CHAPTER 7

RADIOTELEPHONE

Most of what you learned about radiotelegraph nets is equally applicable to radiotelephone. Just as in radiotelegraph, a radiotelephone net is an organization of two or more stations in direct communication on a common channel. One station in the net, the net control station, is in charge. Radiotelephone nets are either free or directed.

The lessons you learned about radiotelegraph operating and circuit discipline also apply to radiotelephone. Abide by the instructions of the net control station, keep a good log, and stand a taut watch.

MICROPHONE TECHNIQUE

The following is a guide that you should use in developing good microphone technique. Practice the DO's and avoid the DON'Ts. Remember, though, that nothing can take the place of good commonsense.

DO:

1. Listen before transmitting. Unauthorized break-in causes confusion and often blocks the transmission in progress to the extent that neither transmission gets through.

2. Speak clearly and distinctly. Both slurred syllables and clipped speech are hard to understand. A widespread error among untrained operators is failure to emphasize vowels sufficiently.

3. Speak slowly. Unless the action officer is listening, he must rely on the copy being typed or written. Give the recorder a chance to get it all down. That way you save time and avoid repetitions.

4. Avoid extremes of pitch. A high voice cuts through interference best, but is shrill and unpleasant if too high. A lower pitch is easier on the ear, but is difficult to understand through background noises if too low.

5. Be natural. Maintain a normal speaking rhythm. Group words in a natural manner. Send your message phrase by phrase instead of word by word.

6. Use standard pronunciation. Speech with sectional peculiarities is difficult for persons from other parts of the country to understand. Talkers who use as a model the almost standard pronunciation of a broadcast network announcer are easiest to understand.

7. Speak in a moderately strong voice. This overrides unavoidable background noises and prevents dropouts.

8. Keep correct distance between lips and microphone. A distance of about 2 inches is correct for most microphones. If the distance is too great, speech is inaudible and background noises creep in; if too small, blaring and blasting result.

9. Shield your microphone. Keep your head and body between noise-generating sources and the microphone while transmitting.

10. Keep the volume of a handset earphone low.

11. Keep speaker volumes to a moderate level.

12. Give an accurate evaluation in response to a request for a radio check. A transmission with feedback or a high level of background noise is not "loud and clear," even though the message can be understood.

13. Pause momentarily, when possible, and interrupt your carrier. This allows any other station with higher precedence traffic to break in.

14. Adhere strictly to prescribed procedures. Up-to-date radiotelephone procedure is found in the effective edition of ACP 125.

15. Transact your business and get off the air. Preliminary calls waste time when communications are good and the message is short. It is NOT necessary to blow into a microphone to test it, nor to repeat portions of messages when no repetition is requested.

DON'T:

1. Transmit while surrounded by other persons loudly discussing the next maneuver or event. It confuses receiving stations, and a serious security violation can result.

2. Hold the microphone button in the push-to-talk position until absolutely ready to transmit. Your carrier will block communications on the net.

3. Hold a handset in such a position while speaking that there is a possibility of having feedback from the earphone added to other background noises.

4. Hold a handset loosely. A firm pressure on the microphone button prevents unintentional release and consequent signal dropout.

5. Tie up a circuit with test signals. Usually 10 seconds is sufficient for testing.

PRONOUNCING NUMERALS

Care must be taken to distinguish numerals from similarly pronounced words. Pronounce numerals as follows:

Numeral	Pronounced
Ø	Zero
1	Wun
2	Too
3	Thu-ree
4	Fo-wer
5	F i-yiv
6	S ix
7	Seven
8	Ate
9	Niner

The numeral Ø is always spoken as "zero"—never as "oh." Decimal points are spoken as "day-see-mal."

In general, numbers are transmitted digit by digit, except that exact multiples of hundreds and thousands are spoken as such. Examples:

Number	Pronounced
44	F o-wer fo-wer
90	N iner zero
136	Wun thuh-ree six
500	F i-yiv hun-dred
1478	W un fo-wer seven ate
7000	S even thow-zand
16,000	Wun six thow-zand
16,400	Wun six fo-wer hundred
812,681	Ate wun too six ate wun

A few special instances, however, require procedures different from the normal pronunciation—digit by digit. Let us examine the prescribed rules for these exceptions. Notice how some of the examples given differ from the general rule for pronouncing numerals.

1. Ranges, distances and speeds given in mile units are always transmitted as cardinal numbers. Examples:

Number	Pronounced
10	T en
13	Thur-teen
25	T wen-ty fi-yiv
50	F if-ty
110	Wun hun-dred ten
300	Thu-ree hundred

2. Altitude is always expressed in feet (except for weapons orders, which are always expressed in yards) and spoken in cardinal numbers. Examples:

Number	Pronounced
700	Seven hun-dred
1100	Eleven hun-dred
5500	Fif-ty fi-yiv hun-dred
10,500	Ten thow-zand fi-yiv hundred
20,000	Twen-ty thow-zand

3. Altitude in weapons orders and information concerning gunfire support are always expressed in yards and are transmitted digit by digit, except that exact multiples of hundreds and thousands are spoken as such. Examples:

Number	Pronounced
10	Wun zero
25	Too fi-yiv
100	Wun hun-dred
1000	Wun thow-zand

4. Bearings are always given in three digits and are transmitted digit by digit. Examples:

Number	Pronounced
090	Zero niner zero
180	Wun ate zero
295	Too niner fi-yiv

5. Position angles, always less than 100°, are expressed in two digits and are pronounced as cardinal numbers. The phrase "position angle" must precede the numerals. Examples:

Number	Pronounced
5	Position angle fi-yiv
10	Position angle ten
15	Position angle fif-teen
27	Position angle twen-ty seven

PHONETIC ALPHABET

Many letters of the alphabet sound alike. For this reason, the standard phonetic equivalents of the letters of the alphabet are used in radiotelephone communications. Correct pronunciation of the phonetic alphabet is important and should be practiced at every opportunity.

Letter	Phonetic equivalent	Pronounced
A	ALFA	AL FA
B	BRAVO	BRAH VOH
C	CHARLIE	CHAR LEE
D	DELTA	DELL TAH
E	ECHO	ECK OH
F	FOXTROT	FOKS TROT
G	GOLF	GOLF
H	HOTEL	HOH TELL
I	INDIA	IN DEE AH
J	JULIETT	JEW LEE ETT
K	KILO	KEY LOH
L	LIMA	LEE MAH
M	MIKE	MIKE
N	NOVEMBER	NO VEM BER
O	OSCAR	OSS CAH
P	PAPA	PAH PAH
Q	QUEBEC	KEH BECK
R	ROMEO	ROW ME OH
S	SIERRA	SEE AIR RAH
T	TANGO	TANG GO
U	UNIFORM	YOU NEE FORM
V	VICTOR	VIK TAH
W	WHISKEY	WISS KEY
X	XRAY	ECKS RAY
Y	YANKEE	YANG KEY
Z	ZULU	ZOO LOO

PROWORDS

Prowords (procedure words) are the radiotelephone equivalents of prosigns. They are words and phrases that have predetermined meanings, and are used to expedite message handling on radiotelephone circuits. Many prowords and prosigns have exactly the same meaning. Also, they are used in the same manner. A list of the prowords (except for precedence prowords), together with an explanation of each and the corresponding prosign (if one exists), is given in table 7-1. Learn them now, because you will use them often. The precedence of a radiotelephone message is indicated by the actual word(s) of the precedence. For example: PRIORITY, IMMEDIATE, and so on.

