⊙ROYAL AIR CADETS
AIR FORCE the next generation

ACP 45

AIR CADET ORGANISATION

RADIO COMMUNICATIONS

OPERATING PROCEDURES

1 MARCH 2012

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FOREWORD

1.   Air Cadet Publication (ACP) 45 – ACO Radio Communications Operating Procedures is an UNCLASSIFIED publication derived from Allied Communication Publication (ACP) 125 (E). Notwithstanding that classification, attention is drawn to the fact that ACO frequencies and CTCSS tones are not for disclosure outside the ACO and are not to be displayed on public forums/web pages. Chapter 4 – Authentication is also similarly not for disclosure.

2.   ACP 45 is now effective and supersedes ACP 35 Vol 2 which ought to be retained for historical cross-reference but where there is any conflict; ACP 44 and ACP 45 take precedence.

3.   Previous versions of this document (ACP 44 Issue 1) have contained supplements to assist in the planning and delivery of Voice Procedure and Radio Syllabus training. These supplements have now been removed and incorporated as ACP44 – Radio Communications Syllabus, Instructions and Exercises.

4.   Comments and recommendations concerning this publication should be addressed through normal channels to: TG1, Headquarters Air Cadets, Royal Air Force College Cranwell, Sleaford, Lincolnshire NG34 8HB.

CHAPTER 4 – MISCELLANEOUS PROCEDURES

RECORD OF CHANGES AND CORRECTIONS

Enter Change or Correction in Appropriate Column

Identification of Change or Correction and Date of Same		Date Entered	By Whom Entered (Signature, Rank, or Rate, Name of Command)
Change	Correction		
	Initial Issue	Mar 2012	▬▬▬▬▬▬
1.01	Minor corrections	Nov 2013	▬▬▬▬▬
1.02	SharePoint PDF		HOAC
1.03	Minor Format Update	May 2014	▬▬▬▬▬

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CHAPTER 1

GENERAL

1.   **Purpose**. The purpose of this publication is to prescribe the basic radiotelephone procedure that shall be used for radiotelephone communications by the Air Cadet Organisation (ACO).

2.   **Communications Security (COMSEC):**

   a.   In the interest of security, transmissions by radiotelephone will be as short and concise as possible, consistent with clarity. ACO radio transmissions have no security since they are open to interception. ACO frequencies and their designators should never be mentioned in the same broadcast.

   b.   Adherence to prescribed procedure is mandatory. Unauthorised departures from or variations in, prescribed procedure often create confusion, reduced reliability and speed, tend to nullify security precautions, and are prohibited. If the procedure prescribed herein does not cover a specific operating requirement, initiative and common sense should suffice.

   c.   The following basic rules are essential to transmission security and shall be strictly enforced on all military and cadet radiotelephone circuits:

   (1)   No transmission shall be made by unauthorised operators.

   (2)   The following practices are forbidden on frequencies assigned to the ACO by the MOD:

   (a)   The sending of names, ranks, email addresses, telephone numbers, URLs and other personal information.

   (b)   Revealing details of a squadron location (unless in an emergency) or sqn name/number.

   (c)   Revealing details of squadron activities, meeting times and activity locations.

   (d)   Messages concerning the holding or movements of arms and ammunition.

   (e)   Messages containing the names of current aircraft, military bases or operations.

   (f)   Inappropriate conversations between operators or the use of profane or indecent language, including the transmission of music.

   (g)   The use of unauthorised prowords.

(h)   Unauthorised use of plain language in place of applicable prowords (ACP 45 Chapter 1 paragraph 10).

(3)   The following practices are to be avoided:

(a)   Violation of Radio Silence..

(b)   Sending on a directed net without permission (Except in an emergency)

(c)   Excessive time consumed in tuning, changing frequency, or adjusting equipment

d.   Any station observing a security violation on the net should immediately notify the net control station (NCS) or the other stations concerned in accordance with established guidance provided by BEADWINDOW PROCEDURES. See ACP 45 Chapter 4 page 4. The Squadron Radio Communications Officer, Wing Radio Communications Officer, Regional Radio Communications Officer and Net Control Station (NCS) are responsible for maintaining security within their area of responsibility. On the National HF Network a report MUST be sent to the Corps Radio Officer radio@aircadets.org for action. Radiotelephone procedural errors are not security violations and will be reported as procedural violations.

3.   Log Keeping

a.   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 a vehicle is not expected to maintain a log as neatly or completely as say an operator in a headquarters who is dedicated to a single task.

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

(1)   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.

(2)   The content of formal messages written separately on a message form.

(3)   The opening and closing of the radio stations on the net.

(4)   Changes in operating frequency and interference reports.

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

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

(7)   Unusual occurrences such as procedural or security violations, entries should include the reporting action taken.

(8)   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.

c.   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. Radio logs to be held in safe keeping for future reference but may be destroyed after one year.

4.   **Symbols Used in Examples:**

a.   Optional words or phrases are shown within brackets.

b.   A hyphen represents a pause between phrases.

5.   **Phonetic Alphabet:**

a.   When necessary to identify any letter of the alphabet, the standard phonetic alphabet shall be used. This alphabet is listed below:

Letter	Phonetic	Spoken as	Letter	Phonetic	Spoken as
A	ALPHA	*AL* FAH	N	NOVEMBER	NO *VEM* BER
B	BRAVO	*BRAH* VOH	O	OSCAR	*OSS* CAH
C	CHARLIE	*CHAR* LEE	P	PAPA	PAH *PAH*
		or	Q	QUEBEC	KEY *BECK*
		SHAR LEE	R	ROMEO	*ROW* ME OH
D	DELTA	*DELL* TAH	S	SIERRA	SEE *AIR* RAH
E	ECHO	*ECK* OH	T	TANGO	*TANG* GO
F	FOXTROT	*FOKS TROT*	U	UNIFORM	*YOU* NEE FORM
G	GOLF	GOLF			or
H	HOTEL	HOH *TELL*			*OO* 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

Note: Italicised syllables carry the accent.

b.   Difficult words or groups within the text of plain text messages may be spelled using the phonetic alphabet and preceded by the proword I SPELL. If the operator can pronounce the word to be spelled, he will do so before and after the spelling to identify the word.

    (1)   **Example A**:

    Catenary – I SPELL Charlie Alfa Tango Echo November Alfa Romeo Yankee – Catenary

    (2)   **Example B**:

    Rendezvous point is – I SPELL Uniform November India Mike Alfa Kilo.

d.   Where a text is composed of pronounceable words, they will be spoken as such. Where a text is encrypted, the groups, even though occasionally pronounceable, are to be transmitted by the phonetic equivalents of the individual letters and without the proword I SPELL.

    (1)   **Example**:

    The encrypted group LUXOW will be spoken, "Lima Uniform X-ray Oscar, Whiskey" and counted as one group.

6.   Pronunciation of Numerals:

a.   To distinguish numerals from similarly pronounced words, the proword FIGURES may be used preceding numbers.

b.   When numerals are transmitted by radiotelephone, the following rules for their pronunciation will be observed.

Numeral	Spoken as	Numeral	Spoken as
0	*ZE*RO	5	FIFE
1	WUN	6	SIX
2	TOO	7	*SEV*-EN
3	TREE	8	AIT
4	*FOW*-ER	9	*NIN*-ER

Numbers will be transmitted digit by digit except that exact multiples of thousands may be spoken as such.

Numeral	Spoken as	Numeral	Spoken as
44	*FOW*-ER *FOW*-ER	1478	WUN-*FOW*-ER *SEV*-EN AIT
90	*NIN*-ER *ZE*RO	7000	*SEV*-EN TOU-SAND
136	WUN TREE SIX	16000	WUN SIX TOU-SAND
500	FIFE *ZE*RO *ZE*RO	812681	AIT WUN TOO SIX AIT WUN

d.   The decimal point is to be spoken as DAY-SEE-MAL.

    (1)   **Example**:

        123.4 is to be spoken as WUN TOO TREE DAY-SEE-MAL FOW-ER

e.   Dates shall be spoken digit by digit, with the months in full:

    (1)   **Example**:

        20 August is spoken as TOO ZERO AUGUST.

f.   Roman numerals shall be transmitted as the corresponding Arabic letters preceded by the word ROMAN NUMERAL.

7.   **Abbreviations in the Text**. Abbreviations in the text are transmitted as follows:

a.   Initials used alone or in conjunction with short titles shall be spoken phonetically.

    (1)   **Example A**:

        Paragraph A shall be spoken as "Paragraph Alfa".

    (2)   **Example B**:

        ACP shall be spoken as "Alfa Charlie Papa".

b.   Personal initials shall be spoken phonetically, prefixed by the word INITIALS.

    (1)   **Example**.

        G M SMITH shall be spoken as "INITIALS Golf Mike Smith".

c.   Abbreviations frequently used in normal speech may be used in the same manner when transmitted by voice.

    (1)   **Example A**:

        NATO may be spoken as "NATO".

    (2)   **Example B**:

        USS Forrestal may be spoken as "USS Forrestal"

d.   Punctuation shall be spoken as follows:

Comma	-	COMMA
Period	-	FULL STOP or PERIOD

Parenthesis	-	PAREN/UNPAREN or OPEN BRACKETS/CLOSE BRACKETS
Oblique Stroke	-	SLANT
Quotation Marks	-	QUOTE/UNQUOTE
Hyphen	-	HYPHEN
Colon	-	COLON
Semicolon	-	SEMICOLON
Dash	-	DASH

8.   **Call Signs**:

    a.   Full call signs are to be used:

        (1)   When first establishing a net.

