____ (at _____).
ZAY	Report when you are in communication by visual with _____.
ZAZ	Report when you are in communication by radio with _____.
ZBA	Wait, I must shift to copy another station (or _____) but will call you as soon as I can (or at _____ o'clock).
ZBK	Reception impossible. Send series of six dashes if transmission received or send series of six dots if transmission not received. Send receipt message when communication next established.
ZBM	Fragments only received (from _____).
ZBN	Send each message twice. I have difficulty receiving.
ZBO	Send each message once only. Reception is good.
ZBP	Send faster.
ZBQ	Send slower.
ZBR	You are missing dots.
ZBU	Your Morse is difficult to read.
ZBV	Reception very bad; send each group _____ times.
ZBW	Reception exceptionally bad; send each character _____ times.
ZBX	Reception impossible.
ZBY	Accuracy of reception of message _____ is doubtful.
ZBZ	Are you certain of accuracy of reception of message(s) _____ (or of group(s) _____ in message _____)?
ZCA	Cease listening in for messages from _____.
ZCB	Groups _____ in message _____ should apparently read as follows: _____.
ZCC	Has executive sign (signal of execution) for last message (or for message following _____) been made?
ZCD	Have you received the signal to execute last message?
ZCE	Have you received SOS just made (by _____) (at _____ o'clock)?
ZCF	Listen in for messages from _____ (on _____ KCS).
ZCJ	Message (_____) does not concern you (or _____).
ZCK	Message which you just forwarded was incorrectly transmitted.
ZCL	Message following was incompletely received; groups missed are indicated by the "blank sign" (AAA).
ZCN	Number of groups (in message _____) was _____.
ZCP	Repeat message(s) from _____ (at _____ o'clock).
ZCQ	Reply to message _____ is to be transmitted now.
ZCT	Following is correct version (of message _____).
ZCU	The following is heading of message (_____) as received. Check to origin if necessary and repeat
ZCV	Transmit your messages in strings of _____.
ZCW	Am going to transmit messages in strings of _____.
ZCX	Have you received my message _____?
CPZ	Delay was due to fault in my receiving apparatus.
ZDA	Delay was due to fault in my transmitting apparatus.
ZDB	You are causing delay by slowness in answering.
ZDC	You are causing delay by answering out of turn.
ZDD	Request immediate reply to my message.
ZDF	Send receipt for message (_____) when communication next established.
ZDG	Transmit all of your messages one after the other.
ZDH	When may I expect answer to my message _____?
ZDM	Continuous frequency.
ZDN	Vacuum tube transmission.
ZDP	Land wire or cable.
ZDR	Radio telephone.

Signal	Meaning
ZDV	Tonic train (chopped CW) transmission.
ZDW	Visual.
ZDX	Frequency.
ZDY	Type _____ transmitter.
ZDZ	Type _____ receiver.
ZFA	Model _____ receiver.
ZFJ	_____ is radio guard on _____ KCS (net control station for net whose call is _____).
ZFK	Am ready to take over radio guard (to act as net control station).
ZFL	Are you radio guard (net control station) (for _____)?
ZFM	Indicate ships (stations) for which you are radio guard (net control station).
ZFQ	(_____) Act as _____ (until _____ o'clock) (on _____ KCS).
ZFW	Am in your zone. Relay communications for me.
ZFX	Expect to be out of communication for radio until _____ o'clock. Handle radio communication for this ship (station).
ZFZ	Am (or _____ is) unable to _____.
ZGA	Are you (or _____ is) unable to _____?
ZGB	Am going to use (or am shifting to) _____.
ZGC	Am (or _____ is) unable to use _____.
ZGD	Am (or _____ is) using _____.
ZGF	Use _____.
ZGG	My antenna (or antenna of _____) has been damaged (or carried away).
ZGJ	My receiving apparatus is temporarily out of commission.
ZGK	Repairs completed. Am in commission.
ZGL	There appears to be something wrong in your (_____) receiving equipment.
ZGM	There appears to be something wrong in your (_____) transmitter.
ZGN	My _____ (or _____ of _____) is defective.
ZGO	Your _____ appears to be defective.
ZGP	I can not transmit on _____ KCS.
ZGQ	Your antenna appears to be grounding.
ZGR	At the end of this transmission I (or _____) will transmit on CW.
ZGS	I have increased my radiation.
ZGT	My radiation is good.
ZGU	I can not receive (_____).
ZGV	How is my note?
ZGW	Lower your note.
ZGX	Raise your note.
ZGY	Your note is bad.
ZGZ	Your note is clear and musical.
ZJA	Your note is rising and falling.
ZJB	Decrease strength of signals.
ZJC	Increase strength of signals.
ZJD	How are my signals?
ZJF	What is my signal strength?
ZJG	Your signals are unreadable owing to your bad note.
ZJJ	Your spark is broken.
ZJK	Your signals fade.
ZJL	Cease using _____.
ZJM	Act as relay between me and _____.
ZJN	Give me your message for _____; I will forward it.
ZJQ	Inform me when this message (or message _____) has been received by the addressee (or by _____).
ZJR	Message _____ has been received by the addressee (or by _____).
ZJV	Message(s) _____ has (have) been sent by land wire.
ZJY	Take no further action with regard to forwarding message _____ (to _____).
ZJZ	Transmit this message now (or at _____) by "F" method.
ZKA	Transmit this message now (or at _____) without preliminary call up.
ZKC	Transmit this message now (or at _____) by "I" method.
ZKG	Pass following message to destination by dispatch mail system.
ZKH	Distribute this message by dispatch where no charges are involved and to all others by mail.