RADIOTELEPHONE MESSAGES

Radiotelephone uses a 16-line message format that is comparable to the formats in radiotelegraph and in teletypewriter communications. It also has the same three military message forms: plaindress, abbreviated plaindress, and codress. By far the most common message form in radiotelephone traffic is the abbreviated plaindress. Often it is so abbreviated that its resemblance to the basic message format is barely detectable. But the three major message parts still are there: heading, text, and ending. Each of these, as in radiotelegraph, can be reduced to parts, components, elements, and contents.

Table 7-2 shows the correct arrangement of a radiotelephone message. All the parts, components, elements, or contents are not necessarily included in any one message, but, when one of them is used, it must be placed in the message in the order in which it appears in the table.

HEADING

The heading of a radiotelephone message may include any or all of the first 10 procedural lines shown in table 7-2. More often than not, though, it includes only the call, preceding the text. One explanation for such general use of the abbreviated form is that radiotelephone communication nearly always is conducted with the station originating and the station addressed in direct communication.

TEXT

The text of the message is the basic thought or idea the originator wishes to communicate. It may be in the form of plain language, code words, cipher groups, or numerals.

Difficult words or groups within the text of a plain language message are spelled out in the phonetic alphabet. Groups or words to be spelled are preceded by the proword I SPELL. If the operator can pronounce the word, he should do so before and after spelling it.

ENDING

Every radiotelephone message ends with the proword OVER or OUT. With OVER, the sender tells the receiver to go ahead and transmit; or, "This is the end of my transmission to you and a response is necessary." With the proword OUT, the sender tells the receiver: "This is the end of my transmission to you and no response is required." The two ending prowords never are used together.

CODE AND CIPHER MESSAGES

Code words (such as LIBRA in the text EXECUTE PLAN LIBRA) are sent as plain language

Table 7-1.--Radiotelephone Prowords

Proword	Meaning	Corresponds to
ALL AFTER	All after	AA
ALL BEFORE	All before	AB
BREAK	Separation of text from other portions of the message. (Used only when confusion between text and heading or ending is likely.)	$\overline{BT}$
CORRECTION	Error	EEEEEEEE
DISREGARD THIS TRANSMISSION.	This transmission is in error Disregard it.	EEEEEEEE $\overline{AR}$
DO NOT ANSWER	Do not answer	F
EXECUTE	Carry out the meaning of the message or signal to which this applies.	$\overline{IX}$ (5-second dash)
EXECUTE TO FOLLOW and IMMEDIATE EXECUTE.	Action on the message or signal that follows is to be carried out upon receipt of EXECUTE. EXECUTE TO FOLLOW is used with the normal and delayed executive methods. IMMEDIATE EXECUTE is used with the immediate executive method.	$\overline{IX}$
EXEMPT	Exempt following addressees from the collective call.	XMT
FIGURES	Numerals or numbers follow.	——
FROM	Originator's sign	FM
GROUPS	Group count	GR
GROUP NO COUNT	The groups in this message have not been counted.	GRNC
INFO	The addressee designations immediately following are addressed for information.	INFO
INITIAL	The following phonetic equivalent is to be recorded as a single letter initial of a name.	——

Table 7-1.--Radiotelephone Prowords--Continued

Proword	Meaning	Corresponds to
I READ BACK	The following is my response to your instructions to read back.	—
I SAY AGAIN	I am repeating transmission or portions indicated.	—
I SPELL	I shall spell the next word phonetically.	—
I VERIFY	I have verified with originator and am repeating.	C
MESSAGE FOLLOWS	A message that requires recording is about to follow.	—
MORE TO FOLLOW	More to follow	B
NUMBER	Station serial number	NR
OUT	End of transmission; no response required.	$\overline{AR}$
OVER	Go ahead; or, this is the end of my transmission and a response is necessary.	K
READ BACK	Repeat this entire transmission back to me exactly as received.	G
RELAY (TO)	Transmit this message to all addressees or to the addressee designations immediately following.	T
ROGER	I have received your last transmission satisfactorily.	R
SAY AGAIN	Repeat	$\overline{IMI}$
SERVICE	The message that follows is a service message.	SVC
SIGNALS FOLLOW	Groups that follow are taken from a signal book. (This proword need not be used on nets primarily employed for conveying signals. It is intended for use when tactical signals are passed on non-tactical nets.)	—

Table 7-1.--Radiotelephone Prowords--Continued

Proword	Meaning	Corresponds to
SILENCE	Emergency silence sign (spoken three times).	HM HM HM
SILENCE LIFTED	Resume normal transmissions.	—
SPEAK SLOWER	Your transmission is at too fast a speed. Reduce speed of transmission.	—
THAT IS CORRECT	Correct	C
THIS IS	From	DE
TIME	The following is the time or data-time group of this message.	—
TO	Action addressee	TO
UNKNOWN STATION	Unknown station	AA
VERIFY	Verify with originator and repeat.	J
WAIT	I must pause a few seconds	AS
WAIT OUT	I must pause longer than a few seconds.	AS AR
WILCO	I have received your message, understand it, and will comply.	—
WORD AFTER	Word after	WA
WORD BEFORE	Word before	WB
WORDS TWICE	Communication is difficult. Transmit (or transmitting) each phrase twice. (Can be used as an order or request.)	—
WRONG	Your last transmission was incorrect. The correct version is_____.	—

