

SEA CADET CORPS



PART I

**Simple Elements
of
W/T Procedure**

PART II

**Basic Voice
Technique and
Procedure**

Revised November 1963. Reprinted August 1966.

All previous editions are obsolete and must be destroyed.

In the interests of standardisation and economy it has been jointly agreed by HQ Sea Cadet Corps and HQ Air Cadets that this communication procedure booklet (CTN 16) which is currently used by the Sea Cadet Corps will also be used by the Air Training Corps H/F Network wef 1st OCTOBER 1970.

Second Reprint September 1973

PART I

**The Simple Elements
of
W/T Procedure**

INTRODUCTION

1. W/T procedure is best exercised by giving each member of the class a call sign, so that in effect he represents a ship or station ; practice in exchanging simple messages is then carried out. If possible, each member should have headphones and a key, but where these are not available the same result can be achieved by passing a key round on a wandering lead ; or if buzzer and key are in one unit, the unit can be passed round. In other words, even the simplest equipment can be made to serve the purpose.

2. The primary purpose of procedure exercises in morse classes of Sea Cadet Units is to give cadets practice in sending. If classes are entirely devoted to long spells of receiving what the instructor sends, there is bound to be a certain monotony, a resultant waning of maintained interest, and virtually an entire lack of experience and practice in sending as far as the cadets are concerned.

3. It must be remembered that even at an early stage morse can be learnt by sending as well as by receiving, and further, that the self-confidence necessary for good operating can only be built up by practice and by "becoming used to the job".

4. Procedure exercises—properly controlled—will give each cadet in the class an opportunity of taking a personal part in the work and a chance of sending something to which the others must listen ; and in a limited period of instruction this is one of the easiest ways of making use of the time available to the best advantage of all present.

5. To ensure smoothness of W/T operating some sort of regular procedure is necessary, and for Sea Cadets it is obvious that the procedure of the Radio Communications Branch of the Royal Navy should be adopted from the beginning. The results will be that cadets will enter the Navy better equipped, and also that greater uniformity of practice will exist in the Sea Cadet Corps as a whole. If the latter result can be achieved, any courses arranged for cadets from different units can be more easily organised and conducted, since cadets will have a common ground of method irrespective of their unit or instructors.

6. Procedure exercises are controlled by the instructor, who also corrects mistakes both in operating and in procedure. As will be seen, it will be necessary for messages to be exchanged ;

but if each cadet is to have a fair chance of practice and of maintaining his interest, the text of messages should be reduced to the narrowest possible limits. It will often be found helpful to send the letters "TEXT" to denote the text.

7. If correct procedure is insisted upon from the beginning, it soon becomes automatic and effortless for all concerned. It is safe to suggest that as soon as cadets know their morse letters and figures thoroughly—even though at a very slow rate—they can be given procedure exercises as a variant from constant reception, and that as they advance in proficiency so can they be given procedure exercises more frequently.

8. It must be distinctly understood that these exercises are not meant to displace the Standard Buzzer Exercises, sent regularly at a rate appropriate to the progress of the class by the instructor or by a cadet who is a really capable operator. Standard Buzzer Exercises should include groups of letters, groups of figures, plain language and, where the standard attained by the class permits, groups of letters and figures mixed.

9. It should be remembered that an excellent incentive to progress and interest is a regular record of the marks obtained by each cadet on these Standard Buzzer Exercises. Cadets can see their improvement for themselves and the competitive spirit is introduced, especially if results can be posted up regularly for all to see.

10. Standard Buzzer Exercises should be marked carefully and conscientiously, and instructors should be alert to see that the effort handed in is the cadet's own unaided work. In cramped or noisy accommodation it is not always easy to ensure this, and false ideas of the general rate of progress as well as of individual attainment may ensue.

PROCEDURE

11. BASIC MESSAGE FORMAT

A message consists of three Parts, which are broken down into *Components* and *Elements*. For the purposes of this booklet, the message format is limited to those portions sufficient for basic communication.

<i>Part</i>	<i>Component</i>	<i>Element</i>	<i>Contents</i>	
Heading	Procedure	Call	Station called Prosign XMT Prosign DE Station Calling	
		Transmission Identification	Station Serial Number	
		Transmission Instructions	Prosign T Callsigns, Operating Signals	
	Preamble	Precedence Date Time Group		Precedence Prosign Date and Time expressed in six figures Zone suffix
			Address	Originator
			Action Addressees	TO (Action Addressees)
			Information Addressees	INFO (Information Addressees)
			Exempted Addressees	XMT (Exempted Addressees) Each Prosign is followed by Callsigns of stations indicated
	Prefix	Group Count		GR followed by number of groups
			SVC	SVC (service message)
----- Separation Prosign BT) -----				
Text	Text	Subject Matter	Plain language Code or Cypher groups	
----- Separation Prosign BT) (written =) -----				
Ending	Procedure	Final Instructions	Prosigns B, C, AS	
		Ending sign	Prosign K, AR	

12. CALLSIGN

For purposes of explanation in this booklet four ships or stations with callsigns GCON GABC GLMN and GXYZ are used. The latter three are combined in collective callsign GALL. There are various types of callsigns but only the normal Naval/International 4 letter type is shown.

are made, receipts given, repetitions asked for and given according to the same alphabetical order ; answers to the same alphabetical order of callsigns.

