

CHAPTER 2 - SENDING MESSAGES ON VOICE

Table of contents (Double click RTF, click PDF page number to section; Ctrl-Home TOC.):

2.0 CHAPTER 2, SENDING MESSAGES ON VOICE, INTRODUCTION	4
2.1 TOOLS	5
2.1.1 PHONETIC ALPHABET	5
2.1.2 PAUSES	5
2.1.3 PAUSING FOR INTERRUPTIONS	6
2.1.4 PROWORDS, OPERATIONAL WORDS	6
2.1.4.1 NUMBER (BEFORE MESSAGE NUMBER OR SVC)	6
2.1.4.2 END (END OF MESSAGE)	6
2.1.4.3 BOOK OF (#)	6
2.1.4.4 END BOOK	6
2.1.4.5 BREAK	7
2.1.4.6 I SPELL	7
2.1.4.7 I SAY AGAIN, (USE #1) TO REPEAT FOR CLARITY	7
2.1.4.8 I SAY AGAIN, (USE #2) TO CORRECT AN ERROR	7
2.1.4.9 NO MORE, ONE MORE (1), MORE (2 OR MORE)	7
2.1.4.10 OVER	7
2.1.4.11 ROGER	8
2.1.4.12 MISC., AFFIRMATIVE, NEGATIVE, ROGER, Q SIGNALS	8
2.1.5 INTRODUCTORY WORDS FOR GROUPS	8
2.1.5.1 FIGURE(S)	9
2.1.5.2 TELEPHONE FIGURES	9
2.1.5.3 INITIAL	10
2.1.5.4 INITIALS (LETTER GROUP)	10
2.1.5.5 MIXED GROUP	10
2.1.5.6 MIXED GROUP FIGURE(S)	10
2.1.5.7 AMATEUR CALL	11
2.1.5.8 ARL, CHECK AND TEXT, IF NUMBERED RADIOGRAMS	11
2.1.5.9 EMAIL, PACKET, AND INTERNET ADDRESSES	11
2.2 RULES FOR VOICING MESSAGES	12
2.2.1 SPELLING, PHONETIC OR LETTER	12
2.2.1.1 MANDATORY USE OF PHONETICS AND SPELLING	12
2.2.1.2 PHONETIC OR LETTER-SPELLING CHOICES	12
2.2.2 NO EXTRANEIOUS WORDS	13
2.2.3 SENDING SPEED	14
2.2.4 RULES FOR VOICING THE PARTS OF THE MESSAGE	14
2.2.4.1 PREAMBLE VOICING RULES	14
2.2.4.2 ADDRESS AND OP NOTE VOICING RULES	15
2.2.4.3 TEXT AND OP NOTE VOICING RULES	17
2.2.4.4 INTRODUCTION OF MULTIPLE TEXT GROUPS	18
2.2.4.5 SIGNATURE AND OP NOTE VOICING RULES	19
2.2.4.6 EMAIL, PACKET, AND INTERNET ADDRESS VOICING	19
2.2.4.7 ENDING THE MESSAGE	20
2.2.4.8 MISC. INTRODUCED GROUP VOICING EXAMPLES	21
2.2.4.9 SUMMARY	22

2.3 THE MESSAGE EXCHANGE	23
2.3.1 TRANSMITTING NOTES	23
2.3.1.1 SENDING SPEED	23
2.3.1.2 PAUSING FOR INTERRUPTIONS.....	24
2.3.2 RECEIVING NOTES.....	25
2.3.2.1 TRANSCRIBE THE MESSAGE EXACTLY	25
2.3.2.2 TRANSCRIBE THE MESSAGE WITHOUT MODIFICATION.....	25
2.3.2.3 BE SURE OF EVERY GROUP RECEIVED.....	25
2.3.2.4 ASK FOR FILLS OR CONFIRMATION.....	25
2.3.2.5 ACCEPT ONLY MESSAGES YOU CAN RELAY OR DELIVER.....	26
2.3.2.6 TAKE RESPONSIBILITY FOR MESSAGES ACCEPTED	26
2.3.2.7 EMERGENCY MESSAGES	26
2.3.2.8 HONOR ALL HANDLING INSTRUCTIONS	26
2.3.2.9 DO NOT ORIGINATE MESSAGES WITHOUT PERMISSION	27
2.3.2.10 MAKE NO COMMENTS REGARDING MESSAGE CONTENT	27
2.3.2.11 ACCEPT ONLY MESSAGES WHICH MEET FCC RULES	27
2.3.3 VOICING THE EXCHANGE	27
2.3.3.1 READY TO COPY-ON/OFF NET-REPEAT/SPELL-LISTENING.....	28
2.3.3.2 VOICING EXAMPLE 1, SINGLE MESSAGE.....	29
2.3.3.3 VOICING EXAMPLE 2, HXC, FILING TIME, OP NOTES	31
2.3.3.4 ACKNOWLEDGING THE MESSAGE.....	32
2.3.3.5 MAKING NOTE OF WORDS IN DOUBT	32
2.3.3.6 INTERRUPTING FOR FILLS BETWEEN GROUPS.....	33
2.3.3.7 JUMPING AHEAD.....	33
2.3.3.8 FILL REQUESTS AND RESPONSES.....	34
2.3.3.9 REQUESTING FILLS, EXAMPLES	37
2.3.3.10 VERIFYING THE CHECK	38
2.3.3.11 REPEATING THE TEXT GROUP'S FIRST INITIALS	39
2.3.3.12 VERIFYING ALTERNATIVES.....	40
2.3.3.13 AMENDING THE CHECK.....	41
2.3.3.14 ACKNOWLEDGING THE MESSAGE AT LAST.....	41
2.3.4 BOOKING, TIME SAVING OPTION, SPECIAL EVENTS.....	41
2.3.4.1 BOOKING IS OPTIONAL	41
2.3.4.2 SENDING THE BASIC BOOK.....	42
2.3.4.3 NOTES ON BOOKING STRUCTURE.....	42
2.3.4.4 BOOKS TO A SINGLE STATION.....	43
2.3.4.5 EXAMPLE 1, FIXED PBL AND TXT, TO ONE STATION	44
2.3.4.6 EXAMPLE 2, FIXED PBL AND ADDEE, TO 1 STATION.....	45
2.3.4.7 EXAMPLE 3, FIXED PBL, TXT AND SIG, TO 1 STATION.....	45
2.3.4.8 EXAMPLE 4, FIXED PBL AND TXT EXCEPT ARL BLANK	46
2.3.4.9 EXAMPLE 5: FIXED PBL AND TXT EXCEPT MISC. BLANK	47
2.3.4.10 ASKING FOR FILLS IN BOOKS	47
2.3.4.11 BOOKS TO MULTIPLE STATIONS	47
2.3.4.12 EXAMPLE: BOOK OF 3, TO 3 STATIONS	49
2.3.4.13 SPECIAL EVENT BOOK SOLICITATIONS.....	50
2.4 SENDING MULTIPLE MESSAGES	51
2.5 STATION OPERATIONS	54
2.5.1 EXCHANGE ON NET FREQUENCY	54

2.5.2 MOVING OFF NET FREQUENCY.....	54
2.5.2.1 CALLING ORDER, SEARCHING, DIRECTION, TIME	55
2.5.2.2 REPEAT CALLS	55
2.5.2.3 TWO STATION EXCHANGE.....	55
2.5.2.4 RELAY STATION ASSISTANCE	56
2.5.2.5 SPECIAL REQUESTS, RX STATION.....	56
2.5.2.6 EXPEDITIOUS ASSIGNED EXCHANGES	56
2.5.2.7 RETURNING TO THE NET	57
2.5.3 MOVING TO A STACK OF TWO OR MORE STATIONS.....	57

2.0 CHAPTER 2, SENDING MESSAGES ON VOICE, INTRODUCTION

This chapter assumes you already know the rules for formatting radiograms presented in chapter 1. Chapter 2 will present the basics of transmitting the message on voice. This material should be augmented with classroom or on-the-air training. This block covers:

- 1) Tools used in transmitting the message;
- 2) Rules for voicing the different parts of the message;
- 3) Voicing the message exchange with examples, fills;
- 4) Booking and sending multiple messages;
- 5) Station Operations.

A radiogram is composed of a series of characters collected into groups. The groups, and the spaces separating them, make up the preamble, address and its op note, text and signature and its op note. On CW the characters and spaces are sent one at a time, making copy simple. Groups on CW are not introduced, and they are spelled as sent.

On voice we are faced with a quite different situation. We must say words to induce correct copy, and are forced to deal with language perceptions. The tools and rules presented here tend to minimize the variability caused by those perceptions and lead to accurate message transmission. With a little practice they will become second nature.

* **GENERAL NOTE:** Literature on traffic handling shows variations on the definitions and uses of prowords, operational words, and introductory words. The same applies to the techniques used for voicing messages and for the handshaking between stations during traffic exchanges.

An attempt is made here to consolidate those variations into one uniform set which may provide consistency. In order to make it easier to sort these things out some of these variations currently in wide use are shown in this manual as alternatives. Where there are choices the simplest and most efficient methods are shown as primary. Notes are included in those sections pointing out the differences that might be expected. The best current practice has been the guide.

Amateur radio protocols are not so formal that you will be excused from a net if they are not followed to the letter. Use of methods as uniform as possible does however help assure both efficient and accurate traffic handling and net operations.

Do what the trained receiving operator expects and confusion and errors will be minimized.

If you use these techniques you will be understood anywhere in the NTS.

2.1 TOOLS

2.1.1 PHONETIC ALPHABET

All operators should memorize the phonetic alphabet and number pronunciation, and be fluent in spelling groups using phonetics. Practice off the air by sending text to yourself with phonetics.

A	ALFA	M	MIKE	Y	YANKEE
B	BRAVO	N	NOVEMBER	Z	ZULU
C	CHARLIE	O	OSCAR	1	ONE
D	DELTA	P	PAPA (PA-PA')	2	TWO
E	ECHO	Q	QUEBEC (KAY-BEK')	3	THREE (TREE)
F	FOXTROT	R	ROMEO	4	FOUR
G	GOLF	S	SIERRA	5	FIVE (FIFE)
H	HOTEL	T	TANGO	6	SIX
I	INDIA	U	UNIFORM	7	SEVEN
J	JULIETT	V	VICTOR	8	EIGHT
K	KILO	W	WHISKEY	9	NINE (NINER)
L	LIMA	X	X-RAY	0	ZERO

2.1.2 PAUSES

Pauses are crucially important tools in voicing messages. Pauses exist between words/letters, groups (essential for clarity and separation), at the end of the Preamble, after each line of an address, the mandatory listening pause after the first BREAK, and even after every five lines of Text. Additionally, pauses may be used to listen for interruptions throughout the message transmission to improve efficiency. See the section on THE MESSAGE EXCHANGE, INTERRUPTIONS.

A clear group pause will distinguish between "SPRINGDALE" and "SPRING" "DALE" easily. Pauses are essential to allow copying time for the receiving operator also---longer pauses after longer groups, especially after the city in the Preamble or Address.

The receiving operator hears such pauses. They are clues to what is coming next in addition to aiding in correct group copying. Use pauses, they're free.

Pauses as used throughout this manual and the voicing examples presented later:

<u>TYPE</u>	<u>SYMBOL</u>	<u>USE</u> (symbol used in this manual only)
WORD PAUSE	(.)	As in pause between words of a sentence.
GROUP PAUSE	(..)	Similar to a pause between sentences.
PUSH-TO-TALK	(//)	At least a group pause switch release.
LISTENING PAUSE	(/.../)	For fill interruption after the Proword BREAK. Listening pauses are used differently on HF fast VOX, other half duplex modes, and on FM repeaters with and without audio delays.
COPY PAUSE	(.. ..)	Length depending on group(s) sent; (spell the group(s) to yourself; when done continue).

2.1.3 PAUSING FOR INTERRUPTIONS

It is useful when sending messages to use fast VOX or release the PTT after every group or phrase transmitted to permit interruptions by the receiving station.

On FM repeaters, or where this is not practical, the release to listen after the first “break” at the start of the text, and after the “break” separating variable parts of a book, is considered mandatory to listen for interruptions.

See TRANSMITTING and RECEIVING under THE MESSAGE EXCHANGE section.

2.1.4 PROWORDS, OPERATIONAL WORDS

These words are spoken to begin or end the message, indicate information for the receiving operator, or to separate parts of the message or books. They are not written in the message or counted in the check. They are usually spoken in a different tone of voice to distinguish them from written parts of the message. The list follows.

2.1.4.1 NUMBER (before message number or SVC)

The proword “number” begins message copy. It tells the operator to copy everything after hearing the word “number”.

To begin the message say "number ..." then transmit the preamble. This is the short formal way to initiate copy. (It has been a long standing custom to begin by saying “Please copy number...” or “Copy message number...” but these informalities are not required.)

The corresponding operational word to stop copy is "end".

The message numbers in variable parts of a book are also introduced with “number” followed by the individual message number.

2.1.4.2 END (END OF MESSAGE)

The proword “end” signals the end of groups to be copied, in other words, the end of the written message. (“end” is a shortened form of “END OF MESSAGE” and is used to make the short and formal end of copy although the later is still used by operators from time to time.)

In other words, written copy is begun with “number” and terminated with “end”.

2.1.4.3 BOOK OF (#)

Used to begin transmission of a book of messages. To begin the book say “BOOK OF (#)” then begin the fixed parts of the message. The corresponding words to end the book are “END BOOK”. The (#) is the quantity of individual messages in the book spoken as words without using the “figures” introducer.

2.1.4.4 END BOOK

Used to end copy of a book of messages. In other words book copy is begun with “book of (#)” and terminated with “end book”.

2.1.4.5 BREAK

The proword “break” marks the start of the text, and “break” at the end of the text marks the start of the signature. The “break” is also used to separate parts of booked messages.

The first “break” at the start of the text, and at the beginning of each variable part of a book message, requires a standby after saying the word to listen for fill requests. The receiving station does not respond at “break” unless necessary. The “break” used to end the text does NOT require a standby before continuing with the signature.

(See VOICING THE EXCHANGE for more operational details on these standby pauses.)

2.1.4.6 I SPELL

Used to indicate you are going back to spell the group just voiced. It is used with ONE GROUP AT A TIME, and is said IMMEDIATELY after voicing the group, followed by either phonetic or letter spelling of the group. (Pausing too long before saying “I spell” will force the receiving operator to attempt to spell the group before you do.) When the group is spelled, go on to the next group without repeating the spelled group.

In ARL SIXTY ONE: "A R L.. SIXTY I spell SIERRA INDIA X-RAY TANGO YANKEE.. ONE I spell OSCAR NOVEMBER ECHO ..."

2.1.4.7 I SAY AGAIN, (use #1) To REPEAT FOR CLARITY

Say the group(s), then "I say again", repeat the group(s), and then continue. It is wise to limit repeats for clarity to one group at a time to avoid confusion with use #2 below. In bad radio conditions, however, repeating phrases or whole lines of a message can increase the chance for correct copy.

“WHISKER I say again WHISKER ... ”

2.1.4.8 I SAY AGAIN, (use #2) To CORRECT AN ERROR

Stop, say "I say again", go back to last group (or proword) sent correctly, and continue, starting with that correct group or proword.