Table 7-2. —Radiotelephone Message Format

Parts	Components	Elements	Format line	Contents
H E A D I N G	Procedure.	a. Call .... b. Message follows .... c. Transmission identification. d. Transmission instructions.	1 2 and 3 4	(Not used in radiotelephone.) Station(s) called (proword EXEMPT, exempted calls). Proword THIS IS and station calling. Proword MESSAGE FOLLOWS. Proword NUMBER and station serial number (when authorized). Prowords RELAY TO; READ BACK; DO NOT ANSWER. Operating signals; call signs; address groups; address indicating groups; plain language.
	Preamble ..	a. Precedence; date-time group; message instructions.	5	Precedence designation. Proword TIME; date and time expressed in digits and zone suffix; operating signals.
	Address ...	a. Originator's sign; originator.	6	Proword FROM; originator's designation as address group(s), call sign, or plain language.
		b. Action addressee sign; action addressee.	7	Proword TO; action addressee designation as address group(s), call sign, or plain language.
		c. Information addressee sign; information addressee.	8	Proword INFO; information addressee designation(s) as address group(s), call sign(s), or plain language.
		d. Exempted addressee sign; exempted addressee.	9	Proword EXEMPT; exempted addressee designation(s) as address group(s), call sign(s), or plain language.
	Prefix	a. Accounting information; group count; SVC.	10	Accounting symbol; group count; proword SERVICE.
SEPARATION			11	Proword BREAK.
T E X T	Text	a. Subject matter......	12	Internal instructions; thought or idea as expressed by the originator.
SEPARATION			13	Proword BREAK.
E N D I N G	Procedure .	a. Time group........	14	Proword TIME. Hours and minutes expressed in digits and zone suffix, when appropriate.
		b. Final instructions ...	15	Prowords WAIT, CORRECTION; station designation.
		c. Ending sign........	16	Prowords OVER; OUT.

words. Encrypted groups such as BAXTO are spelled phonetically: BRAVO ALFA XRAY TANGO OSCAR.

The phonetic alphabet is applied not only to letters of the alphabet, but also to the names of the signal flags. Flag A is ALFA, flag B is BRAVO, and so on. Signal flags are combined into code groups that have meanings of their own. ECHO KILO TWO, for example, means "anchor is dragging." The meanings of such code groups are given in appropriate signal publications.

It may sound strange to you that flag signals are sent by radiotelephone, but they are; this is done often. You must be able to recognize whether you are hearing a flag signal or a word or group spelled phonetically. Here is how you will know: If the phonetic alphabet is used, the proword ISPELL precedes it, and each phonetic letter is to be recorded as a letter. If you hear I SPELL, followed by DELTA OSCAR, you would write it as DO. Without that proword, you can assume the alphabet flags are intended, and record the transmission as DELTA OSCAR.

SIGNAL FLAGS AND PENNANTS

The Radioman need not be an expert in visual signaling, but should be acquainted with the names of flags and pennants. Flag signaling makes use of the alphabet flags already mentioned, and also numeral flags, numeral pennants, and a set of additional flags and pennants with special meanings. The alphabet flags represent letters; the numeral flags, numbers. Numeral pennants are used only in calls. Special flags are used to direct changes in speed, position, formation, and course in tactical maneuvers; to indicate units; to identify units, and for other specialized purposes. The names of the special flags or pennants and their spoken and written equivalent are given in the following lists.

Flag or pennant	Spoken	Written
CODE or AN- SWER	CODE or AN- SWER	CODE ANS
BLACK PEN- NANT	BLACK PEN- NANT	BLACK
CORPEN	CORPEN	CORPEN
DESIGNATION	DESIG	DESIG
DIVISION	DIV	DIV
EMERGENCY	EMERGENCY	EMERG
FLOTILLA	FLOT	FLOT
FORMATION	FORMATION	FORM

INTERROGA- TIVE	INTERROGA- TIVE	INT
NEGATIVE	NEGAT	NEGAT
PREPARATIVE	PREP	PREP
PORT	PORT	PORT
SPEED	SPEED	SPEED
SQUADRON	SQUADRON	SQUAD
STARBOARD	STARBOARD	STBD
STATION	STATION	STATION
SUBDIVISION	SUBDIV	SUBDIV
TURN	TURN	TURN

In addition, there are the 1st, 2nd, 3rd, and 4th SUBSTITUTE flags. They are used only for flag communication, however, and are of no concern to the radiotelephone operator.

Separations in flag signals are indicated by the TACKLINE. This is spoken and written TACK.

The PREPARATIVE, INTERROGATIVE, and NEGATIVE pennants are known as governing pennants. In flag signaling they are hoisted either above or below a signal, whereas in radiotelephone operation they are transmitted as the first or last part of a signal. In either usage their meanings are as follows:

Preceding the signal	Pennant	Following the signal
Prepare to - - - - - .	PREP	My present intention is to----------.
Questions or inquiries.	INT	Request permission to - - - - - - - - -.
Cease, do not- - - .	NEGAT	Action is not being carried out.

OPERATIONAL BREVITY CODE

Your duties as a radiotelephone operator require that you know and use correctly the special "language" developed for tactical maneuvering, air control, anti-air warfare, naval gunfire support, electronic countermeasures, antisubmarine warefare, and other specialized uses are called operational brevity codes.

For a complete list of operational bervity code words, refer to the effective edition of ACP 165. ACP 165 is divided into sections according to subject area. Following are the major section headings, along with representa- tive code words from each section. They are presented here to acquaint you with the type of information contained in the publication.

Section 1—General. (Includes surveillance, warning, reporting aircraft control, airborne early warning, search and rescue, and electronic readiness conditions and duties.)

ANGLES: Height of friendly aircraft in thousands of feet; or fly or am flying at height indicated in thousands of feet.

BOGEY: An air contact that is unidentified but assumed to be enemy.

CHICKS: Friendly fighter aircraft.

SKUNK: A surface contact that is unidentified but assumed to be enemy.

YELLOW JACKET: Survivor in the sea wearing a lifejacket.

Section 2— Antiaircraft coordination.

GUNS FREE: Fire may be opened on all aircraft not recognized as friendly.

WARNING RED: Attack by hostile aircraft is imminent.

Section 3— Carrier deck conditions and flight operations.

ASSUME DECK: Carrier prepare deck for emergency landing of aircraft as soon as possible.

SLINGSHOT: Launch by catapult.

Section 4—Aircraft conditions of readiness and missions.

AUTOCAT: Automatic relay plane (radio).

SHECAT: Mine-laying plane.

Section 5— Undersea warfare.

BROTHER: Attacking ship of surface antisubmarine unit.

COLD: ASW contact has been lost and measures are being taken to regain contact.

SINKER: Disappearing radar contact.

SPOOK: Unidentified surface contact that is possibly an enemy submarine.

WOLF: Visually identified enemy submarine.

Section 6—Small surface craft control and direction.

BULLY: Concentrate attack on my target or target designated.

Section 7— Minesweeping operations.

DAISY: Moored mine.

Section 8— Electronic warfare.

CHATTER: Communications jamming.

GADGET: Radar equipment.

HOOTER: Jammer.

SCRUB: Erase the contact designated from all plots.

The final section of ACP 165 is an alphabetical decode listing of the code words.

You should understand that the words and phrases of the brevity code provide no communication security. The purposes of the codes are to (1) standardize the vocabulary, (2) increase the accuracy of transmission, and (3) shorten the transmission time.