Example : GABC GLMN GXYZ de GCON K.

GCON de GABC K.

GCON de GLMN K.

GCON de GXYZ K.

13. THE CALL

A Preliminary call is made to establish communication for the first time:—

GABC de GCON K.

- (i) The callsign of the ship or station called comes first, “de” means from, followed by the callsign of the station calling.
- (ii) When a collective callsign is used, it may be followed by the prosign “XMT” and callsigns to indicate ships or stations of that collective call who are not required to answer:—
GALL — XMT — GABC de GCON K.
- (iii) Each transmission ends with either \overline{AR} (·-·-· as one sign) or K. \overline{AR} is used when no answer is required. K is used when an answer is required. For brevity, the sign AR is written as “+”.
- (iv) When establishing communication for the first time and under difficult operating conditions, callsigns in the call should be transmitted twice:—

GABC GABC de GCON GCON K.

If GABC does not answer, GCON will repeat the call at short intervals until an answer is received.

14. THE ANSWER

- (i) GCON de GABC K.

This answer means “Proceed with your message”. If the receiving station cannot hear the transmitting station (GCON) very well an “Operating Signal” may be added so that the transmitting station, knowing how he is being received, may transmit at the appropriate speed. The operating signal is QRK and the readability of signals is indicated by the figures 1 to 5 meaning:—

- 1 Unreadable.
- 2 Readable now and then.
- 3 Readable but with difficulty.
- 4 Readable.
- 5 Perfectly readable.

The readability is presumed to be good unless the receiving station indicates otherwise.

- (ii) GCON is readable but with difficulty, GABC makes:—
 GCON de GABC QRK 3 K.
- (iii) For various reasons GABC may not be ready to receive GCON's message, in which case he would use the prosign \overline{AS} (wait):—
 GCON de GABC \overline{AS} +
 or GCON de GABC \overline{AS} 3 + (to indicate wait 3 minutes).
 + used because no further transmission is required from GCON.

15. THE SEPARATIVE SIGN

II (· · ·) written as hyphen(—).

This prosign is used to separate adjacent prosigns, groups or phrases to avoid confusion.

16. STATION SERIAL NUMBER

A combination of letters and figures from 001–999 preceded by NR assigned to a message by a transmitting station to provide a numerical sequence check and identification of messages transmitted:—

NR BC 123

17. TRANSMISSION INSTRUCTIONS.

The prosign "T" (Pass to . . .) followed by a callsign is used in this element to indicate to the station called, that you wish him to pass the message to another station:—

GABC de GCON —T—GLMN—R—121212Z—FM
 GCON— TO GABC GLMN INFO GXYZ = TEXT
 = K.

18. PRECEDENCE

All messages must bear a precedence prosign. This is an indication to Originators and Addressees of the relative importance of the message, and to operators the order in which messages are transmitted.

Precedence prosigns are as follows:—

Z = Flash.
 Y = Emergency.
 O = Operational Immediate.
 P = Priority.
 R = Routine.
 M = Deferred.

19. DATE TIME GROUP

The date time group normally consists of six figures followed by a letter. The first two figures indicate the date of the month, and

the last four the time at which the message was originated. The letter is a "zone suffix" to indicate the time being used. This zone suffix must always be used in a date time group. "Z" denotes GMT, "A" BST and "B" double BST. The date in a date time group may be omitted in tactical signalling.

20. THE ADDRESS

The address component consists of:—

Prosign "FM" followed by the callsign of the ship or station who originated the message.

Prosign "TO" followed by the callsigns of the ships or stations to whom the message is addressed for action.

Prosign "INFO" followed by the callsigns of the ships or stations to whom the message is addressed for information.

If the "TO" or "INFO" elements contained a collective callsign, then the prosign "XMT" followed by a callsign or callsigns may be used to indicate a ship or station of that collective callsign, who does not need the message.

If no address component is included in the message, the call constitutes the address.

21. THE PREFIX

Group Count

The prosign "GR" followed by numeral(s) is the group count and means "this message contains the number of groups indicated". In Broadcast Procedure only, the group count is repeated in the final instructions.

Service

The abbreviation "SVC" is inserted in the prefix to indicate a service message. This is a message between communication personnel and concerns any phase of message handling, communication facilities or circuit conditions. If however the text of the message consists only of operating signals, prosigns and amplifying data the SVC is omitted and it is then known as a procedure message.

22. TEXT

Contains the subject matter of the message.

23. FINAL INSTRUCTIONS

Prosign "B"

Prosign "B" followed by callsign(s) means "more to follow to station(s) indicated".

Prosign "C"

Prosign "C" followed by identifying data is used to correct a portion of the message.

- = C 10 — ABC means the correct version of group 10 is ABC.
- = C 8 to 10 — ABC BCA DCK.
- = C WA at — noon.
- = C My to refers — My 121212Z July refers.

Ending Sign

Prosigns “K” or $\overline{\text{AR}}$.

