

## Unit 36

# COMMUNICATIONS AT SEA

Communication at sea involves the transfer of intelligence (information) between various points at sea or shore, i.e. ship-to-shore and ship-to-ship communication. The way to communication is possible by sound or visual signalling and by radio or electronic communications. Signalling is divided into flag signalling, flashing light signalling using Morse symbols, sound signalling by Morse symbol, or voice signalling over a loud hailer, and signalling by radio, i.e. radiotelegraphy. Maritime communications are used for safety, navigational, commercial and miscellaneous purposes.

The ship's communicational equipment has undergone a revolutionary development and ranges from the traditional hand flags or arms, the hoist, flares, semaphore, bells, voice hailer, to the modern equipment used in radio or wireless telegraphy (WT), radiotelephony (RT) and satellite communications. SSB (single side band) transmitters, walkie-talkie sets, VHF and FM receivers, transceivers, telex, fax, satcoms, and computers displaying digital data are found on almost every modern ship.

Most communications today are carried out by radiotelephony. Safety communications must use simple and clear language. To avoid any possible misunderstanding the language of the safety communication procedures has been codified, first into Morse Signalling Code by ITU, followed later by the International Code of Signals (ICS). IMO has standardised maritime English into what is known today as "IMO Standard Marine Navigational Vocabulary". "Seaspeak" is the most recent improvement of the IMO Standard Vocabulary for use in maritime communications, principally by VHF radio.

Any conversation, i.e. a ship-to-ship, ship-to-shore or shore-to-ship exchange, consists of the following stages:

1. *Making Contact*
2. *Exchange of Message*
3. *End Procedure*

### **Making Contact**

If the name of the ship or station being called is unknown, the following *making contact* procedure is recommended by SMCP (Standard Marine Communication Phrases 1997) and SEASPEAK:

#### Calling station

*ALL SHIPS, ALL SHIPS, ALL SHIPS, (IN SEA AREA....)*

**CALLING \*UNKNOWN SHIP IN POSITION:**

- *BEARING: 1-8-5 DEGREES FROM PUNTA STELLA*

- *DISTANCE: 4.6 MILES THIS IS NEWHAVEN RADIO. 1-0-4-N OVER*

- Calling unknown ship. Type: Container ship: hull color: blue, funnel, red ...

Responding station

NEWHAVEN RADIO. I-0-4-N.

**THIS IS** SEA URCHIN, N-W-E-9. IN POSITION:

- BEARING: 1-8-5 DEGREES FROM PUNTA STELLA

- DISTANCE: 4.6 MILES

OVER

In the *making contact* stage it is usually necessary for one station to indicate the working channel and the other to agree to it, e.g.:

Calling station

*SEA URCHIN. THIS IS NEWHAVEN RADIO.*

**SWITCH TO** VHF CHANNEL TWO - TWO

OVER

Responding station

NEWHAVEN RADIO, THIS IS SEA URCHIN.

**AGREE** VHF CHANNEL TWO - TWO;

OVER

If the name of a ship or station is known (i.e. its name and call sign), the making contact procedure is as follows:

Calling station

PONTEBBA, 1-Q-W-T,

PONTLBBA, 1-Q-W-T.

THIS IS SEA URCHIN, N-W-F-9,

SEA URCHIN, N-W-F-9,

ON VHF CHANNEL ONE - SIX.

OVER

Responding station

SEA URCHIN, N-W-F-9,

THIS IS PONTEBBA. 1-Q-W-T.

OVER

### **Exchange of Messages**

In the message exchange procedure the following *message markers* (i.e. words introducing the content and purpose of the message) are:

Message Marker

Answer to Message Marker

**Question**

**Answer**

**Instruction**

(Instruction received)

**Advice**

(Advice received)

**Request**

(Request received)

**Information**

(Information received)

**Warning**  
**Intention**

(Warning received)  
(Intention received)

### EXAMPLES

<i>Question</i>	<i>Answer</i>
WHAT ARE YOUR INTENTIONS?	I INTEND TO ALTER COURSE TO STARBOARD
<i>Warning</i>	Warning received
BUOY NUMBER: ONE - FIVE UNLIT	BUOY NUMBER: ONE - TWO UNLIT

### End Procedure

In the end procedure the conversation is terminated (e.g. NOTHING MORE), using a polite greeting (HAVE A GOOD WATCH, HAVE A PLEASANT VOYAGE TO) and the phrase OUT Or OVER AND OUT; e.g.:

