CHAPTER 6

INTERNATIONAL SIGNALING

In wartime and peacetime, communications are necessary between U.S. Navy ships and merchantmen sailing throughout the world. Vessels of many nations come in contact with one another, exchanging messages of varying degrees of importance.

This chapter discusses some of the facets of international signaling, such as the manner of calling and answering, message construction, and use of procedure signals and signs. International signaling procedures are in many respects similar to those used by allied naval units. Every signalman must be aware, however, there are significant differences.

When communicating with a merchantman, you must remember to use international procedure. Merchantmen do not have access to all of our publications, nor are they required to know Navy procedure. So take a little extra time and learn how to communicate with merchantmen.

Much of the information you will need to know to communicate with merchantmen is contained in the *International Code of Signals*, Pub 102.

SIGNALING INSTRUCTIONS

LEARNING OBJECTIVES: Explain the procedure for signaling from the *International Code of Signals*, using explanation and general remarks, definitions, and general instructions. Explain the procedures for signaling using flags, flashing lights, sounds, radiotelephones, and hand flags or arms to communicate with merchantmen.

EXPLANATION AND GENERAL REMARKS

The purpose of the *International Code of Signals* is to provide ways and means of communication in situations related essentially to safety of navigation and persons, especially when language difficulties arise. In the preparation of the Code, account was taken of the fact that wide application of radiotelephony and radiotelegraphy can provide simple and effective means of communication in plain

language whenever language difficulties do not exist. The Code consists of four chapters, an appendix, and two indexes:

- 1. Chapter 1—Signaling Instructions
- 2. Chapter 2—General Signal Code
- 3. Chapter 3—Medical Signal Code
- 4. Chapter 4—Distress and Lifesaving Signals and Radiotelephone Procedures
- 5. Appendix—U.S/Russia Supplementary Signals for Naval Vessels
- 6. Indexes—Signaling Instructions and General Signal Code, and Medical Signal Code

DEFINITIONS

When a man-of-war and a merchant ship desire to communicate, it is extremely important for those involved in the use of the Code to follow the prescribed terminology. The following terms have the meanings indicated:

- 1. Sound signaling: Any method passing Morse signals by means of siren, whistle, foghorn, bell, or other sound apparatus.
- 2. Identity Signal: The group of letters and figures assigned to each station by its administration.
- 3. Station: A ship, aircraft, survival craft, or any place at which communications can be effected by any means.
- 4. Station of origin: Station where the originator submits a signal for transmission, regardless of the method of communication used.
- 5. Station of destination: Station in which the signal is finally received by the addressee.
- 6. *Receiving station*: The station by which a signal is actually being read.
- 7. At the dip: A hoist or signal is said to be at the dip when it is about half of the full extent of the halyards.
- 8. Group: Denotes more than one continuous letter and/or numeral that together compose a signal.

9. Numeral group: One or more numerals.

Definitions of the following terms agree in meaning with allied signaling instructions:

Visual signaling

Originator

Transmitting station

Addressee

Procedure

Procedure signal

Hoist

Tackline

METHODS OF SIGNALING

The methods of signaling that may be used are as follows:

Flag signaling

Flashing light signaling

Sound signaling

Voice over a loud hailer

Radiotelegraphy

Radiotelephone

Signaling by hand flags or arms

Flag Signaling

The international flagbag consist of 40 flags: 26 alphabetical flags, 10 numeral pennants, 3 substitutes, and the ANSWER pennant.

Flashing Light and Sound Signaling

The Morse symbols representing letters and numerals are signaled as in any other form of Navy communications.

In flashing light and sound signaling, it is best to err on the side of making the dots shorter in their proportion to the dashes. The distinction between the elements is then clearer. The standard rate of signaling by flashing light is 40 letters per minute.

Voice Over a Loud Hailer

Whenever possible, plain language should be used where a language difficulty exists; groups from the *International Code of Signals* could be transmitted using the phonetic spelling tables.

Radiotelegraph and Radiotelephone

When radiotelegraph or radiotelephone is used for the transmission of signals, operators should comply with the *Radio Regulations of the International Telecommunications Union* in force at that time.

GENERAL INSTRUCTIONS

Unless otherwise indicated, all signals between vessels are made from the master (or commanding officer) of the vessel of origin to the captain of the vessel of destination.

Identification of Ships and Aircraft

Identity signals for ships and aircraft are allocated on an international basis. The identity signals may therefore indicate the nationality of a ship or aircraft.

Use of Identity Signals

Identity signals may be used for two purposes:

- 1. To speak to, or call, a station
- 2. To speak of, or indicate, a station

Examples:

YP LABC—I wish to communicate with vessel LABC by _____. (Complements Table 1, chapter 2, page 108)

HY 1 LABC—The vessel LABC with which I have been in collision has resumed her voyage.

Names of Vessels and/or Places

Names of vessels and/or places are spelled out, as follows:

RV GIBRALTAR—You should proceed to Gibraltar.

IT2 SS MICHIGAN—SS Michigan is on fire.

How to Signal Numbers

Numbers are signaled as follows:

Flag signaling: By the numeral pennants of the Code.

Flashing light or sound signaling: Usually by the numerals in the Morse code; they may also be spelled out.

Radiotelephone or loud hailer: By the code words of the Figure Spelling Table in chapter 1, section 10, page 18.

Figures that form part of the basic signification of a signal are to be sent together with the basic group.

Examples:

DI 20—I require boats for 20 persons.

FJ 2—Position of accident (or survival craft) is marked by sea marker.

A decimal point between numerals is to be signaled as follows:

Flag signaling: By inserting the ANSWER pennant where it is desired to express the decimal point.

Flashing light and sound signaling: By "decimal point" signal AAA.

Voice: By use of the word *decimal* (pronounced DAY-SEE-MAL).

Wherever the text allows depth to be signaled in feet or in meters, the figures should be followed by the letter F to indicate feet or by the letter M to indicate meters.

Azimuth or Bearing

Azimuth or bearing is expressed in three figures denoting degrees from 000 to 359, measured clockwise. If there is any possibility of confusion, the figures should be preceded by the letter A. They are always true unless expressly stated to be otherwise.

Examples:

LW 005—I received your transmission on bearing 005°.

LT A120 T1540—Your bearing from me is 120° at (local time) 1540.

Course

Course is expressed in three numerals denoting degrees from 000 to 359, measuring clockwise. If there is any possibility of confusion, the numerals should be preceded by the letter *C*. They are always true unless expressly stated to be otherwise.