Example: in “TO BRING BOOKS...”, the group BRING skipped in error;
“TO BOOKS I say again TO BRING BOOKS...”

2.1.4.9 NO MORE, ONE MORE (1), MORE (2 or more)

Indicates if you have additional traffic to follow or not. These terms follow the “end” or “end book” termination of copy.

2.1.4.10 OVER

Indicates the end of your transmission and signals the receiving station to go ahead:

"W3TX 3RN TRAFFIC PODUNK TWO.. WORDS WITH W3RX OVER".

Many transmissions by the net control or individual stations are “self completing”, i.e., the words themselves signal the end of the sequence. In such cases the “over” may be omitted. Such signals are pointed out throughout the chapter. The “end no more” sequence, for example, is sufficient to signal the end of the transmission of the radiogram. On the other hand, a station’s traffic list, comment, or question is of uncertain length and is terminated with “over”, or sometimes with its call sign..

The “OVER” may be used between messages or after other transmissions whenever the transmitting station wishes to signal or force the other station to go ahead.

The “OVER” is useful in preventing two stations from transmitting at the same time. It is used effectively when the words of the transmission are not themselves a clear indication for the other station to “go ahead”. “Doubling” by two stations can result in much wasted time and copying errors. See also the note on “GO AHEAD” under MISC. below.

2.1.4.11 ROGER

Receiving station acknowledgment of message(s) copied. It is not necessary to repeat message number(s) or other parts. (“MESSAGE(s) RECEIVED”, “BOOK OF (#) RECEIVED”, are in wide use. For the sake of brevity and efficiency ROGER is the preferred method. ROGER, meaning received-understood, implies all messages were received.)

Roger means “received and understood”. It does NOT mean “yes” or “affirmative”.

2.1.4.12 MISC., AFFIRMATIVE, NEGATIVE, ROGER, Q SIGNALS

A few key words:

AFFIRMATIVE	Yes.
CHARLIE	Yes.
CONFIRM ____	The request to confirm correct copy of group(s). The affirmative reply to the request.
NEGATIVE	No.
ROGER	Received and understood. (Does NOT mean yes, confirm, charlie, or affirmative!).
OVER	End of transmission, invitation to transmit.
GO AHEAD	Continue. Used after requesting fills after interruptions to signal the sending operator to continue. Also used as an equivalent to OVER.
73	Best regards (plural!). 73’s is redundant.
/	Symbol used to separate characters in groups. SLASH. The "/" may be voiced as "slash", "stroke", "diagonal", or "slant-bar".

***** “Q” SIGNALS ARE NOT USED OPERATIONALLY ON VOICE! *****

Say it with words as described in this manual. (“Q” signals are permitted within the message text and are treated as initials.)

2.1.5 INTRODUCTORY WORDS FOR GROUPS

Introductory words are spoken to alert the receiving operator to a special type of group to follow such as initial(s), figure(s), mixed groups, or amateur call signs... not normal spoken words. The introducer implies that the group is going to be sent one character at a time, letters phonetically if present. The introducer avoids having to try to pronounce such groups and then use “I spell” to spell them. They are used ahead of single groups (except for a shortcut explained in INTRODUCING MULTIPLE TEXT GROUPS in the text voicing rules section.). Only one introducer is used per group. They are not written. They are usually spoken in a different tone of voice.

Say the introductory word(s) ahead of the group, voice the group as individual characters as indicated, then go on to the next group.

ALWAYS voice the letters in eligible introduced groups with PHONETICS unless indicated otherwise in this manual. Do not use multiple introducers within a single group.

Examples of groups eligible to be introduced and voiced one character at a time using phonetics for letters:

J, AM, BARC, 7, 234, 2A, 2/3, 146R67, M/4, 3M/4A, W3XYZ, W4XYZ/3, 2300Z, 6PM, 7025KHZ, etc.

EMAIL, PACKET, and INTERNET addresses are also sometimes introduced as shown later to avoid having to introduce each of the individual groups contained therein.

The use of the introductory words completes the “tool kit” for voicing any type of group encountered in the message. All groups are either plain text words to transmit, and perhaps be spelled using “I spell”, and these eligible groups to be introduced.

Introductory words are used for all eligible groups in the message except where there are special relaxed rules for the Preamble and Telephone numbers in the Address and Signature where the experienced operator expects the types of groups to be sent. (See Voicing Rules and Examples.)

2.1.5.1 FIGURE(s)

Used to introduce a group of one or more numbers:

Say “figure(s)”, then voice the numbers one digit at a time, group pause, and go on to the next group. Examples:

2, voiced as "figure TWO";

62, voiced as "figures SIX TWO";

Saying “figure TWO” means the number character “2”. Saying “TWO” implies the spelled-out word. Saying “figures SIX TWO” indicates the single group “62”. Saying “figure SIX... figure TWO” results in copy of the figures “6” and “2” as separate groups. Saying “SIXTY TWO” or “SIX TWO” implies two groups---words spelled out exactly as shown.

Avoid the use of “figures SEVENTEEN” in place of “figures ONE SEVEN”; or “figures FIFTY TWO” for “figures FIFE TWO”, etc. The teens and Y’s can cause errors under difficult receiving conditions, and operators expect single characters at a time in these groups. This applies to the non-introduced figures in the Preamble as well. “SEVENTEEN” is not the pronunciation for any of the single character figures.

2.1.5.2 TELEPHONE FIGURES

Used to introduce the telephone numbers in an address or signature when no zip code is present (thus forcing the receiving station to skip the zip to the telephone number line), as in:

...MARYLAND (no zip) 410 555 1234, voiced as “MARYLAND telephone figures FOUR ONE ZERO..(pause) FIFE FIFE FIFE.. (pause) ONE TWO TREE FOUR”. (See the special Voicing Rules for telephone figures in the address and signature.)

2.1.5.3 INITIAL

Used to introduce a single letter initial, phonetic pronunciation mandatory, as in the initial in a proper name, John R Smith: "JOHN.. initial ROMEO.. SMITH";

A "A", any other single letter, as a group in the text or name initial, "initial ALPHA"

I Pronoun I, voiced as "initial INDIA"

X Letter "X" used as a period, voiced as "initial X-RAY".

(The "X" used as a period is often voiced without the "initial" introduction. The method shown is preferred.)

2.1.5.4 INITIALS (LETTER GROUP)

Used to introduce a group of 2 or more letters, as in an abbreviation, unpronounceable group, etc. Phonetics are mandatory; as in:

AM voiced as "initials ALPHA MIKE"

NTS voiced as "initials NOVEMBER TANGO SIERRA"

THUR voiced as "initials TANGO HOTEL UNIFORM ROMEO"

Say "initials" then immediately voice the letters phonetically, group pause, then go on to the next group. ("letter group" is used in place of "initials" by many operators. "Initials" is recommended for clarity. See also the section on sending a series of like groups.)

2.1.5.5 MIXED GROUP

Used to introduce a group consisting of a mix of 2 or more of the 3 types of characters permitted in a group; letters, figures, or slashes (/), not beginning with figure(s). See the next section for mixed groups beginning with figure(s). Examples:

R2, A3J, A/X, B/3, MS/4, W4XYZ/3, W3XYZ/EPA/EANTX, etc.

Say "mixed group", voice one character at a time, letters phonetically, group pause, then go on to the next group, as in:

MS/4, voiced as "mixed group MIKE SIERRA SLASH FOUR"

Do NOT introduce characters separately within the mixed group. To do so would imply a separate group to copy.

The "/" may be voiced as "slash", "stroke", "diagonal", or "slant-bar" ("Forward slash" is not necessary and should be avoided.).

2.1.5.6 MIXED GROUP FIGURE(s)

Used to introduce a mixed group as above when the first character is number(s), as in:

2A: voiced as "mixed group figure TWO ALPHA"

2/A: voiced as "mixed group figure TWO SLASH ALPHA"

With two or more numbers beginning the group:

24/B: voiced as "mixed group figures TWO FOUR SLASH BRAVO"

146R67: voiced as "mixed group figures ONE FOUR SIX ROMEO SIX SEVEN";

* (The "R" is used as a decimal point within mixed figure groups.)

Do not introduce characters separately within the mixed group. To do so would imply a separate group to copy.

This introduction is an expansion of “mixed group” related to teletype when “figures” was required to be typed before typing numbers.

2.1.5.7 AMATEUR CALL

Used to introduce an amateur call sign in the Address, Text, or Signature (but not in the Preamble). Phonetics are mandatory for the letters; as in:

K000: voiced as "amateur call KILO OSCAR ZERO OSCAR", etc.

Note that call sign groups with slashes appending other information are introduced as mixed groups (W3ABC/NCS).

2.1.5.8 ARL, CHECK AND TEXT, IF NUMBERED RADIOGRAMS

* **ARL IN CHECK**: The letters ARL precede the CHECK in messages containing ARRL numbered radiograms within the text, and are voiced as 3 letters without introduction, as in:

ARL 20: “A R L.. TWO ZERO”; (note the space); or

20/ARL 20: “TWO ZERO.. CORRECTED TO.. A R L.. TWO ZERO”

The letters "A R L" are customarily voiced without phonetics, but may be so voiced in severe conditions if necessary. Note there is a space between the ARL and the CHECK figures.

* **ARL IN TEXT**: The letters ARL in the TEXT are used like an introductory group indicating that ARRL Numbered Radiogram spelled-out numbers are to follow immediately. The group is customarily voiced as the letters “A R L”, NOT introduced, and NOT spelled phonetically. Each separate numbered radiogram is preceded by the ARL group. The spelled-out numbers of the radiograms are each spelled phonetically using “I spell”.

ARL SIXTY: “A R L.. SIXTY I spell SIERRA INDIA X-RAY TANGO YANKEE”, (Two groups.);

ARL SIXTY ONE: “A R L.. SIXTY I spell SIERRA INDIA X-RAY TANGO YANKEE.. ONE I spell OSCAR NOVEMBER ECHO”, (Three groups.);

ARL FIFTY ARL SIXTY: “A R L.. FIFTY I spell FOXTROT INDIA FOXTROT TANGO YANKEE.. A R L.. SIXTY I spell SIERRA INDIA X-RAY TANGO YANKEE”, (Four groups.)

In severe conditions it is permissible to introduce ARL as “initials ALPHA ROMEO LIMA”.)

2.1.5.9 EMAIL, PACKET, and INTERNET ADDRESSES

The normal voicing of such addresses is to treat all the groups formatted in the address as individual groups using the previously described introducers and phonetics as required.

These addresses may be introduced as “email address”, “packet address” and “internet address” when it is desired to avoid having to introduce every group within the address. See the voicing rules for examples. In this case the words are used as introducers.

2.2 RULES FOR VOICING MESSAGES

Following are the guidelines for voicing parts of the message during transmission.

“Q” signals are not used operationally on voice.

2.2.1 SPELLING, PHONETIC or LETTER

When voicing a group try to understand the perception of the group by the receiving operator. Although context sometimes helps in group perception, surprises in formatting often make it safer to treat each group individually when making the decision to spell. When there is any chance of misunderstanding or ambiguity you may spell the group. Voice the group, use the operational words “I spell” immediately, then spell the group with letters or phonetics. When done go on to the next group.

Spell only one group at a time using the operational words “I spell”.

Spell with letters or phonetics based on radio conditions, interference, or type of group. Spell and use phonetics where mandatory. Use only standard phonetics. Over-use of phonetics is controversial, but the objective in traffic handling is absolute accuracy in copy. Based on errors measured in the traffic system, the following guidelines target the most frequent and critical errors.

2.2.1.1 MANDATORY USE OF PHONETICS AND SPELLING

* PREAMBLE: Group introductions are not required in the Preamble, but all groups that would be eligible to be introduced are still voiced as such. Only the introducer is omitted.

These rules apply throughout the message.

*** INTRODUCED GROUPS:**

All characters in introduced groups are voiced one character at a time

All letters in introduced groups are voiced with phonetics:

Initial, Initials (letter groups, 2 or more letters forming the group);

Initial "X" used as a period, “Initial X-RAY”;

Mixed group letters; “mixed group figure SIX PAPA MIKE” (6PM);

Amateur call sign letters; “amateur call WHISKEY ONE ALPHA WHISKEY”;

Handling instruction letters, “HOTEL X-RAY CHARLIE”.

ALWAYS SPELL THESE GROUPS AND USE PHONETICS:

Last names of addressee in address, and in Op Note;

Proper names in text;

Last names in signature and Op Note;

ARL Radiogram numbers spelled out in texts; (ARL FIFTY and SIXTY sound very much alike even letter-spelled!);

Fills, as requested;

2.2.1.2 PHONETIC or LETTER-SPELLING CHOICES

Letter-spelling is used in this manual as the shortened way of saying “spelling with letters” rather than with phonetics (“KEY I spell K E Y” vs. “KEY I spell KILO ECHO YANKEE”).

The choice to use phonetic spelling or letter spelling depends on radio conditions, interference, and type of group. The ambiguity in perception of sound-alike letters when letter-spelling is avoided by choosing to spell with phonetics.

Phonetics are always used when spelling the groups eligible to be introduced and for key groups of the message outlined in the section above.

*** SPELL THE FOLLOWING TYPE GROUPS (PHONETICS OR LETTERS)**

(In Preamble):

- * City of origin, unless very common and understood;

(In Address):

- * First names, unless unique and understood without ambiguity;
- * Street names, unless very common and understood;
- * City name, unless very common and understood;

(In Text, address OP NOTE and signature OP NOTE):

- * Unusual words; and plurals (as needed to emphasize the “s”);
- * Words with numerous spellings (to, too, two, for, four);
- * Words that seem out of context;
- * Spelled-out numbers (Note that the use of figures denotes numbers. Spelled-out numbers can be letter spelled for emphasis; 6, “figure 6”; or six, “SIX I spell S I X...” (“eighth” and “eight” are candidates for spelling!);

(In Signature):

- * First names and address names in signature, unless unique or very common and understood.

*** WHEN THERE IS ANY DOUBT ABOUT CORRECT COPY, SPELL IT OUT!**

2.2.2 NO EXTRANEOUS WORDS

Prowords, Introductory Words, and Operational Words are set aside for special purposes and are recognized by traffic handlers. Any other words used are likely to cause confusion or be written down by the receiving operator. Words such as "today's date", "BACK STOP that's two words", "BLACK as in night", etc., are considered more than bad practice. Do not say any extraneous words like "check", "with a check of", "city of origin", "to", "going to", "street address", "break for text", "break it for the signature", "signature", etc.

“Q” signals used operationally on voice are extraneous words.

Do not say “same as...” for parts of the message, implying a group is the same as in a previous message. It is usually disruptive to copy or organization. Book if required.

Saying “today’s date” for the preamble date is considered poor practice as well.

In other words, the proper use of pauses, prowords, operational words and rules for voicing each individual group of the properly formatted message is sufficient and expected practice for proper perception and copy by the receiving operator. The object is to have the receiving operator copy

the message exactly as it is written on the sending copy. Avoid surprises. Treat the unusual with spelling or “I say again” for clarity.

See the voicing rules and examples, and special booking instructions to follow.

2.2.3 SENDING SPEED

SENDING AT THE PROPER SPEED FOR ACCURATE COPY IS THE HARDEST SKILL TO LEARN IN TRAFFIC HANDLING!

Clear sending, using introductory and operational words and expected transmission protocols properly, and using proper spacing between groups, are crucial for accuracy.