Pontebba

... NOTHING MOKE. THANK YOU. HAVE A PLEASANT VOYAGE TO CEUTA. OVER

### Seaside VTS

PONTEBBA, THIS IS SEASIDE VTS. THANK YOU. HAVE A GOOD WATCH.  
OVER AND OUT

### IMO STANDARD MARINE COMMUNICATION PHRASES

#### III/1 .2 - SEARCH AND RESCUE COMMUNICATIONS

##### 1.2.3 - Performing/co-ordinating SAR - operations

*The questions are normally asked and advice is given by the Co-ordinator Surface Search (CSS) or the On-scene Commander (OSC). For further information especially on items: 8 to 16 see IMO-MERSAR Manual, 1993.*

***I am/will act as Co-ordinator Surface Search.***

***I will show following signals/lights.***

***Can you proceed to distress position?***

- **Yes, I can proceed to distress position.**
- **No, I cannot proceed to distress position.**

***When will you arrive at distress position?***

- **I will arrive at distress position within ... hours/ at... UTC.**

***The position given in MAYDAY not correct,***

- **Correct position ....**

***Vessels are advised to proceed to position ... to start rescue.***

***Carry out search pattern ... starting at... UTC.***

- **Carrying out search pattern ... starting at... UTC.**

***Initial course ... degrees, search speed... knots.***

***Carry out radar search.***

- Carrying out radar search.

*MV... is allocated track number....*

*MV/MVs ... adjust interval between vessels to ... kilometres/nautical miles.*

- Interval between vessels adjusted to ... kilometres/nautical miles.

*Adjust track spacing to ... kilometres/nautical miles.*

- Track spacing adjusted to ... kilometres/nautical miles.

*Search speed now ... knots.*

*Alter course to... degrees (at... UTC).*

- Course altered to ... degrees (at... UTC).

*Alter course for next leg of track now/at... UTC.*

- Course altered for next leg of track.

*We resume search in position....*

*Crew has abandoned vessel.*

*Keep sharp lookout for lifeboats/liferafts.*

#### 1.2.4 - Finishing with SAR - operations

*What is result of search?*

- Result of search negative.

*Continue search in position ....*

*Sighted vessel in position ....*

*Sighted derelict / lifeboats / liferafts / lifejackets in position ....*

*Sighted oil slick in position....*

*Can you pick up survivors?*

- Yes, I can pick up survivors.
- No, I cannot pick up survivors.

*I/MV... will proceed to pick up survivors.*

*Stand by at lifeboats/liferafts.*

*Picked up ... survivors in position....*

*Picked up ... lifejackets in position....*

*Picked up lifeboat/life raft with ... casualties in position....*

*Picked up ... casualties in lifejackets in position....*

*Survivors in bad/good condition.*

*Do you require medical assistance?*

- Yes, I require medical assistance.
- No, I do not require medical assistance.

-

*There are still... /no more lifeboats/liferafts with survivors.*

*Total number of persons on board was ....*

*Rescued all persons/... persons.*

*You/MV... can stop search and proceed.*

*We finish with SAR - operations.*

## A. Comprehension & vocabulary

A.1 Which terms from those listed have been defined in the following examples?

- station • sound signalling • transmitting station • procedure
- code sign • visual signalling • receiving station • addressee

1. \_\_\_\_\_ : any method of communication where the transmission of transmitters/receivers can be seen;
2. \_\_\_\_\_ : any method of passing Morse signals by means of a siren, whistle, a foghorn, a bell, or other sound apparatus;
3. \_\_\_\_\_ : identity signal, i.e. group of letters and figures assigned to each station (shipborne or shore-based) by the authorities;
4. \_\_\_\_\_ : a ship, aircraft, survival craft or any place at which communication can be effected by any means;
5. \_\_\_\_\_ : the station from which a signal is actually being sent;
6. \_\_\_\_\_ : the authority to whom a signal is addressed;
7. \_\_\_\_\_ : the station by which a signal is actually being read, decoded, or received;
8. \_\_\_\_\_ : a set of rules drawn up for the conduct of signalling.

**A.2 insert the most suitable terms:**

• **true** • **letter** • **day** • **preceded** • **degrees** • **bearings** • **indicating**  
 • **minutes** • **date** • **year** • **figures** • **midnight** • **month** • **hours**

1. Azimuths or \_\_\_\_\_ are to be expressed in three figures denoting \_\_\_\_\_ from 000 to 359 measured clockwise. If there is any possibility of confusion they should be \_\_\_\_\_ by the letter "A". Bearings are always to be \_\_\_\_\_ bearings.
2. Dates are to be signalled by two, four or six figures preceded by the \_\_\_\_\_ "D". The first two figures indicate the \_\_\_\_\_ of the month. When they are used alone they refer to the current \_\_\_\_\_. For example, D15 transmitted on the 15th or any other \_\_\_\_\_ in April means "15 April": The two figures which follow indicate the month of the \_\_\_\_\_.
3. Times are to be expressed in four \_\_\_\_\_ of which the first two denote the \_\_\_\_\_ (from 00: \_\_\_\_\_ up to 23 = 11 p.m.), and the last two denote the \_\_\_\_\_ (from 00 to 59). The figures are preceded by:
  1. the letter "T" \_\_\_\_\_ local time, or
  2. the letter "Z" indicating Universal time Coordinated (UTC).

