

1.0 THE ARRL MESSAGE FORMAT

The standard ARRL message format is used to send written amateur radio messages throughout the National Traffic System (ARRL NTS) and independent nets. The format is standardized in order to provide a uniform means of originating, handling, and tracking messages.

A message is considered a “formal” radiogram when it is completed with a correctly formatted preamble, address, text and signature. Stations in the system are not obligated to handle incomplete or improperly formatted messages.

This chapter presents the message format and how to fill out the message form. The ARRL standard message consists of four main parts:

1. PREAMBLE: Information to track the message;
2. ADDRESS: Name and address of the intended recipient;
(with optional delivery “Op Note”);
3. TEXT: The message information; and
4. SIGNATURE: The party for whom the message was originated;
(with optional reply “Op Note”).

RECORDS: These four parts are recorded on the message form along with information records about how the message was originated, received, sent or delivered. The handling operator’s duties include entering these records.

1.0.1 EXAMPLE BLANK FORM

Below is an example form fabricated for this manual. The ORIG and DLVD blocks at the bottom were added here for demonstration of records. Official ARRL message packs are available from the ARRL, Newington, CT, 06111, and: <<http://www.arrl.org/FandES/field/forms/>>.

ARRL RADIOGRAM FORMAT:

NR	PREC	HX__	STN ORIG	CK	PLACE OF ORIG	TIME FILED	MON DY																												
(2) TO					THIS RADIO MESSAGE WAS RECEIVED AT:(9) AMATEUR STATION _____ TEL _____ NAME _____ STREET ADDRESS _____ CITY,STATE,ZIP _____																														
TEL		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">OP NOTE (2.4)</td> <td style="width: 15%; border-bottom: 1px solid black;"></td> <td style="width: 15%; border-bottom: 1px solid black;"></td> <td style="width: 15%; border-bottom: 1px solid black;"></td> <td style="width: 15%; border-bottom: 1px solid black;"></td> <td style="width: 15%; border-bottom: 1px solid black;"></td> <td style="width: 15%; border-bottom: 1px solid black;"></td> </tr> <tr> <td>TEXT</td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> </tr> <tr> <td></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> </tr> <tr> <td></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> </tr> </table>						OP NOTE (2.4)							TEXT																				
OP NOTE (2.4)																																			
TEXT																																			
SIG (4)		OP NOTE (4.2)																																	
RCVD FROM (5)		NET	DATE/TIME		SENT TO (6)	NET	DATE/TIME																												
(7) ORIG - FROM - DATE/TIME Name Addr City TEL					(8) DLVD - TO - DATE/TIME Name Addr City TEL																														

A message is entered on the form and the form blocks are numbered for reference. Preamble numbers in brackets [] refer to sections 1.1.#, and part (block) numbers in paren. () refer to sections 1.#. in the text below. This form was created for this manual.

PREAMBLE (1)

[1] NR 1	[2] PREC R	[3] HX HXE	[4] STN ORIG W1AW	[5] CK 12	[6] PLACE OF ORIG NEWINGTON CT	[7] TIME FILED 1830Z	[8] MON DY JUL 1
(2) TO DONALD R SMITH 164 EAST SIXTH AVE RIVER CITY MD 00789					THIS RADIO MESSAGE WAS RECEIVED AT:(9) AMATEUR STATION _____ TEL _____ NAME _____ STREET ADDRESS _____ CITY,STATE,ZIP _____		
TEL 301 555 3470							
OP NOTE (2.4)							
TXT (3)							
THANKS FOR MESSAGE X HOPE TO SEE YOU AT HAMFEST X 73							
SIG (4) DIANA					OP NOTE (4.2)		
RCVD FROM (5) WD3W		NET MEPN	DATE/TIME 012215Z JUL 91		SENT TO (6) KD3JK	NET MDD	DATE/TIME 012308Z JUL 91

NOTE: The ARRL radiogram consists of GROUPS in the Preamble, Address and its Op Note, Text, and Signature and its Op Note. These groups consist ONLY of three possible character types: LETTERS (all upper case), FIGURES, and/or SLASHES (/). The slash is used to separate characters within a group, but may be the first or last character if needed. It is not usually used as a group by itself. (Message records may in any form.)

1.1 PREAMBLE PART

All messages must have a preamble. The preamble of the message contains information about the message necessary to keep track of it as it passes through the amateur system.