See the section on THE MESSAGE EXCHANGE, SENDING SPEED.

2.2.4 RULES FOR VOICING THE PARTS OF THE MESSAGE

2.2.4.1 PREAMBLE VOICING RULES

Basic preamble example:

NR 65	PREC R	[HX]	STN-ORIG N3XYZ	CK 20	PLACE-OF-ORIG CATONSVILLE MD	[TIME-FILED]	MON JUL	DAY 24
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And a Test message with HX codes and Time Filed.

NR SVC 66	PREC TEST R	[HX] HXA50	STN-ORIG N3XYZ	CK 22/ARL 23	PLACE-OF-ORIG CATONSVILLE MD	[TIME-FILED] 1800Z	MON JUL	DAY 24
-----------------	-------------------	---------------	-------------------	--------------------	---------------------------------	-----------------------	------------	-----------

* **INTRODUCTORY WORDS are NOT REQUIRED** since the receiving operator knows the order and type of the Preamble parts. Eligible groups are still voiced as in introduced groups.

* **PROWORD “NUMBER”**: The message transmission is begun by saying "number" then:

1) **MESSAGE NUMBER**: Say the word "SERVICE" if the number is preceded by SVC. Say the message NUMBER figures one digit at a time.

2) **PRECEDENCE**: Voice as the full word(s); “Emergency”, “Priority”, “Welfare” or “Routine” (Emergency, P, W, R are written.). Exercise messages may be given a precedence preceded by the word “TEST”; voice as “TEST ROUTINE”, etc.

3) **HX__**: Say HX__ codes phonetically, as in "HOTEL X-RAY CHARLIE", treated as an initial group, or a mixed group if numbers present, but without being introduced as such. If figures are appended the group is a mixed group, as in “HXA50”, voiced as “HOTEL X-RAY ALPHA FIVE ZERO”

4) **STATION-of-ORIGIN**: Say call sign with phonetics without the introducer.

5) **CHECK**: If there is an ARL preceding the check figures voice as individual letters “A R L” (indicating presence of a Numbered Radiogram in the text).

Say the check digits one at a time without introduction.

If the check is amended as in 22/ARL 23 say "TWO TWO CORRECTED TO A R L TWO TREE" (or "TWO TWO SLASH A R L TWO TREE", less often used) without introducers.

6) PLACE-OF-ORIG: Say the CITY, then say "I spell", and follow with letter or phonetic spelling for the city unless it is well known and understood.

Say STATE as full name, even though it is written as two letters. (If you feel you must say the state as a letter group, then introduce it as "initials" and voice the letters with phonetics.)

If the City/State of origin is not a city/state, as in a message relayed from MARS, the groups such as "VIA MARS NNN0AAA FPO NY" may be voiced using appropriate introducers and phonetics as required.

7) TIME-FILED: Voice as a mixed group, without introduction, as in "ONE EIGHT ZERO ZERO ZULU". The operator knows the month typically follows the state. Hearing a figure will indicate that a filing time is being sent. Use phonetics for letters such as "Z", "EST", etc. (Some operators elect to introduce the filing time as "mixed group figures" as a "heads-up" for the optional filing time, but the first method shown is best practice of the day.)

8) MONTH: Say MONTH as full name, even though written as three letters (JUL = "JULY").

9) DAY: Say DATE digits one at a time; "TWO FOUR" rather than twenty four.

10) Add a short pause, then go on to the Address part.

 * EXAMPLE:

NR SVC 66	PREC TEST R	[HX] HXA50	STN-ORIG N3XYZ	CK 22/ARL 23	PLACE-OF-ORIG CATONSVILLE MD	[TIME-FILED] 1800Z	MON JUL	DAY 24
-----------------	-------------------	---------------	-------------------	--------------------	---------------------------------	-----------------------	------------	-----------

The complex preamble example above is voiced (Also see more Voicing Examples later.):
"number SERVICE.. SIX SIX.. TEST ROUTINE.. HOTEL X-RAY ALPHA FIFE ZERO.. NOVEMBER TREE X-RAY YANKEE ZULU.. TWO TWO.. CORRECTED TO.. A R L.. TWO TREE.. CATONSVILLE I spell C A T O N S V I L L E.. MARYLAND.. ONE EIGHT ZERO ZERO ZULU.. JULY.. TWO FOUR"

2.2.4.2 ADDRESS AND OP NOTE VOICING RULES

Groups in the address section are voiced with introducers, last names spelled with phonetics, unusual groups spelled with letters or phonetics, and special rules apply to the zip codes and telephone numbers.

Special example address:

- 1. (addressee) JOHN A HAM W3XYZ PRES PODUNK ARC
- 2. (address) 107 HOOK ROAD SW APT 21A
- 3. (city/st/zip) PHILADELPHIA PA 19034 DASH 1234
- 4. (tel) 215 555 2345
- 5. (op note) OP NOTE CALL AFTER 6PM

* NO special introducer is used to begin the address. The day in the preamble followed by a short pause is the beginning marker.

* Introduce and use phonetics with all eligible introduceable groups as encountered, noting the special rules for zip codes and telephone figure groups.

* See also Section 2.3.3.7, JUMPING AHEAD for shortcuts in sending the address for “known” recipients.

1) NAMES: Spell unusual FIRST NAMES. Introduce an INITIAL and voice it phonetically. Say LAST NAME, “I spell”, and spell phonetically. Introduce and use phonetics with call signs and other eligible groups.

2) ADDRESS groups are introduced rigorously. Spell street names unless easily understood. Do not expand abbreviations or compress words to abbreviations. Transmit exactly as written. AVENUE is “AVENUE”, AVE is “initials ALPHA VICTOR ECHO”.

3) CITY/ST/ZIP: Spell the destination CITY (unless well known) and use phonetics if it is an unusual name or contains sound-alike letters. Allow sufficient copy time for long city names unless spelled. Say STATE as the full name (even though only the two letter abbreviation is written), or as introduced initials if you must. Introduce ZIP CODE with figures and voice one digit at a time; "figures TWO ONE TWO ZERO ZERO".

NINE DIGIT ZIPS, SPECIAL RULE, as in (21200 dash 1234) are voiced as: "figures TWO ONE TWO ZERO ZERO.. DASH I spell D A S H.. ONE TWO TREE FOUR". Note the one-time “figures” introduction.

CANADIAN or other MIXED ZIPS may be introduced once: A4X 2L7, "mixed groups ALPHA FOUR X-RAY.. TWO LIMA SEVEN", using a pause between groups.

4) TELEPHONE NUMBER, SPECIAL RULE: Introduce the figures ONE TIME for all the groups as in: "figures FOUR ONE ZERO.. FIFE FIFE FIFE.. ONE TWO TREE FOUR", using a pause between each group of digits. (It is customary here to introduce only once, unlike number groups elsewhere, since several phone groups are expected, and the next group(s) sent will be either "op note" or "break".)

If **NO ZIP CODE** is given, introduce telephone number as "**telephone figures**", again a one-time introduction. The "telephone figures" special introduction will tell the receiving operator to skip over the zip code area on the message form.

FOREIGN TELEPHONES: Telephone figures for foreign countries may not be grouped as in this country. Introducing each figure group “figures” individually is suggested in this case.

If **NO TELEPHONE FIGURES** are given, simply go on to the Op Note or “break”.

5) **ADDRESS OP NOTE: “OP NOTE”** is the introducer. Contents of the address Op Note are voiced according to the rules for text groups---rigorous introduction of eligible groups and spelling. At the end of the OP NOTE, voice the “break”.

Experienced operators should be able to achieve transmission and copy of the example address with lines, abbreviations, mixed groups, figures and spelling exactly as written above.

Pauses at the end of each line aid in copy. See the Voicing Examples later.

*** BREAK AT END OF ADDRESS:**

The Address (or its Op Note if present) always ends by voicing the proword “break”.

This first “break” at the start of the text, and at the beginning of each “variable” part of a book message, requires a standby after saying the word to listen for fill requests.

If nothing is heard in a few seconds, continue sending the message text. If the receiving operator is forced to say “go ahead” you have probably waited too long, although it may do so at its discretion. Saying “go ahead” is discouraged except in FM repeater type operating where frequent listening by the sender for interruptions is not practical. Fast VOX or PTT operation on HF permits more frequent interruptions. See The Message Exchange, Pausing for Interruptions.

2.2.4.3 TEXT AND OP NOTE VOICING RULES

After the standby pause, continue with the Text. There are no rule shortcuts used in the Text (except a shortcut for a series of like groups, 2.2.4.4 below). Voice every individual group clearly, using pauses to indicate group separation and for copy time. Message example text:

(TXT)	ARL	SIXTY	FIVE	11PM	JULY/29
	USAIR/354	TELL	N3ZZZ	THANKS	FOR
	THE	GREAT	MEAL	X	NEW
	PHONE	410	555	2008	REGARDS

1) Introduce all single initials, initial groups, figure groups (voiced one digit at a time), mixed groups and amateur calls as encountered, voicing letters with phonetics.

2) Spell proper names phonetically, spell sound-alike words and unusual groups for clarity with letter or phonetic spelling. Spell plurals as needed.

3) Say ARL as three letters, “A R L” (may be introduced as “initials” and voiced phonetically in severe conditions). Spell each ARRL numbered radiogram spelled-out number phonetically one at a time; i.e., for ARL SIXTY FIVE, say “A R L.. SIXTY I spell SIERRA INDIA X-RAY TANGO YANKEE.. FIVE I spell FOXTROT INDIA VICTOR ECHO..”

4) Use I SAY AGAIN to correct errors by saying “I say again” then going back to the last correctly sent group and resuming transmission with that group.

5) “I say gain” may be used to repeat groups or phrases for clarity or emphasis.

6) Groups may be voiced one at a time; or several groups may be voiced together as a phrase, based on what you think the receiving station can remember, then pause for copy time. Picking phrases based on logically connected groups is often helpful in perception. DO NOT include introduced groups in such phrases---send those each individually.

7) Consider pausing before saying "initial X-RAY" (used as a period) after a long group or phrase. This will help the receiving operator avoid forgetting the initial while concentrating on copy.

8) Remember that punctuation, other than X for period, is always written out as a word group and may be spelled if necessary.

9) The Text always ends by voicing the proword "break", followed immediately, without a standby for fills, by the signature.

2.2.4.4 INTRODUCTION OF MULTIPLE TEXT GROUPS

When sending a series of the same type groups within the text, such as a number of call signs each appended with liaison information, the entire series is sometimes introduced once in the plural to save repeating the introductory words for every group. As soon as a different type of group is encountered the appropriate new introducer is used.

For W3AA/3RN W3AB/MDD W3AC/MSN W2XX in a net report text; voice as:
"mixed groups WHISKEY TREE ALPHA ALPHA SLASH TREE ROMEO NOVEMBER..
WHISKEY TREE ALPHA BRAVO SLASH MIKE DELTA DELTA.. WHISKEY TREE
ALPHA CHARLIE SLASH MIKE SIERRA NOVEMBER.. amateur call WHISKEY TWO X-
RAY X-RAY", using pauses to separate the groups and the new introducer for W2XX.

Or, less frequently, for suffix type groups such as AA AB BL 3CF; voice as:
"initial groups ALPHA ALPHA.. ALPHA BRAVO.. BRAVO LIMA.. mixed group figure TREE
CHARLIE FOXTROT", using pauses to mark the group separation and using the new introducer
for the mixed group. The introducer "**letter groups**" may be used as the alternative to "initial
groups" in this case.

This shortcut is used mainly for net reports and similar traffic between stations who understand the content. It is used primarily with a series of mixed groups or amateur calls or suffixes to save time spent repeating introducers. It is seldom done with a series of single letters or figure groups of any kind.

It is a risky shortcut to use on unfamiliar traffic. Using introducers for each eligible group is the formal and expected treatment.

2.2.4.5 SIGNATURE AND OP NOTE VOICING RULES

(SIG) **BILL** (Will, Al, Hal, Jean, Gene, etc.)

It is suggested that signature errors may be reduced by regularly spelling with letters or phonetics even for first names. There are many sound-alike names in common use.

Signatures may also be multi-lined. Rules for voicing the groups in the signature are the same as for the ADDRESS groups, including the special rules for zips and telephone figures when presented in the same order. Otherwise use the rigorous text rules for each group.

If there is no signature op note, the message may be ended. See the next sections.

* **SIGNATURE OP NOTE:** Contents of the signature Op Note are voiced according to the rules for TEXT groups. “**OP NOTE**” is the introducer. See also the voicing examples later.

* **EXAMPLE:**

OP NOTE PKT AT WB3FFV 21228 MD, is voiced as “OP NOTE.. initials PAPA KILO TANGO.. AT I spell ALPHA TANGO.. amateur call WHISKEY BRAVO TREE FOXTROT FOXTROT VICTOR.. figures TWO ONE TWO TWO EIGHT.. initials MIKE DELTA”

2.2.4.6 EMAIL, PACKET, and INTERNET ADDRESS VOICING

* **STANDARD VOICING:** The entire series of groups can be voiced as introduced groups, or groups spelled for clarity, as done normally for such groups. (See chapter 1 for formatting these addresses.)

Example: **kj3e@k3hki.#somd.md** is written in the message as:

KJ3E ATSIGN K3HKI DOT POUNDSIGN SOMD DOT MD, and is voiced as:

"amateur call KILO JULIETT TREE ECHO.. ATSIGN I spell A T S I G N.. amateur call KILO TREE HOTEL KILO INDIA.. DOT I spell D O T.. POUNDSIGN I spell P O U N D S I G N.. initials SIERRA OSCAR MIKE DELTA.. DOT I spell D O T.. initials MIKE DELTA".

(ATSIGN and POUNDSIGN could also have been introduced with “initials” as a letter group and sent using phonetics rather than using the spelling method.)

HTTP COLON SLASH SLASH WWW DOT HAM DOT INFO BACKSLASH EDU, and HARRY ATSIGN AOL DOT COM are voiced in similar fashion.

* **INTRODUCED VOICING,** (not widely used):

These addresses may also be introduced as shown below to avoid having to introduce each of the individual groups contained therein. (Where the groups “PACKET ADDRESS”, “INTERNET ADDRESS” or “EMAIL ADDRESS” appear in a text they should be voiced, and then spelled, to avoid confusion with their use as introducers, if used, in the same message part.) Note that the introduction permits voicing each of the parts without using other introducers, and implies no spaces. “SPACE” should be included in a properly formatted message where a space is required as an integral part of the address (the same applies to “UNDERSCORE”, etc.).

PACKET ADDRESS Example: **kj3e@k3hki.#somd.md** is written in the message as:

KJ3E ATSIGN K3HKI DOT POUNDSIGN SOMD DOT MD, and is voiced as:

"packet address.. KILO JULIETT TREE ECHO.. ATSIGN I spell A T S I G N.. KILO TREE

HOTEL KILO INDIA.. DOT I spell D O T.. POUNDSIGN I spell P O U N D S I G N.. SIERRA OSCAR MIKE DELTA.. DOT I spell D O T.. MIKE DELTA".

INTERNET ADDRESS Example **http://www.ham.info\edu**, written in the message as: HTTP COLON SLASH SLASH WWW DOT HAM DOT INFO BACKSLASH EDU, and is voiced in similar fashion as above, introduced as "**internet address**".