        (2)   When reporting into a previously established net.

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

    b.   Provided no confusion can arise, call signs may be abbreviated when authorised by the Net Control Station (NCS).

9.   **Prowords**:

    a.   Prowords are pronounceable words or phrases which have been assigned meanings for the purpose of expediting message handling on circuits where radiotelephone procedure is employed. In no case shall a proword or a combination of prowords be substituted for the textual component of a message. For radiotelephone communication between units of different nationalities, the prowords may be replaced by their equivalent prosigns, where these exist, spelled out using the authorised phonetic equivalents.

    b.   The prowords listed in paragraph 11 are authorised for general use. Certain of these prowords are the approximate equivalent of the prosign authorised for use in radiotelegraphy and are so indicated.

Note: Additional proword for use when initiating and answering queries concerning signal strength and readability are listed in Chapter 3 paragraph 11.

10.   **List of Prowords**:

Proword	Explanation
ACKNOWLEDGE (ACK)	An instruction to the addressee that the message must be acknowledged.

Proword	Explanation
ADDRESS GROUP	The group that follows is an address group.
AFFIRM	Affirmative or YES
ALL AFTER	The portion of the message to which I have reference is all that which follows _____ .
ALL BEFORE	The portion of the message to which I have reference is all that which precedes _____
ANSWER AFTER	The station called is to answer after call sign _____ when answering transmissions.
ASSUME CONTROL	You will assume control of this net until further notice.
AUTHENTICATE	The station called is to reply to the challenge which follows.
AUTHENTICATION IS	The transmission authentication of this message is _____
BREAK	I hereby indicate the separation of the text from other portions of the message.
BROADCAST YOUR NET	Link the two nets under your control for automatic rebroadcast.
CALL SIGN	The group that follows is a call sign.
CLOSEDOWN	Stations are to close down when indicated. Acknowledgements are required.
CORRECT	You are correct, or what you have transmitted is correct.
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.

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Proword	Explanation
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 for which receipt or acknowledgement has been received).
DO NOT ANSWER	Stations called are not to answer this call, receipt for this message, or otherwise transmit in connection with this transmission. When this proword is employed, the transmission shall be ended with the proword OUT.
EXECUTE	Carry out the purpose of the message or signal to which this applies. (To be used only with the Executive Method).
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).
EXEMPT	The station(s) immediately following is (are) exempted from the collective call or from collective address.
FIGURES	Numerals or numbers follow.
FLASH	Precedence FLASH
FROM	The originator of this message is indicated by the address designator.
GRID	The portion following is a grid reference
GROUPS	This message contains the number of groups indicated by the numeral following.
GROUP NO COUNT	The groups in this message have not been counted.
I AM ASSUMING	I am assuming control of this net until further notice.
I AUTHENTICATE	The group that follows is the reply to your challenge to authenticate.
IMMEDIATE	Precedence IMMEDIATE.

Proword	Explanation
IMMEDIATE EXECUTE	Action on the message or signal following is to be carried out on receipt of the word EXECUTE. (To be used with the Immediate Executive Method).
INFO	The addressees immediately following are addressed for information.
I READ BACK	The following is my response to your instructions to read back.
I SAY AGAIN	I am repeating transmission or portion indicated.
I SPELL	I shall spell the next word phonetically.
I VERIFY	That which follows has been verified at your request and is repeated. (To be used only as a reply to VERIFY).
MESSAGE	A message which requires recording is about to follow. (Transmitted immediately after the call. 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).
MORE TO FOLLOW	Transmitting station has additional traffic for the receiving station.
NEGATIVE (NEGAT)	Cancel message(s) sent by the Delayed Executive Method. (NEGAT may be used to cancel a single message or a group of messages awaiting execution).
NET NOW	All stations are to net their radios on the unmodulated carrier wave which I am about to transmit.
NOTHING HEARD	to be used when no reply is received from a call station.
NUMBER	Station serial number.
OUT	This is the end of my transmission to you and no answer is required or expected.

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Proword	Explanation
OVER	This is the end of my transmission to you and a response is necessary. Go ahead, transmit.
PRIORITY	Precedence PRIORITY
READ BACK	Repeat this entire transmission back to me exactly as received.
REBROADCAST YOUR NET	Link the two nets under your control for automatic rebroadcast
RELAY (TO)	Transmit this message to all addressees (or address's immediately following this proword). The address component is mandatory when this proword is used.
RELAY THROUGH	Relay your message through call sign _____
ROGER	I have received your last transmission satisfactorily
ROUTINE	Precedence ROUTINE
SAY AGAIN	Repeat all of your last transmission. Followed by identification data means "Repeat _____ (portion indicated)
SEND YOUR	I am ready to receive your message, report, etc. (Used only in reply to the offer of a message, etc, on tactical or reporting nets).
SERVICE	The message that follows is a SERVICE message
SIGNALS	The groups which follow are taken from a signal book. (This proword is not used on nets primarily employed for conveying signals. It is intended for use when tactical signals are passed on non-tactical nets).
SILENCE (Repeated three or more times)	Cease transmissions on this net immediately. Silence will be maintained until lifted. (Transmissions must be authenticated by the use of a self-authentication system, codeword, etc).

Proword	Explanation
SILENCE LIFTED	Silence is lifted. (Transmissions must be authenticated by means of a self-authentication system, codeword, etc).
SPEAK SLOWER	Your transmission is too fast. Reduce speed of transmission.
STOP REBROADCASTING	Cut the automatic link between the two nets that are being rebroadcast and revert to normal working.
THIS IS	This transmission is from the station whose designator immediately follows.
THIS IS A DIRECTED NET	From now until further notice this net is directed.
THIS IS A FREE NET	From now until further notice this net is free.
THROUGH ME	Relay your message through me.
TIME	That which immediately follows is the time of date-time group of the message.
TO	The addressees immediately following are addressed for action.
-TO-	The portion of the message to which I have reference is all that which appears between the groups _____ and _____
UNKNOWN STATION	The identity of the station with whom I am attempting to establish communication is unknown.
USE ABBREVIATED CALL SIGNS	Call signs are to be abbreviated until further notice.
USE ABBREVIATED PROCEDURES	As conditions are normal, all stations are to use abbreviated procedure until further notice.
USE FULL CALL SIGNS	Call signs are to be sent in full until further notice.
USE FULL PROCEDURES	As conditions are not normal, all stations are to use full procedure until further notice.

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Proword	Explanation
VERIFY	Verify entire message (or portion indicated) with the originator and send correct version. (To be used only at the discretion of, or by, the addressee to which the questioned message was directed).
WAIT	I must pause for a few seconds.
WAIT-OUT	I must pause longer than a few seconds.
WILCO	I have received your signal, understand it, and will comply. To be used only by the addressee. Since the meaning of ROGER is included in that of WILCO, the two prowords are never used together.
WORD AFTER	The word of the message to which I have reference is that which follows _____
WORD BEFORE	The word of the message to which I have reference is that which precedes _____
WORDS TWICE	Communication is difficult. Transmit each phrase (or each code group) twice. (This proword may be used as an order, request, or as information).
WRONG	Your last transmission was incorrect. The correct version is _____

CHAPTER 2

MESSAGES

1.   **Plaindress:**

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

   b.   A plaindress message contains all the components as shown in the basic message format and must always include the precedence and date-time group.

2.   **Abbreviated Plaindress.** 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.

3.   **Codress.** A codress message is one in which the entire address (ie 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 communications personnel to handle it properly. It contains all other components shown in the schematic diagram, paragraph 8.

4.   **Service Message:**

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

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

   c.   Plain-language service messages are identified by the proword SERVICE (paragraph 15).

   d.   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 precedence equal to that of the message to which they refer.

5.   **Abbreviated Service Message**. 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.

6.   **Classification of Service and Abbreviated Service Messages**:

   a.   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.

   b.   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.

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

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

      (1)   Heading.

      (2)   Text.

      (3)   Ending

   b.   Each message PART has certain COMPONENTS which are broken down to ELEMENTS and CONTENTS:

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

      (2)   In the schematic diagram (paragraph 8), format lines, 2, 3, 4, 14, 15 and 16 identify the procedural portion of the basic message format as designed for radiotelephone operation. Lines 5 through13 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.

8.   **Schematic Diagram of Message Format**. 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.

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Parts	Components	Elements	Format Line	Contents
H E A D I N G	Procedure	a. Call	1	Not used
			2 and 3	Stations called. Proword INFO – to identify info addresses is abbreviated plaindress messages. Proword EXEMPT – exempted call signs. Proword THIS IS – the station calling.
		b. Message Follows		Proword MESSAGE
		c. Transmission Identification		Proword NUMBER and station number
		d. Transmission Instructions	4	Prowords RELAY TO, READ BACK DO NOT ANSWER, WORDS TWICE. Operating signals; address groups; call signs, plain language designators.
	Preamble	a. Precedence; Date-Time Group; Message Instructions	5	Precedence designation; Proword TIME: date and time expressed in digits, and zone suffix, month indicated by the first three letters; 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's Sign; Originator	6	Proword FROM. Originator's Address designator

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Parts	Components	Elements	Format Line	Contents
		b. Action Addressee Sign	7	Proword TO. Action addressees designators
		c. Information Addressee Sign; Information Addressee	8	Proword INFO. Information addressees designators
		d. Exempted Addressee Sign; Exempted Addressee	9	Proword EXEMPT. Exempted addressees designators.
	Prefix	a. Group Count	10	Group count; Proword GROUPS (GROUP NO COUNT)
	SEPARATION		11	Proword BREAK
T E X T	Text	a. Subject Matter	12	CLEAR, UNCLASSIFIED, proword SERVICE, and/or internal instructions as appropriate; thoughts or ideas as expressed by the originator
	SEPARATION		13	Proword BREAK
	Procedure	a. Time Group	14	Proword TIME. Hours and minutes expressed in digits and zone suffix, when appropriate

Parts	Components	Elements	Format Line	Contents
E N D I N G		b. Final Instructions	15	Prowords AUTHENTICATION IS, CORRECTION, I SAY AGAIN MORE TO FOLLOW, STANDBY EXECUTE, WAIT; operating signals, address groups; call signs; and plain language designators
		c. Ending Sign	16	Prowords OVER, OUT

9. **Format Lines 2 and 3 (Calling and Answering:**

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

b.   **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 circuit.