The parts of the preamble, except for the check as noted later, are NOT changed by any station relaying or delivering the message. They are permanent parts of the message created by the station of origin and must remain with the message all the way to the delivery point. Preamble information is used to service undeliverable messages and to generate replies to specific handling instructions.

The HANDLING INSTRUCTIONS, [HX__], and TIME FILED, [TIME], are OPTIONAL, chosen by the station of origin based on the need for their inclusion (see sections 1.1.3 and 1.1.7).

The parts of the PREAMBLE are as follows:

NR 1	PREC 2	[HX] 3	STN-ORIG 4	CK 5	PLACE-OF-ORIG 6	[TIME-FILED] 7	MON 8	DAY 9
---------	-----------	-----------	---------------	---------	--------------------	-------------------	----------	----------

Each of these parts of the preamble are discussed in the following paragraphs (numbered according to their position).

1.1.1 MESSAGE NUMBER,

NR 1	PREC	[HX]	STN-ORIG	CK	PLACE-OF-ORIG	[TIME-FILED]	MON	DAY
---------	------	------	----------	----	---------------	--------------	-----	-----

The message number is selected by the station originating the message and it must be on all messages. It stays with the message all the way to the point of delivery. The delivering station may need to reply to the station of origin and refer to this number.

Use number digits only, no letters, leading zeros, or dashes. Numbers are usually begun with 1 at the start of a year or month at the pleasure of the originating station.

NOTE: If the message is a SERVICE message, place letters SVC in front of message number as a leading group (infrequently used currently). Precedence is kept the same as in the message being serviced. (See the section on creating service messages.)

1.1.2 MESSAGE PRECEDENCE, PREC.

NR	PREC 2	[HX]	STN-ORIG	CK	PLACE-OF-ORIG	[TIME-FILED]	MON	DAY
----	-----------	------	----------	----	---------------	--------------	-----	-----

Letter(s) used to indicate the precedence of the message, and must be on all messages. See the latest Precedence full definitions from ARRL (From ARRL FSD-3). Messages are handled in the order of precedence as much as possible as follows;

*** PRECEDENCES (ARRL FSD-3, 2/94)**

EMERGENCY (Spelled out on form.):

Any message having life and death urgency to any person or group of persons, which is transmitted by Amateur Radio in the absence of regular commercial facilities. This includes official messages of welfare agencies during emergencies requesting supplies, materials or instructions vital to relief of stricken populace in emergency areas. During normal times, it will be very rare. On CW/RTTY, this designation will always be spelled out. When in doubt, do not use it.

PRIORITY (P):

Use abbreviation P on CW/RTTY. This classification is for a) important messages having a specific time limit, b) official messages not covered in the emergency category, c) press dispatches and emergency related traffic not of the utmost urgency, d) notice of death or injury in a disaster area, personal or official.

WELFARE (W):

This classification, abbreviated as W on CW/RTTY, refers to either an inquiry as to the health and welfare of an individual in the disaster area or an advisory from the disaster area that indicates all is well. Welfare traffic is handled only after all emergency and priority traffic is cleared. The Red Cross equivalent to an incoming Welfare message is DWI (Disaster Welfare Inquiry).

ROUTINE (R):

Most traffic in normal times will bear this designation. In disaster situations, traffic labeled Routine (R on CW/RTTY) should be handled last, or not at all when circuits are busy with higher precedence traffic.

Notes: These precedences are not meant to prohibit handling lower level traffic until all higher levels are passed. Common sense dictates handling higher precedence traffic before lower when possible and/or outlets are available.

* **EMERGENCY:** Emergency is always spelled out in the preamble. Means other than Amateur Radio should be included in the delivery options. EMERGENCY messages have immediate urgency. They should take priority over any other activity and should be passed by the best means available with the cooperation of all stations.

* **EXERCISE MESSAGES:** Messages in the ARRL format passed for test and exercise purposes may be given a precedence preceded by the word "TEST", as in "TEST R", "TEST P", "TEST W", or "TEST EMERGENCY". It is customary to indicate within the text of such messages the words "TEST MESSAGE", or "EXERCISE". Using "EXERCISE" as the first and last groups of the text helps alert listeners to the nature of the content to avoid undue alarm.

In some exercises, the life of the message may be terminated when the exercise period is terminated, i.e., any such messages are not handled after the exercise. Consult with the ARES/RACES/NTS group conducting the test to determine if such messages should be filed, handled and delivered afterwards to permit a full evaluation of the exercise.