The introducer implies no spaces. "SPACE" is used in formatting such addresses where a space is required as an integral part of an address.

EMAIL ADDRESS Example: **harry@aol.com** becomes HARRY ATSIGN AOL DOT COM, as written, introduced as "**email address**": "email address.. HOTEL ALPHA ROMEO ROMEO YANKEE.. ATSIGN I spell A T S I G N.. ALPHA OSCAR LIMA.. DOT I spell D O T.. CHARLIE OSCAR MIKE".

The introducer implies no spaces. "SPACE" is used in formatting such addresses where a space is required as an integral part of an address.

2.2.4.7 ENDING THE MESSAGE

When the signature (or its Op Note if present) is completed, the operational groups to end the message are voiced, as in:

"end.. no more", "end.. more", "end.. one more", for the single message; and:
"end book.. no more", "end book.. more", "end book.. one more", for BOOKS.

* "OVER" is dispensed with at this point. The "end.. no more" sequence is sufficient to signal the end of the transmission. On FM repeaters or slow VOX operation it is useful at other times to use "OVER" as the last group sent to avoid "doubling" and/or to force a response from the receiving station. "OVER" may be used that way between messages in a long series, following "end more", to request the receiving operator to confirm copy is still satisfactory, if needed. Otherwise the series is customarily sent through to the end.

* The "end no more" sequence after the last message signals the receiving station to acknowledge the message(s) or ask for fills as required.

2.2.4.8 MISC. INTRODUCED GROUP VOICING EXAMPLES

FIGURE(S)

4 "figure FOUR"
46 "figures FOUR SIX"

TEL, In address (or sig)

410 555 1234 "figures FOUR ONE ZERO.. FIFE FIFE FIFE.. ONE TWO TREE FOUR", introduced once.

TELEPHONE FIGURES (when no zip code figures in address)

410 555 1234 "telephone figures FOUR ONE ZERO.. FIFE FIFE FIFE.. ONE TWO TREE FOUR"

TEL, in text or elsewhere, (each group treated as any other figure group).

410 555 1234 "figures FOUR ONE ZERO.. figures FIFE FIFE FIFE.. figures ONE TWO TREE FOUR", all 3 groups introduced.

INITIAL(S) (Letter Group)

John A Smith "JOHN.. initial ALPHA.. "
I AM "initial INDIA.. AM..."
X "initial X-RAY"
PM "initials PAPA MIKE",

MIXED GROUP

B6 "mixed group BRAVO SIX"
R/9 "mixed group ROMEO SLASH NINER"
I/O "mixed group INDIA SLASH OSCAR"
W4KFC/VA "mixed group WHISKEY FOUR KILO FOXTROT CHARLIE SLASH VICTOR ALPHA"

MIXED GROUP FIGURE(S)

2C "mixed group figure TWO CHARLIE"
2/C "mixed group figure TWO SLASH CHARLIE"
146R67 "mixed group figures ONE FOUR SIX ROMEO SIX SEVEN"

AMATEUR CALL

W3BOB "amateur call WHISKEY TREE BRAVO OSCAR BRAVO"

ARL, IN CHECK (ARL voiced as non-introduced letters, as in letter-spelling)

ARL 20 "A R L.. TWO ZERO" (No introduction in PBL.)

ARL, IN TEXT (ARL voiced as non-introduced letters, as in letter-spelling)

ARL FIFTY "A R L.. FIFTY I spell FOXTROT INDIA FOXTROT TANGO YANKEE" (Numbered radiogram groups spelled phonetically.)

2.2.4.9 SUMMARY

Transmitting radiograms on voice is more complex than many operators realize at first. It is a learned skill, and like any other, requires some practice. The tools and rules are based mainly on common sense, however, and are easily learned. In summary:

- * Groups in the preamble are not introduced (except optionally the time-filed, MARS origins, etc.);
- * Figures, initials, mixed groups, and call signs elsewhere are introduced by type, except for the special rule for zips and telephone numbers in the address or signature; figures one digit at a time;
- * Initials, mixed groups, and call signs are always voiced with phonetics for letters;
- * Groups may be voiced one at a time, or grouped in phrases chosen as logically connected words;
- * Groups that must be introduced are not included in voiced phrases;
- * Certain critical groups are always spelled phonetically, others always spelled with letters or phonetics, in order to minimize errors which can disable the message. Emergency BLOOD and FLOOD kit requests demand phonetic spelling of the key word. Both types of kits are available!
- * Pauses are critically important to copy. GLENDALE and GLEN DALE are two different places!
- * The sending operator's progress through the message may be anticipated due to uniform methods, and every action is either expected or flagged by prowords, introductions or operational words---the receiving station locked in sync;
- * The sending operator transmits the message at copy speed, rather than reading speed, using pauses for clarity;
- * Last names, telephone figures, street address figures and names, call signs, figures vs. spelled numbers, and abbreviations erroneously converted to words and vice versa, are some of the critical groups transmitted with errors that can disable messages or cause serious misinterpretation at the delivery point. Exact copy is really imperative.
- * Traffic handlers operate mostly in an "open loop" mode, i.e., there is seldom direct feedback as to the accuracy of relayed radiograms. The old party joke rule applies. It takes a concerted effort to assure that the accuracy of messages is preserved from origination to delivery. Where practical to do so, it may be worth the trouble to make arrangements to test the system from time to time by sending relayed messages back to the originator to check for errors that creep into the process. Scrupulous attention to clear and proper sending and careful honest receiving is the routine quality control.
- * Traffic handling done efficiently and accurately is a lot of fun, and a rewarding activity with a public interface.

2.3 THE MESSAGE EXCHANGE

The following sections present the methods for sending, receiving, asking for fills, multiple message sending and booking messages.

Amateur radio operators handling traffic have an ethical obligation to consider every message a "ball in play" until it is relayed, delivered, or serviced. Each station handling a message represents the entire amateur community.

The objective of traffic handlers is to be like a fax machine in the chain of message relaying. Whatever goes in should come out the other end with reliability, accuracy, and promptness.

The skills of both the transmitting and receiving stations in exchanging formal written messages involves speech perception and spelling problems unique to voice operating. The protocols in this manual reflect years of experience in Amateur Radio dealing with these problems. The skills do require some practice.

Unlike casual note taking, copy of the formal radiogram must produce the result of having every group transcribed exactly as it was written on the original message.

Sending messages for officials during disasters often puts the operator between the public and help. Getting the job done right is critical to public safety and welfare.

2.3.1 TRANSMITTING NOTES

2.3.1.1 SENDING SPEED

* IMPORTANT NOTE (Repeated a different way.):

The transmitting operator must send clearly and at a speed which will allow the receiving operator to copy perfectly without rushing. Transmit, do not "read", the message. This is one of the hardest skills in traffic handling to master. Use pauses to frame groups clearly.

Assume the receiving operator is copying with pencil and paper unless advised otherwise.

A useful trick to overcome the natural tendency to speak too rapidly is to say a group or phrase, pause, spell it to yourself as though you were writing it, and continue when you visualize that the receiving operator is also finished. KC3Y, Maryland Slow Net NM, teaches actually writing it out while voicing it.

It always takes less time to send a message correctly the first time than it takes to negotiate repeats and fills of missing or uncertain parts. The importance of clearly spaced group sending can not be overemphasized. It is crucial to correct message copy.

Two stations passing traffic on voice seldom have the luxury of duplex operation like they have on the telephone. They must work together using the skills that come from proper training and experience to know what each other is doing without the direct feedback... a primary purpose of uniform protocols.

Send a message to someone while watching the copy process. You can see when you are sending too rapidly or too slowly. The motion of a hand, or a facial expression, can alert you to when to stop, or when something is confusing.

The art of "transmitting" a message is knowing when you are doing it right, and knowing the other person is following along in step, when you are transmitting in the blind.

Break-in CW comes close to full duplex relative to interruption, but even experienced CW operators develop the skill of knowing when they are doing it right. An approximation of that method for voice using interruptions is outlined below.

2.3.1.2 PAUSING FOR INTERRUPTIONS

The receiving station should only interrupt for fills at those specific "break" points where listening pauses are mandatory unless it is known that the sending station is able to hear between groups, otherwise parts of the message may be missed.

* **LISTENING BETWEEN GROUPS:** It is useful to use fast VOX or release the PTT after every group or phrase transmitted to permit interruptions by the receiving station.

If the transmitting station is listening between groups or phrases simply interrupt and say the last group or segment copied, and the sending operator can resume with the next group, or repeat the group containing the segment, respectively. If the receiving station says a group incorrectly, the transmitting station will repeat that group to correct it before continuing.

If you are capable of such frequent listening and the receiving station is not familiar with your capability, you may announce same at the start of the message exchange sequence, much like QSK is announced when operating on CW: Say "**LISTENING BETWEEN GROUPS.**" before beginning.

On FM repeaters, or where this is not practical, the release to listen after the first "break", and after the "break" separating variable parts of a book, is considered mandatory to listen for interruptions. At these points formal fill request words are used.

The receiving station is not obligated to say anything at these customary listening pauses on HF and fast VOX operation. If the receiving operator says "go ahead" during these breaks, you have probably paused too long. Conversely, if the receiving station needs to interrupt at these points it should be ready to transmit immediately upon hearing the "break" so as to catch the transmitting station before transmission resumes.

On FM repeaters and slow VOX operation "go ahead", or "go" for short, is optionally used, however. This confirms that copy is still acceptable and avoids a loss-of-signal situation from forcing a repeat of long messages, a series of messages, or long books.

Caution should be used on FM repeaters with audio delay systems or multi-site key-up delays. On these systems you must key the transmitter and wait for up to a second or two before your audio will be available to the receiving station. Groups may be cut off at the beginning. This also makes listening between groups cumbersome and risks cutting off important information. Use

the customary listening break points instead, allowing sufficient time to prevent repeater delays from causing missed message groups by “doubling”.

* SSB: The transmitting station may set up for fast VOX by turning the VOX “delay” to minimum so that the transmitter un-keys as quickly as possible after each word or phrase spoken. Linear amplifiers using relays slaved to the exciter keyline may be so slow that the net delay is still too long to be useful for this purpose. Converting such linears to solid state switching and “TR” electronic antenna switching can dramatically improve the situation as well as reduce wear and tear on the equipment.

If the minimum delay is insufficient you may have to use PTT instead (Push-To-Talk mic or foot switch). PTT on a large variety of radios forces an immediate return to full receive when the switch is released.

2.3.2 RECEIVING NOTES

The receiving operator must develop certain skills and disciplines to assure accurate copy and efficient operation. These skills are complimentary to those involved in transmitting messages on voice. In addition:

2.3.2.1 TRANSCRIBE THE MESSAGE EXACTLY

The message copied should be an exact replica of the message held by the transmitting station... letter for letter, group for group.

2.3.2.2 TRANSCRIBE THE MESSAGE WITHOUT MODIFICATION

No part of the message may be altered, even when it appears necessary, except for appending corrections to the check value. If part of a message appears to be in error, confirm the part with the sending station. If it is correctly received, leave it alone. OP NOTES may be used to pass words to the next operator regarding problems or even suspected errors. This is risky business, however, and very easily a situation in which one can insert one’s foot in one’s mouth. You never really know what the message originator had in mind!

2.3.2.3 BE SURE OF EVERY GROUP RECEIVED

Do not assume that you have copied a group correctly. If you miss part of a group avoid guessing about the missing part. Check each group to see that it fits the context and makes sense. If the sending speed is too fast, ask for reduced speed. If interference is present, ask for a shift in frequency if possible. Ask for a repeat or confirmation if you have any doubt. Only you know for sure that you have copied every group with certainty.

Do not acknowledge the message until you are certain you have it copied it completely and accurately. Take the time!

2.3.2.4 ASK FOR FILLS OR CONFIRMATION

If interference or static is present, or you make a copying mistake, mark the groups or parts of words which might be in error (underline). If the sending station is “listening between groups” interrupt with the group or segment. The sender will repeat. Otherwise, mark (underline, circle, etc.) groups you are not sure about as you go along. You can ask for “fills” formally after the “break” at the start of the text or at the end of the message. Read the message to check for questionable context. Ask for “fills” or confirmation until you are certain that you have all of the

message correctly copied. Do not be afraid to ask or worry about taking the extra time. Other operators will respect your care.

The benefit of being able to interrupt the moment you have a receiving doubt is obvious. You get to fix things as you go along, thus saving formal fill requests later... and valuable time.

Acknowledge the message only after this process is completed. Do not worry about taking the extra time. Other operators will respect your care.

2.3.2.5 ACCEPT ONLY MESSAGES YOU CAN RELAY OR DELIVER

Try to accept only those messages you can forward or deliver in a timely fashion. Sometimes you may be asked to do otherwise as a liaison station or for "store and forward".

If you accept a message, and are unable to pass it on promptly, try to find another station to accept it and keep it moving. There are many ways to move a message along. Phone a fellow amateur to take custody if you can not handle it properly. Mailing, personal delivery, telephoning neighbors of the addressee, etc., are alternative methods to direct telephone delivery. See the chapter on Delivering Messages. Service messages promptly when necessary. Ask fellow amateurs for help if you have difficulties.

Messages should be delivered within 48 hours if possible.

2.3.2.6 TAKE RESPONSIBILITY FOR MESSAGES ACCEPTED

Once you acknowledge a message, it is your message to handle. Do not go back to the station from whom you received it and bother him with delivery problems or change your mind about accepting it. It is reasonable, in some circumstances, to find the station from whom the message was received and confirm the message content, but it is your responsibility, not his, to service the message.

If you can not deliver a message, try relaying it to another station that can.

If you have an insoluble problem, send a service message back to the station of origin. Explain the problem and put enough information in the service message to allow the station of origin to find the original message and evaluate, at the same time, the accuracy of the information you received. Repeat any key items in question in your service message!

2.3.2.7 EMERGENCY MESSAGES

Emergency messages should be handled by the fastest path available, on or off radio. Notices regarding death or serious illness are often better delivered by relief agencies or public safety officials.

2.3.2.8 HONOR ALL HANDLING INSTRUCTIONS

HX codes regarding delivery, progress and replies are part of the job. Failure to honor these requests is as serious as not delivering the message at all. If a reply is requested by HXE from the addressee, and no reply is forthcoming, send a service message back and say so. In these type messages, the "ball is in play" until the originating station receives his expected response. An "ARL SEVEN" reply request in the text is an option for the addressee to approve.

2.3.2.9 DO NOT ORIGINATE MESSAGES WITHOUT PERMISSION

Originating a message for a third party (Someone other than yourself.) without permission is a fraud and forgery. (Strong words!) Generating messages about a third party or their property or status without their permission is also considered very poor practice. Respect privacy.

Do NOT service back changes of addresses, phone numbers, or other personal information about the addressee without their permission. The original message might be intended to pry into the private affairs of the recipient.

2.3.2.10 MAKE NO COMMENTS REGARDING MESSAGE CONTENT

It is not proper to comment on the content of a message on the air, (legality excepted), or allow such a judgment to affect how a legal message is handled. The originator and the addressee deal with the content of messages.

Any legal message placed in play in the traffic system should get the same good service. Even an apparently pointless message is at least giving the system some practice, and it is improper to assume that the message is pointless to the originator or addressee.

