COMMUNICATIONS INSTRUCTIONS RADIOTELEPHONE PROCEDURES

ACP125 (G)

28 November 2016

FOREWORD

The Combined Communications-Electronics Board (CCEB) is comprised of the five member nations, Australia, Canada, New Zealand, United Kingdom and United States and is the Sponsoring Authority for all Allied Communications Publications (ACPs). ACPs are raised and issued under common agreement between the member nations.

ACP 125(G), "Communications Instructions – Radiotelephone Procedures", is an UNCLASSIFIED CCEB publication.

This publication contains Allied military information for official purposes only.

It is permitted to copy or make extracts from this publication.

This ACP is to be maintained and amended in accordance with the provisions of ACP.

CCEB LETTER OF PROMULGATION FOR ACP 121(I)

The purpose of this Combined Communication Electronics Board (CCEB) Letter of Promulgation is to implement ACP 121(I) within the Armed Forces of the CCEB Nations. ACP 121(I), COMMUNICATIONS INSTRUCTIONS – GENERAL, is an UNCLASSIFIED publication developed for Allied use and, under the direction of the CCEB Principals. It is promulgated for guidance, information and use by the Armed Forces and other users of military communications facilities.

ACP 121(I) is effective on receipt for CCEB Nations and when directed by the NATO Military Committee (NAMILCOM) for NATO Nations and Strategic Commands. ACP 121(I) will supersede ACP 121(H), which shall be destroyed in accordance with national regulations.

Publication	Effective for	Date	Authority
ACP 125(G)	CCEB	On Receipt	LOP

All proposed amendments to the publication are to be forwarded to the national coordinating authorities of the CCEB or NAMILCOM.

For the CCEB Principals,

C.J. Mills
LT CDR, RNZN
CCEB Permanent Secretary

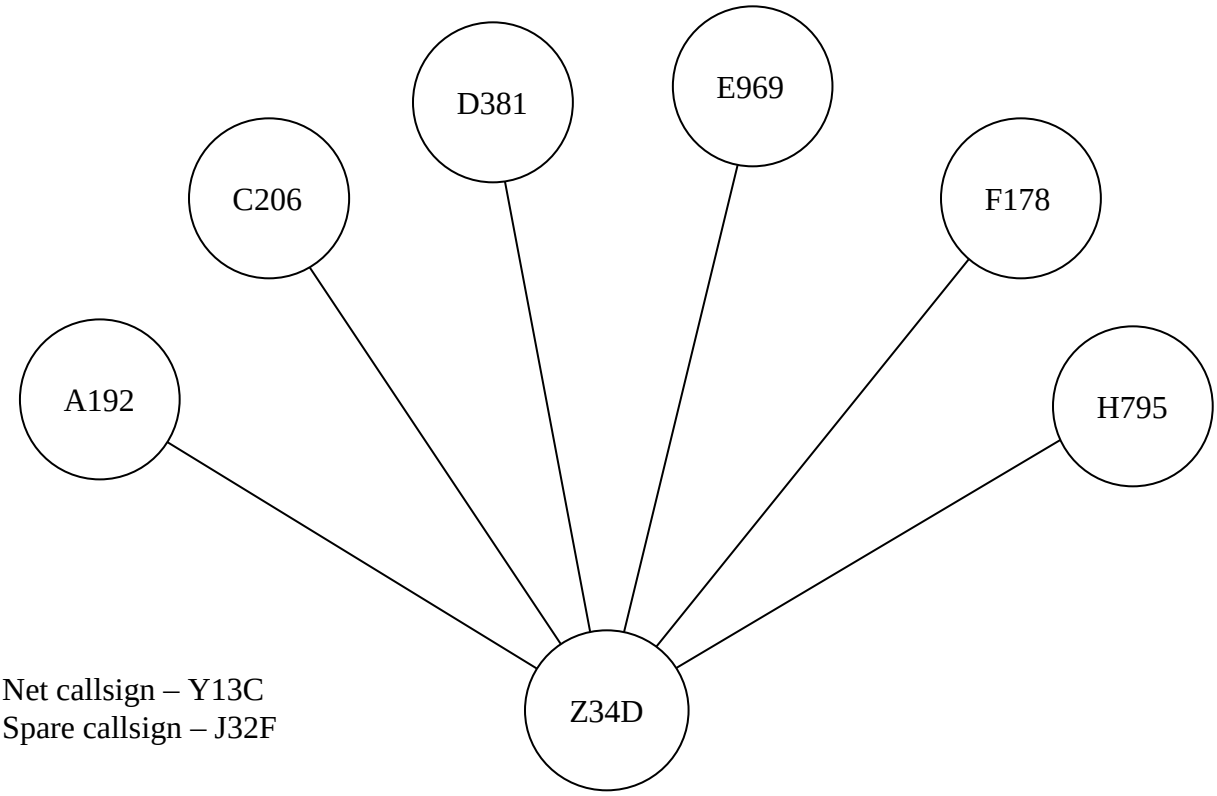
T +1 (703) 614-4684
E christopher.j.mills29.fm@mail.mil

RECORD OF CHANGES AND CORRECTIONS

Identification of Change or Correction and Date		**Date Entered**	**Entered by** **(Signature ~ Rank, Grade or Rate & Name of Command**
Change	**Correction**		

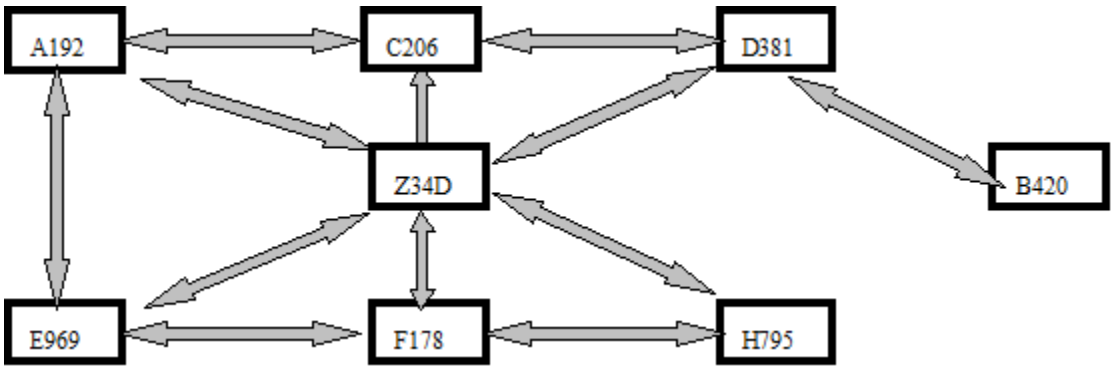
NET DIAGRAMS FOR EXAMPLES IN THIS PUBLICATION

The following diagram illustrates the net organisation used in the examples throughout this publication. The call signs are of types derived from ACP 121 and are used solely to standardise examples. Callsign Z34D is the Net Control Station.

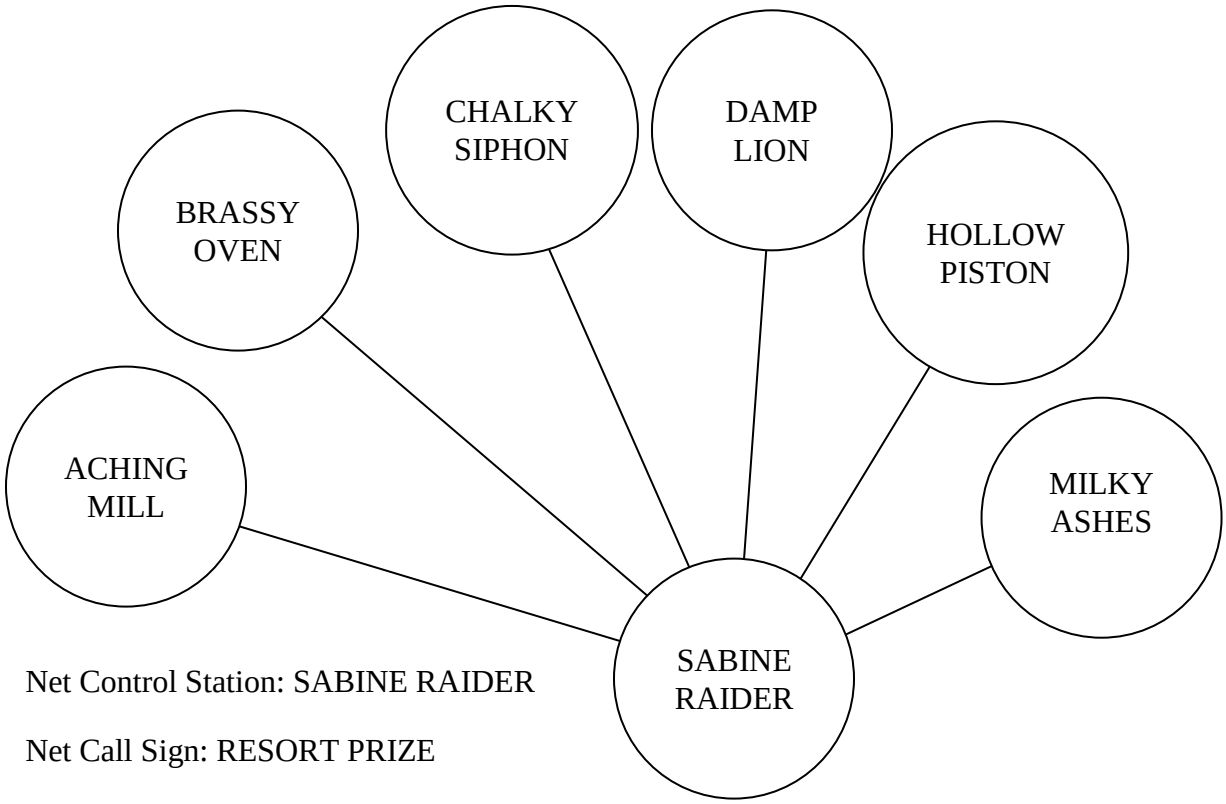


Net callsign – Y13C
Spare callsign – J32F

The following diagram shows connectivity between stations. Note that callsign B420 is a member of another net and is only able to receive messages relayed from callsign D381.



The following diagrams demonstrate verbal callsigns that are used within examples throughout this publication.



Examples of Radio Transmissions

Examples of transmissions used in this publication conform to the following:

Callsigns are italicised;

Prowords are written in upper case; and

Parts of a radio call that may be omitted when using abbreviated procedure (see paragraph 611) are written in parentheses.

Example:

78 – THIS IS 4D – READ BACK – Convoy has arrived – Time One Six Three Zero Zulu – OVER

(4D – THIS IS) – 78 – I READ BACK – Convoy has arrived – Time One Six Three Zero Zulu – OVER

(78 – THIS IS) – (4D) – ROGER –OUT

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1
INTRODUCTION

General

101. The aim of ACP 125 is to prescribe the voice procedure for use by the armed forces of Allied nations on secure and non-secure tactical voice nets. Its purpose is to provide a standardized way of passing speech and data traffic as securely as possible consistent with accuracy, speed and the needs of command and control.

102. Voice procedure is necessary because:

a. Speech on a congested voice net in battle must be clear, concise and unambiguous. To avoid interference between speech and data, it will often be expedient to assign the passage of data traffic to logistic or admin nets rather than to those directly associated with command and control.

b. It must be assumed that all transmissions will be intercepted and analysed by potential adversaries, and used to provide radio location and signals intelligence. The use of a standard procedure is an important security measure against the constant threat of enemy electronic warfare activities.

c. Some form of discipline is needed to ensure that transmissions do not overlap, if two people send at one time the result is chaos.

103. To ensure interoperability, ACP 125 procedures are to form the foundation of all national or single-service radiotelephone procedure doctrine. Adherence to the procedure procedures prescribed in ACPACP 125 is mandatory on all Allied military tactical secure and insecure when operating as part of a Joint of Combined voice nets. . Departure from, or variations in variation to these procedures is prohibited. Such action can invalidate security precautions, reduce accuracy and speed, and create confusion. If the

104. Should a procedure does not cater for a specific situation, common sense and training experience should be used as a guide. Standard procedure must never be substituted with individually preferred methods, or the latter used as an excuse for lack of procedural expertise.

105. The rules for Voice Procedure are frequently reviewed and changed as necessary. Suggestions for change are welcome and should be sent to the appropriate Signal School for review then submitted to the national ACP coordinator for examination by the CCEB.

Voice Procedure

106. The term Voice Procedure encompasses three related elements:

a. **Protocol.** The rules of use – how to start and finish a message. On mixed voice and data nets this includes the prowords used for the passage of data traffic.

b. **Callsigns.** Figures, letters, or combinations of both used to identify a communications station, an organization, or an individual on a radio net.

c. **Secure Nets and Tactical Codes.** The cryptographic systems employed to protect secure nets, and the tactical codes used to provide some degree of cryptographic protection for information transmitted over insecure nets.

Protocols

107. The protocols in this publication are designed to reduce wherever possible, consistent with accuracy, the time spent in the transmission of voice communications drills, message text and data traffic.

Callsigns

108. The voice callsign system seeks to conceal from an enemy who is talking to whom, hence the level of command, composition and purpose of the net. Callsign systems are devised to make all nets sound the same to an intercepting operator or analyst. Unless considerable time is spent in monitoring and searching for telltale traffic, the nature, composition and purpose of an insecure net should not be obvious.

Secure Nets

109. Nets using approved on-line encryption equipment for all transmissions are considered secure nets.

110. Tactical codes need not to be used when operating on a secure net; however, the rules for voice procedure continue to apply in order to maintain accuracy and avoid confusion.

111. Traffic passed over a secure net must not be classified higher than the classification assigned to the crypto net variable in use. The rules for voice procedure apply equally to secure and insecure nets.

Tactical Codes

112. Used on non-secure nets, tactical codes are designed to provide:

a. Concealment of exploitable text.

b. Authentication tables; a means by which a station can provide evidence of their authenticity through either self-authentication or as a response to a challenge from another station.

Encryption of Plain Text

113. The variety of operations in which Allied forces may be involved, the ability or otherwise of hostile agencies to respond to information passed over non-secure nets and the threats to communications in peacetime, require commanders and communicators at all levels to exercise

judgement as to what should and should not be enciphered. Decisions arrived at should be based on the guidelines given in this publication.

CHAPTER 2
SECURITY

The Radio War

201. The range, efficiency and traffic capacity of modern radios provide an excellent method of communication, particularly for mobile elements. However, as the unauthorised interception and recording of radio transmissions is impossible to detect or prevent, it must be assumed that every radio transmission made during training exercises or on operations will be intercepted and evaluated by potentially hostile signal intelligence (SIGINT) agencies, and the resulting intelligence ultimately used against Allied nations.

202. During peacetime, a future adversary will patiently conduct long-term analysis of allied net structures and intercepted message traffic. This task is simplified by the relaxation of security precautions during training exercises; actions that would be considered unthinkable during operations. Inferior security and operating procedures practised during peacetime are unlikely to be corrected immediately at the onset of hostilities. The enemy response to security breaches made in wartime can be expected to be immediate.

203. Employment of on-line encryption significantly reduces the amount of information available for analysis. However, even secure nets can provide an enemy useful intelligence through analysis of traffic flow patterns and Direction Finding (DF) of transmitters.

204. Non-secure nets provide the most substantial information for analysis and are therefore considered the least secure of all means of communications. Should encryption equipment not be available then the use of tactical codes is essential when transmitting information of value to the enemy.

Intercepted Information

205. This constant monitoring of Allied radio communications and the study and interpretation of the various traffic characteristics provide the enemy with vital current information concerning fighting capabilities.

206. Intercepted information once analysed and correlated with existing data from other sources, can provide intelligence of sufficient value to influence significantly enemy command decisions.

207. Whether from direct security breaches or the provision of indirect clues through the indiscreet use of plain language, a potential enemy will attempt to discover:

a. Task Organisation or Order of Battle:

i. Command structure.

ii. Radio net level, composition and function.

iii. Ship and unit identities.

b. Locations

i. Formation and unit boundaries.

ii. Areas of operation.

iii. Location of command ships and headquarters.

c. Intentions

i. Operations plans.

ii. Tactical groupings.

iii. Movement.

d. Combat Effectiveness

i. Casualties.

ii. Damaged or defective ships, vehicles and equipment.

iii. Standard of radio discipline.

Security of Information

208. Whether transmitted during training or on operations, all information of a long or short term nature likely to assist an enemy in wartime should be encoded, whenever possible, prior to its transmission on insecure radio. Further guidance as to what information should be encrypted is detailed at para. 224.

209. Once sensitive information has been transmitted in the clear, there is no guaranteed period of safety and it must be assumed that enemy reaction will be immediate.

210. Each transmission must be carefully considered and the risk calculated. The rival priorities of security and speed are to be carefully weighed and balanced against the enemy's ability to intercept and exploit the transmitted information.

Communications Security

211. Communications Security (COMSEC) is the collective title for the measures taken to protect all aspects of communications in order to deny information and intelligence to an enemy. This includes cryptographic security details of which are contained in national cryptographic instructions.

Transmission Security

212. Transmission Security (TRANSEC) is that component of COMSEC which includes all measures designed to protect Allied radio transmissions from enemy interception, analysis and deception:

a. **Interception.** Interception is the act of searching for, listening to and recording radio communications and electronic transmissions for the purpose of obtaining information.

b. **Analysis.** Analysis is the examination and interpretation of intercepted radio communications traffic and electronic transmissions for the purpose of obtaining intelligence.

c. **Deception.** Deception is the introduction of a false transmission into a communications system, by imitating an authentic transmission, with the intention to deceive or create confusion.

Defence Against Interception

213. The use of radio is part of an overall Emission Control (EMCON) policy and is a command function decided at the highest level.

214. No radio transmission can be regarded as safe from interception. It is important to remember that intercept receivers are designed to receive weaker signals at greater distances than standard receivers do.

215. Maximum defence against enemy interception and Direction Finding (DF) can be achieved if the following protective measures are taken:

a. **Radio silence.** The best defence against interception and DF is to not transmit and as such operations staff may direct radio silence by some or all stations during various phases of battle. Instructions and procedures for imposing, breaking and lifting radio silence must be rigidly adhered to if the protection it provides against enemy interception is to be attained. The lifting of radio silence does not allow radio to then be used indiscriminately.

b. **EMission CONtrol (EMCON).** EMCON may be enforced in response to a known SIGINT threat. An EMCON plan will impose scalable restrictions on the use of radio, such as:

i. limiting transmission lengths,

ii. restricting maximum power outputs,

iii. restricting usable frequency ranges,

iv. prohibiting antennas that propagate in the direction of enemy receivers, and

v. radio silence.

c. **Avoiding unnecessary transmissions.** The necessity for each radio transmission should be carefully considered; radio is often used habitually when adequate alternative methods of communication are available. Called stations should be limited to essential addressees only to avoid unnecessary replies and acknowledgements. The checking of communications and associated transmitter tuning and testing should be reduced to an absolute minimum.

d. **Transmission Length.** The longer a transmission the more vulnerable it is to intercept and DF. Individual transmission should not exceed 20 seconds and, whenever possible, terminated with the proword OUT. The push to talk button should always be released during pauses in procedure. The same principle should be applied to data transmissions.

e. **Procedure.** Poor procedure can increase transmission time and cause a series of unnecessary transmissions requesting clarification. Strict adherence to correct message procedure and communication drills, combined with good net discipline, will minimise transmission time and reduce vulnerability to interception and DF. Measures must be taken to avoid the continuous repetition of data messages – the danger is that unless an automatic acknowledgement is received from the intended recipient a data message may be repeated ad infinitum.

f. **Changing Frequency.** Changing frequency can break continuity of interception. Whenever possible, on non-secure nets, the instruction to change frequency should be encoded or passed by secure means – this is important when the change occurs at an unpredictable time. Frequencies are never to be passed in clear over non-secure radio.

g. **Use of Alternative Means of Communications.** Methods of communication not dependent on radio, such as line or courier, should always be used in preference to radio, particularly for bulk or routine traffic where a delayed response is acceptable to the originator.