* **SERVICE MESSAGES:** The precedence of a SVC message should be the same as that of the message being serviced. SVC ahead of a message number indicates a service message sent between stations relative to message handling, or delivery. Since they affect timely delivery, they are handled before routine messages. SVC is not a precedence (See section 1.11).

1.1.3 HANDLING INSTRUCTIONS, [HX], OPTIONAL

NR	PREC	[HX] 3	STN-ORIG	CK	PLACE-OF-ORIG	[TIME-FILED]	MON	DAY
----	------	-----------	----------	----	---------------	--------------	-----	-----

OPTIONAL. Do not use handling instructions unless a particular need is present. Handling instructions are used to instruct the relaying and/or delivering operator to handle the message according to the following codes (Refer to ARRL CD 218, pink card.). If used, handling instructions must stay with the message to the point of delivery.

NOTE: Numbers following the letters are appended without a space.

* **HANDLING INSTRUCTIONS** (ARRL, FSD-218 2/91)

- HXA__** (Followed by number.) Collect landline delivery authorized by addressee within [...] miles, (If no number, authorization is unlimited.).
- HXB__** (Followed by number.) Cancel message if not delivered within [...] hours of filing time; service originating station.
- HXC** Report date and time of delivery of the message back to the originating station.
- HXD** Report to originating station the identity of station from which received, plus date and time. Report identity of station to which relayed, plus date and time, or if delivered, report date and time and method of delivery (by service message).
- HXE** Delivering station get reply from addressee, originate message back.
- HXF__** (Followed by a number.) Hold delivery until [date].
- HXG** Delivery by mail or landline toll call not required. If toll call or other expense involved, cancel message and send service message back to originating station.

* Compliance with these instructions is mandatory. Reports may be considered service messages.

* **MORE THAN ONE HX CODE MAY BE USED.** If more than one code is used, they may be combined provided no numbers are to be inserted, otherwise the HX should be repeated, thus: NR 27 R HXAC W1AW..., or, NR 27 R HXA50 HXC W1AW...(etc.).

1.1.4 STATION OF ORIGIN

NR	PREC	[HX]	STN-ORIG 4	CK	PLACE-OF-ORIG	[TIME-FILED]	MON	DAY
----	------	------	---------------	----	---------------	--------------	-----	-----

The call sign of the amateur station originating (creating) the message for first introduction into the amateur system is the station of origin and must be on all messages. This call sign must stay with the message to the point of delivery. Service messages go to this station.

It is wise for stations not at their call book address to include an OP NOTE about how to send service messages or replies (See the sections on delivering and servicing messages.).

1.1.5 CHECK, CK

NR	PREC	[HX]	STN-ORIG	CK 5	PLACE-OF-ORIG	[TIME-FILED]	MON	DAY
----	------	------	----------	---------	---------------	--------------	-----	-----

The check is the number of word "groups" in the text of the message and must be used on all messages. This number is used by operators to verify that the text has been copied with the correct number of groups. See the TEXT section 1.3.4 for information about how to count word groups for computing the check. There are two ways to enter the check in the preamble:

1) 1 R HXE W1AW 12 NEWINGTON CT 1830Z JUL 1. (check is 12)

The check is entered as the number of word groups in the text if there are NO ARRL NUMBERED RADIOGRAMS in the text.

2) 1 R HXE W1AW ARL 12 NEWINGTON CT 1830Z JUL 1. (check is ARL 12)

The check is preceded by the letters "ARL" if the text includes one or more ARRL NUMBERED RADIOGRAMS (See attached list.). Note the space between "ARL" and "12".

The use of "ARL" in the check alerts the receiving operator to expect ARRL NUMBERED RADIOGRAM(s) in the text.

* **CHECK ERRORS:** This subject is covered in the "Receiving Messages" sections of chapters 2 and 3. The original check is never changed. A correction may be appended with "/".

As mentioned earlier, the preamble of a message is created by the originator and is not to be changed by other stations. If a discrepancy is found between the check and the word count of a message by relaying stations, every attempt should be made to verify that the correct text and check has been transmitted and received. This is your responsibility as an operator.

If an error can not be resolved, it is customary to modify the check in the preamble by preserving the original check, and noting the corrected value by appending it with a "/", as in 13/12. This is read as "one three corrected to one two" when transmitting on VOICE, or "13/12" on CW.

THE TEXT OR CHECK IS NOT ALTERED TO FORCE AGREEMENT!