**A.3 Give the Italian equivalents for the following:**

**Weather Notation:**

b	= blue sky (0-2/8 clouded)	_____
bc	= sky partly clouded	_____
c	= cloudy (6-B/B clouded)	_____
d	= drizzle	_____
e	= wet air (without precipitation)	_____
f	= fog	_____
g	= gale	_____
h	= hail	_____
ip	= precipitation in sight of ship or station	_____
kq	= line squall	_____
ks	= storm of drifting snow	_____
kz	= sandstorm or dust storm	_____
l	= lightning	_____
m	= mist	_____

o	= overcast sky (The sky completely covered with a uniform layer of thick or heavy cloud)	_____
n	= squally weather	_____
r	= rain	_____
rs	= sleet (rain and snow together)	_____
s	= snow	_____
t	= thunder	_____
t/r	= thunderstorm with rain	_____
t/s	= thunderstorm with snow	_____
u	= ugly, threatening sky	_____
v	= pure air; abnormal visibility	_____
w	= dew	_____
x	= hoarfrost	_____
y	= dry air	_____
z	= haze	_____

#### A.4 Supply the missing words:

- antenna • operator • radios • station • alarm • distress
- transmitter • emergency • transmission • radiotelephone
- auto-alarm • signal • dashes • seconds • minutes • intervals
- distress

#### Communications equipment

The ships 1. \_\_\_\_\_ acts as an efficient ground and it can receive lightning discharges, which can damage the radio or endanger the radio

2. \_\_\_\_\_ .

In such cases the antennas should be brought down and the ships

3. \_\_\_\_\_ shut down until the storm passes.

The portable lifeboat 4. \_\_\_\_\_ are equipped with an automatic

5. \_\_\_\_\_ signal transmitter and 6. \_\_\_\_\_ .

The 7. \_\_\_\_\_ is adjusted to a frequency of 500/2182 kHz for "Automatic 8. \_\_\_\_\_ ".

Vessels in danger transmit alarm messages via radiotelegraph or 9. \_\_\_\_\_ to call attention to the 10. \_\_\_\_\_ .

The radiotelegraph alarm 11. \_\_\_\_\_ places into operation the

12. \_\_\_\_\_ of vessels which carry them. It consists of a series of 12

13. \_\_\_\_\_ transmitted in one minute. The duration of each dash is 4

14. \_\_\_\_\_ with a one second between two 4 consecutive dashes.

The 15. \_\_\_\_\_ signal for the radio consists of two tones transmitted alternately in 16. \_\_\_\_\_ of 30 seconds to one 17. \_\_\_\_\_ .

#### A.5 Answer the following questions:

1. What does communication at sea involve?
2. What are the various ways to communicate at sea?
3. What are maritime communications used for?
4. Which of the traditional communicational means/devices are still used on board?
5. How are most communications carried out today?
6. What is the modern language of the sea?
7. What is this standardized language called?
8. What is "Seaspeak"?

## B. Grammar

**B.1** Supply a suitable form of the verb in brackets and place it into the sentence:

Communications on board ship by internal telephone system, voice pipes and portable shipboard transceivers (*convey*). Engine orders from the bridge by phone or by means of the ship's telegraph (*pass*). Communications over short distances can by visual or sound signals (*make*). Visual signals by using flags of the ICS or an Aldis lamp for messages in the Morse Code (*send, flash*). Flags can in combinations of two, three or four letters (*hoist*). Communications over long distances by radio (*send*). English for voice communications at sea (*use*). IMO the language at sea called the Standard Marine Navigational Vocabulary (*standardize*). This language for marine voice communication worldwide (*recommend*).

**B.2** Supply the required preposition:

### Safety at sea (INMARSAT)

When things at sea sometimes go wrong, then you need communications, fast. Every INMARSAT ship earth station is fitted 1. \_\_\_\_\_ a special alert mechanism 2. \_\_\_\_\_ cope 3. \_\_\_\_\_ emergency situations.