Defence Against Analysis

216. The following measures should be taken to render enemy traffic analysis more difficult and any resulting intelligence less reliable:

a. **Calling and answering.** The greater the number of stations included in a call, the more potential intelligence there is available to an analyst to decide the composition, size and level of a net. For this reason, all station calls and large multi-station calls are unduly detrimental to security; their use should be confined to exceptional, unavoidable circumstances. Collective calls have the advantage of brevity without the need to divulge each callsign in the initial call but, used

excessively, subsequent answering calls will soon provide the analyst with their grouping and identity.

b. **Callsign omission.** After initial calling and answering calls have been made and the identities of the calling and called stations have been satisfactorily established, callsigns should be omitted entirely unless circumstances demand otherwise. In addition to denying the analyst useful repetition and confirmation of callsigns, overall transmission time is reduced.

c. **Locations.** Locations, whether Allied or those of an adversary, are the most sensitive information sent over radio and are an unrivalled source of intelligence; an analyst can invariably relate unencoded enemy locations to friendly forces' positions. This is often due to the inadvertent disclosure of associated plain language, in either the same or other messages, combined with the analyst's knowledge of Allied tactical doctrine. Furthermore, an enemy commander, aware that Allied forces know the enemy force positions, can take appropriate counter action.

d. **Plain Language.** Plain language information of an obviously sensitive nature must be encoded prior to transmission over non-secure radio. Every effort should also be made to identify and encode plain language information that may in isolation appear innocuous but when assembled with other similar information by an analyst becomes classified. Ideally, with the sensible use of vocabulary codes, transmissions should contain the minimum of exploitable plain language text.

e. **Avoiding Compromise.** Plain language reference to callsigns, address groups, tactical codes or other security aids is forbidden and must be constantly guarded against if the security value and protection they offer is not to be compromised. Linkage or compromise enabling continuity between old and new operating frequencies must be avoided.

f. **Standardisation.** Idiosyncrasies of speech and operating techniques enable the analyst, aided by a comprehensive filing system, to recognize an individual, their ship or unit and its expected role. The aim of every radio user should be to remain anonymous. The names of personnel, ships or units must never be transmitted in clear. Unique personal expressions or mannerisms, jargon and mention of specialist items of equipment must be avoided.

Defence Against Deception

217. An enemy will rarely attempt deception during peacetime, but almost exclusively reserve its use for time of war to ensure maximum impact. Unsuspecting stations preoccupied with urgent tactical matters are particularly prone to this method of attack. Special care must also be taken to identify and ignore counterfeit transmissions made solely to solicit answering calls, normally for DF purposes, particularly when radio silence is in force.

218. Whenever deception is recognized, or suspected, it should be reported immediately by secure means in accordance with national reporting procedures.

219. The best defences against enemy deception are:

a. **Secure Nets:** Employment of secure voice equipment is an excellent defense against deception as, except where a friendly station has been captured intact, it is generally safe to assume that all stations are authentic. However, an enemy using plain voice may mimic a friendly station in order to lure stations to switch to plain voice to respond.

b. **Good Procedures.** The success of enemy deception relies on its ability to appear inconspicuous, which is mainly dependent on enemy knowledge of Allied operation procedures.

c. **Constant Vigilance.** Radio users and operators must remain alert to irregularities in procedure, unfamiliar speech and unexpected transmissions of dubious origin. Subtle use of previously recorded transmissions of Allied nets, played back by an enemy, can cause confusion and endanger Allied troops; these may not necessarily be on the same net or within a similar time frame.

d. **Authentication.** The correct and timely use of authorized authentication systems help protect Allied nets against enemy communications deception. The requirement for good authentication practices is less apparent in training, but will contribute significantly to combat survival and effectiveness in time of war.

Aids to Security

220. There are procedural aids which can considerably enhance transmission security. The degree and period of security protection afforded by these aids is greatly dependent on their correct use. This requires a thorough understanding of their potential and also their limitations. Abuse or misuse of security aids will quickly counter their security value and, equally dangerously instill a false sense of security.

221. Unofficial, locally designed codes or adaptation of official codes, however well intentioned, will not deceive a cryptanalyst; only officially authorised codes are to be used. Aids to security are:

a. Secure Nets.

b. Authorised low-level codes.

c. Authentication.

d. Codewords.

e. Nicknames.

f. Address groups.

g. Callsigns.

h. Net identification signs.

i. Veiled speech

Secure Nets

222. Secure voice equipment provides the best defence against analysis and should be used wherever possible.

Low Level Codes

223. Low level codes are designed to provide security protection for sensitive short-term tactical information where speed and simplicity of operation are the overriding considerations. When time and circumstances permit, secure communications systems or alternative physical methods should be used.

What to Encode

224. Apart from the information desired by the enemy described at para. 207, there can be no hard and fast guidance on what other transmitted information may be exploitable in any particular circumstance. Military judgement must be exercised in every case to answer the following questions:

a. How much information am I prepared to let the enemy obtain from my radio traffic?

b. How might the enemy exploit the information I am about to transmit?

225. Exploitable text is that which provides useful information for an enemy to use in a timely way (enemy response time can be expected to be as little as a few minutes) to our disadvantage; it includes locations and timings, assembly areas, start lines, ship and unit states and indications of intentions. Such indications include “warning orders”, “orders”, “no move before”, etc. Their exploitability must be judged according to the tactical situation at the time. For example, in the heat of battle, “orders” may be commonplace and of no significance to an enemy; on the other hand, during a lull, a “warning order” may be the key to them discovering the time and place of a counter attack. Further Policy guidance about what may or may not normally be sent by unprotected means shall be promulgated at the discretion of the relevant Allied/theatre/command HQ.

226. All exploitable text must be encoded whenever the situation permits. If the delay imposed by encoding a message, or parts of a message, will prejudice the operation more than the plain text transmission will prejudice its security then the message may be sent in plain text at the discretion of the originator; however, the originator must understand that they may be called upon to justify their decision.

Real or Non-Exercise Traffic

227. In training, there is a need to differentiate between exercise play and events, which require action outside the context of the exercise; conventionally this is known as “real” activity. Messages associated with real activity are just as exploitable as any other and care must be taken to ensure that security is not unduly prejudiced by the urgency of such situations. In order to highlight the differences between real and other messages, the proword NO PLAY is used. Its meaning is defined in the list of prowords at Annex A to Chapter 3.

Authentication

228. An enemy may attempt to deceive operators by imitating a friendly station with the intent of making false reports or orders, eliciting important information or to create confusion. Authentication is a security aid designed to prevent Allied communicators being deceived by fraudulent transmissions made by unauthorised persons.

229. Authentication is only used on non-secure nets and is mandatory whenever the following applies:

a. In reply to a challenge (silence is not be broken for the sole purpose of responding to a challenge).

b. When initially joining an established net or resuming radio contact after a temporary closure, absence or periods of silence.

c. When a station suspects that a transmission is fraudulent.

d. When transmitting the plain language cancellation of a message.

e. When reporting enemy contact and transmitting amplifying reports in plain language.

f. Imposing, lifting or breaking radio or emergency silence when a codeword or nickname is not used.

g. Transmitting instructions that affect the tactical situation or directing changes to the operation of the net, such as relocating units or directing stations to close down or change frequency where a nickname is not used.

h. When transmitting to a station under radio silence.

i. When transmitting a classified message in clear over non-secure radio.

230. When using challenge and reply authentication, the following should be observed:

a. Stations are not to be challenged unnecessarily.

b. Stations should be given a limited amount of time to reply to a challenge before a new challenge is issued (30 seconds is a reasonable time limit for a station to respond to a challenge).

c. A station replying incorrectly to a challenge is to be issued a new challenge.

d. A station failing three attempts to reply correctly is to be ignored.

e. After completion of the challenge and reply procedure, the challenging station should be subject to a counter challenge unless their authenticity is known.

231. Further guidance on authentication is contained at para. 619.

232. Codewords

233. A codeword is a single word with a pre-arranged meaning, used to establish a condition, an alert, or to initiate the implementation of a plan or operation. Codewords are prepared and issued by the Operations Staff. Their meanings are always classified and are intended to be used once only as an executive order. They may therefore be sent in clear. Codewords are rarely used in connection with communications, other than for conditions of electronic silence.

234. Nicknames

235. A nickname is comprised of two distinct non-associated words, neither of which is a colour. Nicknames have pre-arranged meaning and are issued by communications staff to perform either of the following:

a. Activate communications procedures such as imposing or lifting silence, or closing down,

b. Activating a shift if frequency where the target frequency is pre-associated with the nickname, or

c. As a substitute to a regularly used word or place name that is difficult to pronounce.

236. Due to the limited protection they provide, nicknames used for communications procedures should only be used once.

Radio Appointment Titles

237. A radio appointment title is a word used to identify the senior individual, by role or branch, at any given station. Radio appointment titles are unclassified and are not codewords; the security protection they provide is to conceal the rank and personal identity of the appointment, therefore concealing the organisational level of the net.

238. The use of radio appointment titles varies between services and nations; nonetheless, where participants are comfortable in their use, they are authorised for combined operating

239. The most commonly used radio appointment title is SUNRAY which is used to identify the commander at any given station. Prowords used in conjunction are FETCH (title), used to request the relevant appointment to the handset, and (title) SPEAKING used by the requested appointment to report that they are at the handset. The following table lists the approved appointment titles:

Table 2-1 Radio Appointment Titles

Title	Appointment	Title	Appointment
ACORN	Intelligence staff	MOLAR	Logistics Officer / Staff
ATOLL	Transport support operations representative	MOONBEAM	Chief of Staff, Executive Officer (XO)
BASEBALL	Air Traffic Controller / Air Direction Officer	NOMAD	Navigation
BLUEBELL	Marine Engineers / Army Electrical and Mechanical Engineers	NUTSHELL	Quartermaster staff
BOXWOOD	Nuclear, Biological and Chemical staff	OFFSET	Offensive Support Operations representative
CONROD	Air Defence representative	PELICAN	Army Air Transport Support representative
CONTRACTOR	Movements staff	PLAYTIME	Ground Transport
COFFEEPOT	Philanthropic or welfare representative	PRONTO	Signals
CRACKER	Artillery Locating staff (includes Artillery intelligence staff)	RAVEN	EW staff
FIREGUARD	Ground Defence representative	RICKSHAW	Ordnance / Supply
FORTUNE	Forward Air Controller (Ground)	SEAGULL	Operations Staff
FOXHOUND	Infantry	SHELLDRAKE	Gunnery staff / Artillery
GLOWWORM	Ground Liaison Officer	SHEPHERD	Chaplain
HAWKEYE	Naval Aviation Officer, Army Aviation	SHOTGUN	Armaments Officer
HOLDFAST	Engineers	SPINDLE	Forward Air Controller (Air)
IRONSIDE	Armour	STARLIGHT	Medical
KINGFISHER	Air Liaison Officer	SUNRAY	Commander
MANHOLE	Administrative staff	SPYGLASS	Air Reconnaissance
METEOR	Meteorological staff	VESTMENT	Air Contact Officer
(title) MINOR	Used to designate the second-most senior appointment	WATCHDOG	Shore Patrol / Military Police

Address Groups

240. An address group is a unique, daily changing group of four random letters used to disguise a command, formation, unit or sub-unit. Address groups are classified when connected

with their meaning. The Allied theatre or command HQ will determine the classification of address groups.

241. **Use of Address Groups.** The use of address groups should be kept to a minimum and never qualified. Address groups are used:

a. In place of clear names and addresses in voice conversations and messages, except when referring to a station in the same unit or on the same net.

b. As a temporary callsign, when a station joins a net for which there is no allocated callsign.

c. To refer, as required, by implication and context headquarters to which the address group is allotted, or to the whole formation, unit or sub unit served by that headquarters.

242. When used, address groups are pronounced phonetically except in the address component of a formal message,

Callsigns

243. A callsign is a combination of letters and figures that identify a communication facility, an organisation, or an individual on a radio net. Its primary use is to establish and maintain communications. The callsign system to be used on an Allied net will be specified by the appropriate command HQ communications staff.

244. In a conversation between two stations, after the initial call and response, callsigns should be dropped altogether unless confusion is likely to arise by so doing. In different circumstances, some callsign systems allow users to abbreviate callsigns once communications have been established. As an aid to TRANSEC, the abbreviated callsign should be dropped whenever possible in communications between two stations unless confusion will arise in so doing.

245. Full callsigns are to be used on the following occasions:

a. When first establishing a net.

b. When reporting into a previous established net.

c. In the transmission instructions and address components when a message is required to be relayed to a station on a different net.

246. When secure daily changing callsigns are used for classified and unclassified messages, and unit or ship names appear in unencrypted text, the unit or ships name is to be replaced by the relevant secure callsign or address group in full. Callsigns and address groups should be preceded by the proword CALLSIGN or ADDRESS GROUP, as appropriate, when used in this manner.

Net Identification Callsign

247. A callsign allocated to each net which may be used by a station to provide the identity of their net when communicating to a station from a different net.

Veiled Speech

248. Veiled speech is the act of concealing the true identity of an event, an activity or a location by using references that would not be known to an enemy. As one cannot be certain about the enemy's knowledge, it is a poor aid to security and should not be used in preference to encoding the message.

CHAPTER 3
ACCURACY

General

301. Voice procedure is designed to provide the fastest and most accurate method of speech transmission. All messages should be pre-planned, brief and straightforward. Ideally, messages should be written down: even brief notes reduce the risk of error. Messages should be constructed clearly and logically in order not to confuse the recipient.

Speech Technique

302. The correct use of audio equipment and clear, concise speech over the radio are essential if transmissions are to be successfully received and understood at the first attempt.

a. **Use of Audio Equipment.** In many situations, particularly in noisy or difficult conditions, the use of headsets fitted with a noise cancelling microphone is preferable to loudspeakers as a headset will aid concentration and the audibility of the incoming signal. The double-sided, noise cancelling microphone is designed to cancel out surrounding noise, for example engine noise or gunfire, allowing speech entering on one side to pass freely. The microphone should be as close to the mouth as possible.

b. **Method of Speech.** The key words to remember are Rhythm, Speed, Volume and Pitch (RSVP):

i. **Rhythm.** Use short sentences divided into sensible phrases which maintain a natural rhythm; they should not be spoken word by word. Where pauses occur, the press-to-talk should be released to minimize transmission time and permit stations to break in when necessary.

ii. **Speed.** Speak slightly slower than for normal conversation. Where a message is to be written down by the recipients, or in difficult conditions, extra time should be allowed to compensate for the receiving station experiencing the worst conditions. Speed of transmission is easily adjusted by increasing or decreasing the length of pauses between phrases, as opposed to altering the gaps between words; the latter will create an unnatural, halted style of speech, which is difficult to understand.

iii. **Volume.** Speak quietly when using whisper facilities, otherwise the volume should be as for normal conversation. Shouting causes distortion.

iv. **Pitch.** The voice should be pitched slightly higher than for normal conversation to improve clarity.

Aids to Accuracy

303. **Pronunciation of Letters.** To help identify spoken letters of the alphabet a standard phonetic word alphabet is used. Each letter of the alphabet is represented by a uniquely pronounced word to enable consistent and accurate pronunciation. For example, BRAVO is the phonetic equivalent of the letter B and DELTA equates to the letter D.

304. **Phonetic Alphabet.** Table 3-1 shows the phonetic word equivalent of each letter and as it is spoken. The underlined portion of the spoken words indicates syllables to be emphasized to make the letters distinctively audible.

Table 3-1 Phonetic alphabet and pronunciation

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

305. **Pronunciation of Figures.** Whenever figures are spoken in single digits over radio they are pronounced as shown in Table 3-2. The underline portion of the spoken words indicates the syllables to be emphasized to make the figures distinctively audible.

Table 3-2 Figure pronunciation

Figure	Spoken As	Figure	Spoken As
1	WUN	6	SIX
2	TOO	7	SEV-EN
3	TREE	8	AIT
4	FOW-ER	9	NINE-ER
5	FIFE	0	ZE-RO

Rules for Spelling

306. **Plain Text.** Spelling is necessary when difficult radio conditions prevent the reception of an obscure word, or of a word or group, which is unpronounceable. Such words or groups within the text of plain language messages may be spelt using the phonetic alphabet; they are preceded by the proword "I SPELL". If the word is pronounceable and it is advantageous to do so, then it should be spoken before and after the spelling to help identify the word.

Example A:

> Pronounceable word – UNNA: …"UNNA- I spell, Uniform November November Alfa – UNNA"

Example B:

> Unpronounceable word or group – UTFX: …"I spell, Uniform Tango Foxtrot X-ray".

307. Exceptions to this rule (precede phonetic spelling with the proword I SPELL), when letters are always spoken phonetically without the proword I SPELL are:

a. Callsigns and Net Identification Signs (NIS).

b. Grid references (UTMs).

c. Target indications

d. Authentication.

e. DTG zone suffix/SICs.

f. Address groups.

g. Encrypted text.

Encrypted Text

308. When a text, or portion of text is encrypted, the letter and figure groups are always to be spelt phonetically without the proword I SPELL.

Example:

> Encrypted portion of text. 2S BJ MW IF: … "Two Sierra – Bravo Juliet – Mike Whiskey – India Foxtrot".

Rules for Numbers and Figures

309. When radio conditions are satisfactory and confusion will not arise, numbers in the text of a message may be spoken as in normal speech. During difficult conditions, or when extra care is necessary to avoid misunderstanding, numbers are sent figure by figure preceded by the proword FIGURES. This proword warns that figures follow immediately, to help distinguish them from other similarly pronounced words.

Table 3-3 Example Pronunciation of Numbers

Number	Satisfactory conditions	Difficult conditions
23	Twenty three	FIGURES two three
50	Fifty	FIGURES five zero

Number	Satisfactory conditions	Difficult conditions
146	One hundred and forty six	FIGURES one four six
200	Two hundred	FIGURES two zero zero
1009	One thousand and nine	FIGURES one zero zero nine
1630 hours	Sixteen thirty hours	FIGURES one six three zero hours
2800	Two thousand eight hundred	FIGURES two eight zero zero
12000	Twelve thousand	FIGURES one two zero zero zero

310. Exceptions to this rule (the proword FIGURES precedes sending numbers figure by figure), when numbers are always spoken digit by digit without the proword FIGURES are:

a. Callsigns.

b. Grid references.

c. Target indications (except that exact multiples of a hundred or a thousand are pronounced as such).

d. Authentication.

e. Formal message date time groups (DTGs).

f. Within encrypted text groups.

Rules for Mixed Groups

311. The rules for sending mixed letter/figure groups incorporate the same principles that apply to sending letters and figures separately. The same information may be sent in two different ways depending on the circumstances.

Example A. Satisfactory conditions:

Mixed group	spoken as
ACP 125	ACP one two five

Example B. Difficult conditions:

Mixed group	spoken as
ACP 125	I SPELL Alfa Charlie Papa FIGURES one two five

Aids to Brevity

312. To reduce the transmission time of a message or radio conversation, radio users and operators must observe brevity by using language that is concise and easily understandable under the given radio conditions. The following paragraphs explain the aids available to achieve this.

313. **Abbreviations.** Although originally designed to save time in writing, abbreviations will often save time in speech. Many abbreviations are so commonly used in normal speech they are more familiar than their original unabbreviated form. The use of such abbreviations in radio transmissions is to be encouraged provided that:

a. They are quicker and easier to use than the full word.

b. They are sufficiently well known to avoid any confusion and subsequent confirmatory transmissions.

c. Where an abbreviation has more than one meaning, the intended meaning is obvious to the addressee from its context or frequent usage.