1.1.6 PLACE OF ORIGIN

NR	PREC	[HX]	STN-ORIG	CK 6	PLACE-OF-ORIG	[TIME-FILED]	MON	DAY
----	------	------	----------	---------	---------------	--------------	-----	-----

The PLACE OF ORIGIN is the location (city and state) of the party for whom the message is created, not necessarily the location of the station of origin. For example, if the station of origin is in Baltimore creating a message for a person in Ellicott City, the PLACE OF ORIGIN would be Ellicott City in the preamble. The PLACE OF ORIGIN relates to the signature and should make sense to the addressee as the place the signing party is located. It must stay with the message to the point of delivery.

The state is given by the US standard two letter code as in "BALTIMORE MD", or "CHICAGO IL". Note that no punctuation is used. (State abbreviations are shown in the MPG-R routing tables.)

Undeliverable messages are serviced back to the station of origin, not the place of origin (See the section on Originating Service Messages.).

If the message addressee wishes to send a reply message, the message goes back to the place of origin, and the addressee should supply the full address for such replies. If it is not available, the station of origin is the next best choice, assuming origination records are kept.

The originating station should ask the person for whom the message is originated about replies. If it is unlikely that the addressee will know the reply address, include a full address for reply as part of the signature.

1.1.7 TIME FILED, [TIME], OPTIONAL

NR	PREC	[HX]	STN-ORIG	CK	PLACE-OF-ORIG	[TIME-FILED] 7	MON	DAY
----	------	------	----------	----	---------------	-------------------	-----	-----

The OPTIONAL "TIME FILED" is used only when filing time has some importance relative to the precedence, handling instructions, or meaning in the text. TIME FILED is the time when the message is created by the station of origin. The time figures are in the 24-hour format followed by the letter "Z" to denote UTC time, or local time, as in "0215Z" or "2215EDT". It is acceptable to specify local time as "L", as in 2215L.

UTC (Z) date and time is customary on ARRL messages (an unmarked time is assumed to be UTC). To avoid ambiguity, mark the time with a Z, time zone designator, or L.

Time and date must agree, that is be related to the same time zone.

The TIME FILED is normally omitted on routine traffic having no special time concerns. If used, the filing time must stay with the message to the point of delivery.

Example: 0215Z JUL 13, 2215EDT JUL 12, or 2215L JUL 12 (all three filing times/dates are equivalent).

1.1.8 MONTH FILED, MON

NR	PREC	[HX]	STN-ORIG	CK	PLACE-OF-ORIG	[TIME-FILED]	MON 8	DAY
----	------	------	----------	----	---------------	--------------	----------	-----

Month must be used on all messages. (If TIME FILED is used, this date must agree with that time); This entry is the month in which the message is created and is written in the preamble as the three letter abbreviation: The month/day is assumed to be UTC unless marked otherwise by a time. The abbreviations:

JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC.

The full name of the month is spoken when transmitting the preamble on voice. On CW, only the three letters are sent.

Example: 0215Z JUL 13, 2215EDT JUL 12, or 2215L JUL 12 (all three filing times/dates are equivalent). "7/13" and other variations are not used.

1.1.9 DAY FILED, DY

NR	PREC	[HX]	STN-ORIG	CK	PLACE-OF-ORIG	[TIME-FILED]	MON	DAY 9
----	------	------	----------	----	---------------	--------------	-----	----------

The DAY FILED is the day of the month on which the message was originated and must be used on all messages. (If TIME FILED is used, the date and time must agree). The day is written in figures only, no leading zeros. On voice, two digit days are spoken as two separate digits ("one seven" rather than "seventeen", etc.). The month/day is assumed to be UTC unless marked otherwise by a time. Example: 0215Z JUL 13, 2215EDT JUL 12, or 2215L JUL 12 (all three filing times/dates are equivalent). "7/13" and other variations are not used.

1.1.10 REVIEW OF THE PREAMBLE

The preamble consists of the following parts, two of which are optional (OPT.):

NR	PREC	[HX] OPT.	STN-ORIG	CK	PLACE-OF-ORIG	[TIME-FILED] OPT.	MON	DAY
----	------	--------------	----------	----	---------------	----------------------	-----	-----

In the example message given, the preamble is:

NR 1	PREC R	[HX] HXE	STN-ORIG WIAW	CK 12	PLACE-OF-ORIG NEWINGTON CT	[TIME-FILED] 1830Z	MON JUL	DAY 1
---------	-----------	-------------	------------------	----------	-------------------------------	-----------------------	------------	----------

If the handling instruction, HXE, and the filing time, 1830Z, were not used by the originating station (both are optional), the preamble would be as follows: Most routine messages in the amateur system are of this form.