Signal	Meaning
ZKM	Forward this message by commercial niteletter.
ZKN	Send V's on your present frequency (or _____ KCS).
ZKO	Am going to send V's on my present frequency (or _____ KCS).
ZKP	Am going to transmit on _____ KCS.
ZKQ	Am shifting to receive on _____ KCS.
ZKR	Am (or _____ is) unable to transmit on _____ KCS.
ZKU	Am (or _____ is) transmitting on _____ KCS.
ZKX	On receiving "K" on _____ KCS I shall (or _____ will) transmit message to you on _____ KCS. Answer on your present frequency (or _____ KCS).
ZKY	Shift to receive on _____ KCS until further orders.
ZKZ	Shift to _____ KCS.
ZLA	Transmit and receive on _____ KCS.
ZLB	What frequency are you (or is _____) using?
ZLC	How is my frequency?
ZLD	Your frequency appears to be correct.
ZLF	Increase your frequency a trifle (or _____ KCS).
ZLG	Decrease your frequency a trifle (or _____ KCS).
ZLH	Your orientation is wrong; check it immediately.
ZLJ	Transmit on _____ KCS.
ZLK	Shift from telegraph to compensating frequency or vice versa.
ZLL	Check your frequency.
ZLV	General call; all stations copy.
ZMC	Who is interfering with you?
ZMF	I am being interfered with by _____ (on _____ KCS).
ZMG	Listen in before transmitting. You are causing unnecessary interference.
ZMJ	Do not interfere, I am receiving from _____.
ZMK	You are causing interference.
ZML	You are causing interference by inattention to order to wait.
ZMM	You are causing interference. Send on another frequency.
ZMN	You are sending at the same time as _____.
ZNO	Answer _____ and take his message(s).
ZNP	Answer calls for me (or for _____).
ZNU	Answer in alphabetical order of call signs.
ZNV	Answer on _____ KCS.
ZPA	Negative; no; not. (For use with operating signals only.)
ZPB	Affirmative; yes. (For use with operating signals only.)
ZPF	Send _____ (weather, obstruction, storm warnings, press, etc.) last received (or received at _____) to me (or to _____).
ZPG	Set clocks to _____ o'clock upon receiving signal of execution.
ZPH	What time is it?
ZQO	Send report of weather conditions your vicinity.
ZXA	What was station serial number of last message received from this station (or from _____)?
ZXB	Station serial number of last message received from you (or from _____) was _____.
ZXC	What was station serial number of last message you transmitted to me (or to _____)?
ZXD	Station serial number of last message transmitted to you (or to _____) was _____.
ZZO	Broadcast your messages without preliminary call up.
ZZP	Do not broadcast. Call your station first.
ZZX	Close your station.

INDEX

	Paragraph		Paragraph
AAA.....	21	More to follow.....	24
AA.....	32, 34	N.....	36
AB.....	32, 34	Negative silence.....	30
Address.....	2	Net control station.....	41
Answer.....	35	Normal form of message.....	10
Answering call up.....	7 to 9	Nothing received.....	36
AR.....	22	NR.....	12
Artillery fire control.....	45-49	Number.....	12, 15, 17
AS.....	23	Number, writer's.....	17
Authentication.....	2	O.....	14
B.....	24	On the way.....	49
Battery fired.....	49	Operating instructions.....	13
BN.....	32, 34	P.....	14
Break.....	16	Press despatches.....	26
BT.....	16	Preparatory command.....	47
C.....	25	Priority.....	14
Call.....	11	Procedure signals.....	20, 54
Call up.....	4-6	R.....	37, 52
Check.....	15	Radio guard.....	41
Class.....	14	Readability of signal.....	52
Code indicator.....	17	Received.....	37
Control of fire.....	45-49	Relay.....	38
Correct.....	25	Repeat back.....	28
Correction.....	26, 28, 32	Repetition.....	32
Cryptograph indicator.....	17	Routine.....	14
Dash, 2-second.....	49	S.....	51
Dash, 5-second.....	48	Salvo mark.....	49
EEEEEEEEEE.....	26	Signature.....	2
End of communication.....	42	Silence.....	30
Ending signal.....	19	Silent station.....	27
Erase.....	26	Space.....	31
Execution, command of.....	48	Static interference.....	44
Executive signal.....	48	Strength of signal.....	51
F.....	27	T.....	38
Finished.....	42	Text.....	17
G.....	28	Time of origin.....	18, 39
Go ahead.....	35	Time of receipt.....	40
Group.....	29	T of O.....	39
GR.....	29	TOR.....	40
Guard, radio.....	41	Transmit to.....	38
HM.....	30	U.....	41
II.....	31	UO.....	30
IMI.....	32	Urgent.....	14
INT.....	33	V.....	4, 11, 38
Interference.....	43, 44	VA.....	42
IX.....	47	Verification.....	33, 34
J.....	34	Verification of cryptographing.....	34
K.....	35	W.....	43
Language, clear.....	3	WA.....	32, 34
Language, secret.....	3	Wait.....	23
Long messages.....	24	X.....	44
Missing groups.....	21	Z signals.....	54

Approved by the Acting Secretary of War and the Acting Secretary of the Navy August 16, 1928.