24. CORRECTIONS

To correct errors during transmission the error sign, a series of at least eight “Es”, is transmitted after a mistake. In the heading the error sign is followed by the last prosign correctly sent. Within the text it is followed by the last word or group correctly sent. The operator then continues with the correct version.

25. GIVING A RECEIPT FOR A MESSAGE

Receipts are indicated by use of the prosign “R”. I have received your last transmission” is made as:—

GCON de GABC R +

26. REPETITIONS

If the message has not been received correctly, a repetition of all or part of it will be required. The prosign $\overline{\text{IMI}}$ (repeat) used alone means “repeat all the message”. If part of the message is required, that part will have to be identified.

To identify parts of a message, the following prosigns may be used.

AA — All after.

WA — Word after.

AB — All before.

WB — Word before.

or by indicating the number of the group required, or quoting the word on either side of the part required, separated by the word “to”.

Examples :—

- (i) GXYZ de GABC — R — 121415Z = Time and time again = K.

“AA and ” — “Time again = K”.

“WA and ” — “time”.

“WA time ” — “and” (because when a word occurs more than once, the first occurrence of the word is meant, unless otherwise shown, e.g., “WA and time” would be “again”).
“and to again ” — “time and again”.

- (ii) GXYZ de GABC — R — 121515A GR4 = 1347 9672
1347 2148 = K.

“AA 2 ” — “1347 2148 = K”.

“2 ” — “9672”.

“2 to 4 ” — “9672 1347 2148”.

- (iii) GABC DE GXYZ $\overline{\text{IMI}}$ AB = K.
 GXYZ de GABC AB = — GXYZ de GABC — R —
 121515A GR 4 K.

There are, of course, many variations of the above but the examples given will illustrate the general principle to be observed. The advantages of the method to be employed are more obvious in the case of long messages of which parts only have been missed.

After a receipt "R" has been given and for Broadcast method messages, operating signal $\overline{\text{INT}}$ ZDK is used to obtain repetitions.

27. THE USE OF THE DATE TIME GROUP AS A MEANS OF REFERRING TO A MESSAGE

Assume that GCON has called GXYZ, received his answer, sent his message (date time group 011005A) but that he has heard no more (i.e. he has had no receipt nor request for repetitions).

After a time, GCON, wishing to know if GXYZ has received the message, sends:—

GXYZ de GCON $\overline{\text{INT}}$ R 011005A K.

("Have you received message 011005A?" INT, the interrogative prosign makes "R" a question.)

GCON may first have to make a Preliminary Call in full to GXYZ, get his answer, and then send as above.

- (i) If GXYZ has received it, although his earlier receipt was not heard, he sends:—

GCON de GXYZ R 011005A K.

GCON receipts.

GXYZ de GCON R +

- (ii) If GXYZ has not received it, he sends:—

GCON de GXYZ ZEC1 011005A K.

ZEC1 is an operating signal used by the R.N. and means "I have not received the message indicated".

- (iii) If GXYZ has received it imperfectly, he will ask for a repetition of portion required:—

GCON DE GXYZ $\overline{\text{IMI}}$ 011005A AB = K.

28. TEMPORARY INTERRUPTION OR BREAKING OFF

The Prosign $\overline{\text{AS}}$ ("wait") may be used by the transmitting station in the course of his message to denote that he must break off for a few seconds. When ready to continue the transmitting station makes the part identity and resumes the transmission of the message.

GXYZ de GABC — R — 121219A GR5 = TVG SNF

PLQ $\overline{\text{AS}}$ (pause) AA2 — PLQ YNB XZL = K.

If he wishes to wait more than a few seconds, he must use $\overline{\text{AS}}$ +

and when ready to continue, must identify the message and part where he left off:—

GXYZ de GABC — R — 121432Z GR4=MLC JGO
AS +

After several minutes he makes:—

GXYZ de GABC 121432Z — AA 1 — JGO SPQ
EZY = K.

29. DRILL AND EXERCISE MESSAGES

Drill. Messages transmitted solely for the purpose of training operators are identified by inclusion of the word “DRILL” at the beginning and end of the text. No action is taken on the text.

Exercise. “EXERCISE” used as the first word of the text means that the instructions or orders in the text **are to be carried out**, for exercise.

30. TEST SIGNAL

When it is necessary, either for the adjustment of a transmitter or a receiver, a test signal may be made; it consists of not more than three series of three V's followed by a ten second dash followed by the callsign of the station.

VVV VVV VVV $\overset{10 \text{ seconds}}{\text{—————}}$ GABC +

31. TUNING STATIONS ON A NET

Tuning several stations when establishing a net, or tuning one or more stations joining a net is known as “Netting”. Ordering or controlling netting is a responsibility of the Net Control Station (NCS).

The following operating signals are used in making a Tuning Signal:—

ZRF Am about to send a tuning signal on my present frequency (or on . . . Kcs (mcs)).

ZRC 2 Tune your transmitter to zero beat with my (or . . .) transmitter.

ZGE 2 Send your callsign twice.

ZRA Your frequency is (1. Correct; 2. Slightly (or . . . kcs) high; 3. Slightly (or . . . kcs) low).