314. Whether abbreviations are spoken as such, spelt phonetically or expanded to their unabbreviated form, will depend on prevailing radio conditions and the circumstances in which they are used. The following common sense rules should be applied to take account of conditions:

a. **Satisfactory Conditions.** To ensure that the advantage of brevity which abbreviations provide is not lost, they will be spoken as in normal speech.

Examples:

RV as “ar-vee” instead of “I SPELL Romeo Victor”.

IED as “eye-ee-dee” instead of “I SPELL India Echo Delta Romeo”.

ETA as “ee-tee-ay” instead of “I SPELL Echo Tango Alfa”.

b. **Difficult Conditions.** In conditions which require amplification of common abbreviations normally spoken as such, it is usually quicker and easier to use the full word than to waste time and effort in spelling.

Examples:

Dispatch Rider Drop zone is better than “I SPELL Delta Romeo Zulu”.

Recce (reconnaissance) is better than “I SPELL Romeo Echo Charlie Charlie Echo”.

315. Abbreviations should only be spelt phonetically when it is either quicker and or easier to do so, or the spelling will be more readily received and understood than the full word or phrase.

Examples where spelling is more appropriate than the full words are:

"I spell November Bravo Charlie" instead of "Nuclear Biological and Chemical".

"I spell Papa Oscar Lima" instead of Petrol, Oil and Lubricants.

"I spell Uniform Tango Mike" instead of Universal Transverse Mercator.

316. Where necessary the sender of a message may, on behalf of the drafter, expand common abbreviations during difficult conditions or when a transmission can be simplified. Where any doubt exists as to the drafter's intentions, abbreviations should never be expanded but spelt phonetically leaving the addressee to interpret the meaning. The abbreviation DF can mean "Defensive Fire" or "Direction Finding"; if the intended meaning is not obvious then DF should be spelt phonetically.

317. **Procedure words (prowords).** To keep voice transmissions as brief and clear as possible standard prowords are used in place of whole sentences. Prowords are easily pronounced and recognised words or phrases used to convey a specific predetermined meaning, for example.

Table 3-4 Examples of Prowords

Proword	Meaning
ROGER	I have received your last transmission satisfactorily
OUT	This is the end of my transmission to you and no answer is required or expected.

318. A full list of prowords is given at Annex A to this chapter.

319. **Punctuation.** Punctuation is not to be used unless it is necessary to the sense of a message, and should rarely be required in radio messages where the originator makes his own transmission. Punctuation can occur more often in written informal or formal messages. When the use of punctuation is essential, it should be written and, spoken or abbreviated as follows:

Table 3-5 Written, spoken or abbreviated punctuation

Punctuation	Written as	Spoken as	Abbreviated as
Full Stop / period	.	Full stop	PD
Comma	,	Comma	CMM
Slant/oblique	/	Slant	Slant
Hyphen	-	Hyphen	Hyphen
Left-hand bracket	(	Brackets on	Paren
Right-hand bracket	)	Brackets off	Unparen
Colon	:	Colon	CLN
Semi-colon	;	Semi-colon	SMCLN
Question mark	?	Question mark	Ques
Decimal point	.	Decimal	Point

320. When writing, punctuation symbols should always be used in preference to the abbreviations.

321. Where low grade codes do not support punctuation symbols, the relevant abbreviation is to be encoded as text using the abbreviated form from Table 3-5.

322. If punctuation marks other than those above are vital to the sense of the text, they are to be written in full and spoken as such:

Examples:

APOSTROPHE

QUOTE

UNQUOTE

323. **Brevity codes.** Messages transmitted in a set format, including data messages, may be shortened through the use of brevity codes. A brevity code is a list of numbers or letter, which equate to a standard predetermined vocabulary of words or phrases, for example equipment and commodity codes. Brevity codes can reduce long stereotyped sentences or lists to a few characters and save considerable time in transmission. It is however important to remember that such codes provide no security at all, and must be regarded as the equivalent of plain language when transmitted unencoded over radio.

324. **Nicknumbers.** A nicknumber is a two figure group which may be used on forward tactical nets to describe any significant location that needs to be disguised, such as:

a. Bridges,

b. Rivers,

c. Reserved demolitions,

d. Place names,

e. Road junctions,

f. Report lines,

g. Stop lines,

h. Killing areas, or

i. Counter-attack / penetration areas.

325. Nickumbers have **NO SECURITY VALUE** and are **ALWAYS TO BE ENCODED**. They are introduced by the proword **NICK**.

Legibility of Handwriting

326. Legible writing is essential if handwritten messages are to be transmitted and received accurately. All handwritten messages drafted for transmission are to be written in capital letters. The following conventions for written characters and symbols are to be observed when drafting and receiving messages:

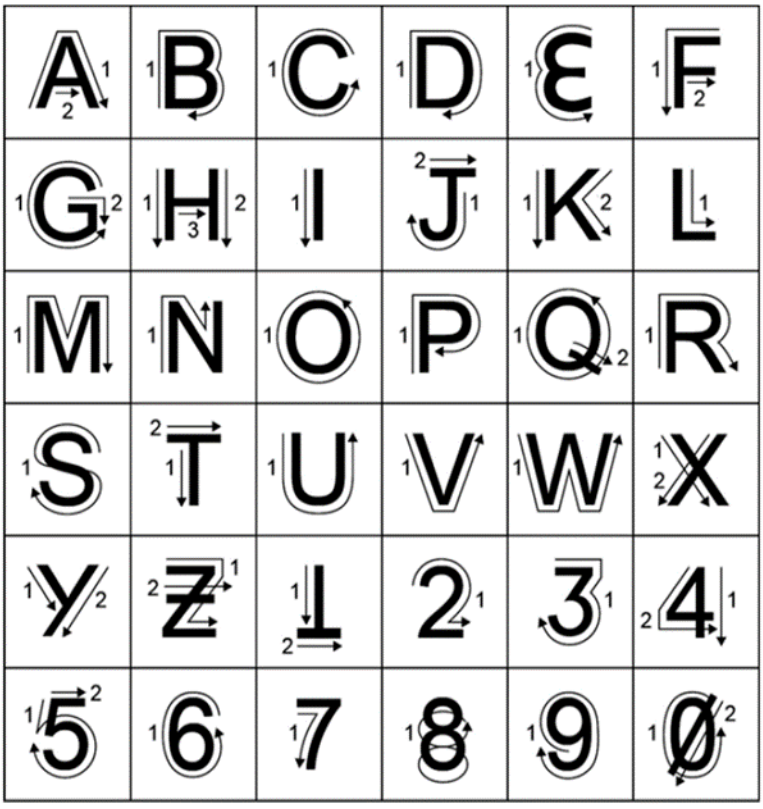
a. The figure 0 is written with a slant through it to distinguish it from the letter O,

b. The figure 1 is written with a line underneath to distinguish it from the letter L,

c. The letter Z is written with a hyphen through it to distinguish it from the figure 2, and

d. Full stops and commas are ringed to make them more conspicuous.

327. The table below provides examples of printed letters and figures as well as suggested pen strokes to be able to write them quickly.



Procedural Signs (Prosigns) and Operating Signals (OPSIGs)

328. Prosigns are authorized abbreviations of prowords, OPSIGs are three letter civil (Q) and military (Z) codes used for a wide range of communications purposes. Both prosigns and OPSIGS should be used to expedite radio logging. Annex A to this chapter contains the prosigns

and OPSIGs relevant to radiotelephone procedures. Radio logging is explained in more detail in Chapter 4 of this publication.

329. A comprehensive list of OPSIGs is contained in ACP 131.

ANNEX A TO
CHAPTER 3 TO
ACP 125 (G)

LIST OF PROWORDS AND THEIR EQUIVALENT PROSIGNS OR OPERATING SIGNALS

Proword	Explanation	Para	Prosign/OPSIG
ACKNOWLEDGE (ACK)	The originator requires the addressee to confirm receipt and understanding of their message	665	ACK
ADDRESS GROUP	The group that follows is an address group	238	
ALL AFTER	The portion of the message to which I am referring is all that follows…….	646	AA
ALL BEFORE	The portion of the message to which I am referring is all that precedes……..	646	AB
ANSWER AFTER	The station called is to answer after callsign…… when answering net calls	622	ZGO
ASSUME CONTROL	You will assume control of this net until further notice	628	ZKD
AUTHENTICATE	The station called is to reply to the challenge which follows	619	INT ZNB
AUTHENTICATION IS	The transmission authentication of this message is……..	619	ZNB
BEADWINDOW (number)	Your station has disclosed an Essential Element of Friendly Information (EEFI) corresponding to the EEFI list at para. 806.	806	
BREAK	This point indicates the separation of text from other portions of this message	531	BT
CALL SIGN	The group that follows is a callsign	241	
CANCEL	Previously transmitted message …….. is cancelled in its entirety	657	
CHECK GROUPS…..	The group count of the message you have sent to me does not match what I have received (followed by the number of groups received)	649	
CLEAR	The quality of your transmission is excellent	633	
CLOSE DOWN	Called stations are to close down when indicated. Acknowledgements are required	680	ZKJ
CORRECT	You are correct, or what you have transmitted is correct	659	C

Proword	Explanation	Para	Prosign/OPSIG
CORRECTION	An error has been made in this transmission. Transmission will continue with the last word correctly transmitted. An error has been made in this transmission (or message indicated). The correct version is……. That which follows is a corrected version in answer to your request for verification.	653	EEEEEEEE or ZFR C C
DISREGARD THIS TRANSMISSION – OUT	This transmission is in error, disregard it. (This proword shall not be used to cancel any message that has been completely transmitted and receipted)	656	EEEEEEEE AR
DISTORTED	I am having trouble reading you due to signal distortion	633	
DO NOT ANSWER	Stations called are not to answer this call, receipt this message, or otherwise transmit in connection with this transmission. (When this proword is employed the transmission shall be ended with the proword OUT)	658	F
EXECUTE	Carry out the order given in the message or signal to which this applies (To be used only with the Executive Method)	708	IX-----
EXECUTE TO FOLLOW	Action on the message or signal which follows is to be carried out upon receipt of the proword EXECUTE. (To be used only with the Delayed Executive Method)	708	IX
EXEMPT	The station(s) immediately following is (are) exempted from the collective call or from collective address	523	XMT
FADING	At times your signal strength fades to such an extent that continuous reception cannot be relied upon	633	QSB
FETCH…….	Bring appointment title……to the handset for a conversation.	237	
FIGURES	Numbers to follow	310	
FLASH FLASH (spoken 3 times)	Precedence FLASH I am breaking-in to your conversation to transmit a FLASH message	669	Z
FORMAL MESSAGE	I wish to transmit a plaindress format message to you	524	

Proword	Explanation	Para	Prosign/OPSIG
FROM (address) FROM (text)	The originator of this message is indicated by the address designator immediately following The portion of the message to which I am referring follows …….. (used in conjunction with proword TO)	528 646	FM
GOOD	Your signal strength is good	633	QSA 4
GRID	The portion following is a grid reference	804	GR
GROUPS	This message contains the number of groups indicated by the numeral following	529	GR (when contained in the heading or ending parts of a message)
GROUP NO COUNT	The groups in this message have not been counted	529	GRNC
I ACKNOWLEDGE	The addressee confirms receipt and understanding of your message	665	ZEV or QSL ACK
I AM ASSUMING CONTROL	I am assuming control of this net until further notice	629	ZKA
I AUTHENTICATE	The group that follows is a reply to your challenge to authenticate	619	ZNB
I READ BACK	The following is my response to your instructions to read back	659	G
I SAY AGAIN	I am repeating transmission or portion indicated	646	IMI
I SPELL	I shall spell the next word phonetically	307	
I VERIFY	That which follows has been verified by the originator at your request and is repeated (to be used only as a reply to VERIFY)	667	J
IMMEDIATE IMMEDIATE (spoken three times)	Precedence IMMEDIATE I am breaking-in to your conversation to transmit an IMMEDIATE message	517 669	O
IMMEDIATE EXECUTE	Action on the message or signal following is to be carried out on receipt of the EXECUTE (To be used only with the Immediate Executive Method)	709	IX
INFO	The addressees immediately following are addressed for information	528	INFO
INTERMITTENT	I am having trouble reading you because your signal is intermittent	633	
LONG MESSAGE	A long message is about to follow, stations with higher precedence traffic should break-in	640	
LOUD	Your signal is very strong	633	

Proword	Explanation	Para	Prosign/OPSIG
MESSAGE	A message requiring to be written down is about to follow (this proword is not used on nets primarily employed for conveying messages. It is intended for use when messages are passed on tactical or reporting nets)	637	ZBO
MORE TO FOLLOW	Transmitting station has further traffic for the receiving station	664	B
NEGATIVE	No		ZUG
NEGAT	Cancel message(s) sent previously using Delayed Executive Method (NEGAT may be used to cancel a single message or a group of messages awaiting execution)	713	NEGAT
NICK	The number following is a nicknumber	325	
NO PLAY	The message text that follows concerns a real activity and is not to be considered as exercise play (typically used to distinguish a real emergency, such as a casualty report, from exercise traffic)	227	
NOTHING HEARD	To be used when no reply is received from a called station	633	ZGN
NUMBER	Station serial number	Table 5-1	NR
OUT	This is the end of my transmission to you and no answer is required or expected	536	AR
OUT TO YOU	This is the end of my transmission to you. I am about to call (or resume a call) with other station(s).		
OVER	This is the end of my transmission to you and a response is necessary. Go ahead, transmit	536	K
PRIORITY PRIORITY (Spoken three times)	Precedence PRIORITY I am breaking-in to your conversation to transmit an IMMEDIATE message	517 669	P
RADIO CHECK	What is my signal strength and readability	633	
READ BACK	Repeat this entire transmission back to me exactly as received	639	G
READABLE	The quality of your transmission is satisfactory	633	
REBROADCAST YOUR NET	Commence automatic rebroadcasting of your other net onto this frequency	674	
RELAY (TO)	Transmit this message to all addressees (or addressees immediately following this proword) The address component is mandatory when this proword is used	641-642	T or ZOF

Proword	Explanation	Para	Prosign/OPSIG
RELAY THROUGH	Relay your message through callsign……	643	ZOK
REPORTING INTO THE NET	Calling station is joining an established net or returning after having been closed down.	620	
REPORT STRENGTH AND READABILITY	Report to me how you are receiving all other stations on the net.	634	
ROGER	I have received your last transmission satisfactorily The quality of your transmission is satisfactory	662 633	R
ROUTINE	Precedence ROUTINE	517	R
SAY AGAIN	Repeat all of your last transmission Repeat a portion of you last transmission (when used in conjunction with ALL AFTER, ALL BEFORE, WORD AFTER, WORD BEFORE , FROM or TO, or specific direction where appropriate)	646	INT IMI
SEND	I am standing by to receive (or continue to receive) your message	637	K
SEND YOUR……	I am prepared to receive the message (format or precedence) that you have offered	637	QRV
SERVICE	The message that follows is a service message	508	SVC
SILENCE SILENCE SILENCE	Cease transmissions on this net immediately, silence will be maintained until lifted (This transmission must be self-authenticated by transmission authentication or a code word when used on non-secure nets)	677	HM HM HM
SILENCE LIFTED	Silence is lifted (This transmission must be self-authenticated by transmission authentication or a code word when used on non-secure nets)	676	ZUG HM HM HM
SPEAK SLOWER	Your transmission is too fast, reduce speed of transmission		QRS
……SPEAKING	Appointment title ……..is speaking	237	
STANDBY	Execution of a tactical message transmitted using Delayed Executive Method is about to occur (upon transmission of the proword EXECUTE)	708	
STOP REBROADCASTING	Cease rebroadcasting your other net onto this frequency	674	QRT
THIS IS	This transmission is from the station whose callsign immediately follows	520	DE

Proword	Explanation	Para	Prosign/OPSIG
THIS IS A DIRECTED NET	From now until further notice this net is directed	625	ZKB
THIS IS A FREE NET	From now until further notice this net is not directed	625	ZUG ZKB
THROUGH ME	Relay your message through me		ZOE
TIME (as a component of a message) TIME (in relation to a time check)	That which immediately follows is the time or date-time group of the message The time I am transmitting is exact as at the moment I said TIME	527 801	QTR
TIME CHECK	I am about to confirm the exact time.		
TO (addressee) (text) TO (text) (group) TO (group)	The addressees immediately following are addressed for action The portion of the message to which I am referring is between …….. and …… The portion of the message to which I am referring is between group number…….. and group number……..	528 646 646	TO
UNKNOWN STATION	I do not know the callsign of the station to whom I am attempting to establish communications with	711	AA
UNREADABLE	The quality of your transmission is so bad that I cannot read you	633	
USE ABBREVIATED CALLSIGNS	Call signs are to be abbreviated until further notice	611	
USE ABBREVIATED PROCEDURE	As conditions are normal, all stations are to use abbreviated procedure until further notice	611	
USE FULL CALL SIGNS	Call signs are to be transmitted in full until further notice	611	
USE FULL PROCEDURE	As conditions are not normal, all stations are to use full procedure until further notice	611	
VERIFY	The addressee requires verification of a message (or portion indicated) from the message originator	667	J
VERY WEAK	Your signal strength is very weak	633	
WAIT	I must pause for up to five seconds before continuing/responding, no other station is to transmit during this period.	636	$\overline{\text{AS}}$
WAIT OUT	I must pause for longer than five seconds before continuing/responding, in the meantime other stations can transmit as normal	636	$\overline{\text{AS}}$ $\overline{\text{AR}}$
WEAK	Your signal strength is weak	633	

Proword	Explanation	Para	Prosign/OPSIG
WILCO	I have received your message, I understand it and I will comply with it (only used by the addressee. Since the meaning of ROGER is included in that of WILCO the two prowords are not used together.	662	
WITH INTERFERENCE	I am having trouble reading you due to interference	633	
WORD AFTER	The word to which I am referring follows……	646	WA
WORD BEFORE	The word to which I am referring precedes……..	646	WB
WORDS TWICE	Communication is difficult, transmit each phrase (or code group) twice Communication is difficult, I am transmitting each phrase (or code group) twice	639	QSZ
WRONG	Your last transmission was incorrect. The correct version is …….	661	ZWF
YOUR CALLSIGN IS	Your callsign for operating on this net is……..	621	

CHAPTER 4
DISCIPLINE

General

401. Radio discipline is a fundamental ingredient of voice procedure without which a radio net cannot function efficiently. In addition to reducing communications efficiency and accuracy, inadequate radio discipline can result in a serious degradation of security standards.

402. It is the commander's responsibility to impose and maintain discipline on a radio net. A commander may choose to exercise that responsibility through the control station. All radio nets or links must have a designated control station. In the absence of instructions to the contrary, the control station is that station serving the senior headquarters or location.

403. During difficult conditions, net efficiency can deteriorate even more rapidly if the control station permits poor operating standards.

Rules for Radio Discipline

404. The following rules for radio discipline are mandatory on all radio nets. Every station must adhere to the following:

a. Always:

i. Use correct voice procedure.

ii. Maintain a constant listening radio watch unless specific instructions or permission has been received to the contrary. This requires that at least one person be nominated to monitor the radio regardless of the circumstances. All aspects of voice procedure are based on the assumption that stations will respond to the call immediately.

iii. Ensure that the correct frequency is in use.

iv. Answer calls in the correct order and without delay.

v. Listen carefully before transmitting to ensure that the frequency is clear and, where possible allow for stations which cannot be heard.

vi. Release the press-to-talk switch promptly.

vii. On releasing the press-to-talk switch, ensure that the radio returns to the receive condition.

b. Never:

i. Violate radio silence.

ii. Compromise classified information by unauthorised plain language disclosure.

iii. Make unnecessary or unduly long transmissions.

iv. Engage in unofficial conversation or operator's chat.

v. Identify an individual, ship or unit by name, or any other personal or individual sign.

vi. Speak faster than the station experiencing the worst reception conditions can be expected to receive, thus avoiding needless repetition.

vii. Show loss of temper or use profane language.