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

    (1)   **Full Call**

        Mike Romeo Golf One Five   - *Call sign of receiving station*

        THIS IS   - *From*

        Mike Romeo Golf Zero One   - *Call sign of transmitting station*

    (2)   **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.

        THIS IS   - *From*

        Golf Zero One   - *Call sign of transmitting station*

    (3)   For speed of working when conditions are good, particularly on large nets, the proword THIS IS may be omitted by the receiving station when responding to a call or receipting for a transmission.

(4)   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 detailed in appropriate national and/or international regulations must be satisfied.

d.   The call may contain:

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

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

(3)   A combination of both individual and collective call signs.

(4)   Net call sign identifying all stations on a given net.

e.   The call may be of two types:

(1)   **Single call** – only one call sign precedes the proword THIS IS. This may be an individual, collective or net call sign.

(2)   **Example**:

Using an individual call sign.

Mike Romeo Golf One Five -THIS IS - Mike Romeo Golf Zero One – OVER

(3)   **Multiple call** – two or more call signs precede the proword THIS IS. These may be individual and/or collective and/or net call signs.

(4)   **Example**:

Using two individual call signs

MRG15 – MRG20 - THIS IS - MRG01 – OVER

f.   When the call serves as the address and a collective call sign is used and there are exempted addressees in the message, such addresses can be exempted in the call by use of the proword EXEMPT followed by the call sign of the Stations exempted.

(1)   **Example**:

ALPHA CHARLIE/CHARLIE CHARLIE – EXEMPT - MRG15 - THIS IS - MRG01 – OVER

g.   **Message**. The proword MESSAGE may be transmitted immediately following the call to indicate that a message, which requires recording, is about to follow.

10.   **Format Lines 4 (Transmission Instructions)**. This line contains the transmission instructions which may consist of prowords WORDS TWICE, RELAY (TO), DO NOT ANSWER, or READ BACK. The use of these prowords is explained in paragraphs 13b, 14, 19 and 20 in Chapter 3.

11.   **Format Line 5 (Preamble)**. 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 is transmitted immediately after the precedence designation. An abbreviated plaindress message may carry no date-time group, or the date-time group may be replaced by a time group transmitted in line 14.

(1)   **Example**:

MRG15 – THIS IS - MRG01 – RELAY TO MRG20 – 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.

(1)   **Example**:

THIS MESSAGE IS A SUSPECTED DUPLICATE

12.   **Format Lines 6, 7, 8 and 9 (Address)**. 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 circuit, the call may serve as the address.

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

Transmission	Explanation
G20	Collective call sign of stations called
THIS IS	From
G01	Call sign of station calling
MESSAGE	A message that requires recording is about to follow

Transmission	Explanation
PRIORITY	Precedence designation
TIME	The time of origin is
One Two One	
Six Three	
Zero Zulu JAN	Date-time group (121630Z JAN)
FROM	The originator of this message is
G01	Call sign of originator
TO	The action addressee is
G20	Collective call sign of action addressees
INFO	The information addressee is
G35	Call sign of information addressee is
G36	Call sign of information addressee (not on net)
EXEMPT	The exempted addressee is
G28	Call sign of exempted addressee

b. **Example B**. Abbreviated plaindress message showing three elements in the address component (assuming abbreviated call signs are in use):

Transmission	Explanation
G26	Call sign of receiving station
THIS IS	From
G01	Call sign of calling station
FROM	The originator of this message is
G28	Call sign of originator
TO	The action addressee is
G36	Call sign of action addressee (not on net)
INFO	The information addressee is
G26	Call sign of information addressee

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

Transmission	Explanation
G28	Call sign of receiving station and action addressee
THIS IS	From
G01	Call sign of station calling and originator of message
PRIORITY	Precedence designation
Text	Subject matter
TIME	Time of origin is
One Two Three	
Four Zulu	Time group

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d. **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
G01	Call sign of station called and action addressee
INFO	The information addressee is
G28	Call sign of station called and information addressee
THIS IS	From
G15	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

13. **Format Line 10 (Prefix)**:

a. This line is identified by the proword GROUPS followed by the number of groups, or GROUPS NO COUNT.

(1) **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.

14. **Format Line 11 (Separation)**. This line contains the proword BREAK, separating the text from the heading. It is used only when confusion between the heading and text is likely.

15. **Format Line 12 (Text)**. 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, the proword SERVICE, and internal instructions.

16. **Format Line 13 (Separation)**. 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.

17. **Format Line 14 (Time Group)**. 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.

18.   **Format Line 15 (Final Instructions)**. May contain prowords (such as AUTHENTICATION IS, CORRECTION, I SAY AGAIN, MORE TO FOLLOW, STANDBY EXECUTE, WAIT) operating signals, address groups, call signs, and plain-language designators.

19.   **Format line 16 (Ending Sign)**. 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 station, 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.

20.   **Informal Messages**. Informal messages are those tactical, operational and service messages commonly sent on user operated circuits i.e. field, tactical and Air Traffic Control (UHF/VHF). These types of traffic tend to use a more conversational procedure. Informal messages tend to contain any element of the basic message format (table in paragraph 9), however they will normally only consist of a call, 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.

CHAPTER 3

OPERATING RULES

1. General

a.   To use circuit 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.

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

c.   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.

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

e.   To avoid interfering with other traffic, an operator shall listen to make certain that a circuit is clear before making any transmissions thereon.

f.   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.

2. Authentication.
When authentication is required, it will be accomplished in accordance with the prescribed authentication system at Chapter 4 paragraph 3 or within ACP 31 Section 6.

3. Establishing Communications

a.   The basic methods for establishing and conducting communications are as defined in ACP 31 Sec 6. Abbreviated callsigns are not to be used when establishing communications.

b.   Before conducting regular traffic over radiotelephone circuits, it may be necessary to make contact with the other stations involved to ascertain that communication is possible.

(1)   **Example A (Conditions Good):**

MRG01 transmits:

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MRG28 – THIS IS - MRG01 – OVER

MRG28 answers the initial call:

MRG01 – THIS IS - MRG28 – OVER

MRG01 having nothing for MRG28, transmits:

MRG28 – THIS IS - MRG01 – OUT

    (2)   **Example B (Conditions Difficult):**

MRG01 transmits:

MRG28 – MRG28 – THIS IS - MRG01 – MRG01 – RADIO CHECK – OVER

MRG28 transmits:

MRG01 – MRG01 – THIS IS - MRG28 – MRG 28 – WEAK READABLE – OVER

MRG01, having nothing for MRG28, transmits:

MRG28 – THIS IS - MRG01 – ROGER – OUT

4.   **Sequence of Callsigns and/or Address Groups.** The following rules govern the sequence of callsigns and/or address groups in calling and answering and of those included in components of messages:

    a.   Callsigns 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 sign) and figures one through 0 will be considered the twenty-seventh through thirty-seventh letters of the alphabet, i.e. $Z = 26^{th}$ letter, $/ = 27^{th}$ letter, $1 = 28^{th}$ letter, $0 = 37^{th}$ letter. Care must be exercised to avoid separating groups of related callsigns and/or conjunctive address groups which are interdependent.

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

    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.

5.   **Establishing a Net.** 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.

a.   **Example A:**

At a designated time or when ready to establish the net, MRG01 transmits a collective call:
CHARLIE CHARLIE – THIS IS – MRG01 – OVER

Each subordinate station then answers the call in alphabetical order:

MRG01 – THIS IS – MRB18 – OVER

MRG01 – THIS IS - MRC32 – OVER

MRG01 – THIS IS – MRD22 – OVER

MRG01 – THIS IS – MRF06 – OVER

MRG01 – THIS IS – MRG09 – OVER

MRG01 – THIS IS – MRS41 – OVER

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

CHARLIE CHARLIE – THIS IS – MRG01 – OUT

b.   **Example B:**

In this example, the subordinate station MRF06 is unable to answer the collective call. MRG01 transmits:

CHARLIE CHARLIE – THIS IS – MRG01 – OVER

The first three stations then answer:

MRG01 – THIS IS – MRB18 – OVER

MRG01 – THIS IS – MRC32 – OVER

MRG01 – THIS IS – MRD22 – OVER

MRG09, hearing no answer from MRF06, waits approximately 5 second and then transmits:

MRG01 – THIS IS – MRG09 – OVER

MRS41 follows on:

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MRG01 – THIS IS – MRS41 – OVER

After receiving answers from all stations except MRF06, MRG01 transmits:

CHARLIE CHARLIE – THIS IS – MRG01 – ROGER – MRF06 – NOTHING HEARD – OUT

MRF06, when able to transmit, calls the NCS to report into the net:

MRG01 – THIS IS – MRF06 – Reporting into net – OVER

MRG01 transmits:

MRF06 – THIS IS – MRG01 – ROGER – OUT

6. **Use of Full or Abbreviated Procedures and Callsigns**

a. Once the net has been established, it will normally work with abbreviated procedures and callsigns (Chap 1, para 8, and Chap 2 para 9). The NCS will, however, order the net to work full or abbreviated procedures or call signs as required by the conditions.

b. **Full Procedure**. With full procedure, the use of prowords and call signs that were previously optional becomes mandatory.