The tuning signal for use with ZRF will consist of the transmission of the tuning stations callsign repeated for 20 seconds, followed by a 10 second dash. After transmitting the tuning signal, the tuning station will direct the stations on the net to send their callsigns twice in order to check their frequency.

GALL GALL DE GCON GCON ZRF ZRC 2 GCON GCON
 $\overset{10 \text{ seconds}}{\text{—————}}$

GCON (for 20 seconds) ————— +

GALL DE GCON ZGE 2 K.

GCON DE GABC — GABC GABC K.

GCON DE GLMN — GLMN GLMN K.

GCON DE GXYZ — GXYZ GXYZ K.

All prove to be on the correct frequency except GLMN, who is 10 kcs low.

GCON makes:—

GABC GXYZ DE GCON ZRA1 +

GLMN de GCON ZRA3 — 10 K.

GLMN readjusts his transmitter and asks if his frequency is correct:—

GCON DE GLMN INT ZRA K.

GLMN DE GCON ZRA 1 +

32. BROADCAST METHOD

The Broadcast Method is used for passing messages from one "OUT" station to a number of other "IN" stations. The essential feature is that no receipts are given for the messages.

On a Broadcast, each message transmitted carries a separate Serial number in numerical sequence, to enable receiving stations to keep a check of all messages made.

General

- (a) Calls of messages consist of a collective callsign followed by the separative sign, e.g. GALL —
- (b) During quiet periods, a test signal is transmitted.
VVV VVV VVV (Callsign) (Callsign) (Callsign).
- (c) Contents of message headings are made twice the text made only once.
- (d) All messages end with the ending sign $\overline{\text{AR}}$.
- (e) The group count, when used, is repeated in the final instructions of messages.
- (f) If the Broadcast Control Station wishes to repeat a transmission of a message, the operating signal "ZFG" ("This is an exact duplicate of message previously transmitted") is inserted immediately after the call. If the Broadcast Control Station is asked to repeat a message, he will give the repetition a new serial number, to be followed by "ZFG" and the old serial number.

Examples :—

- (i) GALL GALL — NR 001 NR 001 — RR — 121212Z
— 121212Z — FM FM GCON GCON — TO TO GLMN
GLMN = TEXT = +
- (ii) The Broadcast Control Station makes the above message for the second time during a quiet period.
GALL GALL — ZFG ZFG — NR 001 NR 001 — RR —
etc.

(iii) The Broadcast Control Station has been asked by an "IN" station to repeat the message:

GALL GALL — NR 002 NR002 — ZFG ZFG — NR 001 NR 001 — RR — etc.

33. PROCEDURE SIGN (PROSIGN)

These are one or more letters or characters used to help communication by conveying in a condensed standard form certain frequently used orders, instructions, etc.

Below is a list of prosigns used in this pamphlet. A line over two or more letters indicates that they are to be transmitted as a single character, without pause between letters.

<i>Prosign</i>	<i>Meaning</i>
<u>AA</u>	Unknown Station.
AA	All After.
<u>AB</u>	All Before.
<u>AR</u>	End of Transmission.
<u>AS</u>	Wait.
<u>B</u>	More to follow.
<u>BT</u>	Long break.
C	Correct.
DE	From.
EEEEEEEE	Error.
FM	Originator's sign.
GR (numeral)	Group count.
<u>I</u>	Separative sign.
<u>IMI</u>	Repeat.
<u>INFO</u>	Information addressee sign.
<u>INT</u>	Interrogatory.
K	Invitation to transmit.
NR	Number.
R	Received.
T	Transmit.
TO	Action addressee sign.
WA	Word After.
WB	Word Before.
XMT	Exempted addressee sign.

Precedence prosigns are shown in article 18.

34. 'Z' OPERATING SIGNALS FOR MILITARY USE

ZBO	"Of what precedence?"	"I have (or . . . has) . . . (numeral followed by precedence prosign for each precedence) message(s) for you (or for . . .)."
-----	-----------------------	---

ZDK	“ Will you repeat message . . . (or portion . . .) (or will you rerun number)? ”	“ Following repetition (of . . .) is made in accordance with your request.”
ZFG		“ This message is an exact duplicate, of a message previously transmitted.”
ZGE		“ Send your callsign once (or . . . times) on this frequency (or on . . . kcs) (or mcs).”
ZKE		“ I (or . . .) report(s) into circuit (net).”
ZKJ	“ May I close down (until . . .)? ”	
ZKJ 1	“ Close down (until . . .) ”	
ZKJ 2	“ I am closing down (until . . .) ”	
ZRA	“ How does my frequency check? ”	“ Your frequency is . . . (1. correct ; 2. slightly (or . . . cycles (or . . . kcs)) high ; 3. slightly (or . . . cycles (or . . . kcs)) low ; 4. stable on steady mark ; 5. stable on steady space ; 6. unstable ; 7. erratic).”
ZRC	“ Shall I tune my transmitter to . . . (1. proper frequency ; 2. zero beat with you (or . . .) transmitter)? ”	“ Tune your transmitter to . . . (1. proper frequency ; 2. zero beat with my (or . . .) transmitter).”
ZRF	“ Will you send tuning signal on your present frequency (or on . . . kcs (or mcs)) for 1 minute or until AS is given? ”	“ Am about to send tuning signal on my present frequency (or on . . . kcs (or mcs)).”