Examples:

MD 025—My course is 025° .

GR C240 S18—Vessel coming to your rescue is steering course 240°, speed 18 knots.

Date

Dates are signaled by two, four, or six numerals preceded by the letter D. The first two numerals indicate the day of the month; when used alone, they refer to the current month.

Example:

D15—Transmitted on the 15th of the current month.

The two numerals that follow indicate the month of the year.

Example:

D1504 means 15 April.

Where necessary, the year may be indicated by two further numerals.

Example:

181096 means 18 October 1996.

Latitude

Latitude is expressed by four figures preceded by the letter L. The first two figures denote the degrees and the last two the minutes. The letter N (north) or S (south) follows if it is needed; however, to keep things simple, the letter may be omitted if there is no risk of confusion.

Example:

L3740S—Indicates latitude 37°40'S.

Longitude

Longitude is expressed by four or, if necessary, five figures preceded by the letter G. The first two (or three) figures denote the degrees and the last two the minutes. When the longitude is more than 99° , no confusion will normally arise if the figure indicating hundreds of degrees is omitted. However, where it is necessary to avoid confusion, the five figures should be used. The letter E (east) or W (west) follows if it is needed; otherwise it may be omitted, as in the case of latitude.

Example:

G13925E—Indicates longitude 139°25'E.

A signal requiring the indication of position to complete its signification should be signaled as follows:

CH L2537N G4015W—Vessel indicated is reported as requiring assistance in lat. 25°37'N long. 40°15'W.

Distance

Figures preceded by the letter *R* indicate distance in nautical miles.

Example:

OM A080 R10—Bearing and distance by radar of vessel indicated are bearing 080°, distance 10 miles.

The letter R may be omitted if there is no possibility of confusion.

Speed

Speed is indicated by figures preceded by

- 1. the letter S to denote speed in knots, or
- 2. the letter *V* to denote speed in kilometers per hour.

Examples:

BQ S300—The speed of my aircraft in relation to the surface of Earth is 300 knots.

BQ V300—The speed of my aircraft in relation to the surface of Earth is 300 kilometers per hour.

Time

Times are to be expressed in four figures, of which the first two denote the hour (from 00—midnight up to 23—11 p.m.), and the last two denote the minutes (from 00-59). The figures are preceded by

- 1. the letter T, indicating local time, or
- 2. the letter Z, indicating Greenwich mean time.

Examples:

BH T1045 L2015N G3840W C125—I sighted an aircraft at local time 1045 in lat. 20°15'N long. 38°40'W flying on course 125°.

RX Z0830—You should proceed at GMT 0830.

Time of Origin

The time of origin may be added at the end of the text. It should be given to the nearest minute and expressed by four figures. Apart from indicating the time a signal originated, it also serves as a convenient reference number.

Communication by Local Signal Codes

When a vessel or a coast station wishes to make a signal in a local code, the signal YV1—"The groups which follow are from the local code"—should precede the local signal in order to avoid misunderstanding.

FLAG SIGNALING

A man-of-war desiring to communicate with a merchant vessel will hoist the CODE pennant in a conspicuous position and keep it flying during the entire time that signals are being made. This indicates that the signal groups are from the *International Code of Signals*.

Groups from the International Code of Signals may also be used between allied naval ships. They may be used alone or to supplement basic signals from the Allied Maritime Tactical Signal and Maneuvering Book, ATP 1, volume II. Whenever military use is made of the Code, groups will be preceded by CODE when transmitted by flaghoist, or INTERCO when transmitted by Morse, voice, or hand flags. When only international signals are used, CODE/INTERCO followed by TACK are to be used as the first group to indicate that all of the following groups are taken from the Code. When used to supplement other signals, CODE/INTERCO immediately precedes the signal group to indicate that only the one group is taken from the Code. When using international signals to supplement signals from ATP 1, volume II, or when international signals are preceded by a naval call sign, naval procedure is used. Under all other circumstances, international procedure is to be used.

As a general rule, only one hoist should be displayed at a time. Each hoist or group of hoists should be kept flying until it has been answered by the receiving station. When more than one group are shown on the same halyard, they must be separated by a tackline. The transmitting station should always hoist the signal where it can be most easily seen by the receiving station; that is, in such a position that the flags will blow out clear and free from smoke.

Calling

The identity signal of the station(s) addressed is hoisted with the signal. If no identity signal is hoisted, it will be understood that the signal is addressed to all stations within visual signaling distance. If it is not possible to determine the identity signal of the station that it is desired to call, the transmitting station should hoist the group:

VF—"You should hoist your identity signal."

CS—"What is the name or identity signal of your vessel (or station)?"

At the same time, the transmitting station will hoist its own identity signal.

YQ—"I wish to communicate by... (Complements table 1, chapter 2) with vessel bearing... from me" can also be used.

Answering

All stations to which signals are addressed will hoist the answering pennant at the dip as soon as they see each hoist (the dip is defined as being one-half the full extent of the halyard). Close up immediately when the signal is understood (closed up is the full extent of the halyard). The answering pennant is returned to the dip as soon as the hoist is hauled down by the transmitting station.

How to Complete a Signal

The transmitting station hoists the answering pennant singly after the last hoist of the signal, to indicate that the signal is completed. The receiving station will answer this in the same manner as for any other signal. When the transmitting station hauls down the answering pennant, the receiving station will haul down its answering pennant at the same time.

How to Act When Signals Are Not Understood

You cannot question the meaning of a hoist by displaying the INTERROGATIVE pennant used in naval procedure. If the receiving station cannot clearly distinguish or understand the signal, it keeps the answering pennant at the dip and hoists one of the following signals:

ZK—"I cannot distinguish your signal."

ZQ—"Your signal appears incorrectly coded. You should check and repeat the whole."

ZL—"Your signal has been received but not understood."

If the originating ship hoists a wrong signal group, it cannot cancel it with the NEGAT pennant. Although international procedure does not provide for special pennants, it does have signal groups that fulfill the same purpose. In this case, for example, the originating ship would hoist the signal group

YN—"Cancel my last signal/message" or

ZP—"My last signal was incorrect. I will repeat it correctly."

Substitutes

The basic reason for using substitutes in international signaling is the same as in naval procedure: a signal flag can be repeated one or more times in the same group, while the ship may carry only one or two sets of flags. Without substitutes, for instance, it is obvious that such a group as AAA or 1000 can be made only if three sets of signal flags are available. By using up to three substitutes, any two-, three-, or four-letter group can be hoisted with only one set of flags.