(1) If, when establishing the net, 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.

(a) **Example**:

Once the net has been established, the NCS transmits:

CHARLIE CHARLIE - THIS IS – MRG01 – USE OF FULL PROCEDURE – OUT

(2) If the net is working using abbreviated procedure and conditions deteriorate to such a degree that this is causing unnecessary repetitions, the NCS will order the use of full procedure:

(a) **Example**:

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

CHARLIE CHARLIE – THIS IS – MRG01 – USE OF FULL PROCEDURE – OVER

Each station answers in turn using full procedure:

MRG01 – THIS IS – MRB18 – ROGER – OUT

MRG01 – THIS IS – MRC32 – ROGER – OUT, etc

c.   **Reverting to Abbreviated Procedure**. When conditions return to normal, the NCS is to order the net return to abbreviated procedure.

(1)   **Example**:

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

CHARLIE CHARLIE – THIS IS –G01 – USE ABBREVIATED PROCEDURE – OVER

Each station answers in turn using abbreviated procedure:

G01 – THIS IS – B18 – ROGER – OUT

G01 – THIS IS – C32 – ROGER – OUT, etc

d.   **Full Callsigns**. On establishing a net or at any other time when conditions require it, the NCS may order the use of full callsigns in the same manner as for full procedure by using the proword USE FULL CALLSIGNS.

e.   **Abbreviated Callsigns**. When conditions have returned to normal, the NCS will order the net to revert to the use of abbreviated callsigns in the same manner as for abbreviated procedure by using the proword USE ABBREVIATED CALLSIGNS. When ordered to use abbreviated callsigns, the net must continue to use either full or abbreviated procedure, whichever is in force.

(1)   **Example**:

The NCS orders the use of abbreviated callsigns when full procedure is in force:

CHARLIE CHARLIE – THIS IS – G01 – USE ABBREVIATED CALLSIGNS – OVER

Each station answers in turn using abbreviated callsigns but continuing to use full procedure:

GO1 – THIS IS – B18 – ROGER – OUT

GO1 – THIS IS – C32 – ROGER – OUT etc

f.   **Full Procedure and Full Callsigns**

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(1)   Conditions may be such that the NCS considers the use of both full procedure and full callsigns necessary for the efficiency of the net. In this case, it will direct the net as follows:

USE FULL CALLSIGNS AND FULL PROCEDURE – OVER

(2)   When conditions warrant it, the NCS may subsequently order the net to use abbreviated procedure or abbreviated callsigns as shown in the above examples or may order the net to abbreviate completely using the prowords USE ABBREVIATED CALLSIGNS and ABBREVIATED PROCEDURE.

7.   **Establishing a Net (Tuning) (FOR AM EQUIPMENTS ONLY, NOT FOR MODERN SSB EQUIPMENT)**

a.   MRG01 wishes to establish a net on a new frequency. At the time arranged for establishing communication, MRG01 listens on the frequency and, finding it clear, transmits:

CHARLIE CHARLIE - CHARLIE CHARLIE – THIS IS - MRG01 – MRG01 – Am about to transmit a tuning signal – MRG01 (repeats callsign for 20 seconds) – NET NOW (holds down press-to-talk switch for 10 seconds) – OUT

b. .   After allowing time for stations to adjust their transmitters, MRG01 will establish communication as in paragraph 5. If any stations are off frequency, they will be given further tuning as follows:

MRD22 – THIS IS MRG01 – You are five kilohertz low – MRG01 (repeats callsign for 20 seconds) – NET NOW – (hold down press-to-talk switch for 10 seconds) – OUT

MRG01 transmits:

MRD22 –THIS IS – MRG01 – OVER

MRD22 transmits:

MRG01 – THIS IS – MRD22 – OVER

MRG01 transmits:

CHARLIE CHARLIE – THIS IS – MRG01 – OUT

8.   **Directing a Change in Frequency**

a.   As with all other activities, which change the characteristics of a net, a change in frequency should be disguised as much as possible in the interests of communications security.

(1)   **Example**:

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The NCS changes the net to a new frequency using the designator HOTEL ONE:

CHARLIE CHARLIE – THIS IS – G01 – CHANGE TO HOTEL ONE – OVER

Each subordinate station answers in turn:

GO – THIS IS – B18 – ROGER – OVER GO1 – THIS IS – C32 – ROGER – OVER

The NCS transmits the order to change:

CHARLIE CHARLIE – THIS IS – G01 – HOTEL ONE now – OUT

9.   **Directed and Free Nets**

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

(1)   **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 circuit discipline.

(2)   **Directed Net**. In this type of net, stations obtain permission from the NCS before communicating with other stations in the net. Transmissions on a directed net may be accomplished in accordance with predetermined schedules.

b.   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.

c.   **Directed Nets**

(1)   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 callsigns are in use).

(a)   **Example:**

MRG01 transmits:

CHARLIE CHARLIE – THIS IS – G01 – THIS IS A DIRECTED NET – of what precedence and for who are your messages – OVER

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Each subordinate station then answers in the alphabetical order of his full callsign, indicating traffic on hand:

GO1 – THIS IS – B18 – One IMMEDIATE and one ROUTINE for you – OVER

GO1 – THIS IS C32 – No Traffic – OVER

G01 – THIS IS – D22 – ROUTINE for B18 – OVER

G01 – THIS IS – F06 – PRIORITY for S41 – OVER

G01 – THIS IS – G09 – No Traffic – OVER

G01 – THIS IS – S41 – No Traffic – OVER

MRG01 then informs the stations that their transmissions have been heard and commences to clear traffic in order of precedence.

CHARLIE CHARLIE – THIS IS – GO1 – ROGER – B18 – Send your IMMEDIATE – OVER

After MRB18 completes his IMMEDIATE to MRG01, the NCS orders the station with the next highest precedence message to transmit his message:

F06 – THIS IS – G01 – Send your PRIORITY – OUT

MRS41, hearing this authorisation, tells MRF06 to go ahead:

THIS IS – S41 – OVER

(Failure of MRS41 to answer immediately would necessitate MRF06 making a preliminary call to MRS41).

S41 – THIS IS – F06 – PRIORITY – TIME, etc

After MRS 41 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.

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

(a)   **Example:**

MRS41, having one ROUTINE message for MRC32, transmits:

G01 – THIS IS – S41 – ROUTINE for C32 – OVER

MRG01 transmits:

THIS IS - G01 – send your message – OUT or, if higher-precedence traffic is awaiting transmission, THIS IS - G01 – WAIT – OUT

When circuit conditions permit, MRG01 informs MRS41 that they may transmit their message:

S41 – THIS IS – G01 – Send your message – OUT

MRC32, hearing the authorisation, should then transmit:

THIS IS – C32 – OVER

This is in order to avoid requiring MRS41 to make a preliminary call. MRS41 then proceeds with the transmission of their ROUTINE message.

10. **Delegating and Assuming Net Control**

a.   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.

(1)   **Example:**

The NCS is closing down for 30 minutes and decides that MRD22 is in the best position to assume net control. He transmits:

CHARLIE CHARLIE – THIS IS – G01 – Am closing down for three zero minutes – D22 – ASSUME CONTROL – TIME One Eight Three Zero Zulu – OVER

The subordinate stations answer in turn:

G01 – THIS IS – B18 – ROGER – OUT

G01 – THIS IS – C32 – ROGER – OUT

G01 – THIS IS – D22 – WILCO – OUT

G01 – THIS IS – F06 – ROGER – OUT

G01 – THIS IS – G09 – ROGER – OUT

G01 – THIS IS – S41 – ROGER – OUT

b.   Other occasions may arise where the NCS is not in a position to give warning that he is leaving the net. In such cases, the senior subordinate station will normally assume net control but, before he does so, he must confirm that the NCS cannot be heard by other stations on the net.

(1)   **Example**:

Nothing has been heard from the NCS. MRF06, as the senior subordinate station, transmits:

CHARLIE CHARLIE – THIS IS – F06 – Have you heard anything from G01 – OVER

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

F06 – THIS IS – B18 – NOTHING HEARD – OVER

F06 – THIS IS – C32 – NOTHING HEARD – OVER, etc

MRF06 then transmits:

CHARLIE CHARLIE – THIS IS – F06 – NOTHING HEARD from G01 – I AM ASSUMING CONTROL – OVER
Subordinate stations rely in order:

F06 – THIS IS – B18 – ROGER – OUT

F06 – THIS IS – C32 – ROGER – OUT, etc

c.   When the NCS rejoins the net, he does so using the proword I AM ASSUMING CONTROL and must give authentication:

(1)   **Example**:

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

CHARLIE CHARLIE – THIS IS – G01 – I AM ASSUMING CONTROL – TIME One Eight Three Zero Zulu – AUTHENTICATION IS _____ - OVER

The subordinate stations reply in order:

G01 – THIS IS – B18 – ROGER – OUT

G01 – THIS IS – C32 – ROGER – OUT, etc

11.   **Radio Checks, Signal Strength, and Readability**

a.   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.

b.   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.