RADIOTELEPHONE CALL SIGNS

Call signs employed in radiotelephone are more commonly known as voice call signs. They consist of spoken words, which can be transmitted and understood more rapidly and more effectively than the actual names of the ships, afloat commands, or the phonetic equivalents of the international radio call signs. Under certain circumstances, however, the phonetically spelled international call sign is used in radiotelephone for station identification, and at other times the ship's name serves as the call sign. These usages are explained in later paragraphs. First, let us consider the voice call signs contained in the JANAP 119 series.

JANAP 119 VOICE CALLS

The voice call signs in JANAP 119 are pronounceable words taken from the English language. They are tactical in nature, and are designed to facilitate speed on tactical radio nets.

A method of deriving voice call signs from the military call signs listed in the ACP 113 series is in preparation at the time of writing this training course. Because it may be some time before this method is implemented, the voice call signs used in this chapter to illustrate radiotelephone procedure are the type found in JANAP 119.

USE OF INTERNATIONAL CALL SIGNS

Administrative shore activities are not assigned call signs in JANAP 119, consequently a ship cannot use her voice call sign on administrative ship-shore circuits. When operating on ship-shore radiotelephone circuits, ships must use their international call signs, spoken phonetically. Example: international call sign NHDY is spoken NOVEMBER HOTEL DELTA YANKEE.

LOCAL HARBOR VOICE CIRCUITS

As may be seen from the preceding example, the use of phoneticized four-character call signs is extremely cumbersome for voice circuit operation. It tends to overload voice circuits, particularly in busy harbors, and provides absolutely no security. For these reasons, a separate and simplified procedure is prescribed in DNC 5 (effective edition) for local harbor voice circuits when the security of the message address is not a requirement.

In U.S. ports and U.S. controlled ports overseas, names of ships and abbreviations of administrative activity titles serve as voice call signs. As a general rule, the USS prefix, hull designations and numbers, and first names or initials of ships need not be included in the voice call unless they are essential for clarity. Even when essential for clarity, it is not necessary to use the phonetic equivalents for letters and initials.

Port authorities controlling local harbor voice circuits are identified by the word CONTROL. On local harbor circuits established for specific purposes, such as for degaussing, tug, and shipyard services, CONTROL is preceded by the appropriate word describing the service. The following examples illustrate the simplified voice call procedure. (Words in parentheses in the examples should not be used unless essential for clarity or to avoid confusion. Portions of examples marked with an asterisk (*) are spoken without phonetics.)

(NORFOLK) CONTROL THIS IS (*USS) ROANOKE
COMDESRON TWELVE THIS IS (NORFOLK)
DEGAUSSING CONTROL
(NEWPORT) CONTROL THIS IS (*TJ) GARY
(PORTSMOUTH) SHIPYARD CONTROL THIS IS
(*USS) FORRESTAL
(FRANKLIN *D) ROOSEVELT THIS IS
(CHARLESTON) CONTROL
(NEW YORK) TUG CONTROL THIS IS *LSM
ONE SIX ZERO
(NORFOLK) FUEL CONTROL THIS IS (*USNS)
PECOS

It is important to remember that the simplified type of call is authorized only in U.S. ports or U.S. controlled ports. If your ship is in a port that is not under U.S. control, you must conform to the international practice of using phoneticized international call signs on radiotelephone circuits.

RADIOTELEPHONE PROCEDURE

A radiotelephone circuit would soon become very confusing if everyone on the circuit failed to follow the same rules and procedures. The remainder of this chapter is devoted to proper operating procedures applicable to radiotelephone communication.

The examples of radiotelephone transmissions are assumed to pass over the net shown in figure 7-1. The dashes in the examples indicate natural pauses.
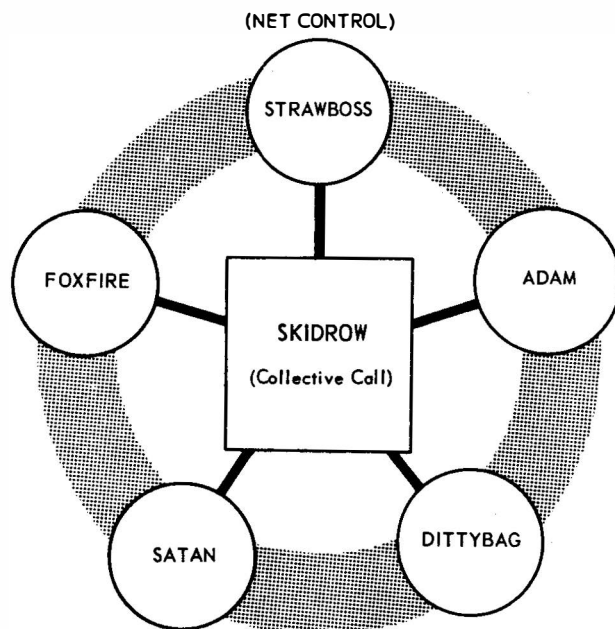

Figure 7-1. — Radiotelephone net.

CALLING AND ANSWERING

Radiotelephone communication is established by a preliminary call and the answer thereto. In our discussion of radiotelegraph procedure in chapter 6, we found that a preliminary call may be made to individual station(s) or to a group of stations collectively. We learned also that a reply to a preliminary call may be abbreviated in certain instances.

Single Call

The single call takes the following form:

FOXFIRE — . . Call sign of station called.
THIS IS . . . . From.
STRAWBOSS— . Call sign of station calling.
OVER . . . . Go ahead; transmit.

The reply is in the same form: STRAWBOSS -- THIS IS FOXFIRE -- OVER. In this instance a single station was called; if two or more were called, they would reply in alphabetical order of call signs.

Collective Call

When stations on the net are assigned a collective call, the collective call is used if all stations are addressed. When necessary, the collective call contains the proword EXEMPT, followed by the call sign of station(s) exempted from the collective call.

SKIDROW -- . .	Net call.
EXEMPT . . .	Exempt.
DITTYBAG -- .	Call sign of exempted station.
THIS IS	From.
STRAWBOSS -- .	Call sign of station calling.
OVER	Go ahead; transmit.

ADAM, FOXFIRE, and SATAN now answer in alphabetical order of call signs.

Abbreviated Call

The call sign of the called station may be omitted when the call is part of an exchange of transmission between stations and when no confusion is likely to result. For example, FOXFIRE and SATAN receive a preliminary call from STRAWBOSS and reply:

THIS IS FOXFIRE -- OVER
THIS IS SATAN -- OVER

CLEARING TRAFFIC

With communication established, STRAWBOSS commences clearing traffic, as follows:

Transmission	
FOXFIRE --	Call signs of re-
SATAN --	ceiving stations.
THIS	From.
STRAWBOSS --	Call sign of sending station.
MESSAGE FOLLOWS—	A message that requires recording is about to follow.
ROUTINE	Precedence.
TIME	Time of origin is -----.
ONE TWO ONE SIX FIVE NINE ZULU--	DTG.
FROM --	Originator of this message is-----.
STRAWBOSS --	Call sign of originator.
TO --	Action addressee is -----.
SATAN --	Call sign of action addressee.