Note :—

INT the interrogative prosign, preceding an operating signal indicates that the question part of the operating signal is being used.

PART II

**Basic Voice Technique
and
Procedure**

INTRODUCTION

1. When a number of units can talk to each other by Radio Telephone (Voice) on a certain Radio Frequency they are known as a Voice net. When one operator speaks all the rest can hear, but if two speak at once a confused and unintelligible jumble of sound results. It is therefore advisable for one station to act as controller to enforce discipline. Stations must fully realise the necessity for voice discipline and must always implicitly obey the controlling station.

Strict discipline is necessary to ensure that :—

- (a) Individual units speak in order and do not interfere with each other's transmissions.
- (b) Any unit transmitting can know that its message has been correctly received by all addressees.
- (c) No time is wasted by unnecessary chit-chat or misunderstandings.
- (d) Urgent or important messages can take precedence over routine ones.
- (e) Corrections, repetitions and verifications can be made swiftly and without causing confusion.
- (f) Addressees can write down messages as they receive them.
- (g) Previous messages can, if necessary, be referred to later.

2. To meet these requirements a Voice procedure has been laid down which is standard throughout the Armed Services of the NATO nations.

What is said on a Voice net is determined by Voice procedure. How it is said is equally important, and it is towards this end that there is a recommended technique for Voice operating.

3. The following points are a guide to correct speech technique :—

(a) *Pitch*

The voice should be pitched at a higher level than for normal conversation. Do not drop the pitch at the end of words or phrases.

(b) *Volume*

The microphone should be held a few inches in front of and facing the mouth (not inclined at an angle). Volume at least as high as in normal conversation and loud enough to overcome local external noises. Do not drop the volume at the end of words or phrases.

(c) *Clarity*

It is necessary for all words and syllables to be clearly spoken. Emphasis must be laid on normally weak syllables and the sounding of consonants exaggerated.

(d) *Dialects*

Operators with strong dialects or accents must endeavour to use as understandable a pronunciation as possible.

(e) *Speech Rate*

The rate of speaking should be as fast as conditions of the circuit allow (taking into account interference, standard of experience, training, etc.). It must be steady. The microphone pressal switch must be released at intervals to allow breaking in, giving pauses of between two and three seconds between phrases. Complicated portions of the message (callsigns, positions, etc.) should be spoken with greater deliberation.

(f) *Microphone Manner*

Operating a circuit is an art in which personality plays a full part. An operator must know the callsigns and identities of all stations on the net, and the sequence of answering. He must take a pride in snap and precision on the air, use his imagination and initiative and help by offering to relay in bad conditions. He should endeavour to keep up to date with the general situation, and take an interest in the traffic being passed. A slovenly operator is a menace, an efficient operator an invaluable asset.

4. THE CONTROL OPERATOR

All the above applies with particular force to the Control operator who must:—

- (a) Exercise a firm but realistic control of the net.
- (b) Speak correctly.
- (c) Know his procedure and use it correctly.
- (d) Have an excellent microphone manner.
- (e) Be completely in touch with the situation.
- (f) Use his discretion and initiative to ensure traffic is handled expeditiously in order of operational importance.

The example he sets will be followed by all stations on the net. He should regard it as his responsibility that the net is a smart one. Inefficient and slovenly operators must be corrected before bad habits develop. Cases of continuing disobedience or inefficiency should be reported to the control operator's Signal Officer.

PROCEDURE

5. THE PHONETIC ALPHABET

When single letters of the alphabet have to be transmitted or a word has to be spelt the phonetic alphabet must be used.

A — Alfa	J — Juliet	S — Sierra
B — Bravo	K — Kilo	T — Tango
C — Charlie	L — Lima	U — Uniform
D — Delta	M — Mike	V — Victor
E — Echo	N — November	W — Whiskey
F — Foxtrot	O — Oscar	X — Xray
G — Golf	P — Papa	Y — Yankee
H — Hotel	Q — Quebec	Z — Zulu
I — India	R — Romeo	

The phonetic word only should be used, e.g.:

“(A)” spoken as “Brackets Alfa” *not* as “Brackets A for Alfa Close Brackets”.

6. NUMERALS

Numerals should be spoken very clearly, thus:—

1 — Wun	4 — Fower	8 — Ate
2 — Too	5 — Fi-yiv	9 — Niner
3 — Thuh-ree	6 — Six	0 — Zero
	7 — Seven	

Double, treble, etc., figures are spoken digit by digit thus:—

10 — Wun Zero (<i>not</i> Ten).
265 — Too Six Fi-yive (<i>not</i> two hundred and sixty five).
1027 — Wun Zero Too Seven (<i>not</i> one thousand and twenty seven).

Exact multiples of 100, 1000, or 1,000,000 are expressed in terms of hundreds, thousands or millions, thus:—

700 — Seven hundred.
2,300 — Too Thuh-ree hundred.
4,000 — Fower thousand.
68,000 — Six Ate thousand.
900,000 — Niner hundred thousand.
2,000,000 — Too million.