Radio Logging

405. Whenever practical to do so, radio logs are to be maintained on all radio nets. Not all types of stations will be able to keep a full log. The operator in an armoured fighting vehicle is not expected to maintain a log as neatly or completely as say a watch keeper in a ship or headquarters who is dedicated to a single task.

406. Subject to the above, the radio log should contain a complete and continuous record of all transmitted and received messages, and information concerning the radio net. The log should be written legibly in the operator's own hand, and include all relevant details and timings of the following:

a. All transmitted and received informal messages and voice conversations in full or, where this is impractical, the gist of a message in sufficient detail to provide adequate reference information. Operators should attempt to log messages between other users of the radio net, but it is accepted that the logging of traffic between third parties is likely to be of second priority during busy periods.

b. The identity of formal messages written separately on a message form.

c. The opening and closing of the radio stations on the net.

d. Changes in operating frequency and interference reports.

e. Sufficient reference data to identify all other calls or procedural messages transmitted or received on the net.

f. Entries to the effect that the radio receiver is operating correctly in the receive condition. (These should be made at regular intervals during periods of net inactivity.)

g. Reports of stations with whom contact is difficult or suspect, amplified with any corrective action taken.

h. Unusual occurrences such as procedural or security violations, or suspected deception or jamming. Entries should include the reporting action taken.

i. Handover and takeover by the radio station operators. The receiving operator is to record his rank, name and signature to the effect that the transfer has been completed satisfactorily. Unless other arrangements exist, this signature is also to confirm that a complete accountability check of all classified and/or cryptographic material has been made.

407. Good log keeping is an essential part of the efficient operation of a radio station, particularly at Control where the operator is responsible for other stations on the net.

408. Radio logs to be held in safe keeping in accordance with national/theatre/command instructions.

CHAPTER 5
MESSAGES

Plaindress

501. A plaindress message is one in which the originator and addressee designators are indicated externally of the text.

502. A plaindress message contains all the components (unless the call serves as the address) as shown in the basic message format and must always include the precedence and date-time group.

503. The group count will always be included when the accounting symbol is employed.

Abbreviated Plaindress

504. Operational requirements for speed of handling may require abbreviation of plaindress headings. In such case, any or all of the following may be omitted:

a. Precedence.

b. Date.

c. Date-time group.

d. Group count.

Codress

505. A codress message is one in which the entire address (i.e. originator and all addressees, including address indicating groups when used), is encrypted within the text. The heading of such a message contains only information necessary to enable communication personnel to handle it properly. It contains all other components shown in the schematic diagram of a message format at Table 5-1.

Service Message

506. A service message is one between communications personnel and pertaining to any phase of traffic handling, communications facilities, or circuit conditions.

507. An encrypted service message will always carry a numerical group count and will be identified as a service message only within the encrypted text.

508. Plain-language service messages are identified by the proword SERVICE.

509. Service messages may be prepared and transmitted in plaindress, abbreviated plaindress, or codress form. They generally concern messages originated at, destined for, or refiled by, the station originating the service message, and will normally be assigned a precedence equal to that of the message to which they refer.

Abbreviated Service Message

510. An abbreviated service message is one between operators, which may be required to facilitate traffic handling. This type of message contains only prowords, address designators, identification of messages, parts of messages, and amplifying data as necessary. An abbreviated service message may be transmitted using plaindress or abbreviated plaindress procedure. It is not identified and need not be authorised in the same manner as a service message.

Informal Messages

511. Informal messages are those tactical, operational and service messages commonly sent on user operated nets, e.g., field tactical and air control. These types of traffic tend to utilise a more conversational procedure. Informal messages may contain any element of the basic message format (Table 5-1), however, they will normally only consist of a call, a text, and an ending, i.e. format lines 2, 3, 12 and 15. All elements used are to be in the sequence described in the basic message format, and when used, time groups sent in format line 14 would normally be time of transmission rather than time of origin.

Classification of Service and Abbreviated Service Messages

512. An unclassified service or abbreviated service message may be used when referring to a classified message if only prowords and message or transmission identifications are used. If it is necessary to include anything that would reveal part of the plain language text of the classified message, however, the service or abbreviated service message must be classified.

513. An unclassified service or abbreviated service message referring to a message received in codress form, or using encrypted call signs or address groups, shall use only those message or transmission identifications which were contained in the external message heading as received.

Message Format

514. Each message shall be prepared in plaindress, abbreviated plaindress, or codress form except when a commercial or International Civil Aviation Organisation form is authorised.

515. Each message prepared in either plaindress, abbreviated plaindress, or codress will have three PARTS:

a. Heading.

b. Text.

c. Ending.

516. Each message PART has certain COMPONENTS which are broken down into ELEMENTS and CONTENTS.

a. All message PARTS and a majority of the COMPONENTS and ELEMENTS have a standardised arrangement or sequential order of appearance.

b. In the schematic diagram of a message format at Table 5-1, format lines 2, 3, 4, 14, and 16 identify the procedural portion of the basic message format as designed for radiotelephone operation. Lines 5 through 13 are the unchangeable elements of the basic format. Not all format lines necessarily appear in every message; however, when used, they will be in the order indicated.

Schematic Diagram of Message Format

517. In the following diagram, note that every ELEMENT is indicated in the order of appearance in the message, but the contents of the various ELEMENTS are not necessarily indicated, as they will appear.

Table 5-1 Schematic diagram of a message format

PART	COMPONENT	ELEMENT	FORMAT LINE	CONTENT
Heading	Procedure		1	Not used.
		a. Call	2 & 3	Stations called: Proword INFO, to identify info addressees in abbreviated plaindress messages. Proword EXEMPT to identify exempted addressees. Proword THIS IS to identify the calling station
		b. Message follows		proword MESSAGE
		c. Transmission identification	4	proword NUMBER and station serial number
		d. Transmission instructions		proword RELAY TO, READ BACK, DO NOT ANSWER, WORDS TWICE; operating signals, address groups, call signs, and plain language designators.

PART	COMPONENT	ELEMENT	FORMAT LINE	CONTENT
	Preamble	a. Precedence, Date-Time Group, message instructions.	5	Precedence designation; ROUTINE, PRIORITY, IMMEDIATE or FLASH. Proword TIME; date and time expressed in digits, and zone suffix, month indicated by the first three letters, and, if required by national authorities the year indicated by the last two digits, operating signals and proword EXECUTE TO FOLLOW or IMMEDIATE EXECUTE.
	Address	a. Originator	6	proword FROM. Originator's address designator
		b. Action addressees	7	proword TO. Action addressee address designators
		c. Information addressees	8	proword INFO. Information addressee address designators
		d. Exempted addressees	9	proword EXEMPT. Exempted addressee address designators
	Prefix	a. Accounting information. Group count	10	accounting symbol; group count; proword GROUPS or proword GROUP NO COUNT
Separation				Proword BREAK
Text	Text	a. Subject matter	12	CLEAR, UNCLASSIFIED, proword SERVICE and/or internal instructions as appropriate, thoughts or ideas as expressed by the originator
Separation				Proword BREAK

Format Lines 2 and 3 (Calling and Answering)

518. These lines will contain the call, the proword MESSAGE, and the transmission identification

519. **The Call.** The call of a message serves to identify the stations between which that particular message is being transmitted. It may also serve as the address of the message when the designators of the originator and addressees are the same as the call signs of the stations in communication with each other on the same net.

520. The call may take one of the following forms:

a. **Full Call.**

Example:

Y13C Call sign of called station

THIS IS From

Z34D Call sign of transmitting station

b. **Abbreviated Call.** The call sign of the called station may be omitted when a call is part of an exchange of transmissions between stations and no ambiguity will result.

Example:

THIS IS From

Sabine Raider Call sign of transmitting station

c. For speed of working when conditions are good, particularly on large nets, the receiving station may further omit the proword THIS IS

d. When responding to a call or receipting for a transmission.

e. When two stations are in continuous communication with each other on a net not shared by a third station, the call may be omitted entirely, provided no confusion would result. For ground forces use, this provision may apply to any two stations within the same net which are in continuous communications with each other. However, in either of the foregoing instances, the requirement for periodic identification as set forth in appropriate national and/or international regulations must be adhered to, as far as possible.

f. An aeronautical station may acknowledge an aircraft message by transmitting the identification of the aircraft.

521. The call may contain:

a. Individual call signs identifying stations (addressees) separately.

b. Collective call signs identifying a predetermined group of stations (addressees).

c. A combination of both individual and collective call signs.

d. Net call sign identifying all stations on a given net.

522. The call may be of two types:

a. **Single call.** Only one call sign precedes the proword THIS IS. This may be an individual, collective or net call sign.

Example:

D381 THIS IS Z34D – OVER

b. **Multiple call.** Two or more call signs precede the proword THIS IS. These may be individual and/or collective and/or net call signs.

Example using two individual call signs:

Damp Lion – Hollow Piston THIS IS Sabine Raider – OVER

523. **Exempting stations.** When placing a multiple call to many but not all stations, it may be simpler to call using a collective or net call sign and then to exclude non-addressee stations by use of the proword EXEMPT and the call signs of the exempted stations.

Example:

Y13C EXEMPT F178 THIS IS Z34D – OVER

524. **Message.** The proword MESSAGE may be transmitted immediately following the call to indicate that a message that requires recording is about to follow. The proword FORMAL MESSAGE may be used to indicate the message is in plaindress format.

525. **Transmission Identification.** A transmission identification is not normally used on voice nets but, if required, it will be the last element of format lines 2 and 3 and will consist of the station serial number preceded by the proword NUMBER

Format Line 4 (Transmission Instructions)

526. This line contains the transmission instructions which may consist of prowords WORDS TWICE, READ BACK, RELAY (TO) or DO NOT ANSWER. The use of these prowords is explained in para's 639-645 and 659.

Format Line 5 (Preamble)

527. This line will contain the precedence, date-time group, and message instructions:

a. **Precedence.** The appropriate precedence designation is transmitted as the first element of format line 5. In the case of dual-precedence messages, the higher precedence designation will be transmitted first.

b. **Date-Time Group.** The proword TIME followed by the date-time group and zone suffix, month indicated by the first three letters and if required by national authorities, the year indicated by the last two digits is transmitted immediately after the precedence designation. An abbreviated

plaindress message may carry no date-time group, or a time group transmitted in line 14 may replace the date-time group.

Example:

95 – THIS IS 92 – RELAY TO 20 – PRIORITY – TIME Zero Seven One Six Three Zero Zulu……

c. **Message Instructions.** These should not normally be required on radiotelephone messages. When included, they will consist of short and concise instructions, which will remain with the message to the station of destination.

Example:

THIS MESSAGE IS A SUSPECTED DUPLICATE

FORMAT LINES 6, 7, 8 AND 9 (ADDRESS)

528. These lines form the address of the message and are recognised by the prowords FROM, TO, INFO and EXEMPT, respectively. When the originator and the addressees are in communication with each other on the same net, the call will serve as the address.

Example A:

Plaindress message heading showing all possible elements of the address component (assuming abbreviated call signs are in use):

Transmission	Explanation
3C	Collective call sign of stations called
THIS IS	From
4D	Call sign of station calling
MESSAGE	A message that requires recording is about to follow
PRIORITY	Precedence designation
TIME	The time of origin is
One Two	
One Six	
Three Zero	
Zulu JAN	Date-time group (121630Z JAN)

Address	
FROM	The originator of this message is
4D	Call sign of originator
TO	The action addressee is
3C	Collective call sign of action addressees
INFO	The information addressee is
20	Call sign of information addressee is
EXEMPT	The exempted addressee is
78	Call sign of exempted addressee

Example B:

Abbreviated plaindress message showing three elements in the address component (assuming abbreviated call signs are in use):

Transmission	Explanation
81	Call sign of receiving station
THIS IS	From
06	Call sign of calling station
Address	
FROM	The originator of this message is
06	Call sign of originator
TO	The action addressee is
20	Call sign of action addressee (not on net)
INFO	The information addressee is
81	Call sign of information addressee

Example C:

Abbreviated plaindress message with call sign serving as the address, action addressees only (assuming abbreviated call signs are in use):

Transmission	Explanation
Call and address	
Oven	Call sign of receiving station and action addressee
THIS IS	From
Piston	Call sign of station calling and originator of the message
PRIORITY	Precedence designation
Text	Subject matter
TIME	Time of origin is
One Two Three Four Zulu	..Time group

Example D:

Abbreviated plaindress message with the call sign serving as the address, action and information addressees (assuming abbreviated call signs are in use):

Transmission	Explanation
Call and address	
DAMP LION	Call sign of station called and action addressee
INFO	The information addressee is
CHALKY SIPHON	Call sign of station called and information addressee
THIS IS	From
BRASSY OVEN	Call sign of station calling and originator of the message
Text	Subject matter
TIME	Time of origin is
One Eight Two Four Zulu……..	Time group

Note: When the call sign serves as the address, a full call sign is mandatory when transmitting the message even though a preliminary call may have been used to ascertain that stations were ready to receive.

Format Line 10 (Prefix)

529. This line is identified by the proword GROUPS followed by the number of groups, or GROUPS NO COUNT. It may contain an accounting symbol in addition to the group designation.

a. **Accounting Information.** Accounting symbols are seldom used on messages transmitted over radiotelephone nets. However, they may appear on messages received for relay from nets employing other procedures and should be recognised as such. These accounting symbols are a combination of letters used to indicate the agency, service, or activity, which assumed financial responsibility for the message.

b. **Group Count.** Radiotelephone messages are usually short and a group count is seldom used. However, the number of groups if sent will be preceded by the proword GROUPS and will normally appear in the message prefix. When a message is transmitted before the group count is determined, the prowords GROUPS NO COUNT will be used in lieu of the group count. The actual group count may then be transmitted in the final instructions and be inserted in the message prefix by the receiving operator. The prowords GROUPS NO COUNT will be included in messages bearing an accounting symbol when groups are not counted.

530. Some tactical codes require that the group count be transmitted at the end of the text rather than in format line 10. In such cases, format line 10 is not used and the group count is transmitted in accordance with the operating instructions for the code.

Format Line 11 (Separation)

531. This line contains the proword BREAK, separating the text from the heading. It is used only when confusion between the heading and the text is likely.

Format Line 12 (Text)

532. This is the text of the message and may contain, prior to the thoughts or ideas as expressed by the originator, the word UNCLASSIFIED or the word CLEAR if specifically authorised (ACP121), the proword SERVICE, and internal instructions.

Format Line 13 (Separation)

533. This line contains the proword BREAK, separating the text from the ending. It is used only when confusion between the text and the ending is likely.

Format Line 14 (Time Group)

534. This line is used only in abbreviated plaindress messages when a time group transmitted here takes the place of a date-time group in line 5. It consists of the proword TIME followed by the time group plus the zone suffix.

Format Line 15 (Final Instructions)

535. May contain prowords (such as AUTHENTICATION IS, CORRECTION, I SAY AGAIN, MORE TO FOLLOW, STANDY EXECUTE, WAIT) operating signal, address groups, call signs, and plain-language designators.

Format Line 16 (Ending Sign)

536. This line is identified by the prowords OVER or OUT:

a. Every transmission shall end with either the proword OVER or the proword OUT, except that the proword OVER may be omitted when two stations are in continuous communication with each other on a net not shared with a third or, in the case of ground forces, where two stations within the same net are in continuous communication with each other where confusion will not arise.

b. In all transmissions where the proword DO NOT ANSWER is used, the transmission shall be ended with the proword OUT.

CHAPTER 6
OPERATING RULES

General

601. To use net time more efficiently, all messages or their substance should be written down prior to transmission. Those messages which must be delivered by the receiving operator to another person, or which are preceded by the proword MESSAGE, shall be written down.

602. Transmissions by radiotelephone shall be as short and concise as practicable, consistent with clarity. The use of standard phraseology enhances brevity.

603. Radiotelephone transmissions should be clear, with natural emphasis on each word except the prescribed pronunciation of a numeral, and should be spoken in natural phrases, not word by word.

604. If it is technically practical, the operator shall, during the transmission of a message, pause after each natural phase and interrupt his transmission (carrier) momentarily, to allow another station to break in if necessary.

605. To avoid interfering with other traffic, an operator shall listen to make certain that a net is clear before making any transmission.

606. When it is necessary for a station to initiate test signals, either for the adjustment of a transmitter before making a call or for the adjustment of a receiver, such signals will not continue for more than 10 seconds and will be composed of spoken numerals (1, 2, 3 etc.) followed by the call sign of the station transmitting the signals.

Sequence of Call Signs and/or Address Groups

607. The following rules govern the sequence of call signs and/or address groups in calling and answering and of those included in components of messages:

a. Call signs and/or address groups in message headings will ordinarily be arranged in alphabetical order in the form in which they are to be transmitted, whether plain or encrypted. For this purpose, / (slant) and figures 1 through 0 will be considered the twenty-seventh through thirty-seventh letters of the alphabet. Care must be exercised to avoid separating groups of related call signs and/or conjunctive address groups that are interdependent.

b. When abbreviated call signs are used on a net, the sequence of answering a collective call is to be the same as if full call signs were in use. This avoids any confusion that may arise when changing from full to abbreviated call signs.

c. If several stations are called in one transmission and one fails to answer in its turn, the next in turn answers after a 5-second pause. The defaulting station then answers last, if able to do so.

Establishing a Net

608. The use of procedure as prescribed herein shall be followed either when opening a net for the first time or when reopening a net. Proper control by the net control station (NCS) and adherence to operating rules by all stations within the net enable the net to begin and maintain an exchange of traffic with minimum delay. The NCS is also responsible for maintaining security on its net. Appropriate security guidance will be furnished by the NCS to all stations prior to establishing a net.

609. Full call signs must be used when establishing a net.

610. Before passing traffic it may be necessary to establish the reception conditions for all stations.

Example A:

At a designated time or when ready to establish the net, Z34D transmits:

Y13C – THIS IS Z34D – OVER

Each subordinate station then answers the call in alphanumeric order:

(Z34D THIS IS) A192 – OVER

(Z34D THIS IS) C206 – OVER

(Z34D THIS IS) D381 – OVER

(Z34D THIS IS) E969 – OVER

(Z34D THIS IS) F178 – OVER

(Z34D THIS IS) H795 – OVER

The NCS now calls the net to inform all stations that their transmissions have been heard and that there is no traffic for them:

(Y13C– THIS IS) Z34D – OUT

Example B:

In this example, the subordinate station E969 is unable to answer the collective call. Z34D transmits:

Y13C – THIS IS Z34D – OVER

The first three stations then answer;

(Z34D THIS IS) A192 – OVER

(Z34D THIS IS) C206 – OVER

(Z34D THIS IS) D381 – OVER

F178, hearing no answer from E969, waits approximately 5 seconds and then transmits:

(Z34D THIS IS) F178 – OVER

H795 follows on:

(Z34D THIS IS) H795 – OVER

After receiving answers from all stations except E969, Z34D transmits:

(Y13C – THIS IS) Z34D – ROGER – E969 – NOTHING HEARD – OUT

Abbreviated Callsigns and Procedure

611. Once the net has been established, it will normally work using abbreviated call signs and procedures as follows:

a. The proword THIS IS may be omitted from all calls

b. Callsigns will be abbreviated by truncating the callsign to the last two characters (order of answering remains the same as for full callsigns)

c. Preliminary calls are optional in accordance with para. 638.

612. The NCS may, however, order the net to revert to full procedures and/or call signs as dictated by the prevailing conditions.

613. **Abbreviated Call Signs.** At the discretion of the NCS and when conditions permit, the NCS may order the use of abbreviated callsigns by using the proword USE ABBREVIATED CALLSIGNS.