INFO --	Information addressee is-----.
FOXFIRE --	Call sign of information addressee.
GROUPS EIGHT	Group count.
BREAK --.	Separation of text from other portions of message.
UNCLAS GO ALONG-SIDE FOXFIRE AND EFFECT PERSONNEL TRANSFER--	Thought or idea conveyed by message.
BREAK --	Separation of text from other portions of message.
OVER --	Go ahead; transmit.

On hearing the proword OVER, receiving stations check the message to see that it was received fully and correctly. When assured that it was, they receipt by sending the proword ROGER, which means "I received your last transmission satisfactorily."

THIS IS FOXFIRE--ROGER--OUT
THIS IS SATAN--ROGER--OUT

TRANSMITTING INITIALS OF NAMES

The proword INITIAL is authorized for use on radiotelephone circuits within the U.S. Navy. Presently, however, this proword is not authorized for communicating with the Army or Air Force (joint communications), or with the allied forces (combined communications).

When transmitting names containing initials, the name for which the initial stands, if known, should be spoken instead of the phonetic equivalent. Example:

USS F. D. ROOSEVELT is transmitted as UNIFORM SIERRA SIERRA FRANKLIN DELANO ROOSEVELT.

If the name for which the initial stands is not known, each initial is spoken by the phonetic equivalent preceded by the proword INITIAL. Example:

LT H. J. SAYER is transmitted as LIEUTENANT INITIAL HOTEL INITIAL JULIETT SAYER.

The proword INITIAL applies only to initials of names. The proword I SPELL must be used when transmitting phonetic equivalents of other single letters.

REPETITIONS

When words are missing or are doubtful, repetition is requested by the receiving station. The proword SAY AGAIN (along or with ALL BEFORE, ALL AFTER, WORD BEFORE, WORD AFTER, and TO) is for this purpose. In complying with such requests, the transmitting station identifies that portion to be repeated. Examples: DITTYBAG sent a message to SATAN. SATAN missed the word following "ship."
SATAN transmits:

DITTYBAG--THIS IS SATAN--SAY AGAIN WORD AFTER SHIP--OVER

DITTYBAG replies with:

SATAN--THIS IS DITTYBAG--I SAY AGAIN--WORD AFTER SHIP--SIGHTED--OVER

After receiving the doubtful portion, DITTYBAG receipts for the entire message.

You may give repetitions in plain language messages by natural phrases or by individual words. In encoded or encrypted messages, make them by individual characters.

CORRECTING AN ERROR

When an error is made by a transmitting operator, the proword CORRECTION is sent. The operator then repeats the last word, group, proword, or phrase correctly sent, corrects the error, and proceeds with the message. Example:

ADAM--THIS IS STRAWBOSS--TIME ONE ZERO ONE TWO ZULU--BREAK--UNCLASS--CONVOY ROMEO THREE -CORRECTION--CONVOY SIERRA ROMEO THREE--SHOULD ARRIVE--ONE SIX THREE ZERO LIMA--OVER

If the error is not discovered until the operator is some distance beyond it, he may make the correction at the end of the message. He must be careful to identify the exact portion he is correcting. Example:

ADAM--THIS IS STRAWBOSS-- TIME ZERO SIX THREE ZERO ZULU--BREAK--UNCLAS--ARE YOU RIGGED FOR HEAVY WEATHER--CORRECTION--TIME ZERO SIX FOUR ZERO ZULU--OVER

CANCELING A MESSAGE DURING TRANSMISSION

During transmission of a message and before transmitting the ending proword OVER or OUT, the message may be canceled by sending the proword DISREGARD THIS TRANSMISSION. (A message already transmitted can be cancelled only by another message.) For example, during the transmission of a message, STRAWBOSS discovers he is giving it to the wrong station:

FOXFIRE-- THIS IS STRAWBOSS--ROUTINE--TIME ZERO SIX ZERO TWO ZULU-- UNCLASS--COMMENCE UNLOADING AT DAWN SIXTEENTH--PROCEED--DISREGARD THIS TRANSMISSION--OUT

DO NOT ANSWER

When it is imperative that called stations do not answer a transmission, the proword DO NOT ANSWER is transmitted immediately following call or the proword MESSAGE FOLLOWS, if used. The complete transmission is sent twice. Example:

SKIDROW--THIS IS STRAWBOSS--DO NOT ANSWER--IMMEDIATE--TIME ONE SIX THREE ZERO ZULU--BREAK--NOVEMBER YANKEE DELTA PAPA-- I SAY AGAIN--SKIDROW--THIS IS STRAWBOSS--DO NOT ANSWER--IMMEDIATE--TIME ONE SIX THREE ZERO ZULU--BREAK--NOVEMBER YANKEE DELTA PAPA--OUT

VERIFICATIONS

When verification of a message is requested, the originating station verifies the message with the originating person, checks the cryptography (if the message is encrypted), and sends the correct version.
Example 1:

STRAWBOSS--THIS is ADAM--VERIFY MESSAGE--TIME ONE ZERO ZERO EIGHT ZERO ONE ZULU--ALL BEFORE BREAK--OVER

STRAWBOSS transmits:

THIS IS STRAWBOSS--ROGER--OUT

STRAWBOSS, after checking with the originating officer, finds the heading correct as

transmitted previously. STRAWBOSS then sends:

> ADAM--THIS IS STRAWBOSS--I VERIFY --MESSAGE--TIME ONE ZERO ZERO EIGHT ZERO ONE ZULU-- ALL BEFORE BREAK- - PRIORITY- - TIME ONE ZERO ZERO EIGHT ZERO ONE ZULU- - FROM- - STRAWBOSS--TO-- ADAM-- INFO-- DITTYBAG--GROUPS ONE SEVEN--BREAK--OVER

ADAM receipts for the transmission:

> THIS IS ADAM--ROGER--OUT

Example 2:

> STRAWBOSS-- THIS IS SATAN--VERIFY MESSAGE--TIME ZERO EIGHT FOUR FIVE ZULU - - WORD AFTER PROCEED--OVER

STRAWBOSS transmits:

> THIS IS STRAWBOSS--ROGER--OUT

STRAWBOSS, after checking with the originating officer, finds that he means HONGKONG instead of SHANGHAI as the word after PROCEED. STRAWBOSS transmits:

> SATAN--THIS IS STRAWBOSS--CORRECTION--MESSAGE--TIME ZERO EIGHT FOUR FIVE ZULU - - WORD AFTER PROCEED--HONGKONG--OVER

SATAN receipts:

> THIS IS SATAN--ROGER--OUT

READ BACK AND WORDS TWICE

Further checks on transmission accuracy be made by the prowords READ BACK and WORDS TWICE. Send READ BACK when you want your message (or a portion of it) repeated back to you as received. Remember to identify the message or portion you want read back. Transmit the READ BACK proword immediately after the call or the proword MESSAGE FOLLOWS, is used. Example:

> ADAM - - THIS IS STRAWBOSS - - READ BACK TEXT--TIME ONE SIX THREE ZERO ZULU - - BREAK - - UNCLAS - - CONVOY DELAYED ONE TWO HOURS --BREAK--OVER

ADAM replies:

> THIS IS ADAM-- I READ BACK TEXT-- UNCLAS-- CONVOY DELAYED ONE TWO HOURS--OVER

STRAWBOSS then sends:

> THIS IS STRAWBOSS - -THAT IS CORRECT--OUT

NOTE: When READ BACK is employed, the proword ROGER is not necessary to indicate receipt of the message.