The FIRST SUBSTITUTE always repeats the uppermost signal flag of that class of flags that immediately precedes the substitute.

The SECOND SUBSTITUTE always repeats the second signal flag and the THIRD SUBSTITUTE repeats the third signal flag, counting from the top of that class of flags that immediately precedes them. No substitute can ever be used more than once in the same group.

There is an important difference between the use of substitutes in naval and international procedures. As you learned in chapter 5, in naval procedure a substitute repeats ANY flag or pennant that precedes it on the base hoist. In international signaling, a substitute repeats only a flag or pennant of the same class (that is, alphabet or numeral) immediately preceding it. The signal VV, for example, would be made as follows:

V

FIRST SUBSTITUTE

The number 1100 would be made by numeral pennants as follows:

1

FIRST SUBSTITUTE

0

THIRD SUBSTITUTE

The signal L 2330 would be hoisted as follows:

L

2

3

SECOND SUBSTITUTE

0

In this case, the SECOND SUBSTITUTE follows a numeral pennant and, therefore, can only repeat the second numeral in the group.

No substitute may be used more than once in the same group. For example, the signal AABA would be

A

FIRST SUBSTITUTE

В

SECOND SUBSTITUTE

The FIRST SUBSTITUTE, used to repeat the first A, cannot be used again. But, having been used it is equivalent to having hoisted A as the second flag. Consequently, it is the second flag that is required to be repeated as the last flag of the group. Hence, the SECOND SUBSTITUTE is used.

When the ANSWER pennant is used as a decimal point, it is disregarded in determining the substitute to use.

Plain Language

Names in the text of a signal are spelled out by means of alphabet flags. The signal YZ—"The words which follow are in plain language"—can be used, if necessary.

FLASHING LIGHT SIGNALING

A signal made by a flashing light is divided into the following parts:

- 1. <u>Call</u>—Consists of the general call or identity signal of the station to be called. It is answered with the answering signal.
- 2. <u>Identity</u>—Transmitting station makes *DE* followed by its identity signal or name. This is repeated back by the receiving station, which then signals its own identity signal or name. This also is repeated back by the transmitting station.
- 3. <u>Text</u>—Consists of plain language or Code groups. When Code groups are to be used, they

should be preceded by the signal *YU*. Words of plain language may also be in the text when the signal includes names, places, and so on. Receipt of each word or group is acknowledged by *T*.

4. Ending—Consists of ending signal AR, which is answered by *R*.

If the entire text is in plain language, the same procedure is followed. Call and identity may be omitted when two stations have established communications and have already exchanged signals.

Use of Procedure Signals and Signs

The following is the list of procedure signals for flashing light transmissions.

- AA "All after..." (used after the "repeat signal" (RPT)) means "Repeat all after...."
- AB "All before..."(used after the "repeat signal" (RPT)) means "Repeat all before...."
- AR Ending signal or end of transmission or signal.
- AS Waiting signal or period.
- BN "All between...and..." (used after the "Repeat signal" (RPT)) means "Repeat all between...and...."
- C Affirmative—YES or "The significance of the previous group should be read in the affirmative."
- CS "What is the name or identity signal of your vessel (or station)?"
- DE "From..." (used to precede the name or identity signal of the calling station.)
- K "I wish to communicate with you" or "Invitation to transmit."
- NO Negative—NO or "The significance of the previous group should be read in the negative." When used in voice transmission the pronunciation should be "NO."
- OK Acknowledging a correct repetition or "It is correct."
- RQ Interrogative or "The significance of the previous group should be read as a question."
- R "Received" or "I have received your last signal."
- RPT Repeat signal "I repeat" or "Repeat what you have sent" or "Repeat what you have received."
- WA "Word or group after..." (used after the "Repeat signal" (RPT)) means "Repeat word or group after...."
- WB "Word or group before..." (used after the "Repeat signal" (RPT)) means "Repeat word or group before...."

Although the use of these signals is self-explanatory, the following notes might be found useful:

These examples illustrate the convenience of international procedure signals and signs:

- 1. The general call signal (or call for unknown station) AA AA AA is made to attract attention when wishing to signal to all stations within visual signaling distance or to a station whose name or identity signal is not known. The call is continued until the station addressed answers.
- 2. The answering signal *TTTT* is made to answer the call and it is continued until the transmitting station ceases to make the call. The transmission starts with the signal *DE* followed by the name or identity signal of the transmitting station.

Example: When one of the stations is other than an Allied naval ship,

STATION "A" TRANSMITS	STATION "B" TRANSMITS	
AA AA (until answered)	TTTTT (until call ceases)	
DE NABC	DE NABC KFLN KFLN	
AR	R	

- 3. The letter *T* is used to indicate the receipt of each word or group.
- 4. The erase signal *EEEEEE* indicates that the last group or word was signaled incorrectly. It is answered with the erase signal. When answered, the transmitting station will repeat the last word or group that was correctly signaled and then proceed with the remainder of the transmission.
 - 5. The repeat signal *RPT* is used as follows:

By the transmitting station to indicate that it is going to repeat ("I repeat"). If such a repetition does not follow immediately after *RPT*, the signal should be interpreted as a request to the receiving station to repeat the signal received ("Repeat what you have received").

By the receiving station to request a repetition of the signal transmitted ("Repeat what you have sent").

The special repetition signals AA, AB, WA, WB, and BN are made by the receiving station as appropriate. In each case, they are made immediately after the repeat signal RPT.

Examples:

RPT AB KL—"Repeat all before group KL."

RPT BN BOATS SURVIVORS—"Repeat all between words *boats* and *survivors*."

If a signal is not understood or, when decoded, is not intelligible, the repeat signal is not used. 'The receiving station must then make the appropriate signal from the Code, indicating "Your signal has been received but not understood."

- 6. A correctly received repetition is acknowledged by the signal *OK*. The same signal may be used as an affirmative answer to a question ("It is correct").
- 7. The ending signal AR is used in all cases to indicate the end of a signal or the end of a transmission. The receiving station answers the signal R—"Received" or "I have received your last signal."
- 8. The transmitting station makes the signal *CS* when requesting the name or identity signal of the receiving station.
- 9. The waiting signal or period signal AS is used as follows:
- When made independently or after the end of a signal, it indicates that the other station must wait for further communications (waiting signal).
- When it is inserted between groups, it serves to separate them (period signal) to avoid confusion.
- 10. The signal C should be used to indicate an affirmative statement or an affirmative reply to an interrogative signal; the signal RQ should be used to indicate a question. For a negative reply to an interrogative signal or for a negative statement, the signal N should be used in visual or sound signaling, and the signal NO should be used for voice or radio transmission.