2.3.2.11 ACCEPT ONLY MESSAGES WHICH MEET FCC RULES

Accept only messages in which content and purpose comply with the fcc regulations in force regarding third party traffic, the prohibition of "business" traffic, encryption, and other rules regarding prohibited communications.

It is difficult to examine a message and conclude with certainty what purpose or meaning is in the content in all cases. If in doubt, it is not mandatory to accept the message---refuse it.

If you know by some other means than content that a message is business related, or otherwise illegal, do not handle it.

If you wind up with such a message, and do not wish to send it along, send a service message to the originating station.

You are the licensee held responsible by the FCC.

Handling messages is a voluntary service.

2.3.3 VOICING THE EXCHANGE

Formal voicing methods are shown in the following sections.

The choice of greetings, use of operator names, and farewells is, of course, optionally added. Amateur traffic handling is a polished skill couched in the friendly traditions of the service... and it's fun!

Groups may be sent as individual single groups, or sent as phrases in the text. Introduced groups are not included in phrases. The receiving operator may request that each group or phrase be sent twice (or more) times under difficult conditions. This may be requested at the start or during an interruption opportunity. A series of single messages, books, or a mix of both may be sent in a series. See the notes after the first voicing example below and section 2.4.

2.3.3.1 READY TO COPY-ON/OFF NET-REPEAT/SPELL-LISTENING

In the examples the TX station is the message sender, the RX station the receiving station.

*** NEW FREQUENCY:**

On a new frequency (off of a net) the RX station calls to check if the frequency is clear; “Is this frequency in use?”. If the frequency is busy the RX station moves to the next clear frequency in the same direction (away from the net) and repeats the sequence.

If clear the RX station will call the TX station and establish contact. The RX station may indicate it is ready to copy or wait to be asked by the TX station. In either case, the establishment of “ready to copy” status is a courtesy prerequisite to beginning the transmission of messages.

See the STATION OPERATIONS section regarding moving off the net, searching, establishing contact, and net exchanges.

*** ON A NET:**

On a net frequency the NCS will dispatch the traffic to be passed “HERE”, the RX station will begin with “ready to copy”. The sending station then begins transmission of the first message according to the rules for a single message or a book. Listen to the NCS in case the calling order is reversed (order of call signs in the dispatch). If the TX station is asked to begin the exchange (addressed first), TX will ask “ready to copy?”. The reply is “ready to copy”, often shortened to “ready”, key words for this purpose used instead of a simple “affirmative” reply.

*** REQUESTS TO REPEAT AND/OR SPELL GROUPS, RX STATION:**

At the start or at interruption opportunities the RX station may request that the TX station send each word group 2 or more times and/or to spell each group (letters or phonetics) in difficult receiving conditions.

*** ADVISING LISTENING CAPABILITY AND QUANTITY, TX STATION:**

At the start the TX station may advise the RX station if it is “listening between groups”. It may also advise the quantity of messages to be sent when sending multiple messages.

2.3.3.2 VOICING EXAMPLE 1, SINGLE MESSAGE

Sample message for example:

(PBL) 26 R N3XYZ 17 BANGOR ME JUL 24

(ADR) JOHN R SMITH
23 OAK DRIVE
PHILADELPHIA PA 19034
215 555 2345

(TXT) I WILL ARRIVE TOMORROW AT
6PM X CAN YOU PICK
ME UP AT THE AIRPORT
QUERY 73

(SIG) BILL

KEY: “.” = word pause, “..” = group pause, “.. ..” = copy pause, (//) = release of PTT, (/.../) = required listening pause.

Prowords, operational words and introductory words are shown lower case. Try sending the prowords and operational words in a slightly higher pitched voice, the introductory words in a slightly lower pitched voice, or vice versa. TX is the sender, RX the receiver, on a net frequency. (See STATION OPERATIONS for details on off frequency calls.)

RX: “W3RX ready to copy”. (In severe conditions the RX station may ask the sender to repeat each group 2 or 3 times and/or use letters or phonetics to spell all groups.);

TX: “W3TX” (Optionally informs RX of quantity and if listening between groups.)
“number.. TWO.SIX.. ROUTINE.. NOVEMBER TREE X-RAY YANKEE ZUZU..
ONE.SEVEN.. BANGOR.. MAINE.. JULY.. TWO.FOUR”.. ..

“JOHN.. initial.ROMEO.. SMITH I spell SIERRA MIKE INDIA TANGO HOTEL.. ..
figures TWO TREE.. OAK I spell O.A.K.. DRIVE.. .. PHILADELPHIA..
PENNSYLVANIA.. figures ONE NINER ZERO TREE FOUR.. .. figures TWO ONE
FIFE.. FIFE FIFE FIFE.. TWO TREE FOUR FIFE.. break” (/.../) (interruption pause)

“initial.INDIA.. WILL.. ARRIVE.. .. TOMORROW.. AT.. .. mixed group figure SIX PAPA
MIKE.. initial X-RAY.. CAN.. YOU.. .. PICK.. ME.. UP.. .. AT.. THE.. AIRPORT.. ..
QUERY.. figures SEVEN TREE.. break.. BILL I spell BRAVO INDIA LIMA LIMA.. end..
no.more”

RX: “ROGER.. W3RX” (or “ROGER.. 73 W3RX”, etc.), or asks for fills, and acknowledges the message when done.

TX: “W3TX” (or “THANKS 73 W3TX”, etc.); (The exchange is complete.)

* PTT releases (//) are not shown in this example. On fast VOX or PTT operation, release or listen after every group or phrase. The expected interruption pause (/.../) is shown.

Notes:

No transmissions are made by the receiving station until the end unless fills are required. If the

receiving station says “go ahead” at the customary break the pause was probably too long, although it may optionally do so.

On FM repeaters, due to audio delays and receive site delays, it may be impractical to break after groups without loss of audio. In this case, the PTT switch is released only at the customary expected fill breaks. When sending long messages or batches the receiving operator may be forced to say “go ahead” by saying “over” at the break point between messages, thus confirming continuing good copy. Keep the repeater transmission time limiter in mind also.

* **GROUPING:** The Preamble, Address, prowords and signature groups are generally transmitted as individual single groups.

The text may also be sent as single groups, or by using the phrasing technique below based on context or conditions.

* **PHRASING:** Some operators prefer to say text groups in phrases rather than as single groups. Although controversial, transmitting phrases containing groups that are logically connected can actually aid in perception and accurate copy. It must be carefully done. Choose how many groups to voice based on context and group lengths, say the groups, then pause an appropriate time for copy before continuing. Groups eligible to be introduced are not included in transmitted phrases.

* **REPEATING FOR EMPHASIS:** Unusual or difficult groups may be repeated for clarity using the operational words “I say again”, as in:
“mixed group figure SIX PAPA MIKE I say again mixed group figure SIX PAPA MIKE”..

Phrases may be repeated for clarity in like fashion.

* **REPEATING TO CORRECT ERRORS:** Errors may be corrected by using the operational words “I say again”, going back to the last group sent correctly, and resuming transmission, as in:
“TOMORROW mixed group figure SIX PAPA MIKE I say again..TOMORROW.. AT.. mixed group figure SIX PAPA MIKE” (where the missed group “AT” is emphasized with tone of voice, or perhaps even spelled for clarity).

* **REPEATING GROUPS MULTIPLE TIMES:** The receiving operator can request that the sending station repeat each group or phrase twice (or more) when conditions are difficult. Single groups in this case, requested in advance, are usually repeated without operational announcement. Phrases are repeated using “I say again” prior to the repeat to mark the phrase boundaries.

* **SPELLING REQUESTS:** In extreme cases the receiving operator may request that groups be spelled phonetically (in addition to those customarily so spelled to reduce common errors). This request may be made at the beginning of the exchange or at any later interruption opportunity.

* **MULTIPLE MESSAGES:** See the later sections on BOOKING MESSAGES and SENDING MULTIPLE MESSAGES. Books and batches are generally sent continuously with acknowledgment at the end of the series.

2.3.3.3 VOICING EXAMPLE 2, HXC, FILING TIME, OP NOTES

Sample message:

(PBL) 65 R HXC N3XYZ ARL 20 CATONSVILLE MD 1800Z JUL 24
 (ADR) JOHN A HAM W3XYZ
 107 HOOK ROAD APT 21A
 PHILADELPHIA PA 19034
 215 555 2345 OP NOTE CALL AFTER 6PM
 (TXT) ARL SIXTY FIVE 11PM JULY/29
 USAIR/354 TELL N3ZZZ THANKS FOR
 THE GREAT MEAL X NEW
 TELEPHONE 410 555 2008 REGARDS
 (SIG) BILL OP NOTE PKT AT WB3FFV 21228 MD

Again, on net frequency per NCS dispatching order:

RX: "W3RX ready to copy" (May request repeated groups or spelling.)

TX: "W3TX" (May inform RX of quantity and pause listening between groups.)

"number.. SIX FIFE.. ROUTINE.. HOTEL X-RAY CHARLIE.. NOVEMBER TREE X-RAY YANKEE ZULU.. A R L.. TWO ZERO.. CATONSVILLE I spell C A T O N S V I L L E.. MARYLAND.. figures ONE EIGHT ZERO ZERO ZULU.. JULY.. TWO FOUR" ..

"JOHN.. initial ALPHA.. HAM I spell HOTEL ALPHA MIKE.. amateur call WHISKEY TREE X-RAY YANKEE ZULU.. .. figures ONE ZERO SEVEN.. HOOK I spell H O O K.. ROAD.. initials ALPHA PAPA TANGO.. mixed group figures TWO ONE ALPHA.. .. PHILADELPHIA.. .. PENNSYLVANIA.. figures ONE NINER ZERO TREE FOUR.. .. figures TWO ONE FIFE.. FIFE FIFE FIFE.. TWO TREE FOUR FIFE.. OP NOTE.. CALL.. AFTER.. mixed group figure SIX PAPA MIKE.. break"(/.../) (interruption pause)

"A R L.. SIXTY I spell SIERRA INDIA X-RAY TANGO.YANKEE.. FIVE I spell FOXTROT INDIA VICTOR ECHO.. mixed group figures ONE ONE PAPA.MIKE.. mixed group JULIETT UNIFORM LIMA YANKEE SLASH TWO NINER.. .. mixed group UNIFORM SIERRA ALPHA INDIA ROMEO SLASH TREE FIFE FOUR.. TELL.. amateur call NOVEMBER TREE ZULU ZULU ZULU.. THANKS.. FOR.. .. THE.. GREAT.. MEAL I spell M E A L.. initial X-RAY.. NEW I spell N E W.. TELEPHONE.. .. figures FOUR ONE ZERO.. figures FIFE FIFE FIFE figures TWO ZERO ZERO EIGHT.. REGARDS.. break.. .. BILL I spell BRAVO INDIA LIMA LIMA.. OP NOTE.. initials PAPA KILO TANGO.. AT I spell ALPHA TANGO.. amateur call WHISKEY BRAVO TREE FOXTROT FOXTROT VICTOR.. figures TWO ONE TWO TWO EIGHT.. initials MIKE DELTA.. end.. no more" (//)... (RX acknowledges or asks for fills.)

RX: "ROGER W3RX" (or "ROGER 73 W3RX", etc.)

TX: "W3TX" (or "THANKS 73 W3TX", etc.), (The exchange is complete.)

* Notes:

* (//) Not shown; use PTT releases to listen or mark parts of the message as desired; note extra pauses after the preamble, address lines and every 5 text groups used as line ending signals (on FM repeaters some operators will release the PTT to mark such lines).

- * Listen for fills at least after the first “break” (and after each “break” before “NUMBER” in book parts; see the section on booking) if not listening between groups or phrases sent.
- * Note the phrases used in transmitting the text; “THANKS FOR” and “THE GREAT”. Those groups might have been voiced “THANKS FOR THE GREAT” except a line ending signal pause was optionally inserted. Optional sending of phrases is based on logically connected groups with no introduced groups imbedded within the phrase. Groups may also be sent singly.
- * The sound-alike group “FOR” was not spelled here since context was clear. Sound-alikes should always be spelled unless the context clarity is certain.
- * Plural “THANKS” was not spelled here. Plurals may be spelled with letters to emphasize the “S” in difficult conditions or where context would not clearly indicate the plural.
- * Note extra pauses for copy time after long groups like “PHILADELPHIA” and “TELEPHONE”.
- * Groups are voiced with pauses for copy time, particularly after long groups unless you spell them.
- * Note the introducer “figures” for each and every text number group.
- * No expected standby for fills between “break” and the signature.
- * Introductory and operational words are usually said in a different tone of voice.
- * Transmission ending “over” is dispensed with in these examples... it is not required.

2.3.3.4 ACKNOWLEDGING THE MESSAGE

The receiving station asks for fills if required, then says “ROGER” and “call sign” to complete the exchange. (The full call sign at the end of an exchange meets ID requirements as well as being a signal that the exchange is complete.)

“ROGER MESSAGE(S)” and “MESSAGE(S) RECEIVED” are still in use by some operators, but ROGER implies all messages received and is sufficient, and efficient.

Saying such phrases as “YOUR MESSAGE NUMBER (#) RECEIVED”, or “ROGER YOUR MESSAGE (#), or “QSL MESSAGE”, etc., is considered poor practice.

“Q” signals are not used operationally in voice message handling. (They are permitted as message groups of course.)

Once acknowledged the message becomes the responsibility of the receiving operator to 1) relay it, 2) deliver it, or 3) to service the message back to the originating station.

2.3.3.5 MAKING NOTE OF WORDS IN DOUBT

When you are copying a message, any group(s) received about which you have doubt should be marked by underlining or some other convenient means. It is amazing how much you can forget after copying another five or ten groups.

Underline or otherwise mark the group, phrase, address, etc., so that you remember to go back at the end of the message and clear it up. (Or interrupt the transmission if the sending station is able to hear you between groups.)

See also TRANSMITTING, PAUSES FOR INTERRUPTIONS.

2.3.3.6 INTERRUPTING FOR FILLS BETWEEN GROUPS

If the sending station is listening between groups or phrases the receiving station may interrupt immediately for fills. In this case the technique is very simple.

Say the last group or segment of a group copied and the sending station will resume transmission with the next group, or repeat the group containing the segment, respectively, thus avoiding having to wait until a break point to ask for fills in the formal way. Examples are indented to represent timing of the transmissions:

TX: ANTENNA IS RETRACTED.. (sent as single groups)

RX: IS

TX: RETRACTED.. NOW...

TX: ANTENNA IS RETRACTED.. (sent as single groups)

RX: WAS (error in request)

TX: IS..RETRACTED..NOW..." (IS!)

TX: ANTENNA IS RETRACTED NOW (sent as a phrase)

RX: IS

TX: RETRACTED NOW...

TX: INSERTED FORCIBLY..

RX: FORCE

TX: FORCIBLY... (spell if needed)

* TIPS: It is customary to interrupt with this method immediately when there is missed copy. It is not considered good practice to interrupt and ask for earlier portions of the message. Better to wait until normal break points or the end of the message and use fill requests.

If the receiving station must interrupt for some other reason it may send "WAIT", and, when ready to copy again, ask for resumption of the transmission by sending the last group(s) copied, or part name, as the indicator of where to continue.