If a message is repeated back incorrectly, it may be corrected by sending the proword WRONG, followed by the correct version. In the foregoing example, assume that ADAM made a mistake when he read the message back.

> THIS IS ADAM--I READ BACK TEXT-- UNCLAS - - CONVOY DELAYED TWO ONE HOURS--OVER

STRAWBOSS corrects ADAM:

> THIS IS STRAWBOSS--WRONG--UNCLAS - - CONVOY DELAYED ONE TWO HOURS--OVER

ADAM reads back again:

> THIS IS ADAM--UNCLAS--CONVOY DELAYED ONE TWO HOURS--OVER

STRAWBOSS ends the exchange with:

> THIS IS STRAWBOSS - -THAT IS CORRECT--OUT

WORDS TWICE is the proword used when communication is difficult. First, the call signs are transmitted twice. Then phrases, words, or groups are spoken twice. Indicate your intention by transmitting WORDS TWICE after the call or the proword MESSAGE FOLLOWS, if used. Do not repeat the proword THIS IS. Example:

> FOXFIRE-- FOXFIRE--THIS IS STRAWBOSS--STRAWBOSS - - OVER - - OVER

FOXFIRE replies:

> STRAWBOSS - - STRAWBOSS - - THIS IS FOXFIRE-- FOXFIRE-- OVER--OVER

STRAWBOSS sends his message:

> FOXFIRE-- FOXFIRE--THIS IS STRAWBOSS- - STRAWBOSS--WORDS TWICE -- ROUTINE-- ROUTINE-- TIME ONE SIX THREE ZERO ZULU--TIME ONE SIX THREE ZERO ZULU--BREAK-- BREAK-- UNCLAS--UNCLAS-- MAIL FOR YOU—MAIL FOR YOU--RECEIVE AT FIRST LIGHT--RECEIVE AT FIRST LIGHT - - BREAK - - BREAK-- OVER--OVER

FOXFIRE receipts:

> STRAWBOSS - - STRAWBOSS - - THIS IS FOXFIRE - - FOXFIRE - - ROGER - - ROGER - - OUT - - OUT

EXECUTIVE METHOD

The executive method is employed to execute tactical signals when two or more units are to

take action at the same time. Executive method messages are usually in abbreviated form and contain the proword EXECUTE TO FOLLOW or IMMEDIATE EXECUTE, whichever is applicable, immediately following the call. The signal to carry out the meaning of the message is the proword EXECUTE. It may be sent shortly after transmission of the message (normal executive method), much later (delayed executive method), or if urgent, as a part of the final instructions of the message itself (immediate executive method). In any event, a warning STANDBY precedes the proword EXECUTE.

1. In our first example the OTC sends a message to the task group by the normal executive method.

> SKIDROW -- THIS IS STRAWBOSS--SIG-NALS FOLLOW - - EXECUTIVE TO FOLLOW--BREAK--CORPEN THREE FIVE SEVEN--OVER

All ships reply in alphabetical order:

> THIS IS ADAM--ROGER--OUT
> THIS IS DITTYBAG--ROGER--OUT
> THIS IS FIXFIRE--ROGER--OUT
> THIS IS SATAN--ROGER--OUT
>
> When STRAWBOSS is ready to execute, he sends the executive signal. To save time, only one station (ADAM) is to receipt.
>
> SKIDROW - - THIS IS STRAWBOSS - - STANDBY - - EXECUTE - - BREAK - - ADAM--OVER

ADAM replies:

> THIS IS ADAM--ROGER--OUT

2. A delayed executive method message is handled in exactly the same way as a normal executive method message except that, as a memory refresher, the text of the message is repeated just before STANDBY -- EXECUTE is given. Assume that the foregoing message is sent by the delayed executive method. The message is transmitted and all stations receipt for it as before. But this time STRAWBOSS is not ready to execute until several minutes elapse. When ready, he sends:

> SKIDROW--THIS IS STRAWBOSS--
> CORPEN THREE FIVE SEVEN - - STANDBY - - EXECUTE - - BREAK-- ADAM--OVER

ADAM replies:

> THIS IS ADAM--ROGER--OUT

3. In the immediate executive method, the text of the message is transmitted twice, separated by I SAY AGAIN. The warning proword IMMEDIATE EXECUTE replaces the proword

EXECUTE TO FOLLOW in the message instructions. The executive signal itself is in the final instructions of the message. Because only one transmission is made, the immediate executive method message does not allow stations to obtain verifications, repetitions acknowledg-ments, and cancellations before the message is executed. Example:

> SKIDROW -- THIS IS STRAWBOSS--SIG-NALS FOLLOW - - IMMEDIATE EXE-CUTE BREAK -- TURN NINE -- I SAY AGAIN - - TURN NINE - - STANDBY - - EXECUTE -- BREAK--SATAN--OVER

SATAN receipts:

> THIS IS SATAN--ROGER--OUT

ACKNOWLEDGMENT

An acknowledgment is a reply from an ad-dressee indicating that he received a certain message, understands it, and can comply with it. Note the difference between an acknowledg-ment and a receipt. The receipt means only that the message was received satisfactorily. Remember that only the commanding officer or his authorized representative can authorize you to send an acknowledgment.

The request for acknowledgment is the word ACKNOWLEDGE (not a proword) as the final word of the text. The reply is the proword WILCO. If the commanding officer can acknowl-edge at once, the operator may receipt for the message with WILCO, because the meaning of ROGER is contained in WILCO. If the acknowl-edgment cannot be returned immediately, the operator receipts for the message with ROGER, and WILCO is sent later. The return trans-mission to a request for an acknowledgment is either ROGER or WILCO--never both.

In the following example, the OTC sends a tactical signal. He desires acknowledgment from two ships.