NR 1	PREC R	[HX]	STN-ORIG WIAW	CK 12	PLACE-OF-ORIG NEWINGTON CT	[TIME-FILED]	MON JUL	DAY 1
---------	-----------	------	------------------	----------	-------------------------------	--------------	------------	----------

A SERVICE message would have a preamble as follows:

NR SVC 1	PREC R	[HX]	STN-ORIG WIAW	CK 12	PLACE-OF-ORIG NEWINGTON CT	[TIME-FILED]	MON JUL	DAY 1
-------------	-----------	------	------------------	----------	-------------------------------	--------------	------------	----------

An EXERCISE message would have a preamble as follows:

NR 1	PREC TEST R	[HX]	STN-ORIG WIAW	CK 12	PLACE-OF-ORIG NEWINGTON CT	[TIME-FILED]	MON JUL	DAY 1
---------	----------------	------	------------------	----------	-------------------------------	--------------	------------	----------

Special rules apply for voicing a preamble. (See Chapter 2.) On CW simply send all the characters and spaces.

There is no prosign or proword sent at the end of the preamble.

1.2 ADDRESS PART

The second section of the message is used to specify the name, address, city, state, zip, and telephone number of the addressee. From the example message:

(2)	DONALD R SMITH	(ADDRESSEE)
	164 EAST SIXTH AVE	(ADDRESS)
	RIVER CITY MD 00789	(CITY/ST/ZIP)
	301 555 3470	(TEL)
	(plus optional OP NOTE; see 1.5)	

Getting as much addressee information as possible is the responsibility of the operator originating the message. Stations relaying or delivering the message can not be in a position to do this as well. An originating operator should try to anticipate the problems the delivering operator might have, and try to help assure success by getting a complete address including telephone number while still in contact with the originator.

If part of a message address is garbled in transmission, a complete address will help the receiving operator recover by giving him more leads to track down. (See the chapter on message delivery.)

No guarantee of delivery can be made by amateurs handling messages for the public. However, the reputation of Amateur Radio and the ARRL is enhanced if all operators try to pay attention to details which help assure that the message will get through.

1.2.1 ADDRESSEE

Line 1 should contain the full name of the addressee and, if possible, it should be the name as it is most likely to be found in the local telephone directory at the point of delivery.

Messages addressed to children should contain the parents listed name, for example:

JUDY AND BARBARA SMITH
C/O DONALD R SMITH
164 EAST SIXTH AVENUE (etc.);

or,

DONALD R SMITH AND JUDY AND BARBARA
164 EAST SIXTH AVENUE (etc.)

Amateur call signs and/or titles are included at the end of the name of the addressee:

JOHN R SMITH W3XYZ

or,

JOHN R SMITH PRES PODUNK ARC

1.2.2 STREET ADDRESS

Line 2 is the street address (or institution name which might require an extra line in the address). Enter figures, street name (spell out east, west, north and south for clarity), and apartment or unit number. Sections of a city, as in SE or NW, are usually left abbreviated.

Apartment or unit numbers for residences are usually included at the end of the street address line. Note the EAST in the street address is spelled out. This is preferred to the abbreviation “E”, etc.

JAMES R SMITH
23 EAST OAK DRIVE SW APT 34

Nursing home or other institution names are usually entered as additional lines:

ROBERT A JOHNSON
PLEASANT VISTA NURSING HOME ROOM 26 (Extra line.)
101 HOWARD ST
NEW YORK NY 00787 212 555 6700

1.2.3 CITY, STATE, ZIP

The CITY, STATE (using standard two letter abbreviations), and ZIP code are entered without punctuation. NINE DIGIT ZIPs are written with a spelled DASH, i.e.

OWINGS MILLS MD 21117 DASH 2345

FOREIGN ZIP CODES may be one or several “mixed” letter/figure groups. They are written as they would be for posting, without punctuation.

1.2.4 TELEPHONE NUMBER

Telephone numbers are written as three groups of digits with no punctuation; area code, exchange, and number (only two groups if the area code is not required):

212 555 3245, or 555 1200 (note no hyphens used)

International phone numbers may be grouped differently. They are written as grouped in a directory, without punctuation.

* **NOTE:** In this manual telephone numbers may be shown on the city/state/zip line in some examples. The telephone figures are always sent as a separate line of the address however.