614. **Full Call Signs.** On initial establishment of the net or at any other time when conditions require it, the NCS may order the use of full call signs by using the proword USE FULL CALL SIGNS.

615. **Abbreviated Procedure.** At the discretion of the NCS and when conditions permit, the NCS may order the use of abbreviated procedure by using the proword USE ABBREVIATED PROCEDURE.

616. **Full Procedure.** If the NCS judges that conditions are such that the use of abbreviated procedure will cause unnecessary repetitions, the NCS orders the use of full procedure by using the proword USE FULL PROCEDURE

617. Abbreviated or full use of callsigns is exclusive from abbreviated or full use of procedure: For example: a station using full callsigns and procedure is ordered to use abbreviated call signs, therefore the net must continue to use full procedure.

618. For brevity, an NCS ordering use of abbreviated callsigns and procedure may combine prowords and order USE ABBREVIATED CALLSIGNS AND ABBREVIATED PROCEDURE. Conversely, when changing to full callsigns and procedure the combined prowords USE FULL CALLSIGNS AND FULL PROCEDURE may be used.

Example A:

Upon establishment of the net the NCS transmits:

> Y13C – THIS IS Z34D – USE ABBREVIATED CALLSIGNS AND ABBREVIATED PROCEDURE – OUT

Example B:

The NCS orders the use of full procedure (assuming full call signs are in use):

> Y13C – THIS IS Z34D – USE FULL PROCEDURE – OVER

Each station answers in turn using full procedure:

> Z34D – THIS IS A192 – ROGER – OUT
>
> Z34D – THIS IS C206 – ROGER – OUT
>
> (The other stations on the net acknowledge in turn).

Example C:

The NCS orders the use of abbreviated callsigns (assuming abbreviated procedure is in use):

> 3C – THIS IS 4D – USE ABBREVIATED CALLSIGNS – OVER

Each station answers in turn using abbreviated procedure and callsigns

> (4D – THIS IS) 92 – ROGER – OUT
>
> (4D – THIS IS) 06 – ROGER – OUT
>
> (The other stations on the net acknowledge in turn)

Authentication

619. Used only on non-secure nets, there are two distinct methods of authentication:

a. **Challenge and reply.** A method whereby one station challenges another; this entails a station issuing the challenge by transmitting the proword AUTHENTICATE along with a sequence of figures or characters from an authentication table. The station being challenged then responds with the proword I AUTHENTICATE along with the corresponding reply of figures or characters derived from a similar authentication table.

b. **Transmission authentication.** A method whereby a station authenticates their own transmission by using the proword AUTHENTICATION IS in conjunction with a sequence of figures or characters from a transmission authentication table that correspond with the time of the transmission.

Example A – Challenge and Reply:

Z34D transmits an order to H795:

95 – THIS IS – 4D – Move now – OVER

H795, unsure of the authenticity of Z34D's transmission, issues the challenge:

(4D – THIS IS) 95 – AUTHENTICATE Charlie Oscar – OVER

Z34D responds:

(95 – THIS IS) (4D) – WAIT (short pause whilst the authentication reply is determined) – I AUTHENTICATE Whiskey – OVER

H795 transmits:

(4D – THIS IS) (95) – OUT

Example B – Transmission authentication:

Z34D transmits an order to H795 using transmission authentication:

95 – THIS IS 4D – Move now – AUTHENTICATION IS Lima Tango OVER

H795 transmits

(4D – THIS IS) 95 – WAIT (short pause whilst transmission authentication is confirmed) – ROGER – OUT

Joining a Working Net

620. Stations joining a net after it has commenced working are to use the proword REPORTING INTO THE NET in their initial call to the NCS. When working non-secure, the NCS is to authenticate the joining station.

Example:

E969 was unable to transmit on the establishment of the net (para. 610 Example B) is now able to transmit and calls the NCS to report into the net:

Z34D – THIS IS E969 – REPORTING INTO THE NET – OVER

Z34D transmits:

E969 – THIS IS Z34D – AUTHENTICATE Mike Tango – OVER

E969 transmits:

THIS IS E969 – I AUTHENTICATE Bravo – OVER

Z34D transmits:

THIS IS Z34D – USE ABBREVIATED CALLSIGNS AND ABBREVIATED PROCEDURE – OUT

621. When joining a net, if the joining station has not been pre-allocated a call sign then it is to either use an Address Group or, if joining from another net, the NIC and call sign from that net. After successful authentication, the NCS is to assign a spare callsign using the proword YOUR CALLSIGN IS and is to advise who they are to follow in the sequence of answering net calls using the proword ANSWER AFTER.

Example:

A new station using the callsign M172 from another net (NIC VV2X) has reported into the net and has been successfully authenticated. The NCS assigns the spare callsign J32F

New station M172 transmits:

Z34D – THIS IS M172 – NIC VV2X – REPORTING INTO THE NET – OVER

Z34D transmits:

M172 – THIS IS Z34D – AUTHENTICATE Yankee Yankee – OVER

M172 transmits:

THIS IS M172 – I AUTHENTICATE Golf – OVER

Z34D satisfied that the authentication reply was correct transmits:

> THIS IS Z34D – YOUR CALLSIGN IS – J32F – ANSWER AFTER – CALLSIGN H795 – USE ABBREVIATED CALLSIGNS AND ABBREVIATED PROCEDURE – OVER

M172 transmits using their assigned callsign J32F:

> (THIS IS) 2F – ROGER – OUT

Directing a Change in Frequency

622. As with all other activities that change the characteristics of a net, a shift in frequency should be disguised as much as possible in the interest of communications security. Signal instructions for the net should, wherever possible, provide agreed nicknames to be used for foreseeable changes in frequency. If these are available, the following procedure will be used:

Example

The NCS changes the net to a new frequency using the nickname FAST TABLE:

> 3C – THIS IS 4D – FAST TABLE – OVER

Each subordinate station answers in turn and confirms to the NCS that the purpose of that nickname is understood by restating it in their reply:

> (4D – THIS IS) 92 – FAST TABLE – OVER

> (4D – THIS IS) 06 – FAST TABLE – OVER

The NCS transmits the order to change:

> (3C – THIS IS) 4D – FAST TABLE – OUT

623. If the change is not planned or if there is no agreed nickname, the change is to be directed using a frequency designator. In such cases, authentication must be used.

Example A:

The NCS directs the net to change to a new frequency using the designator B11, where a transmission authentication system is in use:

> 3C – THIS IS 4D – Change to Frequency Bravo One One – TIME One Eight One Six – AUTHENTICATION IS Foxtrot Romeo – OVER (the time of authentication may be given if considered necessary depending on instructions for the authentication system in use).

Having verified the authentication, the subordinate stations answer in turn:

(4D – THIS IS) 92 – ROGER – OUT

(4D – THIS IS) 06 – ROGER – OUT, etc.

Example B:

The NCS changes the net to a new frequency using the designator B11 where a transmission authentication system is not in use:

3C – THIS IS 4D – Change to Frequency Bravo One One – OVER

The first station to reply seeks authentication:

(4D – THIS IS) 92 – AUTHENTICATE Delta Hotel – TIME One Eight One Six – OVER (The time of authentication may be given if considered necessary, depending on instructions for the authentication system in use.)

The NCS Authenticates:

(92 – THIS IS) 4D – I AUTHENTICATE Mike – OVER

Callsign A192, satisfied with the authentication response, acknowledges the order to change frequency:

(4D – THIS IS) 92 – ROGER – OUT

(4D – THIS IS) 06 – ROGER – OUT, etc.

624. When the shift has been executed, the NCS will decide whether it is necessary under the conditions to check that the net has been re-established on the new frequency. In the interests of communications security, this should only be done if the NCS considers that the net may not be fully working for some reason. If the NCS does decide to re-establish the net, it will be done as described in para. 610.

Directed and Free Nets

625. The type of net and method of operation is determined from consideration of operational factors involved.

a. **Free Net.** In this type of net, the net control station (NCS) authorises member stations to transmit traffic to other stations in the net without obtaining prior permission from the NCS. Free net operation does not relieve the control station of the responsibility for maintaining net discipline.

b. **Directed Net.** In this type of net, stations obtain permission from the NCS prior to communicating with other stations in the net. Permission is not required for the transmission of FLASH messages, which shall be sent

direct. Transmissions on a directed net may also be accomplished in accordance with predetermined schedules.

626. A net is deemed to be a free net unless otherwise ordered. When it is required to change a free net to a directed net, or vice versa, one of the prowords THIS IS A FREE NET or THIS IS A DIRECTED NET shall be used by the NCS.

627. Directed Nets:

a. The following example illustrates the manner in which the NCS announces that the net is directed and requests the amount and precedence of traffic to be transmitted (assuming abbreviated call signs are in use).

Example:

Z34D transmits:

3C – THIS IS 4D – THIS IS A DIRECTED NET – of what precedence and for whom are your messages – OVER

Each subordinate station then answers in the alphanumeric order of his full call sign, indicating traffic on hand:

(4D – THIS IS) 92 – One IMMEDIATE and one ROUTINE for you – OVER

(4D – THIS IS) 06 – No Traffic – OVER

(4D – THIS IS) 81 – ROUTINE for 92 – OVER

(4D – THIS IS) 69 – PRIORITY for 95 – OVER

(4D – THIS IS) 78 – No Traffic – OVER

(4D – THIS IS) 95 – No Traffic – OVER

Z34D then informs the stations that their transmissions have been heard and commences to clear traffic in order of precedence:

(3C – THIS IS) 4D – ROGER – 92 – Send your IMMEDIATE – OVER

After A192 completes his IMMEDIATE to Z34D, the NCS orders the station with the next highest precedence message to transmit his message:

69 – THIS IS 4D – Send your PRIORITY – OUT

H795, hearing this authorisation, tells E969 to go ahead:

(69 – THIS IS) 95 – SEND – OVER

(Failure of H795 to answer immediately would necessitate E969 making a preliminary call to H795.)

(95 – THIS IS) 69 – PRIORITY – TIME, etc.

After H795 receipts for the message and transmits the proword OUT, the NCS continues to authorise stations to transmit their messages in order of precedence until his traffic list is cleared.

b. When the traffic list is cleared, stations having messages to transmit should call the NCS and request permission to transmit.

Example:

H795, having one ROUTINE message for C206, transmits:

4D – THIS IS 95 – ROUTINE for 06 – OVER

Z34D transmits:

(95 – THIS IS) 4D – send your message – OUT or, if higher precedence traffic is awaiting transmission, (95 – THIS IS) 4D – WAIT OUT

When net conditions permit, Z34D informs H795 that they may transmit their message:

95 – THIS IS 4D – Send your message – OUT

C206, hearing the authorisation, should then transmit:

(95 – THIS IS) 06 – SEND – OVER

This is in order to avoid requiring H795 to make a preliminary call. H795 then proceeds with the transmission of their ROUTINE message.

Delegating and Assuming Net Control

628. It may be necessary for net control to be delegated to a subordinate station when effective net control cannot be maintained by the NCS or when the NCS has to leave the net for any reason. In such cases, the proword ASSUME CONTROL is to be used.

Example:

The NCS is closing down for 30 minutes and decides that D381 is in the best position to assume net control. The NCS transmits:

3C – THIS IS 4D – Am closing down for three zero minutes – 81 – ASSUME CONTROL – TIME One Eight Three Zero Zulu – AUTHENTICATION IS Quebec Lima – OVER

The subordinate stations answer in turn:

(4D – THIS IS) – 92 ROGER – OUT

(4D – THIS IS) 06 – ROGER – OUT

(4D – THIS IS) 81 – WILCO – OUT

(4D – THIS IS) 69 – ROGER – OUT

(4D – THIS IS) 78 – ROGER – OUT

(4D – THIS IS) 95 – ROGER – OUT

629. Other occasions may arise where the NCS is not in a position to give warning that they are leaving the net. In such cases, the senior subordinate station will normally assume net control but, before doing so, they must confirm that other stations on the net cannot hear the NCS.

Example:

Nothing has been heard from the NCS. E969, as the senior subordinate station, transmits:

3C – THIS IS 69 – Have you heard anything from 4D – OVER

There is no reply from the NCS, and the other stations transmit:

(69 – THIS IS) 92 – NOTHING HEARD – OVER

(69 – THIS IS) 06 – NOTHING HEARD – OVER

E969 then transmits:

(3C – THIS IS) 69 – NOTHING HEARD from 4D – I AM ASSUMING CONTROL – OVER

Subordinate station reply in order:

(69 – THIS IS) 92 – ROGER – OUT

(69 – THIS IS) 06 – ROGER – OUT, etc.

630. When the NCS re-joins the net, it does so using the proword I AM ASSUMING CONTROL and must give authentication:

Example:

The NCS wishes to resume control of the net and transmits:

3C – THIS IS 4D – I AM ASSUMING CONTROL – TIME One Eight Three Zero Zulu – AUTHENTICATION IS X-ray Oscar – OVER

The subordinate stations reply in order:

(4D – THIS IS) 92 – ROGER – OUT

(4D – THIS IS) 06 – ROGER – OUT, etc.

Radio Checks, Signal Strength and Readability

631. A station is understood to have good signal strength and readability unless otherwise notified. Strength of signals and readability will not be exchanged unless one station cannot clearly hear another station.

632. A station that wishes to inform another of his signal strength and readability will do so by means of a short and concise report of actual reception such as, WEAK BUT READABLE, LOUD BUT DISTORTED, WEAK WITH INTERFERENCE, etc. Reports such as "five by five," "four by four," etc., will not be used to indicate strength and quality of reception.

633. The prowords listed below are for use when initiating and answering queries concerning signal strength and readability:

a. General:

i. **RADIO CHECK.** What is my signal strength and readability; how do you hear me?

ii. **ROGER.** I have received your last transmission satisfactorily. The omission of comment on signal strength and readability is understood to mean that reception is loud and clear. If reception is other than loud and clear, it must be described with the prowords for (2) and (3) below.

iii. **NOTHING HEARD.** To be used when no reply is received from a called station.

b. Report of Signal Strength:

i. **LOUD.** Your signal is very strong.

ii. **GOOD.** Your signal strength is good.

iii. **WEAK.** Your signal strength is weak.

iv. **VERY WEAK.** Your signal strength is very weak.

v. **FADING.** At times your signal strength fades to such an extent that continuous reception cannot be relied upon.

c. Report of Readability:

i. **CLEAR.** The quality of your transmission is excellent.

ii. **READABLE.** The quality of your transmission is satisfactory.

iii. **UNREADABLE.** The quality of your transmission is so bad that I cannot read you.

iv. **DISTORTED.** Having trouble reading you due to signal distortion.

v. **WITH INTERFERENCE.** Having trouble reading you due to interference.

vi. **INTERMITTENT.** Having trouble reading you because your signal is intermittent.

Example (Assuming Abbreviated Call Signs Are in Use):

Z34D desires a radio check with Y13C (net callsign) and transmits:

3C – THIS IS 4D – RADIO CHECK – OVER

All stations of the collective call hear Z34D loud and clear except C206 and D381. The replies of each station, in order, are:

(4D – THIS IS) 92 – ROGER – OVER

(4D – THIS IS) 06 – GOOD READABLE – OVER

(4D – THIS IS) 81 – WEAK WITH INTERFERENCE – OVER

(4D – THIS IS) 69 – ROGER – OVER

(4D – THIS IS) 78 – ROGER – OVER

(4D – THIS IS) 95 – ROGER – OVER

Z34D indicates his reception of each of the called stations was loud and clear except for C206, who had strong signal strength but was distorted, and D381, who was not heard, by replying:

(3C – THIS IS) 4D – ROGER – 06 LOUD DISTORTED – 81 – NOTHING HEARD – OUT

In the event Z34D hear all stations loud and clear, the reply would have been:

(3C – THIS IS) 4D – ROGER –OUT

Strength and Readability Report

634. The NCS may wish to determine how each of the net stations are receiving each other in order to:

a. Determine the suitability of the operating frequency,

b. Determine if relay procedures (see para. 641) will be required for the passage of messages between stations, or

c. Assist in isolating problems with transmitters or receivers through the experience of the other stations.

635. Performed immediately after a RADIO CHECK, the Proword REPORT STRENGTH AND READABILITY is used to direct stations to report how they receive all other stations on the net.

Example:

Z34D having just completed the radio check:

3C – THIS IS 4D –REPORT STRENGTH AND READABILTY – OVER

All stations respond:

(4D – THIS IS) 92 – ROGER – OVER

(4D – THIS IS) 06 – ROGER – OVER

(4D – THIS IS) 81 – All Stations LOUD AND CLEAR except 06 – WEAK WITH INTERFERENCE and 78 – WEAK READABLE – OVER

(4D – THIS IS) 69 – ROGER – OVER

(4D – THIS IS) 78 – ROGER – OVER

(4D – THIS IS) 95 – ROGER – OVER

Delay in Response

636. A station, who is transmitting or required to respond, that needs to pause to prepare their response, may do so using the Prowords WAIT or WAIT OUT.

a. **WAIT.** Advises the receiving stations that a brief pause (up to five seconds) is required during which time other stations are not to interrupt.

During this pause the operator is to release the press-to-talk button. After five seconds, if there is need for a further pause, the operator may again transmit WAIT. WAIT may be used up to three times consecutively at which point the Proword WAIT OUT must be used.

b. **WAIT OUT.** Advises the receiving station(s) that when the transmitting station is ready to continue or respond, they will establish a new call. WAIT OUT may also be used by the NCS to direct a station to cease their current conversation.

Preliminary Calls

637. When communication is difficult or when the calling station wishes to ascertain whether the station called is ready to receive a message, a preliminary call will be sent before transmitting a message.

Example A:

C206 wishes to transmit a message to E969 and desires to know if E969 is ready to accept it. C206 transmits:

69 – THIS IS 06 – MESSAGE – OVER

E969, ready to accept the message, transmits by using the proword SEND:

(06 – THIS IS) 69 – SEND – OVER

C206 transmits:

(69 – THIS IS) (06) – ROUTINE, etc.

Example B:

D381 wishes to transmit a message to H795 and desires to know that H795 is ready to accept it. D381 transmits:

95 – THIS IS 81 – PRIORITY – OVER

H795, not prepared to accept the traffic immediately transmits:

(81 – THIS IS) 95 – WAIT

After a short pause, H795 is ready and transmits:

SEND YOUR PRIORITY – OVER

Note: If the delay for H795 had been longer than a few seconds, H795 would have transmitted:

(81 – THIS IS) 95 – WAIT OUT

When ready to accept the message, H795 would transmit:

81 – THIS IS 95 – SEND YOUR PRIORITY – OVER

Transmitting a Message

638. **Communications Good.** When communication reception is satisfactory, message parts need to be transmitted only once and preliminary calls are optional.

Example A:

Z34D transmits:

78 – THIS IS 4D – PRIORITY – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

F178, having received the transmission satisfactorily, transmits:

(4D – THIS IS) 78 – ROGER – OUT

Example B:

F178, having missed the transmission, transmits:

(4D – THIS IS) 78 – SAY AGAIN – OVER

Z34D transmits:

(78 – THIS IS) (4D –) I SAY AGAIN – 78 – THIS IS 4D – PRIORITY – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

F178, having still not read the words after convoy, transmits:

(4D – THIS IS) (78)– SAY AGAIN ALL AFTER Convoy – OVER

Z34D transmits:

(78 – THIS IS) (4D) – I SAY AGAIN ALL AFTER Convoy – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

F178 transmits:

(4D – THIS IS) (78) – ROGER – OUT

639. **Communications Difficult.** When communication is difficult, call signs should be transmitted twice. Phrases, words, or groups may be transmitted twice and indicated

by use of the proword WORDS TWICE. Reception may be verified by use of the proword READ BACK.