When the signals N or NO and RQ are used to change an affirmative signal into a negative statement or into a question, respectively, they should be transmitted after the main signal.

Examples:

CY N (or NO, as appropriate)..."Boat(s) is (are) not coming to you."

CW RQ—"Is boat/raft on board?

The signals *C*, *N* or *NO*, and *RQ* cannot be used in conjunction with single-letter signals.

SOUND SIGNALING

Because of the apparatus used (whistle, siren, foghorn), sound signaling is necessarily slow. Moreover, the misuse of sound signaling could create

serious confusion at sea. Sound signaling in fog should, therefore, be reduced to a minimum. Signals other than the single-letter signals should be used only in extreme emergency and never in frequented navigational waters.

The signals should be made slowly and clearly. They may be repeated, if necessary, but at sufficiently long intervals to ensure that no confusion can arise and that one-letter signals cannot be mistaken for two-letter groups.

Under international procedures, a transmitting ship calls in the same manner as by flashing light; the receiving ship replies with the answering sign. (No call or answer is sent, however, when transmitting single-letter signals.) The transmitting ship then sends the entire message. Unless the receiving ship misses a word or group, it does not answer until the ending AR is made; it then indicates receipt by sending *R*.

If the receiving ship misses a word or group during the transmission, it immediately signals *RPT* to indicate the omission; the transmitting ship goes back a few words or groups, then continues the message. Ships do not exchange identities in this form of communication despite use of the general call *AA*.

RADIOTELEPHONE

When using the *International Code of Signals* in cases of language difficulties, the principles of the *Radio Regulations of the International Telecommunications Union* then in force have to be observed. Letters and figures are spelled out according to phonetic spelling tables. When coast and ship stations are called, the identity signals or names shall be used.

Calling

The call consists of the call sign or name of the station called, the group *DE*, and the call sign or name of the calling station.

Difficult names of stations should be spelled. After contact has been established, the call sign or name need not be sent again.

Answering

The reply to a call consists of the call sign of the calling station, the group *DE*, and the call sign or name of the station called.

General Information

When calling all stations in the vicinity, the group *CQ* is used.

To indicate that groups are from the *International Code of Signals*, the word **INTERCO** is inserted. The group *YZ* will be used when plain language is used in the text.

The signal AS is used when the station called is unable to receive traffic immediately.

To receipt for a transmission, the signal R is used.

Repetitions are obtained by *RPT* followed by prowords if needed.

To end a transmission, the signal AR is used.

MORSE SIGNALING BY HAND FLAGS OR ARMS

A station that desires to communicate with another station by Morse signaling using hand flags or arms may indicate the requirement by transmitting to that station the signal KI by any method. The call signal AA may be made instead.

On receipt of the call, the station addressed should make the answering signal or, if unable to communicate by this means, should reply with the signal *YS1* by any available method.

The call signal AA AA AA and the signal T should be used, respectively, by the transmitting station and the addressed station.

Normally both arms should be used for this method of transmission, but in cases where this is difficult or impossible, one arm can be used.

All signals will end with the ending signal AR.

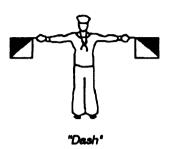
Figure 6-1 shows positions for Morse signaling by hand flags or arms.

SINGLE-LETTER SIGNALS

International single-letter signals, which may be made by any method of signaling, have specific meanings that in most cases do not parallel the same 1 RAISING BOTH HAND FLAGS OR ARMS



2 SPREADING OUT BOTH HAND FLAGS OR ARMS AT SHOULDER LEVEL



3 HAND FLAGS OR ARMS BROUGHT BEFORE THE CHEST



SEPARATION OF 'dots' AND/OR 'dashes'

4 HAND FLAGS OR ARMS KEPT AT 45° AWAY FROM THE BODY DOWNWARD



SEPARATION OF LETTERS, GROUPS OR WORDS

5 CIRCULAR MOTION OF HAND FLAGS OR ARMS OVER THE HEAD



ERASE SIGNALS, IF MADE BY THE TRANSMITTING STATION.
REQUEST FOR REPETITION IF BY THE RECEIVING STATION.

73NP0041

Figure 6-1.—Morse signaling by hand flags or arms.

single-letter signals from ATP 1, volume II. These important and commonly used signals are as follows:

- A I have a diver down; keep well clear at slow speed.
- B* I am taking in, discharging, or carrying dangerous goods.
- C* Yes (Affirmative or "The significance of the previous group should be read in the affirmative.")
- D* Keep clear of me; I am maneuvering with difficulty.
- E* I am altering my course to starboard.
- F I am disabled: communicate with me.
- G* I require a pilot. When made by fishing vessels operating in close proximity on the fishing grounds, it means "I am hauling nets."
- H* I have a pilot on board.
- I* I am altering my course to port.
- J I am on fire and have dangerous cargo on board, keep well clear of me.
- K I wish to communicate with you.
- L You should stop your vessel instantly.
- M My vessel is stopped and making no way through the water.
- N NO (Negative or "The significance of the previous group should be read in the negative.") This signal may be given only visually or by sound. For voice or radio transmission, the signal should be "NO."
- Man overboard.
- P In harbor—All persons should report on board as the vessel is about to proceed to sea. At sea—It may be used by fishing vessels to mean "My nets have come fast upon an obstruction."
- O My vessel is "healthy" and I request free pratique.
- S* My engines are going astern.
- T* Keep clear of me; I am engaged in pair trawling.
- U You are running into danger.
- V I require assistance.
- W I require medical assistance.
- X Stop carrying out your intentions and watch for my signals.
- Y I am dragging my anchor.

Signals of letters marked by an asterisk (*), when made by sound, may only be made in compliance with the requirements of the *International Regulations for Preventing Collisions at Sea.*

Signals *K* and *S* have special meanings as landing signals for small boats with crews or persons in distress.