1.2.5 ADDRESS OP NOTE

An OP NOTE may be inserted after the telephone figures, before the text, relating to handling and/or delivery matters. The words “OP NOTE” are used to introduce this information when transmitting the message. OP NOTES are optional, and are generally not considered part of the message to be delivered to the addressee. They are primarily for use by the handling operators. For example, the following address with OP NOTE relates to when to attempt delivery by telephone.

DONALD R SMITH
164 EAST SIXTH AVENUE
RIVER CITY MD 00789
301 555 3470 OP NOTE WORKDAY ONLY

1.2.6 PUNCTUATION

PUNCTUATION IS NOT USED IN THE ADDRESS SECTION. The only exception in general use is the symbol "/", sometimes used to separate parts of a street address, group, or institution name. If a DASH or HYPHEN is required, it is spelled out to avoid conflict with prosigns used in the transmission process:

SFC JOHN L JONES
357TH ORD/CMD 34 DASH 765 UNIT
FORT SMITH CO 99770
600 555 7899

1.2.9 RE-CONTACTING ORIGINATING PARTY

Originating stations should also get complete information from the originator to permit re-contact if a problem arises in delivery, or if a reply message is received (this information is entered in block 7 on the message form, see 1.7).

1.3 TEXT PART

The text contains the actual message information authorized by the person for whom the message was originated. Note that the amateur does not originate messages for a person without permission from that person!

The text is entered in section 3 of the message form. (When transmitting a message, the text is separated from the preceding address, and the signature to follow, by the use of the word "BREAK" on voice, the prosign <BT> on CW, to allow the receiving operator to know its beginning and end. BREAK and <BT> are not counted as groups.)

The text is divided into word "groups", five or ten to a line for easy counting, and is usually limited to 25 words or less.

ARL	FORTY	SIX	X	DO
YOU	WANT	THE	304/BA	EQUIPMENT
QUERY	THE	SIX	DASH	B
TYPE	IS	NO	LONGER	AVAILABLE
X	CU	ON	7013R5	73

Note the use of "X", "QUERY", "/", "DASH", "R" and spelled-out numbers for the ARRL numbered radiogram "ARL FORTY SIX" (See the following section.). The check is ARL 25.

1.3.1 PUNCTUATION

PUNCTUATION characters are not used in the text except as follows:

- /:** The slash, "/", is used to separate characters within a group, as in 304/BA. Since the "/" is part of the group it does not qualify as a separate group for the check. Although usually not used as a group by itself (a space on the left and on the right), if so used it would be counted in the check.
- X:** The letter "X" used to denote a period. The letter "X" is never used as the last group of the text. The "X" is a separate group and IS counted for the check.
- R:** The letter "R" is used in place of a decimal in mixed figure groups, as in 7013R5 (7013.5), or 146R670 (146.670). Since the "R" is part of the group it does not qualify as a separate group for the check. (The inclusion of the "R" makes the

group a “mixed group” for transmission on voice.)

OTHER PUNCTUATION is spelled out (in order to avoid confusion with prosigns used in the transmission of the message) as in "QUERY" for a question, "DASH" to separate special number or mixed groups, "EXCLAMATION", "COMMA", etc. (Hyphens are NOT used in telephone number groups or anywhere else in the text.) Such punctuation words are separate groups and ARE counted for the check.

"Q"-SIGNALS and other letter groups are permitted in the text. Ciphers, codes, and encryption, and other groups intended to obscure the meaning, are not.

SALUTATIONS: Words like "love" and "regards", often associated with signatures in formal letters, are put in the text in amateur messages (not in the signature).

1.3.2 EMAIL, PACKET or INTERNET ADDRESSES

Punctuation is not permitted. Appropriate spelled words are used as substitutes where required, i.e.:

W3XXX ATSIGN AOL DOT COM ("AT" may be used for "ATSIGN")

W3XXX ATSIGN WB3XXX DOT MD DOT USA DOT NA

HTTP COLON SLASH SLASH WWW DOT HOMEPAGE DOT COM

Notes: "\" is written as "BACKSLASH", "/" is written as "SLASH".

"TILDE", "UNDERSCORE", "POUNDSIGN", etc., are often encountered.

Use "UPPERCASE" or "LOWERCASE" where required to specify case.

Use "SPACE" and "DASH" where they are an integral part of an address group.

1.3.3 ARRL NUMBERED RADIOGRAMS

ARRL Numbered Radiograms are messages encoded as one or two numbers, some with option blanks to be filled out in the text, to permit many words to be condensed to a few. These numbers are always spelled out in the written message and in transmission, and are always preceded by the letters "ARL", as in "ARL FORTY SIX" in the example text.