Example A:

E969 transmits:

> A192 – A192 – THIS IS E969 – E969 – PRIORITY PRIORITY – OVER

A192 transmits:

> E969 – E969 – THIS IS A192 A192 – SEND YOUR PRIORITY – OVER

E969 transmits:

> A192 – A192 – THIS IS E969 – E969 – WORDS TWICE – WORDS TWICE – PRIORITY – PRIORITY – Convoy has arrived – Convoy has arrived – TIME One Six Three Zero Zulu – TIME One Six Three Zero Zulu – OVER

A192 transmits:

> E969 – E969 – THIS IS A192 – A192 – SAY AGAIN – SAY AGAIN – WORD BEFORE has – WORD BEFORE has – OVER

E969 transmits:

> A192 – A192 – THIS IS E969 – E969 – I SAY AGAIN – I SAY AGAIN – WORD BEFORE has – WORD BEFORE has – Convoy – Convoy – OVER

A192 transmits:

> E969 – E969 – THIS IS A192 – A192 – ROGER – ROGER – OUT

Example B:

The text consists of code groups.

E969 transmits:

> A192 – A192 – THIS IS E969 – E969 – WORDS TWICE – WORDS TWICE – PRIORITY – PRIORITY – TIME One Two Zero Nine Zero Three Zulu – TIME One Two Zero Nine Zero Three Zulu – GROUPS EIGHT – GROUPS EIGHT – Alfa Mike Lima Quebec Delta – Alfa Mike Lima Quebec Delta – Romeo Oscar Charlie Zulu Yankee – Romeo Oscar Charlie Zulu Yankee, etc. – OVER

A192 transmits:

> E969 – E969 – THIS IS A192 – A192 – ROGER – ROGER – OUT

Long Message Procedure

640. Long Message Procedure is required to reduce time spent on the air and allow another station to break in with precedence traffic if required. Transmission length should be no longer than 20 seconds in any one transmission.

Example:

92 – THIS IS 69 – LONG MESSAGE – OVER

(69 – THIS IS) – 92 – SEND – OVER

(92 – THIS IS) (69) – Text (transmit for 20 seconds maximum) – MORE TO FOLLOW – OVER

(THIS IS) (92) – SEND – OVER

Callsign E969 pauses briefly to allow another station to break in if required.

(92 – THIS IS) (69) – Text (continue with remainder of message, again transmitting in 20 second periods repeating the procedure as necessary to transmit the entire message). – OVER

On completion of entire transmission receiving station A192 will receipt the message or seek repetitions as necessary.

Relay

641. The proword RELAY used alone indicates that the station called is to relay the message to all addressees.

Example:

Z34D transmits:

92 – THIS IS 4D – RELAY – PRIORITY – TIME One One One Three Two Two Zulu – FROM 4D – TO 95 – Proceed on mission assigned – OVER

A192 transmits:

(4D –THIS IS) 92 – ROGER – OUT

A192 relays the message:

95 – THIS IS 92 – PRIORITY – TIME One One One Three Two Two Zulu – FROM 4D – TO 95 – Proceed on mission assigned – OVER

H795 transmits:

(92 – THIS IS) (95) – ROGER – OUT

642. The proword RELAY TO followed by an address designator indicates that the station called is to relay the message to the stations indicated. When more than one station is called, the call sign of the station designated to perform the relay will precede the proword RELAY TO.

Example A:

Z34D transmits:

92 – THIS IS 4D – RELAY TO 95 – PRIORITY – TIME One One One Three Two Two Zulu – Proceed on mission assigned – OVER

A192 transmits:

(4D – THIS IS) 92 – Roger – OUT

A192 relays the message:

95 – THIS IS 92 – FROM 4D – PRIORITY – TIME One One One Three Two Two Zulu – Proceed on mission assigned – OVER

H795 transmits:

(92 – THIS IS) 95 – ROGER – OUT

Example B:

C206 transmits:

81 – 78 – THIS IS 06 – 81 – RELAY TO 20 – ROUTINE –TIME Two One Zero 81 Four Zulu – FROM C206 – TO B420 – INFO D381 – F178 – BREAK – Text – OVER

D381 transmits:

(06 – THIS IS) 81 – ROGER – OUT

F178 transmits:

(06 – THIS IS) 78 – ROGER – OUT

D381 relays the message to B420

Note: In this case, D381 has relayed the message to B420, who is an off-net station, using radiotelephone procedure. At times, it is necessary to relay a message originated on a radiotelephone net by some other means of communications. When such relay is

necessary, it is the responsibility of the station relaying the message to use the proper format for the means of communications employed for relay.

643. The proword RELAY THROUGH allows the NCS or another station to indicate a station that can relay a message.

Example:

F178 attempts to transmit a message to E969 but cannot contact them. The NCS directs F178 to relay through A192 who is known to be in contact with E969:

78 – THIS IS 4D – RELAY THROUGH 92 – OUT

F178 transmits:

92 – THIS IS 78 – RELAY TO 69 – Move now – OVER, etc.

644. The proword THROUGH ME allows a third station who knows that they are in contact with the required station to indicate that they are able to relay the message:

Example:

In the previous example, if the NCS had known that they were in contact with E969 they could have transmitted:

78 – THIS IS 4D – THROUGH ME – OVER

645. In all cases, whether the originating station can or cannot hear the relaying station, the relaying station must inform the originating station (station from whom the message was received for relay) that they have not been able to relay the message.

Example:

C206 requests D381 to relay a message to B420. D381 accepts but is unable to relay. D381 informs C206 and transmits

06 THIS IS 81 UNABLE TO RELAY YOUR MESSAGE (DTG OR TEXT) TO 20 – OVER

C206 replies:

81 THIS IS 06 ROGER OUT

Having been informed that the message has not been passed C206 resumes the responsibility to pass the message.

Repetitions

646. When words are missed or are doubtful, repetitions are to be requested by stations before receipting for the message. The proword SAY AGAIN, used alone or in conjunction with ALL BEFORE, ALL AFTER, FROM, TO, WORD BEFORE, WORD AFTER, will be used for this purpose. In complying with requests for repetitions, the transmitting station will identify that portion which is being repeated preceded with proword I SAY AGAIN.

Example A:

Z34D calls the two stations for which he has traffic:

> 06 – 81 – THIS IS 4D – MESSAGE – ROUTINE – TIME Zero Eight One Zero Five Two Zulu – FROM 4D – TO 06 – INFO 81 – BREAK – At One Eight Zero Zero Zulu – Proceed Hong Kong – To Arrive One Six May – Load One Thousand Troops – for return Ningpo – I SPELL – November India November Golf Papa Oscar – Ningpo –OVER

C206, having missed from "At" to "Proceed," transmits:

> (4D – THIS IS) 06 – SAY AGAIN – FROM At TO Proceed – OVER

Z34D deals with the request for repetitions by C206 before the other station requests his repetitions:

> (06 – THIS IS) 4D – I SAY AGAIN – FROM At TO Proceed – At Eight Zero Zero Zulu Proceed – OVER

C206, having now received the message satisfactorily, transmits:

> (4D – THIS IS) 06 – ROGER – OUT

Having heard C206 give a receipt for the message, the next station asks for his repetitions. In this case, D381 missed from "At" to "Proceed" and the word after "Load." As C206 had already asked for the phrase from "At" to "Proceed" and D381 heard it repeated. It is not now necessary for them to request that part to be repeated. D381 asks, therefore, for the word after "Load" to be repeated:

> (4D – THIS IS) 81 – SAY AGAIN – WORD AFTER Load – OVER

Z34D repeats the word:

> (81 – THIS IS) (4D) – I SAY AGAIN – WORD AFTER Load – One – Over

D381, having now received the message satisfactorily, transmits:

> (4D – THIS IS) (81) – ROGER – OUT

Example B:

Alternatively, the second station in the sequence of answering, not having heard the transmitting station answer the request for repetition within 5 seconds, transmits:

(4D – THIS IS) 81 – SAY AGAIN – WORD AFTER Load – OVER

Z34D having received a response from all relevant stations, transmits:

(06 – 81 –THIS IS) 4D – I SAY AGAIN – At TO Proceed – At One Eight Zero Zero Zulu – Proceed – WORD AFTER Load – One – OVER

C206 transmits:

(4D – THIS IS) 06 – ROGER – OUT

D381 transmits:

(4D – THIS IS) 81 – ROGER – OUT

647. In requesting repetitions of the heading of a message, a repetition may be requested of all that portion of the heading preceding or following a proword, or that portion of the heading between any two prowords. Requests for repetitions and replies thereto must include the nearest proword preceding and/or following the portion requested.

Example A:

E969 transmits:

06 – 78 – THIS IS 69 – PRIORITY – TIME One Eight One Six Two Five Zulu – FROM 69 – TO 06 – 78 – INFO B420 – BREAK – Proceed to rejoin convoy – OVER

C206, having missed all before the address, transmits:

(69 – THIS IS) 06 – SAY AGAIN – ALL BEFORE – FROM – OVER

E969 replies to C206:

(06 – THIS IS) 69 – I SAY AGAIN – ALL BEFORE – FROM – 06 – 78 – THIS IS 69 – PRIORITY – TIME One Eight One Six Two Five Zulu – OVER

C206 transmits:

(69 – THIS IS) 06 – ROGER – OUT

F178, having received the message satisfactorily, transmits:

(69 –THIS IS) 78 – ROGER – OUT

Example B:

D381 transmits:

95 – THIS IS 81 – ROUTINE – TIME Two Four Zero Nine One Two Zulu – FROM 81 – TO 95 – INFO – B420 – BREAK – Cancel my Two Three One Four Two Eight Zulu – OVER

H795, having missed the portion between the date-time group and the information addressees, transmits:

(81 – THIS IS) 95 – SAY AGAIN – FROM TIME TO INFO – OVER

D381 transmits:

(95 – THIS IS) (81) – I SAY AGAIN – FROM TIME TO INFO – TIME Two Four Zero Nine One Two Zulu – FROM 81 – TO 95 – INFO – OVER

H795 transmits:

(81 – THIS IS) (95) – ROGER – OUT

648. When it is necessary to ask for repetitions after a message has been receipted, such requests and replies there to must identify the message being queried as well as the portion required. Where used, the date-time group or time group shall be used for such identification.

Example:

H795 transmits:

81 THIS IS 95 – SAY AGAIN your Two Four Zero Nine One Two Zulu – OVER

D381 transmits:

(95 THIS IS) 81 – I SAY AGAIN – 95 – THIS IS 81 – ROUTINE – TIME Two Four Zero Nine One Two Zulu – FROM 81 – TO 95 – INFO – B420 – BREAK – Cancel my Two Three One Four Two Eight Zulu – OVER

H795 transmits:

(81 – THIS IS) 95 – ROGER – OUT

Checking the Group Count

649. When a message consisting of coded groups is being received and the number of groups actually received does not correspond with the group count of the message, the

receiving station requests a check by transmitting the proword CHECK GROUPS… stating the number of groups actually received.

650. When queried, the transmitting station will check and, if the number of groups received is correct, will indicate this by use of the proword CORRECT. The receiving station must then alter the group count accordingly.

651. In all messages where words and groups are counted and the count is 50 or less, the transmitting station, if it considers the receiving station to be incorrect after it has questioned the group count, repeats the group count followed by the initial letter of each group. This will enable the receiving station to determine which groups are missing and to request a repetition.

Example A (Group Count Correct – Less Than 50 Groups):

D381 transmits:

> 92 – THIS IS 81 – ROUTINE – TIME One Four Two Zero Three Eight Zulu – GROUPS One Two – Delta Golf India – Lima Oscar Papa – Juliet Tango X-ray – Romeo Oscar Tango – Foxtrot Mike X-ray – Oscar Papa India – Tango Romeo Sierra – Mike Delta Golf – Delta November India – Sierra Tango Delta – Golf Bravo X-ray – Oscar Mike Bravo – OVER

A192, having received only 11 groups, transmits:

> (81 – THIS IS) 92 – CHECK GROUPS One One – OVER

D381 checks his group count against his transmission copy, finds it correct, and transmits the first letter of each group:

> (92 –THIS IS) (81) – GROUPS One Two – Delta Lima Juliet Romeo Foxtrot Oscar Tango Mike Delta Sierra Golf Oscar – OVER

D192 can now see which group he has missed and transmits:

> (81 – THIS IS) (92) – SAY AGAIN Five – OVER

D381 transmits:

> (92 –THIS IS) (81) – I SAY AGAIN Five – Foxtrot Mike X-ray – OVER

D192 transmits:

> (81 – THIS IS) (92) – ROGER – OUT

Example B (Group Count Incorrect):

C206 transmits:

78 – THIS IS 06 – ROUTINE – TIME Zero Four One Two Five Two Zulu – GROUPS Eight – Mike Tango November – Sierra Uniform Bravo – Echo Lima Yankee – Golf Bravo Zulu – Foxtrot Oscar Uniform – Delta Oscar Papa – Oscar Bravo Juliet – OVER

F178, noticing that the group count and the number of groups he has received are different, transmits:

(06 –THIS IS) (78) – CHECK GROUPS Seven – OVER

C206 checks his group count against the transmission copy, discovers his error, and transmits:

(78 – THIS IS) (06) – CORRECT – OVER

F178 transmits:

(06 –THIS IS) (78) – ROGER – OUT

652. In all messages with a group count exceeding 50 groups, if the receiving station is considered to be incorrect the transmitting station repeats the original group count and transmits the identity of the first, eleventh, and every subsequent tenth group number followed by the corresponding first letter of each group.

Example (Group Count Correct – More Than 50 Groups):

D381 transmits a message containing 64 groups to A192.

A192 queries the group count:

(81 – THIS IS) 92 – CHECK GROUPS Six Four – OVER

D381 checks and finds the group count correct as sent, so transmits:

(92 – THIS IS) (81) – GROUPS Six Five – One Mike – One One Sierra – Two One Papa – Three One Romeo – Four One India – Five One November – Six One Golf – OVER

A192 then request a repetition of the 10 groups in which he has a miscount:

(81 – THIS IS) (92) – SAY AGAIN – One One TO Two Zero – OVER

D381 then transmits the requested groups.

CORRECTIONS

653. When a transmitting operator makes an error, the proword CORRECTION will be transmitted followed by the last word, group, proword, or phrase correctly transmitted. Transmission then continues.

Example A:

F178 transmits:

> 95 – THIS IS 78 – Convoy Romeo Three – CORRECTION – Romeo Four should arrive – One Six Three Zero Lima – TIME One Zero One Two Zulu – OVER

H795 transmits:

> (78 – THIS IS) 95 – ROGER – OUT

Example B:

C206 transmits:

> 4D – THIS IS 06 – TIME Two Four Zero Seven One Two Zulu – GROUPS Nine – Zulu Bravo Alfa X-ray – X-ray Oscar – CORRECTION – Zulu Bravo Alfa X-ray – X-ray Quebec Alfa – Kilo, etc.

Z34D transmits:

> (06 – THIS IS) 4D – ROGER – OUT

Example C:

C206 transmits:

> 78 – THIS IS 06 – ROUTINE – TIME One Four Zero Six Four Two Zulu – FROM 06 – TO 48 – CORRECTION – TO 78 – Text – OVER

F178 transmits:

> (06 –THIS IS) 78 – ROGER – OUT

Example D:

D381 transmits:

> 06 – THIS IS 81 – PRIORITY – TIME Zero Three One Eight One Four Zulu – Latitude One Six Three Zero – Longitude One Zero One Five – CORRECTION – Longitude One Zero Five Five – OVER

C206 transmits:

> (81 – THIS IS) 06 – ROGER – OUT

654. When an error in transmission is made but not discovered immediately, a correction may be made in the final instructions element provided that the ending sign

has not been transmitted. When making such a correction, the word, group proword, or phrase must be properly identified.

Example:

> 95 – THIS IS 81 – Tanks Will Arrive – Grid Three Two One Nine Five Three – at Hotel Hours Minus Six – time One Four Two Six Zulu – CORRECTION – WORD AFTER Minus – Five – OVER

D95 transmits:

> (81 – THIS IS) 95 – ROGER – OUT

655. If it is necessary to make corrections after a receipt has been obtained for a message, an abbreviated service message, identifying the message and the portion to be corrected, should be made:

Example:

F178 transmits:

> 95 – THIS IS 78 – CORRECTION – My One Three One Five One Six Zulu – WORD AFTER Monday – Morning – OVER

Cancelling Messages

656. During the transmission of a message and up to the transmission of the ending proword OVER or OUT, the message may be cancelled by use of the proword DISREGARD THIS TRANSMISSION – OUT.

Example:

During the transmission of a message E969 realises that the transmission is being sent in error and therefore cancels it:

> 78 – THIS IS 69 – ROUTINE – TIME One Zero Zero Six Zero Two Zulu – Begin unloading at One One One Two Three Zero Zulu – Proceed – DISREGARD THIS TRANSMISSION – OUT

657. A message that has been completely transmitted can only be cancelled by another message.

Example:

E969 transmits:

> 78 – THIS IS 69 – CANCEL my One Zero Zero Six Zero Two Zulu – TIME Zero Seven One Two Zulu – OVER

DO NOT ANSWER Transmissions

658. When it is imperative that the called stations do not answer a transmission, the proword DO NOT ANSWER will be transmitted immediately following the call, and the complete transmission will be sent twice, the full transmission ending with the proword OUT. DO NOT ANSWER transmissions must be authenticated.

Example:

Sabine Raider transmits:

> Siphon – THIS IS Raider – DO NOT ANSWER – Act in accordance with Plan Charlie – TIME Two Two One Eight Zulu – AUTHENTICATION IS……. – I SAY AGAIN – Siphon – THIS IS Raider – DO NOT ANSWER – Act in accordance with Plan Charlie – TIME Two Two One Eight Zulu – AUTHENTICATION IS…… – OUT

READ BACK

659. If it is desired that a message or portion thereof be read back to ensure accuracy, the proword READ BACK and identifying data; e.g., READ BACK TIME, READ BACK GRID, READ BACK TEXT, etc., will be transmitted immediately following the call. Upon accurate reading back message or portion thereof, the originating station will respond with the proword CORRECT:

Example A:

Z34D transmits:

> 78 – THIS IS 4D – READ BACK – Convoy has arrived – Time One Six Three Zero Zulu – OVER

E178 transmits:

> (4D – THIS IS) 78 – I READ BACK – 78 – THIS IS 4D – READ BACK – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

Z34D transmits:

> (78 – THIS IS) (4D) – CORRECT – OUT

Example B:

C206 transmits:

> 81 – THIS IS 06 – READ BACK GRID – Meet Me Grid One Three Four Two Six Five – OVER

D381 transmits:

(06 – THIS IS) 81 – I READ BACK GRID – One Three Four Two Six Five – OVER

C206 transmits:

(81 –THIS IS) (06) – CORRECT – OUT

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

660. The proword READ BACK, when not preceded by identifying callsigns, means that all stations are to read back. If a collective call is used, but only part of the stations represented in the call are required to read back, that station or those stations will be specified by transmitting the appropriate call signs preceding the proword READ BACK. When the order to read back is given, only those stations directed to do so will read back; remaining stations called will keep silent unless directed by the calling station to receipt.

Example:

Z34D transmits:

3C – THIS IS 4D – 81 READ BACK – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

D381 transmits:

(4D – THIS IS) 81 – I READ BACK – 3C – THIS IS 4D – 81 READ BACK – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

The remaining stations then confirm receipt:

(4D – THIS IS) 92– ROGER – OUT

(4D – THIS IS) 06 – ROGER – OUT etc.