SINGLE-LETTER SIGNALS WITH COMPLEMENTS

These signals can be transmitted by any method of signaling. A list of the single-letter signals with complements are listed below:

AZIMUTH OR BEARING	A with three numerals
COURSE	C with three numerals
DATE	D with two, four, or six
	numerals

LONGITUDE G with four or five numerals (the last two numerals denote minutes, and the rest, degrees)

COMMUNICATE (I wish K with one numeral to communicate with you by (complement table 1))

LATITUDE L with four numerals (the

first two numerals denote degrees, and the rest,

minutes)

DISTANCE in nautical R with one or more numerals miles

SPEED in knots S with one or more numerals LOCAL TIME T with four numerals (the

first two numerals denote hours, and the rest, minutes) V with one or more numerals

SPEED in kilometers per

hour

GMT Z with four numerals (the

first two numerals denote hours, and the rest, minutes

GENERAL SIGNAL CODE

LEARNING OBJECTIVES: List and explain 10 sections contained in the General Signal Code.

Each section in the General Signal Code covers specific actions. For example, section 1, Distress-Emergency, ranges from *abandon ship* to *search and rescue*; and section 3, Aids to Navigation, ranges from *course* to *water depth*. The sections and their contents are as follows:

- 1. DISTRESS—EMERGENCY
- 2. CASUALTIES—DAMAGES
- 3. AIDS TO NAVIGATION—NAVIGATION—HYDROGRAPHY
- 4. MANEUVERS

- 5. MISCELLANEOUS
- 6. METEOROLOGY—WEATHER
- 7. ROUTING OF SHIPS
- 8. COMMUNICATIONS
- 9. INTERNATIONAL SANITARY REGULATIONS

10. TABLE OF COMPLEMENTS

You can see that almost every situation possible is covered in the General Signal Code. This code is very important, so familiarize yourself with it.

MEDICAL SIGNAL CODE

LEARNING OBJECTIVES: Explain procedures for encoding and decoding medical signals. List procedures for instructions to Masters and Doctors.

Chapter 3 of the *International Code of Signals* covers the Medical Signal Code. This code is divided into the four following sections:

- 1. Explanations and Instructions
- 2. Request for Medical Assistance
- 3. Medical Advice
- 4. Table of Complements

Medical advice should be sought and given in plain language whenever possible, but if language difficulties arise, the Code should be used.

Even when plain language is used, the text of the Code and the instructions should be followed as far as possible.

Reference is made to the procedure signals C, N or *NO*, and *RQ*, which when used after the main signal, change its meaning into affirmative, negative, and interrogative, respectively.

Example:

MFE RQ—Is bleeding severe?

MFE N—Bleeding is not severe.

INSTRUCTIONS TO MASTERS

The master should make a careful examination of the patient and should try to collect, as far as possible, information covering the following subjects (under chapter 3 of the Code):

- 1. Description of the patient
- 2. Previous health
- 3. Localization of symptoms, diseases, or injuries
- 4. General symptoms
- 5. Particular symptoms
- 6. Diagnosis

Such information should be coded by choosing the appropriate groups from the corresponding sections of the Code. It would help the recipients of the signal if the information were transmitted in the order shown in the previous list.

After a reply from the doctor has been received and the instructions therein followed, the master can give a progress report by using signals from chapter 3.

INSTRUCTIONS TO DOCTORS

Additional information can be requested by using chapter 3, section 3A.

Example:

MQB—I cannot understand your signal. Please use standard method of case description.

For diagnosis, chapter 3, section 3B should be used

Example:

MQE 26—My probable diagnosis is cystitis.

Prescribing should be limited to the "List of Medicaments" which comprises table M-3 in chapter 3, section 4.

For special treatment, signals from chapter 3, section 3C should be used.

Example:

MRP 4—Apply ice-cold compress and renew every 4 hours.

When prescribing medication, three signals found in chapter 3, section D, should be used as follows:

1. The first (chapter 3, section 3D-1 and table M-3 in chapter 3, section 4) signifies the medication itself.

Example:

MTD 32—You should give aspirin tablets.

2. The second (chapter 3, section 3D-2) signifies the method of administration and dose.

Example:

MTI 2—You should give by mouth two tablets/capsules.

3. The third (chapter 3, section 3D-3) signifies the frequency of the dose.

Example:

MTQ 8—You should repeat every 8 hours.

The frequency of external applications is coded in chapter 3, section 3D-4.

Example:

MTU 4—You should apply every 4 hours.

Advice concerning diet can be given by using signals from chapter 3, section 3E.

Example:

MUC—Give water only in small quantities.

As an example, two cases of request for assistance and the corresponding replies follow:

CASE ONE

REQUEST FOR MEDICAL ASSISTANCE. "I have a male age 44 years. Patient has been ill for 2 days. Patient has suffered from acute bronchitis. Onset was sudden. Patient is delirious. Patient has fits of shivering. Temperature taken in mouth is 40°C. Pulse rate per minute is 110. The rate of breathing per minute is 30. Patient is in pain (chest). Part of the body affected is right (chest). Pain is increased on breathing. Patient has severe cough. Patient has bloodstained sputum. Patient has been given penicillin injections without effect. Patient has received medication in last 18 hours. My probable diagnosis is pneumonia."

MEDICAL ADVICE. "Your diagnosis is probably right. You should continue giving penicillin injections. You should repeat every 12 hours. Put patient to bed lying down at absolute rest. Keep patient warm. Give fluid diet, milk, fruit juice, tea, mineral water. Give water very freely. Refer back to me in 24 hours, or before if patient worsens."

CASE TWO

REQUEST FOR MEDICAL ASSISTANCE. "I have a male aged 31 years. Patient has been ill for 3 hours. Patient has had no serious previous illness. Pulse rate per minute is 95. Pulse is weak. Patient is

sweating. Patient is in pain in lumbar (kidney) region. The part affected is left lumbar (kidney) region. Pain is severe. Pain is increased by hand pressure. Bowels are regular."

REQUEST FOR ADDITIONAL INFORMATION. "I cannot make a diagnosis. Please answer the following questions. Temperature taken in the mouth is (number). Pain radiates to groin and testicle. Patient has pain on passing water. Urinary functions normal. Vomiting is present."

ADDITIONAL INFORMATION. "Temperature taken in mouth is 37°C. Pain radiates to groin and testicle. Patient has pain on passing water. Patient is passing small quantities of urine frequently. Vomiting is absent. Patient has nausea."