But *not* when they are *times* or *bearings*.

7. TIMES

The 24 hour clock is used.

Times to the nearest minute are expressed in four figures, thus:

1315 — One Thuh-ree One Fi-yiv.
2300 — Two Thuh-ree Zero Zero.

8. DATE TIME GROUPS

When a message may have to be referred to at a later date it must be given some form of identification. This takes the form of a six figure group at the end of the message. The first two figures give the date and the last four the time at which it was composed. It is preceded by the proword "TIME" and followed by a single letter indicating the Zone time being kept. Round Britain there are only two possibilities.

Z for Greenwich Mean Time, and

A for British Summer Time.

e.g. "Report number of watches held by cadets of your platoon Time 141205 ZULU."

This can be referred to later, e.g.:

"Your 141205 ZULU. Brackets ALPHA Five wrist Brackets BRAVO One pocket."

9. CALLSIGNS

On any Voice communication network each individual unit is allocated a Callsign by which it is always identified.

There is also a Collective Callsign by which ALL units may be addressed at once.

These Callsigns may be either distinctive names or combinations of letters or figures, e.g.:

Company Commander	— AB	} Collective YZ
No. 1 Platoon	— CD	
No. 2 Platoon	— EF	
No. 3 Platoon	— GH	
No. 4 Platoon	— JK	

10. MULTIPLE ADDRESSEES

If there is more than one addressee, they should answer in the order called.

If the Collective Callsign is used, individual units should answer in alphabetical (or numerical) sequence thus:—

"YANKEE ZULU this is ALFA BRAVO over."

"This is CHARLIE DELTA over."

"This is ECHO FOXTROT over."

"This is GOLF HOTEL over."

"This is JULIET KILO over."

AB then transmits his message:—

"YANKEE ZULU this is ALFA BRAVO When I say TIME it will be exactly 1205 (pause) 15 seconds 10 seconds 5, 4, 3, 2, 1 TIME 1205 over."

The message, having been satisfactorily received, is receipted in the same sequenc:—

- “ This is CHARLIE DELTA Roger out.”
- “ This is ECHO FOXTROT Roger out.”
- “ This is GOLF HOTEL Roger out.”
- “ This is JULIET KILO Roger out.”

11. PROWORDS AND PROCEDURES

“ Prowords ” are distinctive words and phrases designed to expedite message handling. “ Over ”, “ Out ” and “ Roger ” are examples. The more common are listed below under the headings of the particular occasions when they are used.

12. ESTABLISHING COMMUNICATIONS

(A) Conditions are good.

- “ YANKEE ZULU this is ALFA BRAVO over.”
- “ This is CHARLIE DELTA over.”
- “ This is ECHO FOXTROT over.”
- “ This is GOLF HOTEL over.”
- “ This is JULIET KILO over.”
- “ This is ALFA BRAVO out.”

(B) Conditions are bad.

“ YZ YZ this is AB AB Radio check over.”

CD, EF, GH, JK answer in sequence using such phrases as:—

- “ Roger ” indicates Loud and Clear.
- “ Loud but distorted.”
- “ Weak but readable.”
- “ Weak and distorted.”

e.g. “ AB AB this is CD CD Weak but readable over.”

If poor conditions persist it may be necessary to continue to repeat everything said in order to ensure reception. For this the proword “ WORDS TWICE ” is used. (Conditions are difficult. Transmit each phrase twice.)

e.g. “ JK this is AB Message for you over.”

“ AB this is JK Send your message Words Twice over.”

“ JK JK this is AB AB Words Twice Words Twice
Headquarters established Headquarters established
in coordinates in coordinates 123 456 123 456
Time 121315 Time 121315 over over.”

13. REPETITIONS

If a message is imperfectly received or there is doubt about some part of it, a repetition must be requested. Do not interrupt the message but wait till the end of the transmission. Then, before receipting, use the following prowords, as appropriate.

Proword

“ SAY AGAIN ”

Explanation

— Repeat ALL of your last transmission.

" SAY AGAIN "	All before (word)	} Repeat portion indicated
" "	All after (word)	
" "	Word before (word)	
" "	Word after (word)	
" "	(word) to (word)	

This is answered by:—

" I SAY AGAIN " (Portion indicated).

When the doubtful points have been cleared up the message is received in the normal manner.

Example :

" YZ this is AB All platoons will parade at 1430Z Time 1245Z over."

" This is CD Roger out."

" This is EF Say again Word after ALL over."

" This is GH Say again Will to Time over."

" This is JK Roger out."

" EF GH this is AB I say again

Word after all platoons (*pause*) Will to time Will parade at 1430Z Time over."

" This is EF Roger out."

" This is GH Roger out."

14. SPELLING

Difficult words, proper names, etc., may have to be spelt out. This is done by using the proword " I SPELL ".

e.g. " GH this is AB Cadet Initials JULIET CHARLIE McGLUSKY I spell Mike Charlie Golf Lima Uniform Sierra Kilo Yankee McGLUSKY is to report to Company Headquarters forthwith Time 1415Z over."
" This is GH Roger out."