661. If the station reading back does so incorrectly, the originating station will call attention to the error by use of the proword WRONG followed by the correct version:

Example:

D381 reads back:

(4D – THIS IS) 81 – I READ BACK – 3C – THIS IS 4D – 81 READ BACK – Convoy has arrived – TIME One Six Two Zero Zulu – OVER

Z34D transmits:

(81 – THIS IS) (4D) – WRONG – TIME – One Six Three Zero Zulu – OVER

D381 transmits:

(4D – THIS IS) (81) – TIME One Six Three Zero Zulu – OVER

Z34D transmits:

(81 – THIS IS) (4D) – CORRECT – OUT

Receipt

662. Receipt is employed in direct station-to-station traffic handling. No message is considered delivered until receipt is obtained (but see b below). A receipt may be effected as follows:

a. The receiving station transmits a receipt after each message or string of messages by the proword ROGER.

b. Where abbreviated procedure is in force, a return transmission may be considered as a receipt if no confusion is likely to arise.

c. An addressee reporting agreed compliance with an instruction or order is to use the proword WILCO. Note:

Note: The proword ROGER is not be used in conjunction with the proword WILCO as the meaning of WILCO incorporates that of ROGER.

Example A:

C206 transmits:

69 – THIS IS 06 – Send vehicle for mail – TIME One Seven One Four Zulu – OVER

F969 transmits:

(06 – THIS IS) 69 – ROGER – OUT

Example B:

Z34D transmits:

81 – THIS IS 4D – Move to my location – OVER

D381 transmits:

(4D – THIS IS) 81 – WILCO – OUT

663. When the transmitting station considers speed of handling a primary consideration, one station in the net may be directed to receipt for the message and no

other stations may answer until instructed to do so. This does not prohibit any station from requesting repetition. Security is enhanced if the same station is directed to receipt for all transmissions.

Example:

Station Z34D sends a message to the collective call Y13C and only desires a receipt from D381.

Z34D transmits:

> 3C – THIS IS 4D – Send boat for mail – TIME One Two One Six Zulu – 81 – OVER

D381 transmits:

> (THIS IS) 81 – ROGER – OUT

H795, having missed the word "mail," transmits:

> (4D – THIS IS) 95 – SAY AGAIN – WORD AFTER for – OVER

Z34D transmits:

> (95 –THIS IS) 4D – I SAY AGAIN – WORD AFTER for – mail – OVER

H795 transmits:

> (4D – THIS IS) 95 – ROGER – OUT

664. At the end of a conversation, a station wishing to indicate that there is further traffic to transmit will use the proword MORE TO FOLLOW in the message ending or receipt.

Example A:

C206, in transmitting a message to E969 wishes to indicate that he has further traffic for E969, transmits:

> 69 THIS IS 06 – TEXT – MORE TO FOLLOW – OVER

E969 responds

> (06 – THIS IS) 69 – ROGER – OVER

Example B:

Z34D, in transmitting a message to Y13C wishes to indicate that he has further traffic for C206 and H795, transmits:

3C – THIS IS 4D – TEXT – MORE TO FOLLOW – FOR 06 and 95 – OVER

The net responds:

(4D – THIS IS) 92 – ROGER – OUT

(4D – THIS IS) 06 – ROGER – OVER

(4D – THIS IS) 81 – ROGER – OUT

(4D – THIS IS) 69 – ROGER OUT

(4D – THIS IS) 78 – ROGER OUT

(4D – THIS IS) 95 – ROGER – OVER

Z34D transmits their message

(06 – 95 – THIS IS) 4D –, etc.

Example C:

E969, in receipting for a message from C206 wishes to indicate that he has a message for C206, transmits:

(06 – THIS IS) (69) – ROGER – MORE TO FOLLOW – OVER

C206 transmits:

(69 – THIS IS) 06 – SEND – OVER

Acknowledgment of Messages

665. It is the prerogative of the originator to request an acknowledgment to a message from any or all addressees of that message by using the proword ACKNOWLEDGE. If an acknowledgment is desired for a message, the request for acknowledgment normally is included in the text of that message. If the message has been transmitted, the request for acknowledgment will constitute a new message.

666. An acknowledgment should not be confused with a receipt; whilst an operator may confirm receipt of a message, the response to a request for acknowledgment can only be originated by the addressee by using the proword I ACKNOWLEDGE. Procedure for acknowledgment of tactical signals is contained in para. 710.

Example:

Z34D transmits a message to D381 and desires an acknowledgment:

81 – THIS IS 4D – Search Area Delta – ACKNOWLEDGE – TIME One One Two Zero Zulu – OVER

D381 transmits a receipt for the message:

(THIS IS) 81 – ROGER – OUT (or WAIT or WAIT OUT)

D381 operator, having shown the message to the commanding officer or his duly authorised representative and having been directed to acknowledge the message, transmits:

4D – THIS IS 81 – Your One One Two Zero Zulu – I ACKNOWLEDGE – TIME One One Two Five Zulu – OVER

Verifications

667. When verification of a message or a portion thereof has been requested by an addressee, the originating station will seek confirmation of the message (or portions thereof) with the originator. Requests for verification use the proword VERIFY. Upon verification of a message (or parts thereof) the verifying station replies with the proword I VERIFY. Where the originator identifies an error then a correction or cancellation is to be transmitted accordingly.

Example:

H795 transmits:

4D – THIS IS 95 – VERIFY Your One Zero Zero Eight Zero One Zulu – ALL BEFORE BREAK – OVER

Z34D transmits:

(95 – THIS IS) 4D – ROGER – OUT (or WAIT or WAIT OUT)

Z34D operator checks with the originator, establishes that the heading previously transmitted was correct, transmits:

95 – THIS IS 4D – I VERIFY My One Zero Zero Eight Zero One Zulu – ALL BEFORE BREAK – 95 – THIS IS 4D – PRIORITY – TIME One Zero Zero Eight Zero One Zulu – FROM 4D TO 95 – INFO 06 – GROUPS One Seven – BREAK – OVER

H795 transmits:

(THIS IS) 95 – ROGER – OUT

668. When a message to a number of addressees is queried by one station and found to be incorrect, the corrected version must be sent to all addressees.

Example:

D381 transmits:

> 78 – THIS IS 81 – VERIFY Your Zero Eight Four Five Zulu – WORD AFTER Proceed – Haiphong – OVER

F178 transmits:

> (81 – THIS IS) 78 – ROGER – OUT (or WAIT or WAIT OUT)

F178 operator checks the message with the originator and finds that the word after "proceed" should have been "Hong Kong" instead of "Haiphong." He therefore transmits a correction to all the original addressees.

> 81 – 69 – THIS IS 78 – CORRECTION – My Zero Eight Four Five Zulu – WORD AFTER Proceed – Hong Kong – OVER

D381 and F178 transmit:

> (78 – THIS IS) 81 – ROGER OUT
>
> (78 – THIS IS) 69 – ROGER OUT

Break-In Procedure

669. A station having a message of higher precedence than the transmission in progress may break in and thus suspend that transmission in the following circumstances:

a. **FLASH.** Break in at once and transmit the message in accordance with para. 671.

b. **IMMEDIATE.** May break in at once and pass the message. A preliminary call may be made before transmitting the message, if necessary. On a directed net, approval to transmit the message must be obtained.

c. **PRIORITY.** As for IMMEDIATE except that only long ROUTINE messages should be interrupted.

670. Note: Break-in procedure will not normally be employed during the transmission of tactical messages except to report enemy contact.

671. The precedence spoken three times means, "Cease transmissions immediately. Silence will be maintained until the station breaking in has passed the message."

672. Break-in procedure for messages of precedence FLASH on either a free net or a directed net should take the following form:

Example:

D381 is transmitting an IMMEDIATE message to Z34D when E969 is handed a FLASH message for transmission to A192. When D381 pauses, E969 transmits:

FLASH FLASH FLASH – 92 – THIS IS 69 FLASH – Text – OVER

A192 transmits:

(69 – THIS IS) 92 – ROGER – OUT

D381 then continues with his transmission:

4D – THIS IS 81 – ALL AFTER – etc.

673. Break-in procedure for messages of IMMEDIATE or PRIORITY precedence is illustrated in the following examples:

a. On Directed Nets:

Example:

D381 is transmitting a PRIORITY message to Z34D when E969 is handed an IMMEDIATE message for A192. When D381 pauses, E969 transmits:

IMMEDIATE IMMEDIATE IMMEDIATE – 4D – THIS IS 69 – IMMEDIATE for 92 – OVER

D381, hearing E969's break-in, ceases transmission

NCS transmits:

(69 –THIS IS) 4D – Send your IMMEDIATE – OVER On hearing this authorisation, A192 transmits:

(69 –THIS IS) 92 – SEND – OVER

E969 transmits:

(92 – THIS IS) (69) – IMMEDIATE – Text – OVER

A192 transmits:

(69 – THIS IS) (92) – ROGER – OUT

As soon as the IMMEDIATE message has been receipted, D381 continues his transmission:

4D – THIS IS 81 – ALL AFTER – etc.

b. On Free Nets:

Example A:

A192 is transmitting a PRIORITY message to D381 when Z34D is handed an IMMEDIATE message for E969. When A192 pauses, Z34D transmits:

IMMEDIATE IMMEDIATE IMMEDIATE –

A192 hearing the precedence spoken three times, ceases transmission

Z34D continues:

69 – THIS IS 4D – IMMEDIATE – Text – OVER

E969 transmits:

(4D – THIS IS) 69 – ROGER – OUT

A192 then continues transmission:

81 – THIS IS 92 – ALL AFTER – etc.

Example B:

A192 is transmitting a long ROUTINE message to D381 when Z34D is hand a PRIORITY message for E969. When A192 pauses, Z34D transmits:

PRIORITY PRIORITY PRIORITY –

A192, hearing the precedence spoken three times, ceases transmission

Z34D continues:

69 – THIS IS 4D – PRIORITY – Text – OVER

E969 transmits:

(4D –THIS IS) 69 – ROGER – OUT

A192 then continues his transmission:

81 – THIS IS 92 – ALL AFTER – etc.

Rebroadcasting

674. Rebroadcasting, sometimes referred to as rebro or retrans, is the act of linking two or more radio nets (operating on separate frequencies) through radio equipment capable of receiving a transmission on one net and automatically rebroadcasting it across the other, and vice versa. Rebroadcasting may be used to extend the range of a net to isolated stations or to combine two separate nets for a specific activity.

675. Management of a rebroadcasting net requires dedicated effort on behalf of the NCS to remain aware of when rebroadcasting is operating and of which stations reside on each of the rebroadcasted frequencies. Whilst rebroadcasting is conducted by an intermediate station, control of when rebroadcasting is activated and deactivated by the NCS through the use of the prowords REBROADCAST YOUR NET and STOP REBROADCASTING YOUR NET respectively.

Electronic, Radio and Emergency Silence

676. Electronic Silence:

a. Orders for the imposition of electronic silence will be issued in advance by secure means, and no connected executive order is to be passed in the clear, or by codeword, over radio.

b. The orders which impose electronic silence will also detail the circumstances in which, and by whom it may be lifted or broken as well as the procedure for lifting or breaking. This will normally include the use of codewords and/or transmission authentication.

c. All stations must be on their guard against attempts by the enemy to induce a break of electronic silence by false messages. On no account is silence to be broken to request authentication of a station which transmits during electronic silence if that station has not given the proper codeword or self-authentication for lifting silence or an emergency break.

677. Radio Silence:

a. Radio silence may be imposed or lifted by the control station on the net, or nets, for which it is responsible.

b. Radio silence may be predetermined or may occur in an emergency. When predetermined, instructions for imposing, lifting, or breaking radio silence are to be passed by any secure means available. Emergency silence is described in para. 677.

c. Radio silence is to be imposed in accordance with the instructions given. This will normally be by the use of codewords, nicknames, or other predetermined designator. Lifting or breaking radio silence may be achieved in the same way, or by the use of transmission or self-authentication.

Example A, imposing radio silence by use of a nickname:

The NCS transmits to all subordinate stations:

3C – THIS IS 4D – PAPER DOLL – OVER

Each subordinate station answers in turn and confirms to the NCS that the purpose of that nickname is understood by restating it in their reply:

(4D – THIS IS) 92 – PAPER DOLL – OVER

(4D – THIS IS) 06 – PAPER DOLL – OVER – etc.

The NCS transmits:

(3C – THIS IS) 4D – PAPER DOLL – OUT

Note: This procedure cannot be distinguished from the procedure for closing down and changing frequency when using nicknames.

Example B, breaking radio silence by means of transmission authentication:

A192 has authority and reason, within the conditions ordered, to break radio silence. He transmits:

4D – THIS IS 92 – Sighting Report – TIME…….- AUTHENTICATION IS…….. – OVER

Z34D transmits:

THIS IS 4D – ROGER – OUT

Note: The remainder of the net maintains radio silence; a break by one station does not lift silence.

Example C, lifting radio silence by means of transmission authentication:

The NCS transmits:

3C – THIS IS 4D – SILENCE LIFTED – TIME…… – AUTHENTICATION IS ……. – OUT

678. Emergency Silence:

a. Emergency (radio) silence may be imposed or lifted only by competent authority.

b. When a transmission authentication system is in force, a station must always authenticate a transmission which imposes or lifts emergency silence, or which calls stations during periods of emergency silence.

c. Transmissions imposing emergency silence will be made twice through and ended with the proword OUT. Stations do not answer or receipt such transmissions.

d. The proword SILENCE spoken three or more times means "Cease transmissions on this net immediately. Silence will be maintained until lifted"

e. After a call, use of the proword SILENCE spoken three or more times means "Stations addressed are to cease all transmissions on this net immediately."

Example:

To impose emergency silence on the net, the NCS transmits:

3C – THIS IS 4D – SILENCE SILENCE SILENCE – TIME…….. – AUTHENTICATION IS …….. – I SAY AGAIN – 3C – THIS IS 4D – SILENCE SILENCE SILENCE – TIME …….. – AUTHENTICATION IS …… OUT.

f. SILENCE spoken three or more times followed by a frequency or frequency designator means "Cease all transmissions immediately on frequency …… (or frequency indicated by the designator)."

g. SILENCE spoken three or more times followed by "all nets" means "Cease all transmissions immediately on all nets."

Example A:

To impose emergency silence on all stations on the frequency indicated by the designator C74, the NCS transmits:

3C – THIS IS 4D – SILENCE SILENCE SILENCE – Charlie Seven Four – TIME …… – AUTHENTICATION IS …….. – I SAY AGAIN – 3C – THIS IS 4D – SILENCE SILENCE SILENCE – Charlie Seven Four – TIME …….. – AUTHENTICATION IS ……..OUT

Example B:

To impose emergency silence on all stations on 134.25MHz only, the NCS transmits:

3C – THIS IS 4D – SILENCE SILENCE SILENCE – Frequency FIGURES One Three Four Decimal Two Five – TIME ……. – AUTHENTICATION IS ……. – I SAY AGAIN 3C – THIS IS 4D – SILENCE SILENCE SILENCE – Frequency FIGURES One Three Four Decimal Two Five – TIME ……. – AUTHENTICATION IS ……. OUT

Example C:

To impose emergency silence on all nets including subordinate nets, using the codeword BODYGUARD, the NCS transmits:

3C – THIS IS 4D – SILENCE SILENCE SILENCE – All nets – BODYGUARD – I SAY AGAIN – 3C – THIS IS 4D – SILENCE SILENCE SILENCE – All nets – BODYGUARD – OUT

Note: Subordinate NCS must repeat this message on their own nets using a different codeword or transmission authentication.

h. Emergency silence is lifted by the use of the proword SILENCE LIFTED, qualified where necessary by a frequency, a frequency designator, or the phrase "all nets" and followed by transmission authentication or a codeword, etc.

Example A:

Lifting emergency silence for all stations on a net, the NCS transmits:

3C – THIS IS 4D – SILENCE LIFTED – TIME

…… – AUTHENTICATION IS ……. – OUT

Example B:

Lifting emergency silence for all stations on a frequency indicated by the designator C74, using the codeword TOWER, the NCS transmits:

3C – THIS IS 4D – SILENCE LIFTED – Charlie Seven Four – TOWER – OUT

679. Following a period of electronic or radio silence, the NCS needs to consider the requirement to re-establish communications by means of a radio check.

Closing Down

680. No station is to close down without prior permission from the NCS. The greatest care must be taken by control stations never to close down a net, or an individual subordinate station, without being completely satisfied that the stations know, or will know, the new frequency and time of reopening. The necessary orders are always passed by the most secure means and, wherever possible, not by radio.

681. When it is essential to order a close-down over radio, and the NCS is satisfied regarding the arrangements for reopening, he orders the net or subordinate station to close down. He may do this by means of the proword CLOSE DOWN or by nickname.

Example A:

Z34D orders the close-down of the net using the nickname BLIND SPOT:

3C – THIS IS 4D – BLIND SPOT – OVER

Each subordinate station answers in turn and confirms to the NCS that the purpose of that nickname is understood by restating it in their reply:

(4D – THIS IS) 92 – BLIND SPOT – OVER

(4D – THIS IS) 06 – BLIND SPOT – OVER, etc.

Z34D transmits:

(3C –THIS IS) 4D – BLIND SPOT – OUT

Example B:

Z34D orders the close down of the net using the proword CLOSE DOWN:

3C – THIS IS 4D – CLOSE DOWN – AUTHENTICATION IS…….. – OVER

All stations, having checked the authentication is correct, reply in turn:

(4D – THIS IS) 92 ROGER – OVER

(4D – THIS IS) 06 – ROGER – OVER – etc.

Z34D transmits:

(3C – THIS IS) 4D – CLOSE DOWN – OUT

CHAPTER 7
EXECUTIVE METHOD

General

701. The Executive Method is used when it is desired to execute a tactical message at a given instant; that is, to ensure that two or more units take action at the same moment.

702. The operating rules in Chapter 6 apply equally to the Executive Method; however, it is the purpose of this chapter to amplify the basic procedure.

703. Abbreviated plaindress format is normally used for messages transmitted by the Executive Method.

704. When communications are good, it is not necessary to have all stations called acknowledge receipt of tactical messages. In these circumstances, only those stations whose call signs precede the proword OVER receipt for the message.

705. The term "signal" used in this chapter refers to a type of message, the text of which consists of one or more letter, words, or signal flags, the prearranged meanings of which are found in tactical publications.

706. Messages sent by Executive Method are never to have a time group included in the message ending.

Executive Methods

707. There are two Executive Methods:

a. Delayed Executive Method.

b. Immediate Executive Method.

Delayed Executive Method

708. A tactical message sent by the Delayed Executive Method will carry the warning proword EXECUTE TO FOLLOW in the message instruction, immediately preceding the text. The executive signal will be sent later in the form STANDBY – EXECUTE, the latter word being the instant of execution. The text of the message being executed shall be repeated prior to transmission of the proword EXECUTE when:

a. It is a portion of, or one of, several outstanding EXECUTE TO FOLLOW messages.

b. A considerable time has elapsed between the transmission of an EXECUTE TO FOLLOW message and the transmission of the executive signal.