For example, ARL SIXTY TWO reads "Greetings and best wishes to you for a pleasant [] holiday season". In a message text this would be written as "ARL SIXTY TWO CHRISTMAS", where the word CHRISTMAS fills in the blank. Some blanks may require multiple words. Some ARRL Numbered Radiograms have multiple blanks. The text groups completing such multiple blanks may usually flow after the numbers, but they may be separated with an "X" if required for clarity.

More than one ARL message may be placed in the text. Each one is preceded by "ARL". The CHECK must contain "ARL" ahead of the group count if these radiograms are used in the text. An "X" may be used to prevent ambiguity at the end of the numbered radiogram, with or without a blank, otherwise it is not required to separate subsequent text.

1.3.4 COUNTING WORD GROUPS FOR THE CHECK

The number value to be entered in the "CHECK" in the preamble of the message is the total number of groups in the text between the start and end prosigns (but not counting the prosigns).

An easy rule to remember about counting word groups: ANY GROUP OF ONE OR MORE CONSECUTIVE CHARACTERS WITH NO INTERRUPTING SPACES, WITH A SPACE BEFORE IT AND AFTER IT, IS COUNTED AS ONE GROUP.

Such a group may be all letters, all numbers, or any mix of numbers, letters, or slashes (/), so long as there are no spaces within the group. Each word, group of connected digits, connected mixed characters, spelled punctuation word, "X", or ARL constitutes one group for the purpose of calculating the total count to enter in the check section of the preamble.

The prosigns "BREAK", or <BT> on CW, at the start and end of the text are not counted.

Examples of word groups:

ONE GROUP

X
145R67
34TH
34TH/CMD
SIXTY
FIFTEEN
7035R7KHZ

TWO GROUPS

X 73
555 5678
34 TH
34TH CMD
ARL SIXTY
FIFTY SIXTH
7035R7 KHZ

THREE GROUPS

THANKS X 73
301 555 3456
55 DASH 56XA
34 TH CMD
ARL SIXTY SEVEN
THREE ZERO SIX
7035 DECIMAL 7

NOTE: 7035R7 means 7035.7, but the period symbol is not permitted. The letter "R" is used as a substitute for DECIMAL POINT. The number group is written as 7035R7, or 7035 DECIMAL 7. If "DECIMAL" is used it is a separate group, making three total in this example.

1.3.5 EXERCISE MESSAGE TEXTS

EXERCISE messages: It is customary to indicate within the text of such messages the words "TEST MESSAGE", or "EXERCISE". Together, the "TEST" precedence and "TEST MESSAGE" in the text alert those receiving the message to the exercise nature of the content. It is suggested that use of the word "EXERCISE" as the first and last groups of the text help make this clear to any listener even if the entire message is not copied, thus preventing undue alarm. See the above section 1.1.2 Message Precedences, Prec., EXERCISE messages..

1.4 SIGNATURE PART

1.4.1 SIGNATURE

The signature of the message is the name of the person for whom the message is created (not necessarily the station of origin), and any other information that person wishes to include (such as address, telephone number, title, etc.). The Place-of-Origin given in the Preamble is the location of this individual.

Words like love and regards, often associated with signatures in formal letters, are put in the text in amateur messages.

Amateur call signs, titles, QCWA or OOTC numbers, etc., in the signature follow the name on the same line.

Addresses for the signing party are optionally included (upon request) on subsequent lines, exactly as done in the address section, but are included only if important to the originator, message purpose, or replying.

Since most addressees know the party from whom messages originate, most messages in daily NTS service have simple one-line signatures.

Messages for served agencies, particularly during disasters, generally require an authorizing signature in full. Messages without same may be refused.

It is IMPORTANT for originating stations to get full information about persons for whom messages are originated in order to be able to re-contact them should a problem arise in the delivery of their message, or if a reply is received (see 1.7).

Example:

```
      THANKS   FOR      MESSAGE   X      HOPE
      TO       SEE      YOU       AT     HAMFEST
      X        73
(SIG)      DIANA N1ABC AT WA1ABC BBS CT
```

Note in this case the reply information is part of the signature itself, thus delivered to the addressee as part of the message. See the next section also.