2.3.3.7 JUMPING AHEAD

When familiar mass mailing type messages are encountered, receiving operators will often wish the sending station to jump ahead to the next part of the message to save time if the sender listens between groups. This practice should be used with care to avoid errors of assumption.

A receiving operator asking for a repeat of a message part, such as the preamble, or addressee, might not need all of that part. When it copies what it needs the station will then send the specific group or part where the sending station should resume transmission.

A receiving operator, upon recognizing the addressee, may tell the sending station to go directly to the text by sending "TEXT". The sender then transmits "break" and then the text. If, however, there is an address op note, the sending operator should send that op note before continuing with the text.

A receiving operator, recognizing a “standard message” from an originator might interrupt the sending with “SIGNATURE” as soon as the address is received and the text is recognized. The sending operator skips the text, sends “break”, and follows with the signature. If the receiving station interrupts with a “ROGER” as soon as the text is recognized it is indicating it knows both the text and signature, however the sending operator should send the signature and/or the signature op note, if present, when the op note is not “standard” for that message. If in doubt the sending operator should confirm the receiving station has the op note.

2.3.3.8 FILL REQUESTS AND RESPONSES

These words are used to ask for and provide repeats of specific groups or parts. Fill in the blanks with the flanking group(s), ask for the required part name, ask for confirmation of a group or phrase, or ask for a group to be spelled with letters or phonetically. Be specific. If there are similar groups in the message give 2 or more groups in the request and/or use limits. The interrogatory is implied without a query (?).

These requests are not usually needed with fast VOX. See the earlier section on Interrupting For Fills Between Groups.

*** LIMITS:**

[**IN (part)**]: The optional position limiter refers to preamble or preamble part names, addressee, address, phone figures, text, signature, op note, book message number, etc., as required to avoid ambiguity in the request. They may precede or follow the request.

* **MULTIPLE FILLS:** When several fills are needed the additional requests simply follow the reply to the preceding fill without a specific acknowledgment. When the fill(s) are settled the receiving station either acknowledges the message(s), or, if the sender was interrupted, says “GO AHEAD” to the sender as the signal to continue (at BREAK), or the specific group after which to resume when interrupting with fast VOX.

*** METHOD 1, FILL REQUESTS AND RESPONSES:**

[IN (part)] WORD AFTER _____;

Respond with group or part requested;

[IN (part)] WORD BEFORE _____;

Respond with group or part requested;

[IN (part)] ALL AFTER _____;

Respond with all groups after the one specified to the end of the message, unless limited;

[IN (part)] ALL BEFORE _____;

Respond with all groups in the message to the group specified, unless limited;

[IN (part)] BETWEEN _____ AND _____;

Respond with group(s) between blanks, observing limits;

[IN (part)] CONFIRM _____ ;

Respond "CONFIRM" or "AFFIRMATIVE" if group(s) correct.

Otherwise voice the correct group(s), (spelling helps);

(part name); Simply state the part name, thus asking for a repeat of that part.

Respond by re-sending the requested part;

[IN (part)] SPELL [PHONETICALLY]... , may be used ahead of fill requests.

Respond by spelling word groups with "I spell".

Eligible groups are introduced and voiced normally.

Note: The optional [IN (part)] limiters may be placed before or after the request. Both methods are in use. This manual will show them ahead of the request as a suggestion that doing so makes it easier for the sending operator to find the requested fill.

ALTERNATE METHODS: There are several schools of thought on requesting and providing fills. The above methods are the best current practice today, being short and efficient. The alternatives below differ in the response method only and are shown for reference.

* **METHOD 2:** Repeating the flanking groups confirms location and catches multiple missed groups unknown in the request.

[IN (part)] WORD AFTER ____;
Respond with group given, word after, and next group;

[IN (part)] WORD BEFORE ____;
Response: go back two groups, give that group, the requested group, and the group given;

[IN (part)] ALL AFTER ____;
Respond with all groups, starting with group given;

[IN (part)] ALL BEFORE ____;
Respond with all groups up through, and including, the group given;

[IN (part)] BETWEEN ____ AND ____;
Respond with first group given through, and including, the second group given;

CONFIRM and SPELL requests are the same as in method 1.

* **METHOD 3:** Repeating the request.

[IN (part)] WORD AFTER ____;
Respond with “word after”, group given, then word after;

[IN (part)] WORD BEFORE ____;
Respond with “word before”, group given, then word before;

[IN (part)] ALL AFTER ____;
Respond with “all after”, group given, then all groups requested;

[IN (part)] ALL BEFORE ____;
Respond with “all before”, group given, then all groups requested;

[IN (part)] BETWEEN ____ AND ____;
Respond with “between” group(1) and group(2), then the groups requested;

CONFIRM and SPELL requests are the same as in method 1.

2.3.3.9 REQUESTING FILLS, EXAMPLES

* NOTE that there are at least three ways of replying to fill requests in use (See the section above.). Only the primary method is shown here. Example message:

(PBL) 65 R HXC N3XYZ ARL 20 CATONSVILLE MD 1800Z JUL 24
(ADR) JOHN A HAM W3XYZ
107 HOOK ROAD APT 21A
PHILADELPHIA PA 19034
215 555 2345 OP NOTE CALL AFTER 6PM
(TXT) ARL SIXTY FIVE 11PM JULY/29
USAIR/354 TELL N3ZZZ THANKS FOR
THE GREAT MEAL X NEW
TELEPHONE 410 555 2008 REGARDS
(SIG) BILL OP NOTE PKT AT WB3FFV 21228 MD

* **REQUESTS AND RESPONSES** ("req. = request, ans. = answer):

req. "WORD AFTER GREAT"; (or "IN TEXT WORD AFTER GREAT" if a limit was required.)

ans. "MEAL" (the group may be spelled if needed)

req. "WORD BEFORE THE"

ans. "FOR I spell F O R" (usually spelled)

req. "ALL AFTER BILL"

ans. OP NOTE PKT AT WB3FFV 21228 MD (voiced per the rules)

req. "ALL BEFORE CATONSVILLE"

ans. number 65 R N3XYZ ARL 20 (voiced per the rules)

req. "BETWEEN X-RAY and figures FOUR ONE ZERO"

ans. "NEW PHONE I spell P H O N E" (spelled for clarity)

req. "CONFIRM ONE ONE PAPA MIKE"

ans. "CONFIRM" (AFFIRMATIVE may also be used by some ops.)

req. "CONFIRM figures TWO ZERO ZERO TREE"

ans. "figures TWO ZERO ZERO EIGHT" (the repeat indicates the error)

req. "IN ADDRESS.. TELEPHONE FIGURES "

ans. "figures TWO ONE FIFE.. FIFE FIFE FIFE.. TWO TREE FOUR FIFE"

req. "PREAMBLE"

ans. number 65 R N3XYZ ARL 20 CATONSVILLE MD JUL 24 (voiced per the rules)

req. "LAST NAME ADDRESSEE"

ans. "HAM I spell HOTEL ALPHA MIKE"

req. "SPELL PHONETICALLY WORD AFTER GREAT"

ans. "MEAL I spell MIKE ECHO ALPHA LIMA"

Receiving station acknowledges after all fills are done: "ROGER.. (call sign) ".

NOTE: The use of "OVER" has been dispensed with in this example. As in the case of "end.. no more", "OVER" is implied by the nature of the fill requests and the responses in most cases. "OVER" may be used to clarify the end of your transmission when necessary, particularly on FM repeaters or slow VOX operation.

Replies restating the flanking groups, or restating the request syntax are not shown.

2.3.3.10 VERIFYING THE CHECK

When receiving traffic, it is customary to copy text five or ten groups to a line to enable a quick count of the groups. Doing this will enable you to anticipate the end of the message (thus saving the time required for a group count). A surprise indicates a probable check error.

Since every operator verifies the group count, a check discrepancy flags both sending and copying errors.

Make a quick check of the text to find obvious possibilities such as words that could have been sent as either one or two groups. The importance of the use of clear separation between groups when sending can not be overemphasized (The "GLENDALE" vs. "GLEN DALE" case.). Clear sending will reduce such errors.

Ask for fills using the fill request guidelines. "CONFIRM.." may be used for likely items. Often a check discrepancy results from missing an "X-RAY" or some other simple error.

DO NOT SPEND A LOT OF TIME FISHING FOR THE PROBLEM. The discrepancy may be found sooner or later by fishing, but only after trial and error and the expenditure of much time.

Wise operators using fast VOX go directly to the first initials method to save time wasted searching group by group. The first initials method involves sending the first initials of each group in the text with the other station interrupting as soon as the discrepancy is detected. Either station may initiate the first initials sequence.

If the RX station is confident it copied the transmitted check correctly, but it has a different group count, RX may immediately begin the first initials series. The TX station will interrupt when the initial sequence error is detected.

If the RX station is not sure it copied the check correctly it may ask "CONFIRM CHECK ##". The TX station will either confirm with "CONFIRM" (or "AFFIRMATIVE") or send the correct check. If a corrected check matches the count the problem is fixed.

If the check still disagrees with the count the RX may ask "COUNT ##?" (its count), in which case the TX station will no doubt make a quick verification of its count, amend the check, or begin the first initials series to the RX station. The RX station will interrupt when the initial sequence error is detected.

The process is slightly different in each case.

See the first initials section following.

NOTE:

Do not re-send entire messages or parts of messages in an attempt to find errors unless the receiving station makes specific requests for parts or fills, or repeats. Do not send entire messages or parts of messages back to the sending station unless specifically requested to do so.

2.3.3.11 REPEATING THE TEXT GROUP'S FIRST INITIALS

A text is sent with a check of ARL 20:

(TXT)	ARL	SIXTY	FIVE	11PM	JULY/29
	USAIR/354	TELL	N3ZZZ	THANKS	FOR
	THE	GREAT	MEAL	X	NEW
	TELEPHONE	410	555	2008	REGARDS

With the text copied incorrectly with a check of 20 but a group count of 19, assume "THE" was missed before "GREAT".

The exchanges would go as follows, indents reflect timing. It is assumed that both stations are capable of listening between groups when transmitting. This may be simulated by quick PTT releases. If not possible, such as on FM repeaters with key up delay, stations send and copy the full sequence and make their requests and corrections at the end as noted below.

1) If the RX station is confident it copied the transmitted check correctly, but it has a different group count, the RX station may initiate the initials sequence (using phonetics):

RX:	TEXT INITIALS.. A S F 1 J.. U T N T F.. G	incorrect sequence
TX:	FOR THE	
RX:	ROGER 73 W3RX	the count now agrees

Note that the TX station will back up a sufficient number of groups to be able to send a unique series of groups to correct the copy.

2) If the RX station is not sure it copied the check correctly it may ask "CONFIRM CHECK ##". Note this is simply a verification of the copied check.

RX:	CONFIRM CHECK TWO ZERO	
TX:	CONFIRM (or AFFIRMATIVE)	since the original check IS 20

The receive station now knows there is either a sending or a receiving error (or a miscount check error on the original). It may begin a TEXT INITIAL series at this point as above, or;

3) The RX station may ask for a verification of the count:

RX: CHECK ONE NINER?; or COUNT ONE NINER?; (number of received groups);

Note that the query is not a normal fill request. The TX station will make a quick check of the count. If TX finds an error on its copy, it will amend the check and inform the RX station of the

amended check, as in: CHECK TWO ZERO SLASH ONE NINER. The amended check now becomes part of the message. That is NOT the case in this example so step 4 below is used:

4) The TX station therefor may initiate the INITIALS sequence.

TX: TEXT INITIALS A S F 1 J.. U T N T F.. T using phonetics
RX: WORD AFTER FOR
TX: THE
RX: ROGER 73 W3RX the check now agrees

In any of the cases, if the stations were operating slow VOX/PTT, FM repeaters, etc., the station copying the INITIALS would listen to the full sequence and make the “WORD AFTER” request or send the correction at the end. On FM repeaters a popular practice is to send the INITIALS in groups of 5 then standby to listen before continuing.

When waiting until the end the correction sent should be carefully chosen to be unique, using as many groups as required. Fill requests should likewise be unique when there are duplicate groups in the text.

2.3.3.12 VERIFYING ALTERNATIVES

If the first initial technique does not readily resolve the check discrepancy the last resort under severe conditions or very confused copy would be to ask for the message or the part to be re-transmitted in its entirety.

“SAY AGAIN (or REPEAT) THE MESSAGE (or BOOK)” may be used.

Requesting “TEXT?”, or other parts, per the FILL rules may be used. Repeating groups may be requested as in “TEXT REPEAT EACH GROUP TWICE”, or “TEXT SPELL GROUPS PHONETICALLY”, etc.

All voicing rules would apply to such repeats as though the message or part had never been previously sent. Stick to expected protocols to avoid introducing new errors.

* **FM REPEATERS:** Asking for a repeat of the text first initials in batches of five with an “OVER” to check the receiving station is sometimes done on FM repeaters to avoid doing the entire text. The entire text first initial method works in all cases, however, and is still efficient on repeaters.

* **GUIDELINES FOR ALTERNATIVES USUALLY AVOIDED:**

Do NOT read back parts or entire messages to the sending station unless, for some reason, that is specifically requested. This is considered poor practice.

Do NOT re-send parts or entire messages to the receiving station unless, for some reason, that is specifically requested. Requesting the text at reading speed should be avoided in favor of the initials check on the first attempt (to find check discrepancies).

2.3.3.13 AMENDING THE CHECK

If the sending station and receiving station eventually agree that they have the same text, and the original check on the sender's copy is in error, the sender made a mistake in not verifying the check when the message was received, or an error was made in copy and not caught.

The CHECK may be amended by adding a slash followed by the corrected number as in 12/13, which is voiced as "ONE TWO corrected to ONE TREE", or "ONE TWO SLASH ONE TREE".

THE TEXT OR CHECK IS NEVER CHANGED TO FORCE AGREEMENT!

The original CHECK value is preserved throughout the life of the message as it moves through the system. An AMENDED CHECK becomes part of the message to be carried on through to delivery.

The sending station should have caught the discrepancy before sending the message, and amended the check. If you fail to catch a check discrepancy and inadvertently acknowledge the message, and can not reach the sending station, you can only amend the check for future reference. If the error has fatally flawed the message a service message back to the originating station may be the only recourse.

If such errors are encountered with a message already having an amended check, only the amended value may be changed once the text is verified. An omitted "ARL" can be added to the amended part. Multiple amendments are seldom if ever done (20/21/22 would be 20/22).

An OP NOTE may be added if there is a particular suspicion about the nature of the error.

2.3.3.14 ACKNOWLEDGING THE MESSAGE AT LAST

Once the rapid and efficient resolution of the check problem is completed, the receiving station responds with, "ROGER", or asks for fills or confirmation of groups, or parts of the message still missed or in doubt. The message is then acknowledged when fills are completed. ("MESSAGE(s) RECEIVED", "BOOK OF (#) RECEIVED", are sometimes used. For the sake of brevity and efficiency ROGER is the preferred method. ROGER, meaning received-understood, implies all messages were received.) See the section on Station Operations.

Saying phrases such as "YOUR MESSAGE (#) RECEIVED", "MESSAGE NUMBER # RECEIVED, or using "QSL MESSAGE(S)", etc., on voice, are all considered poor practice.

2.3.4 BOOKING, TIME SAVING OPTION, SPECIAL EVENTS

Considerable time can be saved in sending two or more messages with fixed parts, such as fixed addressees, fixed texts, etc., by "booking" the messages as they are voiced.