A distress alert immediately seizes a telephone, telex or data communications channels and connects it automatically 4. \_\_\_\_\_ a coast earth station 5. \_\_\_\_\_ a rescue Coordination Centre 6. \_\_\_\_\_ action. Distress alerts have top priority 7. \_\_\_\_\_ all other sorts 8. \_\_\_\_\_ communication, and the connection is always made immediately, regardless 9. \_\_\_\_\_ the location 10. \_\_\_\_\_ the emergency or the distance 11. \_\_\_\_\_ the coast earth station and Rescue Coordination Centre. IMO has made satellite communications a cornerstone 12. \_\_\_\_\_ the Global Maritime Distress Safety System (GMDSS), which was introduced 13. \_\_\_\_\_ 1991. Under the GMDSS a ship earth station (SES) will satisfy regulatory Communications requirements 14. \_\_\_\_\_ ships operating 15. \_\_\_\_\_ almost all parts 16. \_\_\_\_\_ the world, apart 17. \_\_\_\_\_ the extreme polar regions.

**B.3** Give the Phonetic Transcription equivalents for the Phonetic Alphabet below:

### PHONETIC ALPHABET

<b>Letter</b>	<b>Word</b>	<b>Pronounced as</b>
A	<i>Alfa</i>	<i>AL FAH</i>
B	<i>Bravo</i>	<i>BRAH VOH</i>
C	<i>Charlie</i>	<i>CHAR LEE</i> or <i>'SHAR LEE</i>
D	<i>Delta</i>	<i>DELL TAH</i>
E	<i>Echo</i>	<i>ECK OH</i>
F	<i>Foxtrot</i>	<i>FOKS TROT</i>
G	<i>Golf</i>	<i>GOLF</i>
H	<i>Hotel</i>	<i>HOH 'TELL</i>
I	<i>India</i>	<i>IN DEE AH</i>
J	<i>Juliett</i>	<i>JEW LEE ETT</i>
K	<i>Kilo</i>	<i>KEY LOH</i>

L	<i>Lima</i>	<i>LEE MAH</i>
M	<i>Mike</i>	<i>MIKE</i>
N	<i>November</i>	<i>NO'VEM BER</i>
O	<i>Oscar</i>	<i>OSS CAH</i>
P	<i>Papa</i>	<i>PAH PAH</i>
Q	<i>Quebec</i>	<i>KEH BECK</i>
R	<i>Romeo</i>	<i>ROW ME OH</i>
S	<i>Sierra</i>	<i>SEE 'AIR RAH</i>
T	<i>Tango</i>	<i>TANG GO</i>
U	<i>Uniform</i>	<i>YOU NEE FORM or '00 NEE FORM</i>
V	<i>Victor</i>	<i>VI K TAH</i>
W	<i>Whiskey</i>	<i>WISS KEY</i>
X	<i>X-ray</i>	<i>EKS RAY</i>
Y	<i>Yankee</i>	<i>YANG KEY</i>
Z	<i>Zulu</i>	<i>ZOO LOO</i>

## C. Translation

### *C.1 Translate into English:*

#### **Segnali a una lettera**

1. A - Ho un palombaro/sommozzalore in immersione; mantenetevi lontano da me e procedete adagio.
2. B - Sto imbarcando, o scaricando, o trasportando merci pericolose.
3. C - Sì, affermativo.
4. D - Mantenetevi lontano da me; sto manovrando con difficoltà.
5. E - Sto accostando a dritta.
6. F - Sono in avaria; comunicate con me.
7. G - Richiedo un pilota; (*peschereccio*) Sto issando le reti.
8. H - Ho il pilota a bordo.
9. I - Sto accostando a sinistra.
10. J - Ho un incendio a bordo e trasporto merci pericolose; mantenetevi lontano da me.
11. K - Desidero comunicare con voi.
12. L - Fermate immediatamente la vostra nave
13. M - La mia nave è ferma e senza attracco.
14. N - No, negativo.
15. O - Uomo in mare.
16. P - (*In porto*) Tutti debbono tornare a bordo: la nave è in procinto di partire.  
(*In mare*) Le mie reti si sono impigliate in un ostacolo.
17. Q - La mia nave è indenne e chiedo libera pratica.
18. R - Ho ricevuto il vostro ultimo segnale.
19. S - Le mie macchine stanno andando indietro.
20. T - Mantenetevi lontano da me; sono impegnato in operazioni di pesca a due battelli.
21. U - State andando verso un pericolo.
22. W - Chiedo assistenza medica.
23. X - Sospendete quello che state facendo e fate attenzione ai miei segnali.
24. Y - La mia ancora sta tirando.
25. Z - Richiedo un rimorchiatore; sto calando le reti.