Example A:

Z34D transmits:

3C – THIS IS 4D – EXECUTE TO FOLLOW – One Eight Five Corpen – OVER

All stations respond in alphabetical order of full call signs:

(4D – THIS IS) 92 – ROGER – OUT

(4D – THIS IS) 06 – ROGER – OUT

(4D – THIS IS) 81 – ROGER – OUT

(4D – THIS IS) 69 – ROGER – OUT

(4D – THIS IS) 78 – ROGER – OUT

(4D – THIS IS) 95 – ROGER – OUT

When ready to execute, Z34D transmits:

3C – THIS IS 4D – Standby – EXECUTE – BREAK – 81 – OVER

D381 transmits:

(4D – THIS IS) 81 – ROGER – OUT

Example B:

To execute a portion of an outstanding Delayed Executive Method signal,

Z34D transmits:

3C – THIS IS 4D – EXECUTE TO FOLLOW – Formation One Two – Tack Speed Two Five – BREAK – 06 – 95 – OVER

C206 and H795 transmit:

(4D – THIS IS) 06 – ROGER – OUT

(4D – THIS IS) 95 – ROGER – OUT

When ready to execute Formation One Two, Z34D transmits:

3C – THIS IS 4D – Formation One Two – Standby – EXECUTE – 92, 78 – OVER

A192 and F178 transmit:

(4D – THIS IS) 92 – ROGER – OUT

(4D – THIS IS) 78 – ROGER – OUT

When ready to execute the remaining portion, Z34D transmits:

3C – THIS IS 4D – Standby – EXECUTE – 06– 95 – OVER

C206 and H795 transmit:

(4D – THIS IS) 06 – ROGER – OUT

(4D – THIS IS) 95 – ROGER – OUT

Example C:

To execute a Delayed Executive Method signal, Z34D transmits:

3C – THIS IS 4D – EXECUTE TO FOLLOW – Formation One One – BREAK 81 – 78 – OVER

D381 and F178 transmit:

(4D – THIS IS) 81 – ROGER – OUT

(4D – THIS IS) 78 – ROGER – OUT

Later, after a pause of several minutes, Z34D wishes to execute the signal and transmits:

3C – THIS IS 4D – Formation One One – Standby – EXECUTE – 69 – 95 – OVER

E969 and H795 transmit:

(4D – THIS IS) 69 – ROGER – OUT

(4D – THIS IS) 95 – ROGER – OUT

Immediate Executive Method

709. In cases of urgency, the executive signal may be transmitted in the final instructions element of the message to which it refers. To differentiate between this method and that laid down in para. 708, the transmission of the executive signal in the final instructions of the message to be executed is termed the "Immediate Executive Method." It should be noted that:

a. The use of the Immediate Executive Method does not allow stations to obtain verifications, repetitions, acknowledgments or cancellations before the message is executed.

b. Messages made by the Immediate Executive Method should be in plain language, or should be limited to basic TURN, CORPEN, and SPEED signals.

c. When using the Immediate Executive Method, the warning IMMEDIATE EXECUTE is used in the message instructions instead of the proword EXECUTE TO FOLLOW.

d. The text of the signal is transmitted twice, separated by the proword I SAY AGAIN. The executive signal is transmitted in the final instructions.

Example:

Z34D transmits:

3C – THIS IS 4D – IMMEDIATE EXECUTE – BREAK – Turn Nine – Tack – Speed One Eight – I SAY AGAIN – Turn Nine – Tack – Speed One Eight – Standby – EXECUTE – 06 – 78 – OVER

C206 and F178 transmit:

(4D – THIS IS) 06 – ROGER – OUT

(4D – THIS IS) 78 – ROGER – OUT

Acknowledgement of Signals

710. Signals, the purport of which required the accomplishment of a difficult manoeuvre, quite often require acknowledgment of not only the understanding of the signal but also the capabilities of the addressee to perform such a manoeuvre. In such cases, the originator adds the word “acknowledge” as the last word in the text. When the commanding officer or authorised representative is close to the operator, and no delay in answering will result, the proword WILCO will be used in receipting in lieu of the proword ROGER. However, when this situation does not exist, the operator shall receipt in the usual manner and send the proword WILCO later, when ordered.

Example:

Z34D transmits:

92 – 95 – THIS IS 4D – EXECUTE TO FOLLOW – Uniform Golf Two – Tack One Five – Tack – Zero Zero Zero – Tack – One Two – ACKNOWLEDGE – BREAK – OVER

The commanding officer of A192 is not in close proximity, or desires to consider the message before acknowledging.

A192 transmits:

(4D – THIS IS) 92 – ROGER – OUT

The commanding officer of H795 is in close proximity and directs his operator to acknowledge.

H795 transmits:

(4D – THIS IS) 95 – WILCO – OUT

When ready to acknowledge, A192 transmits:

4D – THIS IS 92 – WILCO – (your last transmission) – OUT

Verifications and Repetitions

711. Verifications and repetitions of tactical messages are made in accordance with procedures laid down in chapter six except that verifications or repetitions of signals taken from a naval signal book must be for the entire transmission or for those portions separated by the "Tack." (The word VERIFY may be used before receipt when the addressee is operating the circuit or is close to the operator.)

Example A, verification:

3C – THIS IS 4D – EXECUTE TO FOLLOW – Zulu Zulu One – Tack – Quebec X-ray One – BREAK – 81 – 95 – OVER

D381 transmits:

(4D – THIS IS) 81 – ROGER – OUT

H795 desires a verification of the first portion of the signal:

(4D – THIS IS) 95 – VERIFY – FOLLOW TO – Tack – OVER

Z34D transmits:

(95 – THIS IS) 4D – ROGER – OUT (or WAIT or WAIT OUT)

After verifying the signal with the originating officer, and finding the original version is correct, Z34D transmits:

95 – THIS IS 4D – I VERIFY – FOLLOW TO Tack –FOLLOW – Zulu Zulu One – Tack – OVER

H795 transmits:

(4D – THIS IS) 95 – ROGER – OUT

(This leaves the original signal with only "Quebec X-ray One" awaiting execution.)

Z34D then transmits a new signal:

3C – THIS IS 4D – EXECUTE TO FOLLOW – Zulu Zulu Seven – OVER

All stations receipt in the normal manner.

Z34D may now execute both outstanding EXECUTE TO FOLLOW signals with on EXECUTE:

3C – THIS IS 4D – Standby – EXECUTE – 95 – OVER

H795 transmits:

(4D – THIS IS) 95 – ROGER – OUT

Example B, request for repetition:

3C – THIS IS 4D – EXECUTE TO FOLLOW – Zulu Zulu One – Tack – Quebec X-ray One – BREAK – 81 – 95 – OVER

D381 transmits:

(4D – THIS IS) 81 – ROGER – OUT

H795 desires a repetition of the signal:

(4D – THIS IS) 95 – SAY AGAIN – OVER

Z34D transmits:

THIS IS 4D – I SAY AGAIN – 3C – THIS IS 4D – EXECUTE TO FOLLOW – Zulu Zulu One – Tack – Quebec X-ray One – BREAK – 95 – OVER THIS IS 95 – ROGER – OUT

Example C, repetition of the call when unknown:

UNKNOWN STATION – THIS IS 95 – SAY AGAIN – ALL BEFORE – EXECUTE TO FOLLOW – OVER

95 – THIS IS 4D – I SAY AGAIN – 3C – THIS IS 4D – EXECUTE TO FOLLOW – OVER

(4D – THIS IS 95) – ROGER – OUT

Example D, repetitions of the whole or any portion of the text:

3C – THIS IS 4D – EXECUTE TO FOLLOW – Turn Starboard Nine Tack Tango A1 Two Tack One Tack Five – 92 – OVER

(4D – THIS IS) 92 – ROGER – OUT

(4D – THIS IS) 69 – SAY AGAIN – Starboard to Alfa – OVER

(69 – THIS IS) 4D – I SAY AGAIN – Starboard to Alfa – Starboard Nine Tack Tango Alfa – OVER

(4D – THIS IS) 69 – ROGER – OUT

Execution of Non-Executive Method Messages

712. Tactical messages taken from a signal book which do not employ Delayed Executive Method or Immediate Executive Method should have a time group included in the message ending. The use of a time group on a tactical message ordering action indicates that action is to be taken on receipt unless otherwise indicated in the text of the message.

Example A (Action to be Taken on Receipt):

Z34D transmits:

78 – THIS IS 4D – Station Bravo Three – TIME One Six Four Two Zulu – OVER

F178 transmits:

(4D – THIS IS) 78 – ROGER – OUT

Example B (Action to be Taken at Time Indicated):

Z34D transmits:

69 – THIS IS 4D – Yankee Mike Four – Tack – Tango One Eight Answer – BREAK – TIME One Seven One Four Zulu – OVER

E969 transmits:

(4D – THIS IS) 69 – ROGER – OUT

Cancelling Tactical Messages

713. Tactical messages requiring cancellation shall be cancelled by the use of the proword NEGAT. Such messages can be cancelled individually or as a group.

Example A:

To cancel all signals transmitted to the same call and awaiting execution:

3C – THIS IS 4D – NEGAT – TIME One Eight Three One Zulu – OVER

Example B:

To cancel one of several signals awaiting execution:

> 3C – THIS IS 4D – NEGAT – Turn Nine Tack – Speed One Four – TIME One 81 Five Zulu – OVER

Example C:

To cancel a portion of a signal awaiting execution:

> 3C – THIS IS 4D – NEGAT – Speed One Four – TIME One 81 Five Zulu – OVER

714. When a message is awaiting execution and a portion of it has been cancelled or executed, only the remainder of the message is considered to be outstanding.

715. Messages sent by the Executive Method cannot be cancelled once the Executive signal EXECUTE has been transmitted.

CHAPTER 8
MISCELLANEOUS PROCEDURES

Method of Synchronizing Time

801. If an accurate time check is desired, it will be requested by using the phrase "Request time check." The time at which the check is required may be indicated by the addition of a four-figure group. Time checks will be given in Greenwich Mean Time (GMT aka ZULU Time) unless otherwise requested or directed.

Example:

C206 requires to check his clock and transmits:

> 4D – THIS IS 06 – Request time check – OVER

Z34D transmits:

> (06 – THIS IS) 4D – Time Check One Eight Zero Two Zulu (pause) One Five Seconds – One Zero Seconds – Five Four Three Two One – TIME One Eight Zero Two Zulu – OVER

C206 transmits:

> (4D – THIS IS) 06 – ROGER – OUT

802. Should the occasion arise when the NCS desires to give an accurate time check to all stations on the net, they will pause a sufficient period of time between the warning phrase and the commencement of the countdown to allow all receiving operators to prepare their watches. The NCS may announce his intention of transmitting a time check at a certain time, using the phrase "Time Check at……."

Example:

Z34D transmits:

> 3C – THIS IS 4D Time Check at Zero Nine Three Zero Zulu (Pause to allow operators to prepare) – One Five Seconds – One Zero Seconds – Five Four Three Two One – TIME Zero Nine Three Zero Zulu – OVER

803. Alternatively, a time check may be made by the Delayed Executive Method.

Example:

Z34D transmits:

3C – THIS IS 4D – EXECUTE TO FOLLOW – Tango One Four One Five Zulu – BREAK – 69 – OVER

E969 responds:

THIS IS 69 – ROGER – OUT

Z34D then transmits the executive signal to coincide with the time 1415:

3C – THIS IS 4D – Standby – EXECUTE – 95 – OVER

H795 responds:

THIS IS 95 – ROGER – OUT

Grid References

804. All grid references, including those encoded, are sent character by character, and all letters are to be pronounced phonetically. A grid reference in clear is easier to interpret if a pause is made between the two directional groups (i.e., between the 'east direction' and 'north direction' groups. Grid references are preceded by the proword GRID.

Example (In Clear):

4D – THIS IS 69 – Enemy at GRID – Three Two Six – (pause) -Eight Four Seven – OVER

805. When grid references are encoded in fixed low-grade codes, instructions relative to their use will apply.

BEADWINDOW Procedure

806. BEADWINDOW is a simple, rapid procedure for use by circuit operators to police the security of non-secure voice networks. It brings to immediate attention of operators the fact that an Essential Element of Friendly Information (EEFI) has been disclosed on the net. Additionally, the BEADWINDOW report serves to alert other operators on the net of the EEFI disclosure and thus acts as an educational aid, producing increased security awareness among operators and an overall improvement in the security of non-secure voice communications.

807. Use of BEADWINDOW is mandatory during training and exercises; however its continued use during operations is subject to local operational security policy.

808. The BEADWINDOW procedure uses a codeword (BEADWINDOW) and a number combination which transmitted immediately to the station disclosing an EEFI. When a station on the net transmits information listed in an EEFI, the net control operator (or any operator on the net in the event the net control operator fails to take action),

transmits the codeword BEADWINDOW, followed by the number of the EEFI which has been disclosed.

809. Example: If an operator discloses a ship's position (disclosing EEFI number one from the list below), the net control operator will call the offending station and transmit:

BEADWINDOW ONE – OVER

810. The only authorised reply to a BEADWINDOW report is:

ROGER – OUT.

811. Approved broad EEFIs for general use are listed below. An appropriate keyword or key phrase has been allocated to each EEFI for ease of training and rapid understanding of BEADWINDOW reports. Additional EEFIs for specific operations or exercises may be developed and broad EEFIs expanded by individual nations or by operational commanders and included in operations plans or orders. This may be accomplished by adding new EEFI categories (i.e., 8, 9, and 10) or by expanding existing categories (e.g., 21-force composition, 22-force capabilities, 23-force limitation, etc.). The EEFI List should be posted in clear sight of the operator at all voice positions for rapid reference.

Table 8-1 Essential Element of Friendly Information List

Key Number	Key Word	Definition
1	Operations	Friendly or enemy position, movement or intended movement, position, course, speed, altitude, or destination of any air, sea, or ground element, unit or force.
2	Capabilities	Friendly or enemy capabilities or limitations, force compositions, or identity; capabilities limitations, or significant casualties to special equipment, weapons systems, sensors, units or personnel. Percentages of fuel or ammunition remaining.
3	Operations	Friendly or enemy operations – intentions, progress, or results. Operational or logistic intentions – assault objectives – mission participants – flying programs – mission situation reports – results of friendly or enemy operations.
4	Electronic Warfare	Friendly or enemy EW/EMCON – intentions, progress, or results, intention to employ ECM – results of friendly or enemy ECM – objectives of ECM – results of friendly or enemy ECCM – results of Electronic Warfare Support Measures (ESM) – present or intended EMCON policy – equipment affected by EMCON policy.
5	Personnel	Friendly or enemy key personnel. Movement or identity of friendly or enemy flag officers, distinguished visitors, unit commanders – movement of key maintenance personnel indicating equipment limitations.

Key Number	Key Word	Definition
6	COMSEC	Friendly or enemy COMSEC breaches – linkage of codes or codewords with plain language – compromise of changing frequencies or linkage with line numbers/circuit designators – linkage of changing call signs with previous call signs or units – compromise of encrypted/classified call signs – incorrect authentication procedure.
7	Wrong Circuit	Inappropriate transmission. Information requested. Transmitted or about to be transmitted which should not be passed on subject circuit because it either requires greater security protection or is not appropriate to the purpose for which the circuit is provided.
8	Spare	For assignments as required.
9	Spare	For assignments as required.
10	Spare	For assignments as required.

CHAPTER 9
PROCEDURES FOR REPORTING ENEMY CONTACTS

Introduction

901. Enemy contact reports shall be transmitted using basic radiotelephone procedure, as modified in this chapter. Details of enemy contact reporting are contained in Allied Maritime Tactical Instructions and procedures, ATP-01,

Transmission of Enemy Reports

902. Enemy contact reports are normally to be made once only when in direct communication with officer in tactical command, higher authority, or shore radio station, except:

a. When using DO NOT ANSWER procedure (para. 658).

b. When the text consists of emergency alarm signals, in which case the text is made twice, separated by I SAY AGAIN, with a time group in the ending.

903. When a ship that is stationed on a screen transmits an emergency alarm signal, the screen station may be indicated in the preamble before precedence.

904. If desired by the originator, a READ BACK may be requested (para. 639).

905. Authentication, when in force, should be used when making initial, amplifying, and negative reports in plain language or a brevity code. Lack of, or incorrect, authentication should not prevent re-transmission or relay of the message to higher authority.

Examples of Enemy Contact Reports

906. The WHEN component report of the contact may be transmitted either as the time group of the message or as the fourth component of the text. In the following examples, the former method is used with Abbreviated Plaindress Procedure (para. 504).

a. Initial Reports:

i. Initial report in Standard Form as transmitted:

4D – THIS IS 69 – FLASH – Locating One Serial One – 4D Delta – Zero 95 X-ray X-ray One Four – Course Two Seven Five – Speed Nine – Time Zero Nine Three Seven Zulu AUTHENTICATION IS ……. – OVER

(69 – THIS IS) 4D – ROGER – OUT

ii. Initial Report using emergency alarm signals, as transmitted:

4D – THIS IS 95 – Station Five – FLASH – Emergency Quebec Zero Four Five Tack One Eight – I SAY AGAIN – Emergency Quebec Zero Four Five Tack One Eight – TIME One Three Two Six Zulu – AUTHENTICATION IS ……. – OVER

(4D – THIS IS) 4D – ROGER – OUT

iii. Initial Report using Brevity Code, as transmitted:

4D – THIS IS 81 – FLASH – Locating One Serial One – Few Bogey (or Oscar Tango) – Two Four Six – Two Two – Closing – TIME Two Three Zero One Zulu – AUTHENTICATION IS ……. – OVER

(81 – THIS IS) 4D – ROGER – OUT

iv. Initial Report in Abbreviated Form using READ BACK procedure, as transmitted:

4D – THIS IS 81 – READ BACK – FLASH – Locating Four Serial One – Three Juliet Juliet – Three Zero Zero Quebec Quebec One Eight – TIME Zero Four Four Five Zulu – AUTHENTICATION IS …….. – OVER

81 – THIS IS 4D – I READ BACK – FLASH – Locating Four Serial One – Three Juliet Juliet – Three Zero Zero Quebec Quebec One Eight – TIME Zero Four Four Five Zulu – AUTHENTICATION IS …….. – OVER

(4D – THIS IS) 81 – CORRECT – OUT

v. Initial Report using DO NOT ANSWER procedure, as transmitted:

4D – THIS IS 92 – DO NOT ANSWER – FLASH – Locating Two Serial One – Many Bogies – Two Five Five Tango Tango Five – Closing – TIME One Nine Zero Zero Zulu – AUTHENTICATION IS ……. I SAY AGAIN – 4D – THIS IS 92 – DO NOT ANSWER – FLASH – Locating Two Serial One – Many Bogies – Two Five Five Tango Tango Five – Closing – TIME One Nine Zero Zero Zulu – AUTHENTICATION IS ……. – OUT

907. Amplifying Reports:

a. First Amplifying Report using Brevity Code, as transmitted:

4D – THIS IS 92 – IMMEDIATE – Locating One Serial Two – Altitude Zero Nine Zero – Three Zero Five Cape Bon Two One – TIME One Zero Four Zero Zulu – AUTHENTICATON IS ……. – OVER

(92 – THIS IS) 4D – ROGER – OUT

b. Amplifying Report using groups from the Allied Maritime Tactical Signal Book, as transmitted:

4D – THIS IS 92 – IMMEDIATE – My One Three Two Five Zulu – Papa X-ray One Eight – TIME One Three Three Zero Zulu – AUTHENTICATION IS …….. – OVER

(92 – THIS IS) 4D – ROGER – OUT

c. Amplifying Report using READ BACK procedures, as transmitted:

81 – THIS IS 95 – READ BACK – IMMEDIATE – Locating Four – Tracking Zero Five Eight – TIME Zero Four Five Zero Zulu – AUTHENTICATION IS …… – OVER

95 – THIS IS 81 – I READ BACK – IMMEDIATE – Locating Four – Tracking Zero Five Eight – TIME Zero Four Five Zero Zulu – AUTHENTICATION IS …… – OVER

(THIS IS) 95 – CORRECT – OUT

d. Amplifying Report using DO NOT ANSWER procedure, as transmitted.

4D – THIS IS 06 – DO NOT ANSWER IMMEDIATE – Locating Two Serial Three – Altitude One Zero Zero – AUTHENTICATION IS …… I SAY AGAIN – 4D – THIS IS 06 – DO NOT ANSWER IMMEDIATE– Locating Two Serial Three – Altitude One Zero Zero – AUTHENTICATION IS …… – OUT

e. Negative Report, as transmitted:

4D – THIS IS 06 – IMMEDIATE – Negative Enemy – Zero Two Seven Quebec Quebec One Eight – Tack – One Two – TIME One Eight Four Six Zulu – AUTHENTICATION IS …… – OVER

THIS IS 4D – ROGER – OUT