1.4.2 SIGNATURE OP NOTE

An OP NOTE may be inserted after the SIGNATURE, before the end of the message, relating to reply and/or servicing matters. The words "OP NOTE" are used to introduce this information when transmitting the message. OP NOTES are optional, and are generally not considered part of the message to be delivered to the addressee. They are primarily for use by the handling operators. For example, the following signature with OP NOTE relates to replies being directed to an amateur packet BBS.

Example with signature OP NOTE:

```
      THANKS   FOR      MESSAGE   X      HOPE
      TO       SEE      YOU       AT     HAMFEST
      X        73
(SIG)      DIANA OP NOTE REPLY VIA N1ABC AT WA1ABC BBS CT
```

Note in this case the reply information is included in the OP NOTE, for the information of the handling station to use for any reply. The OP NOTE is not normally delivered to the addressee.

See the section on transmitting methods for VOICE and CW for details of how to include the OP NOTE relative to the prosigns used in transmission. The words "OP NOTE" are always included to introduce such information to indicate that the information is separate and distinct from regular message parts.

1.5 RECORDS, BLOCK 5, STATION RCVD INFORMATION

Enter the call sign of the station from whom the message was received, net name, and date/time of receipt in the RCVD block (REC'D block on regular ARRL form.)

RCVD FROM (5)	DATE/TIME	SENT TO (6)	DATE/TIME
------------------	-----------	----------------	-----------

1.6 RECORDS, BLOCK 6, STATION SENT INFORMATION

Enter the call sign of the station to whom the message was sent, net name, and date/time of transmission in the SENT block. (SENT block on regular ARRL form.)

1.9 BLOCK 9 STATION IDENTIFICATION FOR MAILING

Enter your station information when mailing a message to the addressee so that person may contact you regarding a reply or becoming a radio amateur. This block appears on the standard ARRL message blank.

1.10 ORIGINATING A MESSAGE

When originating a message from a member of the public, remind that person that no guarantee of delivery is possible but that the amateur service has a nation-wide network of stations meeting daily to perform this free public service and that every effort will be made to get the message through.

Get all of the originating party's information for the station origination block 7.

Get the complete name, address, city, zip, and telephone information for the addressee for block 2.

Explain the normal 25 word limit on texts and assist the party in constructing a clear text, using ARRL numbered radiograms if possible. Complete block 3.

Ascertain how the party wishes the signature to read in block 4.

Count the text word groups for the check block, fill out the preamble with your message number, call, etc., and the originating party's place of origin.

Observe the cautions in the following sections regarding legality, permission, and foreign third party traffic.

As originator you are the best filter for compliance. 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 means other than content that a message is business related, or otherwise illegal, do not handle it.

Handling messages is a voluntary service.

You may explain regulations regarding message content and purpose to the originating party with tact and diplomacy. Help them to construct a proper message.

You are the licensee held responsible by the FCC.

1.10.1 MESSAGE LEGALITY

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.

If you receive such a message, and determine it does not comply with this requirement, you are not obligated to pass it on. Send a service message to the station of origin indicating same.

1.10.2 MESSAGES ORIGINATED WITH PERMISSION

Do not originate a message for a third party (someone other than yourself) without permission. this a fraud and forgery.

Generating messages containing information about a third party without their permission is also considered very poor practice. respect privacy.

1.10.3 FOREIGN THIRD PARTY TRAFFIC

Do not transmit by amateur radio any third party messages into foreign countries that do not have treaty provisions with the united states permitting such traffic.

Traffic to foreign countries may have tighter rules, or be prohibited. Some countries may permit amateur-to-amateur messages transmitted directly---others may not. You are the first party. The amateur receiving the message is the second party. The amateur-to-amateur case, usually permitted, is different than the case of the second party receiving a message for a third party.

Check the US THIRD-PARTY TRAFFIC AGREEMENTS list published by the ARRL in the NET DIRECTORY, periodically in QST, and elsewhere, or check with your Section Traffic Manager. This list is also available on the ARRL web site. (Regulations, International Operating.)

You are the licensee held responsible by the FCC.

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.

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 voice 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.

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.**

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".

2.1.4.5 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..."

2.1.4.10 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.

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.
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 FIVE 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 server 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.

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

2.2.2 NO EXTRANEIOUS 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.

"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
----------	-----------	------	-------------------	----------	---------------------------------	--------------	------------	-----------

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 FIFE 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.

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.

2.2.4.5 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.#sombd.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.

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”,

* “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

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

2.3 THE MESSAGE EXCHANGE

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

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.

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.

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.

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".

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.

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.

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.

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.)

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.

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

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.