MEDICAL ADVICE. "My probable diagnosis is kidney stone (renal colic). You should give morphine injection. You should give by subcutaneous injection 15 milligrams. Give water freely. Apply hot water bottle to lumbar (kidney) region. Patient should be seen by doctor when next in port."

DISTRESS AND LIFESAVING SIGNALS

LEARNING OBJECTIVES: List and define distress and lifesaving signals. Explain distress transmitting procedures.

Chapter 4 of the *International Code of Signals* covers distress signals, lifesaving signals, and distress radiotelephone transmitting procedures.

DISTRESS/LIFESAVING

The following signals, to be used or displayed either together or separately, indicate distress and need of assistance (see fig. 6-2):

A gun or other explosive signal fired at intervals of about a minute

A continuous sounding with any fog-signaling apparatus

Rockets or shells, throwing red stars fired one at a time at short intervals

A signal made by radiotelegraphy or by any other signaling method consisting of the group ...--... (SOS) in the Morse code

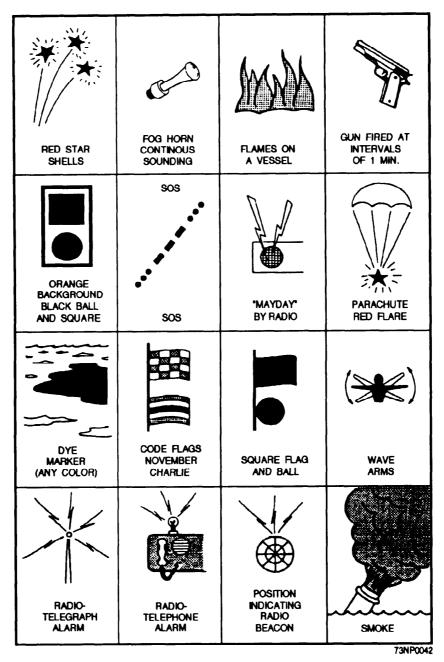


Figure 6-2.—Distress signals.

A signal sent by radiotelephony consisting of the spoken word "Mayday"

The international code signal of distress indicated by NC

A signal consisting of a square flag having above or below it a ball or anything resembling a ball

Flames on the vessel (as from a burning tar barrel, oil barrel, and so forth.)

A rocket parachute flare or a hand flare showing a red light

A smoke signal giving off orange-colored smoke

Slowly and repeatedly raising and lowering arms outstretched to each side

The radiotelegraph alarm signal

The radiotelephone alarm signal

Signals transmitted by emergency position-indicating radio beacons

Vessels in distress may use the radiotelegraph alarm signal or the radiotelephone alarm signal to secure attention to distress calls and messages. The radiotelegraph alarm signal, which is designed to actuate the radiotelegraph auto alarms of vessels so fitted, consists of a series of 12 dashes sent in 1 minute.

The duration of each dash is 4 seconds, and the duration of the interval between two consecutive dashes is 1 second. The radiotelephone alarm signal consists of two tones transmitted alternately over periods of from 30 seconds to 1 minute.

The use of any of the foregoing signals except for the purpose of indicating that a vessel or seaplane is in distress, and the use of other signals that may be confused with any of the previously mentioned signals are prohibited. Attention is drawn to the relevant sections of the *Merchant Ship Search and Rescue Manual*, and the following signals:

- A piece of orange-colored canvas with either a black square and circle or other appropriate symbol (for identification from the air)
- A dye marker

Signals used in situations of distress and search and rescue are shown in figure 6-2 (Distress) and figure 6-3 (Lifesaving signals).

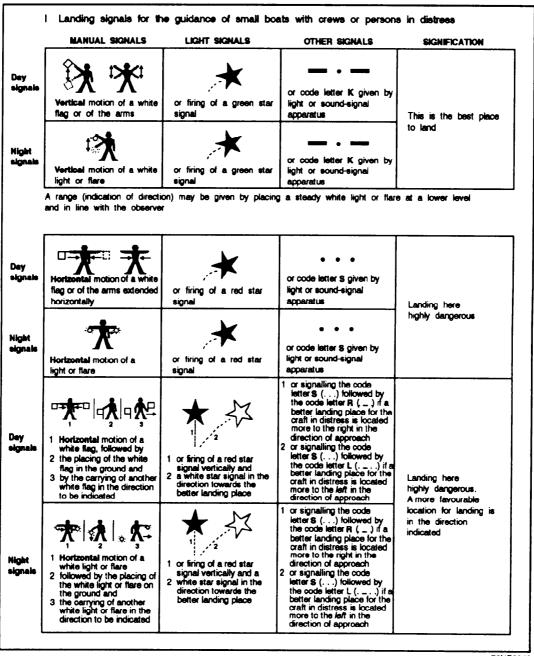


Figure 6-3.—Lifesaving signals (page 1 of 4).

73NP0043

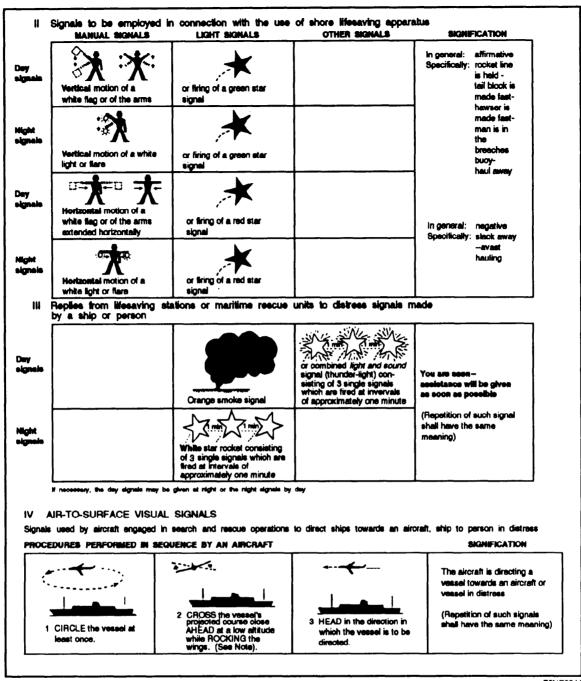


Figure 6-3.—Lifesaving signals (page 2 of 4).

73NP0044

RADIOTELEPHONE PROCEDURES

Any message you hear prefixed by one of the following words concerns SAFETY:

MAYDAY (Distress)—Indicates that a ship, aircraft, or other vehicle is threatened by grave and imminent danger and requests immediate assistance.