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

(1)   **General**:

RADIO CHECK	What is my signal strength and readability; how do you hear me?
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 from (2) and (3) below.
NOTHING HEARD	To be used when no reply is received from a called station.

(2)   **Report of Signals Strength:**

LOUD	Your signal is very strong
GOOD	Your signal strength is good
WEAK	Your signal strength is weak
VERY WEAK	Your signal strength is very weak
FADING	At times your signal fades to such an extent that continuous reception cannot be relied upon

(3)   **Report of Readability:**

CLEAR	The quality of your transmission is excellent
READABLE	The quality of your transmission is satisfactory

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UNREADABLE	The quality of your transmission is so bad that I cannot read you
DISTORTED	Having trouble reading you because your signal is distorted
WITH INTERFERENCE	Having trouble reading you due to interference
INTERMITTENT	Having trouble reading you because your signal is intermittent

d. **Example (Assuming Abbreviated Callsigns are in Use):**

MRG01 desires a radio check with – CHARLIE CHARLIE collective and transmits:

CHARLIE CHARLIE – THIS IS – G01 – RADIO CHECK – OVER

All stations of collective call hear MRG01 loud and clear except MRC31 and MRD22. The replies of each station, in order, are:

G01 – THIS IS – B18 – ROGER – OVER

G01 – THIS IS – C32 – GOOD READABLE – OVER

G01 – THIS IS – D22 – WEAK WITH INTERFERENCE – OVER
G01 – THIS IS – F06 – ROGER – OVER

G01 – THIS IS – G09 – ROGER – OVER

G01 – THIS IS – S41 – ROGER – OVER

MRG01 indicates his reception of each of the called stations was loud and clear except for MRC32, who was distorted, and MRD22, who was not heard, by replying:

CHARLIE CHARLIE – THIS IS – G01 – ROGER – C32 DISTORTED – D22 – NOTHING HEARD – OVER

In the event MRG01 that heard all stations loud and clear, the reply would have been:

CHARLIE CHARLIE – THIS IS – G01 – ROGER – OUT

12.   **Preliminary Calls.** 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.

a.   **Example A**:

MRC32 wishes to transmit a message to MRF06 and desires to know if MRF06 is ready to accept it. MRC32 transmits:

F06 – THIS IS – C32 – MESSAGE – OVER

MRF06, ready to accept the message, transmits:

C32 – THIS IS – F06 – SEND YOUR MESSAGE – OVER

MRC32 transmits:

F06 – THIS IS – C32 – ROUTINE, etc

b.   **Example B**:

MRD22 wishes to transmit a message to MRS41 and desires to know that MRS41 is ready to accept it. MRD22 transmits:

S41 – THIS IS – D22 – PRIORITY – Over

MRS41, not prepared to accept the traffic immediately transmits:

D22 – THIS IS – S41 – WAIT

After a short pause, MRS41 is ready and transmits:

D22 - THIS IS – S41 – SEND YOUR PRIORITY – OVER

Note: If MRS41's delay had been longer than a few seconds, MRS41 would have transmitted:

D22 – THIS IS – S41 – WAIT – OUT

When ready to accept the message, MRS41 would transmit:

D22 – THIS IS – S41 – SEND YOUR PRIORITY – OVER

13.   **Transmitting a Message**

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

(1)   **Example A**:

MRG01 transmits:

G09 – THIS IS - G01 – PRIORITY – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

MRG09, having received the transmission satisfactorily, transmits:

G01 – THIS IS – G09 – (ROGER) – OUT

(2)   **Example B**:

MRG09, having missed the transmission, transmits:

THIS IS – G09 – SAY AGAIN – OVER

MRG01 transmits:

G09 – THIS IS – G01 – I SAY AGAIN – G09 – THIS IS G01 – PRIORITY – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

MRG09 transmits:

G01 – THIS IS – G09 – SAY AGAIN ALL AFTER Convoy – OVER

MRG01 transmits:

G09 – THIS IS – G01 – I SAY AGAIN ALL AFTER Convoy – has arrived – TIME One Six Three Zero Zulu – OVER

MRG09 transmits:

G01 – THIS IS – G09 – ROGER – OUT

b.   **Communication Difficult**. When communication is difficult, callsigns 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. Under such conditions, preliminary calls are normally employed unless stations are on a directed net, in which case stations should have indicated they are ready to receive.

(1)   **Example A**:

MRF06 transmits:

MRB18 – MRB18 – THIS IS – MRF06 – MRF06 – PRIORITY PRIORITY – OVER

MRB18 transmits:

MRF06 – MRFO6 – THIS IS – MRB18 – MRB18 – SEND YOUR PRIORITY – OVER

MRF06 transmits:

MRB18 – MRB18 – THIS IS – MRF06 – MRF06 –
WORDS TWICE – WORDS TWICE – PRIORITY – PRIORITY –
Convoy has arrived – Convoy has arrived – TIME One Six
Three Zero Zulu - TIME One Six Three Zero Zulu

MRB18 transmits:

MRF06 – MRF06 – THIS IS – MRB18 – MRB 18 – SAY AGAIN –
SAY AGAIN – WORD BEFORE has - WORD BEFORE has –
OVER

MRF06 transmits:

MRB18 – MRB18 – THIS IS – MRF06 – MRF06 – I SAY AGAIN – I
SAY AGAIN - WORD BEFORE has – WORD BEFORE has –
Convoy – Convoy – OVER

MRB18 transmits:

MRF06 – MRF06 – THIS IS – MRB18 – MRB18 – ROGER –
ROGER – OUT

(2)   **Example B**:

The text consists of code groups.

MRF06 transmits:

MRB18 – MRB18 –THIS IS – MRF06 – MRF06 – 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

MRB18 transmits:

MRF06 – MRF06 – THIS IS – MRB18 –MRB18 - ROGER –
ROGER – OUT

14.   **Relay**

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

(1)   **Example**:

MRG01 transmits:

MRB18 – THIS IS – MRG01 – RELAY – PRIORITY – TIME One One One Three Two Two Zulu – FROM MRG01 – TO MRS41 – Proceed on mission assigned – OVER

MRB18 transmits:

MRG01 – THIS IS – MRB18 – ROGER – OUT

MRB18 relays the message:

MRS41 – THIS IS - MRB18 – PRIORITY – TIME One One One Three Two Two Zulu – FROM MRG01 – TO MRS41 – Proceed on mission assigned – OVER

MRS41 transmits:

MRB18 – THIS IS – MRS41 – ROGER – OUT

b.   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 callsign of the station designated to perform the relay will precede the proword RELAY TO.

(1)   **Example A**;

MRG01 transmits:

B18 – THIS IS – G01 – RELAY TO S41 – PRIORITY - TIME One One One Three Two Two Zulu – Proceed on mission assigned – OVER

MRB18 transmits:
G01 – THIS IS – B18 – (ROGER) – OUT

MRB18 relays the message:

S41 – THIS IS – B18 – FROM G01 – PRIORITY - TIME One One One Three Two Two Zulu – Proceed on mission assigned – OVER

MRS41 transmits:

B18 – THIS IS – S41 – (ROGER) – OUT

(2)   **Example B**:

MRC32 transmits:

D22 – G09 – THIS IS - C32 – D22 – RELAY TO B42 – ROUTINE - TIME One One One Three Two Two Zulu – FROM G01 – TO B42 – INFO D22 – G09 – BREAK – Text – OVER

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MRD22 transmits:

THIS IS D22 – ROGER – OUT

MRG09 transmits:

THIS IS G09 – ROGER – OUT

MRD22 relays the message to MRB42

Note: In this case, MRD22 has relayed the message to MRB42, who is an off-net station, using radiotelephone procedure. At times, it is necessary to relay a message originated on a radiotelephone circuit 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.

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

(1)   **Example:**

MRG09 attempts to transmit a message to MRF06 but cannot contact him. The NCS directs MRG09 to relay through MRB18 who he knows to be in contact with MRF06:

G09 – THIS IS – G01 – RELAY THROUGH B18 – OUT

MRG09 transmits:

B18 – THIS IS – G09 – RELAY TO F06 – Move now – OVER, etc

d.   The proword THROUGH ME allows a third station who knows that he is in contact with the required station to indicate that he is able to relay the message:

(1)   **Example:**

In the previous example, if the NCS had known that he was in contact with MRF06 he could have transmitted:

G09 – THIS IS – G01 – THROUGH ME – OVER

e.   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 he has not been able to relay the message.

(1)   **Example:**

MRC32 requests MRD22 to relay a message to MRG28, MRD22 accepts but is unable to relay. MRD22 informs MRC32 and transmits C32 THIS IS D22 UNABLE TO RELAY YOUR MESSAGE (DTG OR TEXT) TO Two Zero. MRC32 replies D22 THIS IS C32 ROGER OUT upon being informed that the message has not been passed and acknowledging the responsibility for clearing the message rests with MRC32:

C32 – THIS IS – D22 – NOTHING HEARD from G28 – OVER

MRC32 replies:

D22 – THIS IS – C32 – ROGER – OUT, or as appropriate

15.   Repetitions

a.   When words are missed or are doubtful, repetitions will be requested by stations 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.

(1)   **Example A:**

MRG01 calls the two stations for whom he has traffic.