15. CANCELLATIONS

During the transmission of a message, and *before* the ending proword (Over or Out), the message may be cancelled by the use of the proword " DISREGARD THIS TRANSMISSION ".

e.g. " FF this is JK Suspicious movement of Disregard this transmission out."

If the message has been fully transmitted it can only be cancelled by another message, thus:—

e.g. (i) " EF this is JK Cancel my last message (or message indicated) over."

" This is EF Roger out."

(ii) " EF this is JK Cancel my 141330Z over."

" This is EF Roger out."

16. READING BACK

If the conditions are poor, or the message, or a portion thereof, is particularly important, it may be desirable that one or more of the addressees should read back the message, or a part of it. The proword "READ BACK", with identification data, is used after the call.

- e.g. (i) "CD this is AB Read Back Proceed with all despatch to support B Platoon Time 1515Z over."
"This is CD I read back CD this is AB Read Back Proceed with all despatch to support B Platoon Time 1515Z over."
"This is AB That is correct out."
- (ii) "YZ this is AB JK Read back position Rendezvous in position 231 645 at 1600 Time 1525Z over."
"This is JK I read back position 231 645 over."
"This is AB That is correct out."

Note. The other addressees do not receipt for the message unless specifically ordered to do so, as follows:—

"CD EF GH this is AB over."
"This is CD Roger out."
"This is EF Roger out."
"This is GH Roger out."

or

"YZ Exempt JK this is AB over."
"This is CD Roger out."
"This is EF Roger out."
"This is GH Roger out."

The proword EXEMPT is used in this case because JK, who is part of YZ, is not required to receipt the message. If there are a number of stations on the net, it is clearly quicker to use the collective call, exempting one addressee than to call the remainder of the stations using their individual callsigns.

If the message (or portion) had been read back incorrectly, the sender indicates it by using the proword "WRONG" and then repeating the correct version.

- e.g. "CD this is AB Read back text Small arms are not I say again not to be fired Time 1530Z over."
"This is CD I read back text Small arms are to be fired over."
"This is AB Wrong Arms are not I say again not to be over."
"This is CD Arms are not I say again not to be over."
"This is AB That is correct out."

(Here the proword "I say again" has been used for emphasis.)

17. CORRECTIONS

If an operator makes an error during the transmission of a message he can correct it by using the proword "CORRECTION", followed by the last word correctly transmitted, and then continuing with the message.

e.g. "EF this is AB Proceed to position 157 Correction position 147 215 Time 1505Z over."
"This is EF Roger out."

If the error is not discovered until after the message has been fully transmitted it can only be corrected by another message.

e.g. "EF this is AB Correction 1505Z Position 147 105 over."

18. VERIFICATIONS

If there is doubt about the meaning or accuracy of a message, or portion thereof, it may be referred back to the originator for verification by use of the proword "VERIFY", followed by identification of the portion in doubt.

e.g. "YZ this is AB Target located in position 121 312 at 1400 Time 1515Z over."
"This is CD Roger out."
"This is EF Roger out."
"This is GH Roger out."
"This is JK Roger out."

On receipt of the message CD Platoon Commander is in doubt about the time quoted in the text, so makes via his operator:—

"AB this is CD Verify 1515Z Word after at over."
"This is AB Roger out."

AB operator then passes the message to the originator for checking.

If it is found that the message was correct as originally transmitted AB makes:—

"CD this is AB I verify 1515Z Word after at 1400 over."
"This is CD Roger out."

If after checking, it is found that the message was *not* correct as originally transmitted AB replies:—

"YZ this is AB Correction 1515Z Word after at 1500Z over."
"This is CD Roger out."
"This is EF Roger out."
"This is GH Roger out."
"This is JK Roger out."

Note. Corrections are transmitted to *all* the addressees of the original signal.

19. OTHER PROWORDS

MESSAGE FOLLOWS

Meaning

The message which follows must be recorded (useful on nets where short unrecorded signals are the normal type of traffic).

SPEAK SLOWER
UNKNOWN STATION

Your transmission is too fast. The identity of the station trying to communicate with me is unknown.

WAIT
WAIT OUT

I must pause for a few seconds.

- (i) I must pause for longer than a few seconds.
- (ii) Used as an order to tell a station which has interrupted to wait his turn.
- (iii) To enforce discipline on a net which is getting confused or out of hand.

Other prowords exist, but they are not applicable to Basic Voice procedure.

20. PRECEDENCE

In order that urgent messages may take precedence over those of lesser importance, all messages are graded in the order of their relative importance. This grading is made by inserting a proword known as an *Indication of Precedence*, and messages with higher precedence are handled before those of lower precedence.

Proword

Use

FLASH

Vital operational messages relating to enemy forces.

EMERGENCY

Highly important or urgent messages relating to enemy forces or affecting own forces, and to save life.

OPERATIONAL IMMEDIATE Important Tactical traffic, and urgent Administrative messages affecting current operations.

PRIORITY

Messages of greater importance or urgency than normal routine traffic.

ROUTINE

Normal day to day traffic (Proword not normally used on Voice nets).

DEFERRED

Long term administrative traffic which can accept delay.