2.3.4.1 BOOKING IS OPTIONAL

Booking is usually done in the head of the sending operator, and it is done at the option of the operators and is not mandatory. The economy of booking is based mainly upon the size of parts that would otherwise have to be repeated.

2.3.4.2 SENDING THE BASIC BOOK

The basic book with a common text and variable address and signature would be formed as follows during transmission (shown written, use proper voicing rules):

“book of three R W3FT ARL 3 BALTIMORE MD JAN 15
break” (/.../) “ARL FORTY SIX break” (/.../)
“number 1 (addressee) break (signature) break” (/.../)
“number 2 (addressee) break (signature) break” (/.../)
“number 3 (addressee) break (signature)
end book no more”

2.3.4.3 NOTES ON BOOKING STRUCTURE

There are many permutations of booking depending on the fixed and variable parts. Booked messages can have fixed preambles (except for message number), fixed addressees, fixed texts, fixed signatures, or combinations of each.

* VOICING THE BOOK:

BOOK OF (quantity): The book is introduced by saying "BOOK OF (#)...", (where “#” is the quantity of messages booked, voiced as a word group without introduction) followed by the fixed parts, then the variable parts.

BREAK: The parts of the book are separated by “break”.

END BOOK: The book is ended by saying "END BOOK", followed by the customary “no more”, “more”, or “one more”. (“OVER” may be added on FM repeaters or slow VOX operation, but it is not required.)

Generally the following guidelines apply:

The PREAMBLE is kept intact except for the message number and sometimes check or date. The message # is a variable part.

The ADDRESSEE, ADDRESS and its OP NOTE are kept together.

The TEXT is kept intact as a fixed part or a variable part, except for blanks in a fixed text to be filled-in within a variable text part. The associated check stays in the same part except when a fixed text has blanks filled in variable parts with variable length additions. There the check moves to the variable parts.

The SIGNATURE, and its OP NOTE are kept together.

* A message with a very long text may be originated as two or more separate messages and easily sent as a book. Each variable part would simply be:
“number (##) CHECK (#) break (text part) break”.

* If the fixed parts include a text, “break” is still used to mark the start and end of the text. If the fixed parts include no text, a single “break” is inserted between the fixed address and signature.

If the text is the last fixed part, only one “break” is used to separate it from the “NUMBER” of the first variable part. IF the fixed part contains only a signature it is preceded by a “break” to distinguish it from a stand-alone address, and is of course followed by the “break” to begin the variable parts.

* Each variable part begins with the proword “NUMBER”, the message number associated with that part, followed by any variable parts of the preamble (identified by part name), and then the address, text and/or signature of the variable parts, each separated by a single “break”. In other words, the variable parts of the book are separated from each other, and from the fixed parts, by the SINGLE proword “break”. No double “break” is ever required.

* In summary, the purpose of the booking format is to combine all fixed parts of several messages into one block to be sent first, followed by all the variable parts, sent next, all in such a way that exact replicas of the individual messages may be reconstructed by the receiving station at a later time. Booking is done “visually” on the fly by the sending operator. Booking is optional.

* Rules for introductory and operational words are generally the same as for single messages except for the opening and closing references to the book and quantity, and the need to identify variable parts of the preamble when separated from the main preamble. (See examples below.)

2.3.4.4 BOOKS TO A SINGLE STATION

When sending a book to a single station it is customary to send the book continuously from start to end. Stopping for acknowledgment after each variable part takes extra time. Fast VOX operation is used on HF to provide listening between groups or phrases. Interruptions are possible any time.

On slow VOX or FM repeaters it is customary to listen after the mandatory “break” at the start of a text, and between “break” and “NUMBER” at the start of each variable part. These are the points where the receiving operator expects a listening opportunity. On repeaters the receiving station sometimes will say “go ahead” (or “go”) at the customary listening breaks to confirm that copy is still acceptable, thus preventing the need to repeat long books if there is a problem. For books of three or four this is not usually required or done. It may be agreed upon by the operators.

In the following examples the parts of the message are shown written, not as voiced in all cases. Use the proper voicing rules. The customary listening pauses are shown as (/.../) for reference. Other PTT releases may be used but the receiving station is not expected to say anything unless a fill interruption is required.

2.3.4.5 EXAMPLE 1, Fixed PBL and TXT, to one station

Given the 3 messages:

2 R W3VPR ARL 15 ANNAPOLIS MD JAN 1
JIM SMITH
13 OAK LANE
BOSTON MA 01033
ARL SIXTY ONE X HAVING
A WONDERFUL TIME HERE X
HOPE TO SEE YOU SOON
BETTY AND JOHN

3 R W3VPR ARL 15 ANNAPOLIS MD JAN 1
BILL JONES
4 CEDAR RD
BALTIMORE MD 21228
410 555 3434
ARL SIXTY ONE X HAVING
A WONDERFUL TIME HERE X
HOPE TO SEE YOU SOON
HARRY OP NOTE REPLY MDD

4 R W3VPR ARL 15 ANNAPOLIS MD JAN 1
CHUCK K3FT
C/O BTN 146R67
BALTIMORE MD
ARL SIXTY ONE X HAVING
A WONDERFUL TIME HERE X
HOPE TO SEE YOU SOON
GEORGE

They are booked as follows, shown written (not voiced). Use proper voicing rules:

“book of three R W3VPR ARL 15 ANNAPOLIS MD JAN 1
break (/.../) ARL SIXTY ONE X HAVING
A WONDERFUL TIME HERE X
HOPE TO SEE YOU SOON break (/.../)

number 2 JIM SMITH
13 OAK LANE
BOSTON MA 01033 break
BETTY AND JOHN break (/.../)

number 3 BILL JONES
4 CEDAR RD
BALTIMORE MD 21228
410 555 3434 break
HARRY OP NOTE REPLY MDD break (/.../)

number 4 CHUCK K3FT
C/O BTN 146R67
BALTIMORE MD break
GEORGE

end book no more”

* Note the fixed parts of the book do not contain a message number, variable parts of the book all contain a unique message number, and where a text is included the text is begun and ended with a “break”. A “break” separates the address from the signature where no text is present.

* “break” always separates each variable part before the proword “NUMBER”, and implies a listening pause.

2.3.4.6 EXAMPLE 2, Fixed PBL and ADDEE, to 1 station

Given the two messages:

```
3 R W3XYZ 10 CROWNSVILLE MD JAN 5
    BOB W3BOB
      TWO OPERATORS ARRIVED AT BWI
      TO OPERATE PACKET X THANKS
      JIM N3EI
5 R W3XYZ 11 CROWNSVILLE MD JAN 5
    BOB W3BOB
      NEED SIX MOBILES WITH TWO
      METERS FOR SEARCH TEAMS X
      ADVISE
      BRIAN N3QXW
```

Booked as follows (shown written, use proper voicing rules):

```
“book of two R W3XYZ CROWNSVILLE MD JANUARY 5
    BOB W3BOB break (/.../)
number 3    CHECK 10 break (/.../)
            TWO OPERATORS ARRIVED AT BWI
            TO OPERATE PACKET X THANKS break
            JIM N3EI break (/.../)
number 5    CHECK 11 break (/.../)
            NEED SIX MOBILES WITH TWO
            METERS FOR SEARCH TEAMS X
            ADVISE break
            BRIAN N3QXW
end book no more”
```

* Note the use of BREAKs to separate the parts, and the word “CHECK” to introduce the variable checks.

* Note the lack of a “break” between the PBL and “BOB W3BOB”, thus indicating that the line is an address, shortened here for the example, not a signature. A fixed-signature-only book would set the signature apart with a break between the PBL and SIG, then a break to end the fixed parts..

* Note the economy of this booking is minimal unless the address is full length, but still saves some time, particularly with large books. PBL and address need only be sent once.

2.3.4.7 EXAMPLE 3, Fixed PBL, TXT and SIG, to 1 station

(Use proper voicing rules.)

“book of two R KJ3E 10 CALIFORNIA MD MAR 10
(/.../) break WELCOME TO FISTS CW CLUB
X ENJOY YOUR MEMBERSHIP 73 break
KJ3E break (/.../)
number 2 JOHN A SMITH
(address, city, zip, tel) break (/.../)
number 3 HARRY J JONES
(address, city, zip, tel)
end book no more”

2.3.4.8 EXAMPLE 4, Fixed PBL and TXT except ARL blank

(Which might be used in a holiday traffic solicitation. Use proper voicing rules.)

“book of two R W3XYZ ARL 3 ANNAPOLIS MD MAR 5
break (/.../) ARL SIXTY BLANK break (/.../)
number 1 JOHN A SMITH
(address, city, zip, tel) break
CHRISTMAS break BARBARA break (/.../)
number 2 HARRY B LEVIN
(address, city, zip, tel) break
HANUKKAH break BOB AND JUDY
end book no more”

* “BLANK” (or “XXX”) is used as place holder for additions in the variable parts, or, where there are two ARL blanks, two may be used, as in: “ARL SIXTY SEVEN BLANK BLANK”. Each blank is limited to single group addition in the variable parts if the check is common. If the blanks have additional groups (more than one), or a variable number of additions, the check becomes a variable part (i.e., a blank may stand for a phrase in the variable part). See the next section.

* A fixed part check must agree with the final un-booked version of the message. Where blanks are filled with variable length insertions the check would move to the variable parts to agree with the final text for that version.

2.3.4.9 EXAMPLE 5: Fixed PBL and TXT except misc. blank

Where numerous messages are sent with a variable word or phrase implied by a blank in the fixed text. Note the checks are in the variable parts of the message! Use proper voicing rules.

“book of two R W3XYZ ANNAPOLIS MD MAR 5
break (/.../) HAPPY BLANK ANNIVERSARY break (/.../)
number 1 CHECK 3
JOHN A SMITH
(address, , city, zip, tel) break (/.../)
40TH break MOM AND DAD break (/.../)
number 2 CHECK 4
HARRY B LEVIN
(address, city, zip, tel) break (/.../)
THIRTY FIFTH break UNCLE BILL
end book no more”

Some operators use “XXX” instead of “BLANK” as place holder. The check indicates the variable additions plus fixed text groups---total text groups (not counting the “blank(s)”.

2.3.4.10 ASKING FOR FILLS IN BOOKS

It is customary when asking for fills in books to specify the message number and/or use part limits to help the receiving station find what you are asking for when ambiguity would otherwise result. The optional limiter [in number ##] is used. From the example in the last section:

req. “in number 2 WORD AFTER HARRY”,
ans. “initial BRAVO”; or

req. “in number 1 CHECK”,
ans. “4”; or

req. “WORD BEFORE BLANK”,
ans. “HAPPY” (in the fixed text implied since no number was given.

“IN FIXED PARTS” may be used to introduce the request if ambiguity would otherwise result.)

2.3.4.11 BOOKS TO MULTIPLE STATIONS

When sending a book of messages with different addressees to different receiving stations on the same frequency it is customary to check each station is ready to copy before starting, and to say the call sign of the station to copy each variable part just ahead of the proword NUMBER introducing that part. This assures each station knows what to copy. All stations obviously copy the book’s fixed parts. The TX station arbitrates relays.

In a stack of numerous stations copying such a book off net, it is efficient to stop at the end of each station’s variable part(s), get fills settled and acknowledgment with that station, and excuse the station from the stack so it may return to the net for other business.

Transmission of books to multiple receiving stations is usually encountered only on Section or Local nets, seldom on Region or higher nets where liaisons are dispatched singly. It requires skill in dispatching, and by the sending station to control the sending process, but it can save

considerable net operating time when done properly. It is an optional strategy. It is often used for transmitting widely distributed books or "bulletins" to jurisdiction reps in emergency nets where considerable time can be saved. (See dispatching messages to all stations on net, QNC, Chap. 4.)

Note that the TX station performs like a net control when handling a group of stations receiving parts of a book. If the stations are dispatched from a net the Net Control Station will assign the messages to each receiving station and the sending station copies along, or the sending station is advised by the NCS which stations will handle which messages at the time of the dispatch. The sending station controls the exchange on the assigned frequency or on the net until the assignment is complete.

Example follows.

2.3.4.12 EXAMPLE: BOOK OF 3, TO 3 STATIONS

Note: (/.../) represents the customary listening points. At the listening points after the first and second messages the receiving stations are called specifically, thus dispensing with the need for interruptions at those points. Message parts are shown written, not voiced in all cases. Use appropriate voicing rules.

TX: "Is the frequency in use?"... (off net, no response)
TX: "W3XA W3TX READY TO COPY?" (on or off net)
RX1: "READY"; or ["READY TO COPY"]
TX: "XB?"; or W3XB? (TX may use suffixes or tactical calls in this sequence.)
RX2: "READY"
TX: "XC?"
RX3: "READY"
TX: "book of three R W3VPR ARL 15 ANNAPOLIS MD JAN 1
break (/.../) ARL SIXTY ONE X HAVING
A WONDERFUL TIME HERE X
HOPE TO SEE YOU SOON break" (/.../) *
RX3: "XB STATION OF ORIGIN" *
* (W3XB needs fill. Fixed part fill requests from any RX station are accepted here so all stations can benefit. The ID is optional.)
TX: "WHISKEY TREE VICTOR PAPA ROMEO"
RX3: "ROGER"
TX: "W3XA number 2 JIM SMITH (alerts XA to copy next part)
13 OAK LANE
BOSTON MA 01033 break
BETTY AND JOHN break
W3XA?" (checking with receiving station for acknowledgment)
RX1: "ROGER W3XA" (station automatically excused from the stack)
TX: "W3XB number 3 BILL JONES (alerts XB to copy next part)
4 CEDAR ROAD
BALTIMORE MD 21228
410 555 3434 break
HARRY OP NOTE REPLY MDD break
W3XB?"
RX2: "WORD AFTER figure FOUR"
TX: "CEDAR I spell C E D A R"
RX2: "ROGER W3XB" (station automatically excused from the stack)
TX: "W3XC number 4 CHUCK K3FT (alerts XC to copy next part)
C/O BTN 146R67
BALTIMORE MD break
GEORGE
end book no more"
RX3: "ROGER W3XC"
TX: "W3TX" (EXCHANGE COMPLETE)

* Each station is automatically excused from the stack when done.

* A receiving station can ask for fills for any part of the message before acknowledging its particular parts. Fills can be requested by interruption if the sending station is so equipped, otherwise requests are accepted at the customary break points or when the TX station calls directly. Some bulletin books have only one message number to be copied by all stations. In this case an acknowledgment poll for all stations is done at the end of the book. See also chapter 4.

2.3.4.13 SPECIAL EVENT BOOK SOLICITATIONS

When sending continuing books, as in holiday solicitations where one huge book may be transmitted all day long, the book will usually have a fixed preamble except for the number and possibly the check. The text may be one of several choices, or contain a basic fixed text with a blank or blanks to be filled in based on choices of the originators. The sending station may transmit new messages sporadically during the event time, calling the receiving station(s), announcing the continuing book, and sending the new message number, check, address, text choice or blank information for the variable text, and signature.

One or a team of receiving stations may complete the messages for transmission as books or singles on later nets. Generally, only messages with one text choice, even if there is a blank to be completed in the variable text parts, are booked for transmission throughout the NTS. Messages with variable texts are permitted, of course, but are usually an economy only for a large number of messages to one addressee.