C32 – D22 – THIS IS - G01 - MESSAGE – ROUTINE – TIME Zero Zero Five Two Zulu – FROM GO1 – TO C32 – INFO D22 – 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 – ACKNOWLEDGE – OVER

MRC32, having missed from "At" to "Proceed", transmits:

THIS IS - C32 – SAY AGAIN – FROM At TO Proceed – OVER

MRG01 deals with the request for repetitions by MRC32 before the other station requests his repetitions:

THIS IS – G01 – I SAY AGAIN – FROM At TO Proceed – At Eight Zero Zero Zulu Proceed – OVER

MRC32, having now received the message satisfactorily, transmits:

THIS IS - C32 – ROGER – OUT

Having heard MRC32 give a receipt for the message, the next station asked for his repetitions – in this case, D38 missed from "At" to "Proceed" and the word after "Load" – As MRC32 had already

asked for the phrase from "At" to "Proceed" and MRD22 heard it repeated, it is not now necessary for him to request that part to be repeated MRD22 asks, therefore, for the word after "Load" to be repeated:

THIS IS - D22 – SAY AGAIN – WORD AFTER Load – OVER

MRG01 repeats the word:

THIS IS - GO1 – I SAY AGAIN – WORD AFTER Load – One – OVER

D32, having now received the message satisfactorily, transmits:

THIS IS - D22 – ROGER – OUT

(2)   **Example B:**

Alternatively, the second station in the sequence of answering, not having heard the first station, MRC32, request for repetition within 5 seconds, transmits:

THIS IS - D22 – SAY AGAIN – At TO Proceed and WORD AFTER Load – OVER

MRG01 having received nothing from MRC32, within 5 seconds of D22's request, transmits:

THIS IS - GO1 – I SAY AGAIN – At TO Proceed – At One Eight Zero Zero Zulu – Proceed – WORD AFTER Load – One – OVER

MRC32 transmits:

THIS IS - C32 – ROGER – OUT

MRD22 transmits:

THIS IS - D22 – ROGER – OUT

b.   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.

(1)   **Example A:**

MRF06 transmits:

C32 – G09 – THIS IS - F06 – PRIORITY – TIME One Eight Six Two Five Zulu – FROM - F06 – TO - C32 – G09 – INFO Bravo Four Two Zero – (BREAK) – Proceed to rejoin convey – OVER

MRC32, having missed all before the address, transmits:

THIS IS - C32 – SAY AGAIN – ALL BEFORE FROM – OVER

MRF06 replies to MRC32:

C32 – THIS IS - F06 – I SAY AGAIN – ALL BEFORE FROM – C32 G09 – THIS IS - F06 – PRIORITY – TIME One Six Two Five Zulu – OVER

MRC32 transmits:

THIS IS C32 – ROGER – OUT

MRG09, having received the message satisfactorily, transmits:

THIS IS - G09 – ROGER – OUT

(2) **Example B:**

MRD22 transmits:

S41 – THIS IS - D22 – ROUTINE – TIME Two Four Zero Nine One Two Zulu – FROM D22 – TO S41 – INFO – Bravo Four Two Zero – BREAK – Cancel my Two Three One Four Two Eight Zulu – OVER

MRS41, having missed the portion between the date-time group and the information addressees, transmits:

THIS IS - S41 – SAY AGAIN – FROM TIME TO INFO – OVER

MRD22 transmits:

THIS IS - D22 – I SAY AGAIN – FROM TIME TO INFO – TIME Two Four Zero Nine One Two Zulu – FROM D22 – To S41 – INFO – OVER

MRS41 transmits:

THIS IS - S41 – ROGER – OUT

c.   When it is necessary to ask for repetitions after a message has been receipted, such requests and replies thereto 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.

16. Checking the Group Count

a. 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 phrase "Interrogative GROUPS........", stating the number of groups actually received.

b. 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.

c. 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.

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

MRD22 transmits:

B18 –THIS IS - D22 – ROUTINE – TIME One Four Two Zero Three Eight Zulu – GROUPS One Two – Delta Golf India – Lima Oscar papa – Juliet Tango Xray – Romeo Oscar Tango – Foxtrot Mike Xray – Oscar Papa India – Tango Romeo Sierra – Mike Delta Golf – Delta November India – Sierra Tango Delta – Golf Bravo Xray – Oscar Mike Bravo – OVER

MRB18, having received only 11 groups, transmits:

THIS IS - B18 Interrogative GROUPS One One – OVER

D22 checks his group count against his transmission copy, finds it correct, and transmits:

THIS IS - D22 – GROUPS One Two – Delta Lima Juliet Romeo Foxtrot Oscar Tango Mike Delta Sierra Golf Oscar – OVER
MRB18 can now see which group he has missed and transmits:

THIS IS - B18 – SAY AGAIN Five – OVER

MRD22 transmits:

THIS IS - D22 – I SAY AGAIN Five – Foxtrot Mike Xray – OVER

MRB18 transmits:

THIS IS - B18 – ROGER – OUT

(2)   **Example B (Group Count Incorrect):**

MRC32 transmits:

G09 – THIS IS - C32 – 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

MRG09, noticing that the group count and the number of groups he has received are at variance, transmits:

THIS IS - G09 – Interrogative GROUPS Seven – OVER

MRC32 checks his group count against the transmission copy, discovers his error, and transmits:

THIS IS - C32 – CORRECT – OVER

MRG09 transmits:

THIS IS - GO9 – ROGER – OUT

d.   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 followed by the initial letter of that group.

(1)   **Example (Group Count Correct – More than 50 Groups):**

MRD22 transmits a message containing 65 groups to MRB18

MRB18 queries the group count:

D22 – THIS IS - B18 – Interrogative GROUPS Six Five – OVER
MRD22 checks and finds the group count correct as sent. He then transmits:

THIS IS - D22 – GROUPS Six Five – One Mike – One One Sierra – Two One papa – Three One Romeo – Four One India – Five One November – Six One Golf – OVER

MRB18 then requests a repetition of the 10 groups in which he has a miscount:

THIS IS - B18 – SAY AGAIN – One One TO Two Zero – OVER

MRD22 then transmits the requested groups:

3–22

17.   **Correction**

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

(1)   **Example A**:

MRG09 transmits:

S41 – THIS IS - G09 – Convoy Romeo Three – CORRECTION – Romeo Four should arrive – One Six Three Zero Lima – TIME One Zero One Two Zulu – OVER

MRS41 transmits:

THIS IS - S41 – (ROGER) – OUT

(2)   **Example B**:

MRC32 transmits:

G01 – THIS IS - C32 – TIME Two Four Zero Seven One Two Zulu – GROUPS Nine – Zulu Bravo Alfa Xray – Xray Oscar – CORRECTION – Zulu Bravo Alfa Xray – Xray Quebec Alfa – Kilo etc

MRG01 transmits:

THIS IS - G01 – ROGER – OUT

(3)   **Example C**:

MRC32 transmits:

G09 – THIS IS - C32 – ROUTINE – TIME One Four Four Two Zulu – FROM Zero Six – TO four Eight – CORRECTION – TO G09 – INFO Bravo Four Two Zero – Join Me – OVER

MRG09 transmits:

THIS IS - G09 – (ROGER) – OUT

(4)   **Example D**:

MRD22 transmits:

C32 – THIS IS - D22 – PRIORITY – TIME Zero Three One Four Zulu – Latitude One Six Three Zero – Longitude One Zero One Five – CORRECTION – Longitude One Zero Five Five – OVER

MRC32 transmits:

THIS IS - C32 – ROGER – OUT

b.   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.

(1)   **Example**:

MRD 22 transmits:

S41 – THIS IS - D22 – Tanks Will Arrive – Grid Three Two One Three – at Hotel Hour Minus Six – TIME One Four Two Six Zulu – CORRECTION – WORD AFTER Minus – Five – OVER

MRS41 transmits:

THIS IS - S41 – ROGER – OUT

c.   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:

(1)   **Example**:

MRG09 transmits:

S41 – THIS IS - G09 – CORRECTION – My One Three One Five One Six Zulu – WORD AFTER Monday – Morning – OVER

18.   **Cancelling Messages**

a.   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

(1)   **Example**:

During the transmission of a message MRF06 realises that the transmission is being sent in error and therefore cancels it:

GO9 – THIS IS - F06 – ROUTINE TIME One Zero Zero Two Zulu – Begin unloading at One One One Two Three Zero Zulu Proceed – DISREGARD THIS TRANSMISSION – OUT

b.   A message which has been completely transmitted can only be cancelled by another message:

(1) **Example**:

MRF06 transmits:

G09 – THIS IS – F06 – Cancel my One Zero Zero Two Zulu – TIME Zero Seven One Two Zulu – OVER

19. **"Do Not Answer" Transmissions**. 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.

a. **Example**:

MRF06 transmits:

G09 –THIS IS – F06 – DO NOT ANSWER – Act in accordance with Plan Charlie – TIME Two Two One Eight Zulu – AUTHENTICATION IS

‾‾‾‾‾ – I SAY AGAIN – G09 – THIS IS F06 – DO NOT ANSWER – Act in accordance with Plan Charlie – TIME Two Two One Eight Zulu – AUTHENTICATION IS ‾‾‾‾‾ - OUT

20. **Read Back**

a. If it is desired that a message or portion thereof be read back to ensure accuracy, the proword READ BACK which means "Repeat the entire transmission back to me exactly as received", but it may be qualified, e.g. READ BACK TIME, READ BACK GRID, READ BACK TEXT, etc, will be transmitted immediately following the call:

(1) **Example A**:

MRG01 transmits:

GO9 –THIS IS - GO1 – READ BACK – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

MRG09 transmits:

THIS IS - G09 – I READ BACK – G09 – THIS IS G01 – READ BACK – Convoy has arrived – Time One Six Three Zero Zulu – OVER

MRG01 transmits:

THIS IS - GO1 – CORRECT – OUT

(2) **Example B**:

MRC32 transmits:

D22 – THIS IS - C32 – READ BACK GRID – Meet Me Grid One Three Four Two Six Five – OVER

MRD22 transmits:

THIS IS - D22 – I READ BACK GRID – One Three Four Two Six Five – OVER

MRC32 transmits:

THIS IS - C32 – CORRECT – OUT

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

b.   The proword READ BACK, when not preceded by identifying call signs, 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, the 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.