PAN (Urgency)—Indicates that the calling station has a very urgent message to transmit concerning the safety of a ship, aircraft, or other vehicle, or the safety of a person.

SECURITE (Safety)—Indicates that the station is about to transmit a message concerning the safety of navigation or to give important meteorological warnings.

IV AIR-TO-SURFACE VISUAL SIGNALS (continued) SIGNIFICATION 4 CROSS the vessel's wake close ASTERN at low altitude while ROCKING the wings. (See Note) وبملازة is no longer required (Repetition of such signals NOTE-Opening and closing the throttle or changing the propeller pitch may also be practiced as shall have the same an alternative means of attracting attention to that of rocking the wings. However, this form of meaning) sound signal may be less effective than the visual signal of rocking the wings owing to high noise level on board the vessel. Signals used by a vessel in response to an aircraft engaged in search and rescue operations SIGNIFICATION Acknowledges receipt of aircraft's signal Hoist "Code and Answering" Change the heading to the Flash Morse Code pendant Close up; or required direction; or signal "T" by signal lamp. e inability to comply Flash Morse Code signal "N" by signal lamp (NOVEMBER); or V SURFACE-TO-AIR VISUAL SIGNALS Communication from surface craft or survivors to an aircraft. Use International Code Use the following surface-to-air of Signals or plain language by use of a torch, signalling visual symbols by displaying the or appropriate symbol on the deck or on the ground. lamps or signal flags

Message	Code of Signals	symbols
- Require assistance	V	V
- Require medical assistance	w	x
- No or negative	N	N
- Yes or affirmative	С	Y
- Proceeding in this direction		+

ICAO annex 12 — Search and rescue.

Figure 6-3.—Lifesaving signals (page 3 of 4).

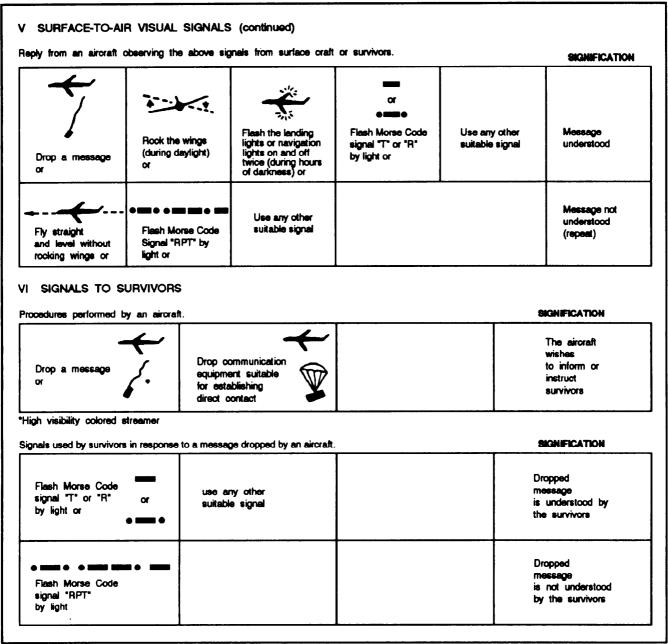
73NP0045

If you hear these words, pay particular attention to the message and call the master or the officer on watch.

Distress transmitting procedures are to be used only when <u>immediate assistance</u> is required. Use plain language whenever possible. If language difficulties are likely to arise, use appropriate tables from the International Code of Signals.

U.S. AND RUSSIA SUPPLEMENTARY **SIGNALS**

LEARNING OBJECTIVES: List and define U.S./Russia supplementary signals for naval vessels, special warning signals, and warning signals to submarines.



73NP0046

Figure 6-3.—Lifesaving signals (page 4 of 4).

On the 25th of May 1972, an agreement between the governments of the United States and the Soviet Union on the prevention of incidents on the high seas was signed. This agreement was called the INCSEA agreement. The purpose of this agreement is to reduce the number of unintended serious confrontations between the United States and Soviet Forces on or over the high seas, to promote safety of operations where the United States and Soviet Naval and Air Forces operate in proximity, and to avoid the breaking of diplomatic relations.

As a part of this agreement, the U.S. and Russian warships and auxiliary vessels will use the signals listed below:

IR 1 I am engaged in oceanographic operations.

- IR 2 I am streaming/towing hydrographic survey equipment...meters astern.
- IR 3 I am recovering hydrographic survey equipment.
- IR 4 I am conducting salvage operations.
- JH 1 I am attempting to retract a grounded vessel.

- MH 1 Request you not to cross my course ahead of me.
- NB 1 I have my unattached hydrographic survey equipment bearing in a direction from me as indicated...(table 3 of ICS).
- PJ 1 am unable to alter course to my starboard.
- PJ 2 I am unable to alter course to my port.
- PJ 3 Caution I have a steering casualty.
- PP 8 Dangerous operations in progress. Request you remain clear of the hazard which is in the direction from me as indicated...(table 3 of ICS).
- OF 1 Caution I have stopped engines.
- QS 6 I am proceeding to anchorage on course...
- QV 2 I am in a fixed multiple leg moor using two or more anchors or buoys fore and aft. Request you remain clear.
- QV 3 I am anchored in deep water with hydrographic survey equipment streamed.
- RT 2 I intend to pass you on your port side.
- RT 3 I intend to pass you on your starboard side.
- RT 4 I will overtake you on your port side.
- RT 5 I will overtake you on your starboard side.
- RT 6 I am/Formation is maneuvering. Request you remain clear of the hazard which is in the direction from me as indicated...(table 3 of ICS).
- RT 7 I shall approach your ship on starboard side to a distance of...100's of meters yards).
- RT 8 I shall approach your ship on port side to a distance of...100's of meters (yards).
- RT 9 I shall cross astern at distance of...100's of meters (yards).
- RU 2 I am beginning a port turn in approximately...
- RU 3 I am beginning a starboard turn in approximately...minutes.
- RU 4 The formation is preparing to alter course to port.
- RU 5 The formation is preparing to alter course to starboard.
- RU 6 I am engaged in maneuvering exercises. It is dangerous to be inside the formation.
- RU 7 I am preparing to submerge.
- RU 8 A submarine will surface within 2 miles of me within 30 minutes. Request you remain clear.
- TX 1 I am engaged in fisheries patrol.
- SL 2 Request your course, speed, and passing intentions.
- UY 1 I am preparing to launch/recover aircraft on course....