> SKIDROW - - THIS IS STRAWBOSS-- SIG-NALS FOLLOW--EXECUTE TO FOL-LOW - - BREAK -- TANGO BRAVO - - TACK - - ONE FIVE - - TACK -- ZERO ZERO ZERO -- TACK -- ONE TWO-- FOXFIRE -- DITTYBAG -- ACKNOWL-EDGE--OVER

The commanding officer of FOXFIRE wishes to consider the message before acknowledging. His operator transmits:

> THIS IS FOXFIRE--ROGER--OUT

The commanding officer of DITTYBAG heard the message, understands it, and can comply. He directs his operator to acknowledge:

THIS IS DITTYBAG--WILCO--OUT

When the commanding officer of FOXFIRE is ready to acknowledge, he has two choices of reply.

1. STRAWBOSS -- THIS IS FOXFIRE-- WILCO--YOUR LAST TRANSMISSION --OUT
2. STRAWBOSS -- THIS IS FOXFIRE-- WILCO -- YOUR EXECUTE TO FOL- LOW -- BREAK -- TANGO BRAVO -- TACK--ONE FIVE -- TACK--ZERO ZERO ZERO -- TACK--ONE TWO -- OUT

When ready to execute the signals, the OTC transmits:

SKIDROW -- THIS IS S T R A W B O S S -- STANDBY--EXECUTE--ADAM--OVER

ADAM receipts as directed:

THIS IS ADAM--ROGER--OUT

RELAY

The proword RELAY indicates that the station called is to relay the message to all addressees. Example:

FOXFIRE--THIS IS STRAWBOSS--RELAY --PRIORITY--TIME ZERO NINE ONE ZERO ZULU--FROM --STRAWBOSS-- TO ADAM -- BREAK -- UNCLAS--RE- PORT NUMBER ROUNDS EXPENDED LAST RUN--BREAK--OVER

After FOXFIRE receipts for the message, he relays it to the action addressee:

ADAM--THIS IS FOXFIRE--PRIORITY-- TIME ZERO NINE ONE ZERO ZULU-- FROM -- STRAWBOSS -- TO--ADAM-- BREAK--UNCLAS--REPORT NUMBER ROUNDS EXPENDED LAST RUN -- BREAK--OVER

The proword RELAY TO, followed by an addressee, means that the station called is to relay the message to the station indicated. When more than one station is called, the call sign of the station to relay precedes the proword RE- LAY TO. Example:

DITTYBAG --SATAN -- THIS IS STRAW- BOSS--SATAN--RELAY TO FOXFIRE -- MESSAGE FOLLOWS--ROUTINE-- TIME ZERO ONE TWO TWO ZULU-- FROM --STRAWBOSS--TO--FOXFIRE INFO--DITTYBAG--SATAN--BREAK--

UNCLAS -- PROCEED ON MISSION ASSIGNED--BREAK--OVER

SATAN receipts and relays as instructed:

FOXFIRE--THIS IS SATAN--MESSAGE FOLLOWS -- ROUTINE -- TIME ZERO ONE TWO TWO ZULU -- FROM -- STRAWBOSS--TO--FOXFIRE--INFO-- DITTYBAG --SATAN -- BREAK -- UN- CLAS -- PROCEED ON MISSION AS- SIGNED--BREAK--OVER

Occasionally, it is necessary to relay by radiotelephone a message received by some other means of communication. In our final example, NOLT (FOXFIRE) received a radio-telegraph message from NAAT (STRAWBOSS) for relay to NRTK (DITTYBAG):

NOLT DE NAAT - T - P - 241632Z - FM NAAT - TO NRTK GR4 B̄T̄ UNCLAS RETURN TO BASE B̄T̄ K

FOXFIRE places the message in radiotele-phone form and relays:

DITTYBAG -- THIS IS FOXFIRE --MES- SAGE FOLLOWS-- PRIORITY--TIME TWO FOUR ONE SIX THREE TWO ZULU -- FROM -- STRAWBOSS --TO-- DITTYBAG --GROUPS FOUR-- BREAK--UNCLAS-- RETURN TO BASE--BREAK--OVER

OPENING A NET

The procedures described here are either for opening a net for the first time or for reopening a net secured temporarily. Procedures for both free and directed nets are described.

Free Net

In the following example, STRAWBOSS opens a free net by transmitting:

SKIDROW--THIS IS STRAWBOSS--OVER

SKIDROW (a collective call) answers in alpha-betical order of stations:

STRAWBOSS--THIS IS ADAM--OVER
STRAWBOSS--THIS IS DITTYBAG--OVER
STRAWBOSS--THIS IS FOXFIRE--OVER
STRAWBOSS--THIS IS SATAN--OVER

STRAWBOSS then calls the net and informs all stations that their transmissions were heard:

SKIDROW -- THIS IS STRAWBOSS--OUT

(or proceeds with message)

If a station does not reply to a collective call within 5 seconds, the next station answers. The delinquent station then answers last, if able to do so. If the station is having difficulty and is

unable to answer the call, the operator reports in to the net when he can. In the preceding example, assume FOXFIRE had equipment failure and could not answer. SATAN waits 5 seconds and answers as usual. When FOXFIRE is able to transmit, he calls STRAWBOSS:

> STRAWBOSS -- THIS IS FOXFIRE--RE-PORTING IN TO NET--OVER

STRAWBOSS replies:

> THIS IS STRAWBOSS--ROGER--OUT

Directed Net

In the next example, STRAWBOSS calls member stations and announces that the net is directed. He requests the precedence and addressees of traffic to be transmitted.

> SKIDROW -- THIS IS STRAWBOSS --THIS IS A DIRECTED NET -- OF WHAT PRECEDENCE -- AND FOR WHOM-- ARE YOUR MESSAGES--OVER

SKIDROW replies, each station indicating the traffic on hand:

> STRAWBOSS -- THIS IS ADAM -- I HAVE ONE IMMEDIATE AND ONE ROUTINE FOR YOU--OVER
>
> STRAWBOSS -- THIS IS DITTYBAG--NO TRAFFIC--OVER
>
> STRAWBOSS--THIS IS FOXFIRE--I HAVE ONE PRIORITY FOR DITTYBAG-- OVER
>
> STRAWBOSS -- THIS IS SATAN -- NO TRAFFIC--OVER

STRAWBOSS informs all stations that their transmissions were received, and commences to clear traffic in order of precedence:

> SKIDROW -- THIS IS STRAWBOSS -- ROGER -- ADAM -- SEND YOUR IM-MEDIATE--OVER

When ADAM transmits, and obtains a receipt for his message, net control gives the station with next highest precedence message permission to transmit.

> FOXFIRE--THIS IS STRAWBOSS--SEND YOUR PRIORITY--OUT

DITTYBAG, hearing the authorization, tells FOXFIRE to go ahead. This saves FOXFIRE the trouble of making a preliminary call.

> THIS IS DITTYBAG--OVER

FOXFIRE goes ahead with his message at once:

> DITTYBAG -- THIS IS FOXFIRE -- MES-SAGE FOLLOWS--(ETC.)

When STRAWBOSS hears the proword OUT that ends the exchange between DITTYBAG and

FOXFIRE, he directs ADAM to send the ROU-TINE that still is outstanding.