- e.g. "GH Info JK this is AB EMERGENCY Proceed with all despatch to scene of aircraft crashed in your vicinity Time 1610Z over."
 "This is GH Roger out."
 "This is JK Roger out."

Here the proword INFO has been used to indicate that the message is for information to JK in addition to being action to GH.

21. BREAK-IN PROCEDURE

A station having a message of higher precedence than the transmission now in progress may break in by waiting for the next pause in transmission and then transmitting the indication of precedence three times followed by his callsign. For example:—

- (i) AB is transmitting a Priority administrative message when CD sights an enemy movement. At the next pause CD transmits:—
 "Emergency Emergency Emergency this is CD
 Emergency Enemy in sight Time 1630Z over."
 AB hearing the precedence Emergency, suspends further transmission until he has received CD's message when he will answer:—
 "CD this is AB Roger out."
- (ii) JK is transmitting a routine message to AB when CD sights further troop movements. At the next pause CD transmits:
 "Emergency Emergency Emergency this is CD
 Emergency over."
 JK ceases transmitting and CD passes his message.
 "AB this is CD Emergency Enemy patrols operating in area Delta Tango Time 1645Z over."
 AB answers:—
 "This is AB Roger out."

22. CONTROL ON A VOICE NET

It is essential that the Controlling Station of a Voice net should take effective charge of his net, and enforce the necessary discipline without which confusion and delay will result. He must not hesitate to be abrupt and forceful to keep his out stations in order.

COMMERCIAL VOICE PROCEDURE

23. ESTABLISHING COMMUNICATION

Ship and Marine Shore Station

"Hello Land's End Radio Hello Land's End Radio This is Empire Star This is Empire Star Radio Telegram for you Radio Telegram for you Over."

“Hello Empire Star Hello Empire Star This is Land’s End Radio Answering This is Land’s End Radio Answering Send your Radio Telegram Send your Radio Telegram Over.”

N.B. After communications have been established callsigns are made once only.

“Hello Land’s End Radio This is Empire Star Radio telegram begins From Empire Star Number One Number of words Eight Date Twenty-eighth Time One two one two Addressed Smith Queenstreet Portsmouth Arriving tomorrow Sunday Love Signature George Radio Telegram Ends Over.”

“Hello Empire Star this is Land’s End Radio Your Radio telegram received Over.”

“Hello Land’s End Radio this is Empire Star Switching Off Out.”

or

“Hello Empire Star this is Land’s End Radio Your Radio telegram begins from Empire Star . . . etc.” (Reading Back.)

“Hello Land’s End Radio this is Empire Star Wrong Word after tomorrow Sunday Over.”

“Hello Empire Star this is Land’s End Radio word after tomorrow Sunday over.”

“Hello Land’s End Radio this is Empire Star Correct Correct.”

Note. If there are any further telegrams to be made the ship will indicate this instead of switching off.

24. REPETITIONS

“Hello Empire Star this is Land’s End Radio repeat word after tomorrow Over.”

“Hello Land’s End Radio this is Empire Star I repeat word after tomorrow Sunday Over.”

25. DISTRESS

A state of Distress is defined as being “Serious or Imminent Danger where the station requires immediate assistance.” The distress call has absolute priority over all other transmissions.

Distress Call

“MAYDAY MAYDAY MAYDAY this is EMPIRE STAR EMPIRE STAR EMPIRE STAR Over.”

Distress Message

Call as above.

Text:—

“Empire Star in Position 5835 North 2520 West lost propeller require tug assistance drifting Eastwards in gale OVER.”

Receipting of Distress

“EMPIRE STAR EMPIRE STAR EMPIRE STAR This is BURNHAM RADIO BURNHAM RADIO BURNHAM RADIO ROGER MAYDAY Out.”

Ships proceeding to aid ships in distress

“MAYDAY EMPIRE STAR EMPIRE STAR EMPIRE STAR This is ORONTES ORONTES ORONTES In position 5834 North 2417 West Speed 25 knots Proceeding to your assistance ETA 1636 Over.”

“MAYDAY ORONTES this is EMPIRE STAR ROGER OUT.”

Cancellation of Distress

“MAYDAY BURNHAM RADIO this is EMPIRE STAR Cancel Distress have been taken in tow by ORONTES Over.”

Burnham Radio would then inform all ships that normal communication is to be resumed:—

“MAYDAY ALL SHIPS ALL SHIPS ALL SHIPS this is BURNHAM RADIO BURNHAM RADIO BURNHAM RADIO Distress traffic ceased Time one seven one three Out.”

26. URGENCY

Urgency messages concern the safety of a ship or aircraft or a person onboard or in sight:—

“PAN PAN PAN Warship Vanguard Warship Vanguard Warship Vanguard This is Empire Star Empire Star Empire Star Have acute appendicitis case onboard operation essential Request medical assistance Over.”

Note. A position course and speed may also be included in Urgency messages.

Receipting

“Empire Star Empire Star Empire Star This is Warship Vanguard Warship Vanguard Warship Vanguard Your PAN received Over.”

Note. All subsequent traffic in connection with the Urgency is treated as normal traffic.