(1)   **Example:**

MRG01 transmits:

CHARLIE CHARLIE - THIS IS – G01 – D22-READ BACK – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

MRD22 transmits:

G01 - THIS IS – D22- I READ BACK – Convoy has arrived - TIME One Six Three Zero Zulu – OVER

MRG01 transmits and directs MRC32 to receipt:

THIS IS - G01 – CORRECT – C32 – OVER

MRC32 transmits:

THIS IS - C32 – ROGER – OUT

c.   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.

(1)   **Example:**

MRD22 reads back:

G01 - THIS IS – D22 I READ BACK – Convoy has arrived - TIME One Six Two Zero Zulu – OVER

MRG01 transmits:

THIS IS – G01 – WRONG – TIME – One Six Three Zero Zulu – OVER

MRD22 transmits:

THIS IS – D22 – TIME One Six Three Zero Zulu – OVER

MRG01 transmits:

THIS IS – G01 – CORRECT – OUT

21. **Receipt**

a.   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:

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

(2)   Where abbreviated procedure is in force, a return transmission may be considered as a receipt; no confusion is likely to arise.

(3)   In the case of a message requiring acknowledgement, the use of the proword WILCO constitutes a receipt (paragraph 22) as the meaning of WILCO includes that of ROGER.

(a)   **Example:**

MRC32 transmits:

F06 – THIS IS - C32 – Send boat for mail – TIME One Seven One Four Zulu – OVER

MRF06 transmits:

C32 – THIS IS - F06 – ROGER – OUT

b.   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 of all transmissions.

(1) **Example**:

Station MRG01 sends a message to the collective call and only desires a receipt from MRD22.

MRG01 transmits:

CHARLIE CHARLIE – THIS IS - G01 – Send boat for mail – TIME One Two One Six Zulu – D22 – OVER

MRD22 transmits:

THIS IS – D22 – ROGER – OUT

MRS41, having missed the word "mail" transmits:

G01 – THIS IS - S41 – SAY AGAIN – WORD AFTER for – OVER

MRG01 transmits:

THIS IS - G01 – I SAY AGAIN – WORD AFTER for – mail – OVER

MRS41 transmits:

THIS IS - S41 – ROGER – OUT

c.   Should either the transmitting or receiving station wish to indicate that he has further traffic to transmit to the station that he is working; this may be done by using the proword MORE TO FOLLOW in the message ending or receipt.

(1) **Example A**:

MRC32, in transmitting a message to MRF06 wishes to indicate that he has further traffic for MRF06, transmits:

F06 – THIS IS - C32 – TEXT – MORE TO FOLLOW – OVER

C32 - THIS IS - F06 – ROGER – OVER

(2) **Example B**:

MRG01, in transmitting a message to all stations on the net wishes to indicate that he has further traffic for MRC32 and MRS41, transmits:

CHARLIE CHARLIE – THIS IS - G01 – TEXT – MORE TO FOLLOW for C32 and S41 – OVER

G01 – THIS IS - B18 – ROGER – OUT
G01 - THIS IS - C32 – ROGER – OVER

> **G01 - THIS IS - D22 – ROGER – OUT**
> **G01 - THIS IS - F06 – ROGER – OUT**
> **G01 - THIS IS - G09 – ROGER – OUT**
> **G01 - THIS IS - S41 – ROGER – OVER**
>
> **C32 – S41 - THIS IS - G01, etc**

(3)   **Example C:**

MRF06, in receipting for a message from MRC32 wishes to indicate that he has a message for MRC32, transmits:

> **C32 - THIS IS - F06 – ROGER – MORE TO FOLLOW – OVER**
> **F06 - THIS IS - C32 – OVER**

22.   **Acknowledgement of Messages**. An acknowledgement should not be confused with a reply or receipt. A prompt reply referring to the message may serve in lieu of an
acknowledgement. It is the prerogative of the originator to request an ACKNOWLEDGEMENT to a message from any or all addressees of that message. If an acknowledgement is desired for a message normally is included in the text of that message. If the message has been transmitted, the request for acknowledgement will constitute a new message. Acknowledgements are originated only by the addressee to whom the request for acknowledgement was made.

a.   **Example:**

MRG01 transmits a message to MRD22 and desires an acknowledgement:

D22 – THIS IS - G01 – Search Area Delta – ACKNOWLEDGE – TIME One One Two Zero Zulu – OVER

D22 transmits a receipt for the message:

G01 – THIS IS - D22 – ROGER – OUT

MRD22 operator, having shown the message to the commanding officer or his duly authorised representative, and having been ordered to acknowledge the message, transmits:

GO1 – THIS IS - D22 – Your One One Two Zero Zulu Acknowledged – TIME One One Two Five Zulu – OVER

23.   **Verifications**

a.   When verification of a message or a portion thereof has been requested by an addressee, the originating station will verify with the originator and send the correct version.

    (1)   **Example**:

MRS41 transmits:

GO1 – THIS IS - S41 – VERIFY Your One Zero Zero Eight One Zulu – ALL BEFORE BREAK – OVER

MRG01 transmits:

THIS IS - GO1 – ROGER – OUT (or WAIT or WAIT OUT)

MRG01 operator checks with the originator establishes that the heading previously transmitted was correct, transmits:

S41 - THIS IS - G01 – I VERIFY - My One Zero Zero Eight Zero One Zulu – ALL BEFORE BREAK – S41 – THIS IS G01 – PRIORITY – TIME One Zero Zero Eight Zero One Zulu – FROM G01 – TO S41 – INFO C32 – GROUPS One Seven – BREAK – OVER

MRS41 transmits:

THIS IS - S41 – ROGER – OUT

b.   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 addresses.

    (1)   **Example**:

MRD22 transmits:

G09 – THIS IS - D22 – VERIFY Your Zero Eight Four Five Zulu – WORD AFTER Proceed – Haiphong – OVER

MRG09 transmits:

THIS IS - G09 – ROGER – OUT (or WAIT or WAIT OUT)
MRG09 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.

D22 – F06 – THIS IS - G09 – CORRECTION – My Zero Eight Four Five Zulu – WORD AFTER Proceed – Hong Kong – OVER

MRD22 transmits:

THIS IS - D22 – ROGER – OUT

MRF06 transmits:

THIS IS - F06 – ROGER – OUT

24. **Break-In Procedure**

a.   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:

(1)   FLASH – Break in at once and transmit the message (b and c below).

(2)   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.

(3)   PRIORITY – As for IMMEDIATE except that only long ROUTINE messages should be interrupted.

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

b.   The precedence spoken three times "Cease transmissions immediately. Silence will be maintained until the station braking in has passed his message".

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

(1)   **Example:**

MRD22 is transmitting an IMMEDIATE message to MRG01 when MFR06 is handed a FLASH message for transmission to MRB18. When MRD22 pauses, MRF06 transmits:

FLASH FLASH FLASH – B18 – THIS IS - F06 FLASH – Text – OVER

MRB18 transmits:

F06 – THIS IS - B18 – ROGER – OUT

MRD22 then continues with his transmission:

G01 – THIS IS - D22 – AFTER ALL – etc

d.   Break in procedure for message of IMMEDIATE or PRIORITY precedence is illustrated in the following examples:

(1)   **On Directed Nets**

3–31

(a)   **Example**:

MRD22 is transmitting PRIORITY message to MRG01 when MRF06 is handed an IMMEDIATE message for MRB18. When MRD22 pauses, MRF06 transmits:

IMMEDIATE IMMEDIATE IMMEDIATE – G01 – THIS IS - F06 – IMMEDIATE for B18 – OVER

MRD22, hearing MRF06's break in, ceases transmission.

NCS transmits:

F06 – THIS IS - G01 – Send your IMMEDIATE – OVER

On hearing this authorisation, MRB18 transmits:

F06 – THIS IS - B18 – OVER

MRF06 transmits:

B18 – THIS IS - F06 – IMMEDIATE – text – OVER

B18 transmits:

F06 – THIS IS - B18 – ROGER – OUT

As soon as the IMMEDIATE message has been receipted, MRD22 continues his transmission:

G01 – THIS IS - D22 – ALL AFTER – etc

(2)   **On Free Nets**

(a)   **Example A**:

MRB18 is transmitting a PRIORITY message to MRD22 when MRG01 is handed an IMMEDIATE message for MRF06. When MRB18 pauses, MRG01 transmits:

IMMEDIATE IMMEDIATE IMMEDIATE

MRB18 hearing the precedence spoken three times, ceases transmission and MRG01 continues:

F06 – THIS IS - G01 – IMMEDIATE – Text – OVER

MRF06 transmits:

G01 – THIS IS - F06 – (ROGER) – OUT

MRB18 then continues transmission:

D22 – THIS IS - B18 – ALL AFTER – etc

    (b)   **Example B:**

MRB18 is transmitting a long ROUTINE message to MRD22 when MRG01 is handed a PRIORITY message for MRF06. When MRB18 pauses, MRG01 transmits:

PRIORITY PRIORITY PRIORITY

MRB18, hearing the precedence spoken three times, ceases transmission and MRG01 continues:

F06 – THIS IS - G01 – PRIORITY – Text – OVER

MRF06 transmits:

G01 – THIS IS - F06 – ROGER – OUT

MRB18 then continues his transmission:

D22 – THIS IS - B18 – ALL AFTER etc

25.   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 c below.