As operators are handed messages to be sent out, they call net control and request permission to transmit. SATAN, for example, has a ROU-TINE for ADAM:

> STRAWBOSS -- THIS IS SATAN --I HAVE ONE ROUTINE FOR ADAM--OVER

STRAWBOSS replies (assuming no other station wishes to send a message of higher precedence):

> THIS IS STRAWBOSS--SEND YOUR MES-SAGE--OUT

SATAN then sends his message. If, however, higher precedence traffic awaits transmission, STRAWBOSS sends:

> THIS IS STRAWBOSS--WAIT--OUT

When traffic conditions permit, STRAWBOSS then calls SATAN and gives him permission to transmit:

> SATAN -- THIS IS STRAWBOSS -- SEND YOUR ROUTINE--OUT

ADAM answers, thereby saving a preliminary call, and SATAN clears his message.

SIGNAL STRENGTH AND READABILITY

A station is understood to have good readability unless otherwise notified. Strength of signals and readability are not exchanged unless for good reason.

When it is necessary to inform another station of his signal strength and readability, it is done by means of a concise report of actual reception. Examples: "Weak but readable," "Loud but distorted," "Weak with interference," and so on. Reports such as "Five by five," "Four by four," and the like, which are derivatives of the numerals used with operating signals QSA and QRK, are forbidden.

The following prowords are for exchanging information concerning signal strength and readability. They were not included in the previous list of prowords (table 7-1), because their meanings apply only to signal strength and readability.

> RADIO CHECK — What is my signal strength and readability?
>
> ROGER — I have received your last transmission satisfactorily. (The omission of comment on signal strength and readability is understood

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to mean that reception is loud and clear.)

NOTHING HEARD   Used when no reply is received from a called station.

LOUD   Your signal is strong, Interference will not bother my copying.

GOOD   Your signal is good.

WEAK   I can hear you only with difficulty.

VERY WEAK   I can hear you only with great difficulty.

CLEAR   Excellent quality (readability).

READABLE   Quality good--no difficulty reading you.

DISTORTED   Having trouble reading you.

WITH INTER-
    FERENCE   Having trouble reading you because of interference.

To illustrate two stations exchanging information on signal strength and readability, a ship (FOXFIRE) and a plane (CATFISH ONE) establish communications as follows:

    FOXFIRE -- THIS IS CATFISH ONE--RADIO CHECK--OVER

    CATFISH ONE -- THIS IS FOXFIRE -- ROGER--OVER

    THIS IS CATFISH ONE--OUT

Had FOXFIRE not received CATFISH ONE loud and clear, the transmissions could have been:

    CATFISH ONE --THIS IS FOXFIRE --WEAK BUT READABLE--OVER

    THIS IS CATFISH ONE--ROGER--OUT

With communications established firmly, there is no need for further checks of the foregoing nature unless equipment difficulty or other adverse conditions develop.

AUTHENTICATION

The specific instances when a radiotelephone message must be authenticated are the same as those for a radiotelegraph message. In general, this is when there is any possibility that the message is of enemy origin. Be alert! Sometimes (but not always) you can spot an enemy deceptive message by the operator's mistakes in procedure or by his mistakes in English grammer or pronunciation. The security reasons for authentication were discussed in chapter 3.

COMMERCIAL RADIOTELEPHONE SERVICES

During peacetime, fleet commanders usually authorize naval vessels to utilize commercial radiotelephone services. Such services provide two-way telephone conversations through commercial land radiotelephone stations between ships at sea and any telephone on land. Naval vessels using this service are limited to calls originating aboard ship. Incoming calls to the ship cannot be accepted.

COASTAL HARBOR RADIOTELEPHONE SERVICE

The Coastal Harbor Radiotelephone Service meets the needs of ships operating within a few hundred miles of the shore. Stations are established at most of the seaports on the Atlantic, Pacific, and Gulf coasts, and also at Honolulu, Hawaii.

HIGH SEAS RADIOTELEPHONE SERVICE

High Seas Radiotelephone Service stations are located at New York, Miami, and Oakland. They provide long-range radiotelephone service. Ordinarily, service through High Seas stations is used by ships operating beyond the normal range of the Coastal Harbor stations.

CHARGES FOR SERVICES

The charge for service depends upon the location of the ship as well as the land telephone, and, of course, upon the time length of the call. For Coastal Harbor Service, only the coastal waters are divided into rate areas. For High Seas Service, the United States is divided into three land rate areas by groups of states, and the oceans are divided into three ocean rate areas defined by latitude and longitude. You will find the land and ocean rate areas, the station call signs, and the operating frequencies listed in DNC 26 (effective edition).

TRANSMITTING AND RECEIVING EQUIPMENT

Practically all standard Navy medium-high frequency transmitters and receivers designed

for amplitude modulation are suitable for commercial RT service. The transmitter must be on the exact frequency specified; otherwise, the carrier does not actuate the automatic calling device at the telephone company marine operator's position, and the call is unanswered. It is best to tune the transmitter before coming into range to prevent the calling device from becoming actuated unintentionally.

The recommended type of microphone is the push-to-talk (release to listen) type. Remember that most users know nothing about radio equipment, so the Radioman should demonstrate operation of the microphone to the user before he goes on the air.

PLACING A CALL

Assume that your ship is an authorized radiotelephone subscriber and the equipments are tuned properly. The Radioman listens to ascertain that the circuit is not busy. If the circuit is clear, he calls the marine operator by voice:

NORFOLK MARINE OPERATOR THIS IS USS ROWE

When the marine operator responds, he (she) is given the name of the ship, the coastal rate area in which the ship is located, the city and telephone number desired, and, if the call is person-to-person, the name of the individual called. He then is requested to quote the rates for the call. Example:

THIS IS USS ROWE -- RATE AREA 2B-- CALLING WASHINGTON DC--LUDLOW 4-5400--PERSON TO PERSON LAURENCE K RICE--QUOTE TIME AND CHARGES

When the marine operator makes the necessary telephone connections, the circuit is ready for the caller. Best results are obtained by speaking plainly and naturally. Instruct the caller to not speak until the other person finishes. When the conversation is over, the Radioman notifies the marine operator:

THIS IS USS ROWE--CALL COMPLETED

The marine operator then quotes the time and charges. Actually the Coastal Harbor and High Seas channels are like party lines and are shared by a large number of ships. A single incoming passenger liner such as SS United States may have hundreds of calls to clear. Courtesy and discretion are necessary if everyone is to share the service equally.

BE SECURITY CONSCIOUS

As pointed out in chapter 3 (Communication Security), radiotelephone is potentially the least secure method of radio communications. You must ever be alert to avoid disclosure of classified information when transmitting on radiotelephone circuits. This applies to military voice circuits as well as to the commercial circuits just discussed.