- UY 2 I am preparing to conduct missile exercises. Request you remain clear of the hazard which is in the direction from me as indicated...(table 3 of ICS).
- UY 3 I am preparing to conduct gunnery exercises. Request you remain clear of the hazard which is in the direction from me as indicated...(table 3 of ICS).
- UY 4 I am preparing to conduct/am conducting operations employing explosive charges.
- UY 5 I am maneuvering in preparation for torpedo launching exercises. Request you remain clear of the hazard which is in the direction from me as indicated..(table 3 of ICS).
- UY 6 I am preparing to conduct/am conducting underway replenishment on course... Request you remain clear.
- UY 7 I am preparing to conduct extensive small boat and ship to shore amphibious training operations.
- UY 8 I am maneuvering to launch/recover landing craft/boats.
- UY 9 I am preparing to conduct/am conducting helicopter operations over my stern.
- UY 10 I am testing my gun systems.
- UY 11 I am testing my missile systems.
- UY 12 I am preparing to conduct/am conducting gunnery/bombing exercises from aircraft on a towed target. Request you remain clear of the hazard which is in the direction from me as indicated...(table 3 of ICS).
- ZL 1 I have received and understood your message.
- ZL 2 Do you understand? Request acknowledgment.

SIGNALING

The INCSEA signals may be signaled by the following methods authorized by the ICOS:

- Flaghoist
- Flashing light
- Voice
- Morse signaling by hand flags or arms

Signals taken from the INCSEA agreement are preceded by the local code indicator "YVp1." Yvp1 and the signal will be separated by a tack.

Acknowledge

To acknowledge signals from the INCSEA, use the signal YVp1 TACK ZLp1. The acknowledge signal is not hoisted to the dip; instead it is hoisted closed up after the signal is understood by the appropriate personnel.

Question

To question signals from the **INCSEA** agreement, the signal YVpl TACK ZLp3 will be used.

Cancel

To cancel signals from the **INCSEA** agreement, the code pennant followed by either *YN* or *ZP* must precede the group that cancels.

SPECIAL WARNING SIGNALS

To inform foreign naval vessels that they have violated Soviet spaces, will use the warning signals listed below:

- SNG You have violated the state border of the Soviet Union. I demand that you leave Soviet Union waters immediately.
- SNO I demand that you leave the waters of the Soviet Union immediately. Unless you do so, a force of arms will be used against you.
- SNP You are violating the regulations for navigating and remaining in Soviet Union waters. I demand that you cease violations.
- SNR Despite warnings, you continue to violate the regulations for navigating and remaining in Soviet Union waters. You are to leave them immediately.

During the day, these signals will be made by flags. During nighttime, these signals are made by Morse code using a signal lamp. Radiotelephone may also be used to transmit the signal, as well as voice using a megaphone or any other amplifying device.

WARNING SIGNALS TO SUBMARINES

The signal of two series of explosions with three explosions in each series (where the interval between the explosions in a series is 1 minute and the interval between the series is 3 minutes) means "You are in Soviet Union waters. I demand you surface immediately. Unless you comply with this order

within 10 minutes, a force of arms will be used against you."

An acoustic signal by sonar may be given simultaneously, with the same meaning as stated previously. The signal will consist of five dashes, each dash 3 seconds long, and the interval between dashes, 3 seconds.

INDEX

LEARNING OBJECTIVES: Explain the procedures for the use of the index.

The index is divided into two separate indexes: Index 1 is the Signaling Instructions and General Signal Code and Index 2 is the Medical Signal Code.

USE AND CONSTRUCTION OF GROUPS

The types of signals used are the following:

Single-letter signals—Indicate very urgent, important, or very common use

Two-letter signals—The general code

Three-letter signals—Begin with M and indicate the medical code

The Code follows the basic principle that each signal should have a complete meaning. This principle is followed throughout the Code. In certain cases, complements are used when necessary to supplement the available group.

To find a certain group when encoding, always turn first to the signal index or medical index, as appropriate, and pick out the key word or phase.

Examples:

Do you require a boat? KEY WORD: Boat

Explosion has occurred in tank. KEY WORD: Explosion

COMPLEMENTS EXPRESS

The use of complements is explained in the following paragraphs. You as a Signalman must know how to use complements to effectively communicate with merchantmen.

Variations in the meaning of the basic signal:

CP—I am (or vessel indicated is) proceeding to your assistance.

CP 1—SAR aircraft is coming to your assistance.

Questions concerning the same basic subject or basic signal:

DY—Vessel (name or identity signal) has sunk in lat. . . long. . .

DY 4—What is the depth of water where vessel sank?

Answers to question or request made by the basic signal:

HX—Have you received any damage in collision?

HX 1—I have received serious damage above the waterline.

Supplementary, specific, or detailed information:

IN—I require a diver.

IN 1—I require a diver to clear propeller.

General signal complements appearing in the text are grouped into three tables. These tables should be used only as and when specified in the text of the signals. The tables of complements are as follows:

Table 1—Communication

- 1. Morse signaling by hand flags or arms
- 2. Loud hailer (megaphone)
- 3. Morse signaling lamp
- 4. Sound signals

Table 2—Logistics

- 0. Water
- 1. Provisions
- 2. Fuel
- 3. Pumping equipment
- 4. Fire-fighting appliances
- 5. Medical assistance
- 6. Towing
- 7. Survival craft
- 8. Vessel to stand by
- 9. Icebreaker

Table 3—Compass Directions

- 0. Direction unknown (or calm)
- 1. Northeast
- 2. East
- 3. Southeast
- 4. South
- 5. Southwest
- 6. West
- 7. Northwest
- 8. North
- 9. All directions (or confused or variable)

The medical signal complements are grouped into three separate tables. As for the general signal complements, the tables should be used only as and when specified in the text of the signals. The medical signal complement tables are as follows:

Table M-1—Regions of the body

Table M-2—List of common diseases

Table M-3—List of medicaments

CROSS-REFERENCES

Cross-references should be used when you are dealing with signals of same subject. These references are found in the right column. Before making additional reference to the index, use extensive cross-references to facilitate coding.

Example:

EL—See right column for cross-reference

SUMMARY

In this chapter you learned how to communicate with merchantmen using flaghoist, flashing light, Morse signaling by hand flag or arms, sound, and radiotelephony. You were taught the international distress signals and about the use of the U.S./Russia supplementary signals. Now it is up to you to put what you have learned to use.