Traffic may be presorted by NTS Region or local delivery areas to facilitate handling through the Section and higher nets.

The stations may agree in advance that the text will be sent from the originating station as "TEXT 1", or "TEXT 2", etc., each with its own check. The receiving station would enter the appropriate text and check in the message(s) to be forwarded. Transmitting such books through the nets may be done in similar fashion although this is seldom if ever done. Normally the forwarding station would book together only those messages with one text version, sending those with different texts in separate books to keep the confusion to a minimum. For stations working together much time can be saved in transmission, as in this example (shown written, use proper voicing):

“BOOK OF TWENTY SIX

R W3FT BALTIMORE MD DEC 20

TEXT 1 check 15 break (/.../) (text of 15) break

TEXT 2 check 18 break (/.../) (text of 18) break

TEXT 3 check 22 break (/.../) (text of 22) break” (/.../)

* (The PBL and these texts could have been sent earlier in the event and omitted here.)

“number 1 JOE SMITH

10 OAK DR

PODUNK MD 21228

410 555 1234 break” (/.../)

“TEXT 2 break

MARY SMITH break” (/.../)

* (Continuing with messages 2 through 25)

“number 26 JOHN DOE

24 EAST 16TH ST NW

TOWSON MD 21204

410 555 5678 break” (/.../)

“TEXT 1 break

UNCLE JOE

end book no more”

2.4 SENDING MULTIPLE MESSAGES

When transmitting a series of two or more single messages, books, or a mix of singles and books, the following sequence is customary. Transmission of the entire batch is continuous and extraneous exchanges between the stations are eliminated or minimized.

The receiving station usually is aware of the quantity of messages to be passed. This information is part of the net listing and, perhaps, the dispatch. If the situation warrants the transmitting station may inform the receiver of the quantity at the start of the exchange along with information regarding fast VOX listening capability, etc.

If the transmitting station is listening between groups or phrases the receiving station can interrupt whenever a group is in doubt. Otherwise, the receiving station must wait for one of the customary listening pauses after an eligible “break” is uttered.

The transmission of the series of messages is then normally done in one continuous flow without interruption unless a fill is needed.

The sending station voices the “end more” or “end one more” statement at the end of each intermediate message, followed by a brief listening pause, and the next message is then begun with “number” without waiting for a “go ahead” from the receiving station.

On FM repeaters, or with slow VOX operation, the sending station may say “end more over” after each message to force acknowledgment by the receiving station, particularly when sending a long series of single messages or long books. Alternatively the receiving station may say “go ahead” at the eligible breaks. This will help avoid a loss of signal situation from requiring a

repeat of an entire series of long transmissions. Normally neither of these are required except to reset repeater timers.

Example follows.

* **MULTIPLE MESSAGE EXAMPLE:** Two singles and a book of two, total 4 messages:
The exchange is shown below written out, not voiced in all cases. Use the proper voicing rules for the type message groups sent.

RX: (checks if frequency is clear, then calls TX station)

RX: "W3TX W3RX READY TO COPY" (short method of calling ready)

TX: (optional "LISTENING BETWEEN GROUPS")

(optional "FOUR MESSAGES" if RX does not know quantity)

"number 22 R W1AW 11 NEWINGTON CT DEC 22
GEORGE SMITH
45 OAK DRIVE
PODUNK MD 21200
410 555 1234 break (/.../)
ADVISE IF YOU RECEIVED MY
EMAIL DATED MARCH 7 X
73 break
STEVE end more" (/.../)

"number 309 R W3FT ARL 3 BALTIMORE MD DEC 22
WILLIAM JONES
13 SLEEPY HOLLOW PKWY
PODUNK MD 21200
410 555 2456 break (/.../)
ARL SIXTY CHRISTMAS break (/.../)
BUCK end more" (/.../)

"book of two R W3VPR ARL 15 ANNAPOLIS MD DEC 23
break(/.../) ARL SIXTY ONE X HAVING
A WONDERFUL TIME HERE X
HOPE TO SEE YOU SOON break"(/.../)

"number 2 JIM SMITH
13 OAK LANE
BOSTON MA 01033 break
BETTY AND JOHN break"(/.../)

"number 3 BILL JONES
4 CEDAR RD
BALTIMORE MD 21228
410 555 3434 break
HARRY OP NOTE REPLY MDD

end book no more"

RX: "ROGER W3RX"

TX: "W3TX" (Exchange complete)

Optional greetings and farewells are not shown.

* The entire series of messages is sent continuously, fill requests and acknowledgment at the end, unless the RX station desires to interrupt at the customary listening pauses, or the TX station is listening between groups for interruptions at any time.

2.5 STATION OPERATIONS

Stations passing traffic individually and on nets should be familiar with message formatting outlined in chapter 1 and sending methods outlined in previous sections in chapter 2. Chapter 4 will present net operating methods. This section presents the common practices of two stations engaged in the traffic exchange, whether on a net, sent off frequency from a net, or meeting by themselves.

The customary practices help the stations know what to expect of each other. Once contact is made the same basic sequence of exchanges is used by all stations when passing traffic, regardless of how they got together.

2.5.1 EXCHANGE ON NET FREQUENCY

The typical net dispatch and exchange is as follows:

NCS: "W3RX W3TX HERE (tfc dest. [qty.*])"

* Quantity is usually only given if there is more than one message assigned to the receiving station and the NCS wishes to have the station send fewer than the total to permit other net business to be injected.

RX: "W3RX ready to copy"

TX: "W3TX... (transmits the message(s)/book(s) as shown in earlier sections);

RX: "ROGER W3RX"

TX: "W3TX" (End of transaction. The NCS resumes control of the net.)

* Listen to the dispatch carefully in case the NCS specifies a different calling order. The first station call sign in the dispatch initiates the exchange. Other arrangements are made for relays, etc. If the TX is asked to initiate the exchange, it asks the RX station "ready to copy?", RX answers "ready to copy". See the NET OPERATING chapter 4 for more information.

2.5.2 MOVING OFF NET FREQUENCY

The art of moving off net frequency and making contact requires a little care and practice. The RX station is usually addressed first in the dispatch when being sent off frequency from a net. The NCS will say the RX call sign, the TX call sign, the assigned frequency and the traffic destination (quantity) to be passed.

NCS: "W3RX W3TX (freq) (tfc dest. [qty.*])"

The two stations acknowledge with their suffix in that order by each saying:

"RX GOING"; or sometimes simply "RX".

"TX GOING"; or sometimes simply "TX".

In some cases the Net Control Station will give the call signs in a different order based on the type of dispatch. Listen to the instructions carefully. Transmitting in the right order will avoid "doubling". The NCS needs to hear that both the dispatched stations have acknowledged and are going, otherwise a call to verify the dispatch was copied may be made, wasting net time. Explanations of dispatching methods and the station responses are outlined in the NET OPERATING chapter 4.

2.5.2.1 CALLING ORDER, SEARCHING, DIRECTION, TIME

When two stations move off the net to exchange traffic certain customs of calling and answering are used. These customs help prevent the confusion of two stations calling each other at the same time, or on two different frequencies, or each station thinking the other is going to do the calling.

At or near the assigned frequency the receiving station calls first, regardless of the dispatch order, so the transmitting station tunes around to find it. (The receiving station picks the frequency to be free of interference, and checks before calling.)

If a relay station is dispatched to help with the exchange the relay station picks the frequency and makes the calls for the other stations.

The receiving, or relay, station selects the frequency as close as possible to the assigned frequency. It is also customary that any shifts or searches are also done in the same direction, i.e., if stations move down to the assigned frequency, and find the frequency busy, they would move down another 2.5KHz or so, or to the next available clear frequency. This is not a hard and fast rule, but moving in the opposite direction should be done in limited fashion since most stations would not be expecting it. Moving too far in the expected direction will also usually result in the other station becoming lost.

2.5.2.2 REPEAT CALLS

The RX station makes the first call:

RX: "IS THIS FREQUENCY IN USE?"; if no response,

RX: "W3TX W3RX"; if no reply, repeats the call:

RX: "W3TX W3RX", until contact is established:

TX: "W3TX ready to copy?"

RX: "ready to copy", and the exchange is begun.

Note that "this is" and "go ahead" or "over" are omitted in the calls. They are not required. Full ID is made after the exchange.

If unsuccessful the call is again repeated by the receiving station, keeping the calling time short and the listening time short so the other station will not pass by and miss the call.

The process is repeated for usually no longer than thirty seconds to one minute or so. Beyond that time the chance of hooking up diminishes. It is prudent after a reasonable time to go back to the net, report "no joy", and let the NCS arbitrate a solution.
(See chapter 4 on NET OPERATIONS.)

2.5.2.3 TWO STATION EXCHANGE

1) THE LONG METHOD, the receiving station calls first:

RX: "IS THE FREQUENCY IN USE?", if no response, then:

RX: "W3TX W3RX" (if no reply, see the section above)

TX: "W3TX ready to copy?"

RX: "ready to copy"

TX: (advises quantity and if listening between groups), then begins the exchange with "number...", or "book of (#)", as outlined in voicing rules; ending with "... end no more";

RX: "ROGER W3RX" (or "ROGER 73 W3RX", etc.); (or settles fills and then acknowledges)
TX: "W3TX" (or "THANKS 73 W3TX", etc.)

2) THE SHORT METHOD, the receiving station calls first:

Experienced stations often use a shortcut as follows:

RX: "IS THE FREQUENCY IN USE?", if no response, then:

RX: "W3TX W3RX ready to copy" (assumes contact is likely)

TX: "W3TX..." (adds quantity and listening between groups, and the traffic is transmitted.)

RX: "ROGER W3RX" (or "ROGER 73 W3RX", etc.); (or settles fills and then acknowledges)

TX: "W3TX" (or "THANKS 73 W3TX", etc.)

This shortcut is not used if the RX station needs to make repeated calls. The "ready to copy" is omitted forcing the TX station to ask in that case.

NOTE that "this is" and "go ahead" or "over" are omitted in the calls. They are not required. Full ID is made after the exchange.

"ROGER" is sufficient to acknowledge the message(s). "MESSAGE(S) RECEIVED" is also in use, but "ROGER" is the shorter and more efficient method, and is easier to hear.

Making comments such as "ROGER YOUR NUMBER (#)", etc., is considered poor practice.

2.5.2.4 RELAY STATION ASSISTANCE

If a relay station is dispatched to aid in the exchange the relay station will usually initiate the contact for obvious reasons. The relay station will initiate an exchange with the sending station then pass the message to the receiving station, keeping the original holder on frequency for any confirmations.

2.5.2.5 SPECIAL REQUESTS, RX STATION

If the receiving station wished to ask for multiple group transmission or spelling it makes the first call without the "ready to copy":

RX: "W3TX W3RX", The sending station will make contact:

TX: "W3TX ready to copy?", at which point the RX request may be made:

RX: "W3RX repeat each group twice ready to copy";

or "... spell each group phonetically ready to copy";

or both.

2.5.2.6 EXPEDITIOUS ASSIGNED EXCHANGES

The assigned traffic is exchanged promptly.

Stations handle only assigned traffic. If other traffic comes up, or some traffic may not be passed, or is refused, the stations return to net and inform the NCS. The NCS may have made other arrangements for other traffic held or need to make new assignments.

Stations pause briefly to listen for calls from others when their business is concluded, then return to net promptly. Chatting with stations is considered poor practice and may keep others waiting. The stations can list "WORDS for (call sign)" on the net and be assigned to have conversations, on or off the net frequency, at another time.

2.5.2.7 RETURNING TO THE NET

The order of transmitting when returning to a net is not important except that stations should not interrupt ongoing transactions. Receiving-station-first may be exercised when returning if both stations know they are returning together.

* **JOB COMPLETED:** Stations report back into the net by saying:

STN: “(suffix) BACK”

NCS: “(suffix)”, repeats the suffix to acknowledge.

It is not necessary for the returning station to indicate the assigned traffic was passed. The NCS assumes it cleared the dispatched traffic. A station would report “no joy” if that was not the case. It is not necessary for a returning station to remind the NCS of its remaining pending business.

If a returning station has additional business to list, or wishes to report a change in the original dispatched traffic count:

STN:

“(full call sign) BACK PLEASE ADD TRAFFIC (list) OVER”; or

“(full call sign) BACK PLEASE CORRECT THE PODUNK 6 TO 5 OVER”; or

“(full call sign) BACK PLEASE CANCEL MY LITTLEBURG OVER”; or

“(full call sign) BACK REQUEST TO BE EXCUSED OVER”;

etc. or the station may reply to a specific request from the NCS for a volunteer to take a liaison job or accept listed traffic.

NCS: “(suffix)”, repeats the suffix to acknowledge return, or, for a request, might say ... “(call sign) ROGER STANDBY”, or might excuse the station as requested.

* **IF UNABLE TO COMPLETE THE ASSIGNMENT:** Stations return to the net in less than a minute. All stations report to the NCS when returning that the assignment is incomplete:

STN:

“(full call sign) NO JOY”, or

“(full call sign) NO (suffix)”, the suffix is that of the station to be contacted when dispatched;

NCS: “(suffix)”, repeats the suffix to acknowledge, and arbitrates a solution to the problem.

The station may add a brief explanation of the problem encountered, such as no clear frequency, unable to copy, interference, suggest a frequency, etc.

* BOTH or ALL stations report no joy, etc., if the assignment is not completed.

* See chapter 4 on NET OPERATING for details on these moves and how to deal with problems with assignments and dispatches.

2.5.3 MOVING TO A STACK OF TWO OR MORE STATIONS

A station may be dispatched off net to pass traffic to a particular station already participating in an exchange at a stack (frequency off net). In some cases there may also be another station waiting in line. The NCS will assign the order of business at the stack. Each subsequent station assigned to the stack will be instructed to exchange traffic with one station there following

another particular station already there. The NCS will specify which station to follow using an “AFTER (call sign)” addition to the dispatch syntax:

NCS: “W3RX UP 5 W3TX AFTER W3XX PODUNK”, or

NCS: [“W3RX UP 5 W3TX PODUNK AFTER W3XX”], less used form.

In the example, W3RX moves up 5 KHz, waits for W3XX to finish with W3TX, then calls W3TX and exchanges the Podunk traffic..

The station moves to the stack frequency, waits for its turn, and then promptly calls its station immediately following the departure of the station it is to follow. Calls should be made promptly so the assigned station does not escape back to the net. The miss will require another dispatching round and wasted net time.

The NCS will usually limit a stack to a total of 3 stations (2 exchanging, 1 waiting), waiting for one to return before dispatching additional stations, one at a time.

*** BOOKS FOR MULTIPLE RECEIVING STATIONS** (See 2.3.4.11 and 12):

On nets below Region and Area level the NCS may dispatch a number of stations to receive particular parts of a book held by one transmitting station. The NCS will either assign the traffic to the receiving stations before the dispatch, or will do so within the dispatch syntax. In either case the transmitting station acts as a temporary NCS to pass the traffic either on the net or off frequency. Off frequency as each station receives its part(s) of the book, the transmitting station will settle with that station and release that station to return to the net.

See chapter 4 on **NET OPERATING** for information on using these skills on the traffic nets and the art of controlling net business.

See the **PROWORD, PROSIGN AND ABBREVIATION LIST** at the end of Chapter 3.