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

    (1)   **Example A:**

Imposing Radio Silence.

The NCS transmits to all subordinate stations:

3–33

CHARLIE CHARLIE – THIS IS - G01 – RADIO SILENCE – OVER

Each subordinate station answers in turn:

THIS IS - B18 – ROGER – OVER

THIS IS - C32 – ROGER – OVER – etc

The NCS transmits:

THIS IS – G01 – RADIO SILENCE now – OUT

26.   **Closing Down**.

a.   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 re-opening. The necessary orders are always passed by the most secure means and, wherever possible, not by radio.

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

(1)   **Example A**:

MRG01 orders the close down of the net using the pro-word CLOSE DOWN:

CHARLIE CHARLIE – THIS IS - G01 – CLOSE DOWN – OVER

The subordinate stations reply in turn:

THIS IS - B18 – ROGER – OVER

THIS IS - C32 – ROGER – OVER – etc

MRG01 transmits:

THIS IS - G01 – CLOSE DOWN now – OUT

CHAPTER 4

MISCELLANEOUS PROCEDURES

1.   **Method of Synchronizing Time**

a.   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) unless otherwise requested or directed.

(1)   **Example:**

MRC32 requires to check his clock and transmits:

G01 - THIS IS - C32 - Request time check - OVER

MRG01 transmits:

THIS IS - G01 - 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

MRC32 transmits:

THIS IS - C32 - ROGER - OUT

b.   Should the occasion arise when the NCS desires to give an accurate time check to all stations on the net, he will pause a sufficient period of time between his warning phrase and the commencement of his 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 ----ZULU".

(1)   **Example:**

MRG01 transmits:

CHARLIE CHARLIE – THIS IS - G01 - 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

2.   **Time Zones**

Local time zones vary around the world. It is therefore important the that correct time zone suffix is added to any times transmitted unless a standard time zone has been previously agreed for that exercise/event. The reference time zone used in military communications is Coordinated Universal Time (UTC), previously GMT, which uses the suffix 'ZULU'. All time zones are

referenced to UTC, British Summer Time is one hour ahead of UTC and is 'ALPHA', a time zone two hours ahead of UTC would be 'BRAVO'. Local time in many countries varies with Daylight Saving Time (DST) so careful reference should be made to the difference from UTC before allocating the relevant suffix. Note that LIMA refers to UTC+11 hours and not local time.

3. **Grid References**

    a.   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 Eastings and Northings. Grid references are preceded by the proword GRID.

         (1)   **Example (In Clear)**:

         G01 – THIS IS - F06 - Enemy at GRID – Tango Oscar Three Two Six - Eight Four Seven – OVER

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

4. **Date Time Groups (DTG)**

    a   A DTG in a message is simply a way of expressing an exact point in time for referencing that message consisting of the date expressed as the day, the time which is referenced to a time zone and the month and year.

    b.   Such as : **231145zJul2014** which would decode to 1145 (Zulu) on the 23 July 2014. Note that the military way of three letters for the month and all four digits for the year is used.

    c.   Christmas 12:00 1988 would be referenced as 251200zDec1988.

5. **Authentication Procedures**. Authentication is a method of challenging any station using a radio network. There are 2 methods in use by the ACO, the first is aimed at Basic Comms and requires a station to respond to one of four codes:

    a.   Alpha. The reply to this code is the stations squadron number.
    b.   Bravo. The reply to this code is the stations squadron number in reverse.
    c.   Charlie. The reply to this code is the stations squadron number added to the date (day of the month).
    d.   Delta. The reply to this code is the stations callsign number added to the date (day of the month).

    Note: Should a squadron number consist of only one digit then the reply to "Alpha" and "Bravo" will be the same, when squadron numbers have F annotation , the F is ignored for authentication purposes

Example A:

MRC28 – THIS IS - MRC56 -Authenticate ALPHA – OVER

MRC28 is the Callsign of No 378 Squadron.

MRC56 – THIS IS - MRC28- I authenticate ALPHA, 378-OVER

MRC28 – THIS IS - MRC56 – Correct –OUT
Example B:

MRC28 – THIS IS - MRC56 – Authenticate BRAVO – OVER

MRC56 – THIS IS - MRC28 – I authenticate BRAVO, 873 – OVER

MRC28 – THIS IS - MRC56 – Correct – OUT

Example C:

MRC16 – THIS IS - MRC56 – Authenticate CHARLIE – OVER
MRC16 is No 5(F) Squadron and today's date is the 27th June.

MRC56 – THIS IS - MRC16 – I authenticate CHARLIE, 32 - OVER

MRC16 – THIS IS - MRC56 – Correct - OUT

Example D:

MRC20 – THIS IS - MRC56 – Authenticate DELTA – OVER

Callsign number is 20, today's date is 10th July.

MRC56 – THIS IS - MRC20 – I authenticate DELTA, 30 – OVER

MRC20 – THIS IS - MRC56 – Correct – OUT

Should a reply to a challenge not be correct i.e. there is no such squadron in the Callsign List, all radio traffic and transmissions are to be stopped immediately and the communications supervisor informed.

NOTE:

Similar to sending Callsigns and Time Groups (DTGs) the proword "Figures" is omitted when sending the prowords "Grid" and "Authenticate".

The second method is based on service methods and instructions are issued with the relevant code sheets. Used for exercises and events as required.

6.   BEADWINDOW PROCEDURE

a.   BEADWINDOW is a simple, rapid procedure for use by operators to self police the security of insecure voice networks. It brings to the immediate attention of operators the fact that Information has been disclosed. It also increases security awareness among operators. Major security breaches should be reported up the chain of command through Wing and Region

b.   Use of BEADWINDOW in operations and exercises is mandatory.

c.   The codeword BEADWINDOW followed by a number is transmitted immediately by net control to the station disclosing the information. If the net controller fails to take action it can be sent by any other operator.

d.   Example: If E12 discloses a person's name and the net controller E35 notices it, the following will be transmitted: **E12 this is E35 BEADWINDOW FIVE – OVER**.

e.   **only** authorized reply to a BEADWINDOW report is **ROGER – OUT**. If necessary discuss the problem over the telephone later, not on the net.

f.   roved codes for general use are listed below. Additional ones for specific operations or exercises may be developed and included in operations plans or orders. This may be accomplished by adding new categories (i.e., 8, 9) or by expanding existing categories (e.g., 21-force composition, 22-force capabilities, 23-force limitation, etc.).

g.   Number and Key Word Definition:

1	Position	Positions, movement or intended movement, course, speed, altitude, or destination of any unit or force.
2	Capabilities	Capabilities or limitations, force compositions, or identity, special equipment, weapons systems, sensors, units or personnel. Weapons and ammunition quantities and or movement.
3	Operations	Military Operations – intentions, progress, or results. Objectives – mission participants – flying programs – mission sitreps – results of friendly or enemy operations.
4	Electronic Warfare	NOT FOR ACO USE
5	Personnel	Key personnel. Movement or identity of officers, distinguished visitors, unit commanders – movement of key personnel.
6	COMSEC	COMSEC breaches – linkage of codes or code words with plain language – compromise of changing frequencies, incorrect authentication procedure
7	Wrong Circuit	Inappropriate transmission. Information requested. Transmitted or about to be transmitted which should not be passed on the net.
8	Unused	Allocate locally
9	Unused	Allocate locally

7. CALLSIGNS AND ABBREVIATIONS

a. Unit callsigns are made up of 3 letters and 2 numbers such as **MRB 25**. The decode for this is as follows:

- **M** - stands, as in Amateur callsigns (M3ABC) for the United Kingdom.
- **R** – indicates the callsign is associated with the RAF
- **B** - is an area designator issued from HQAC
- **25** - is a Squadron designator from a numerical listing of each wing.

b. As a unit may have more than 1 radio it was originally decided, with advice from the MoD, that a suffix would be added for the remaining radios which would, by necessity, be mobile or portable sets. These suffixes were to have the letter **M** and then a further numeric designator making M1, **M2** etc. The full callsign would then be, in this case **MRB25M1** pronounced **Mike Romeo Bravo Two Fife Mike Wun**.

c. If a Net Control Station (NCS) decided that conditions permitted then abbreviated callsigns such as **Bravo Two Fife Mike Wun** could be used for mobiles and **Bravo Two Fife** for the main station. HF conditions are notoriously temperamental though and so full callsigns are preferable.

d. When running a tactical or VHF / UHF net, and the increased amount of traffic thereon, it is preferable to use abbreviated callsigns when possible and conditions allow it. This will minimise traffic on the net. Obviously there is a limit on the number of sub callsigns that can be made up of the letter **M** and digits **0** to **9**. An advance into double digit suffixes with the letter **M** is not allowed.

e. The MOD have recently (2010) allowed the ACO to use any 2 alpha numerics for the suffix to the main callsign as long as the first one is alphabetical. A trial in 2010/11 proved a success and it has now been adopted by the ACO. This would allow 936 possible suffixes to the main unit callsign, such as **AF, G7 , ST, WS** etc. The only prohibited suffixes will be **AC, CC, IC** and **OC** as these may cause confusion elsewhere.

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