

# NTS Message Traffic 1.0



Info. Provided by ARRL Net Directory 1999-2000 FSD-50

By: Rich Davis, N2NMH

# NTS Message Traffic 1.0

## National Traffic System using ARRL Format

**PURPOSE:** To provide for a reliable means of transmitting formal information.

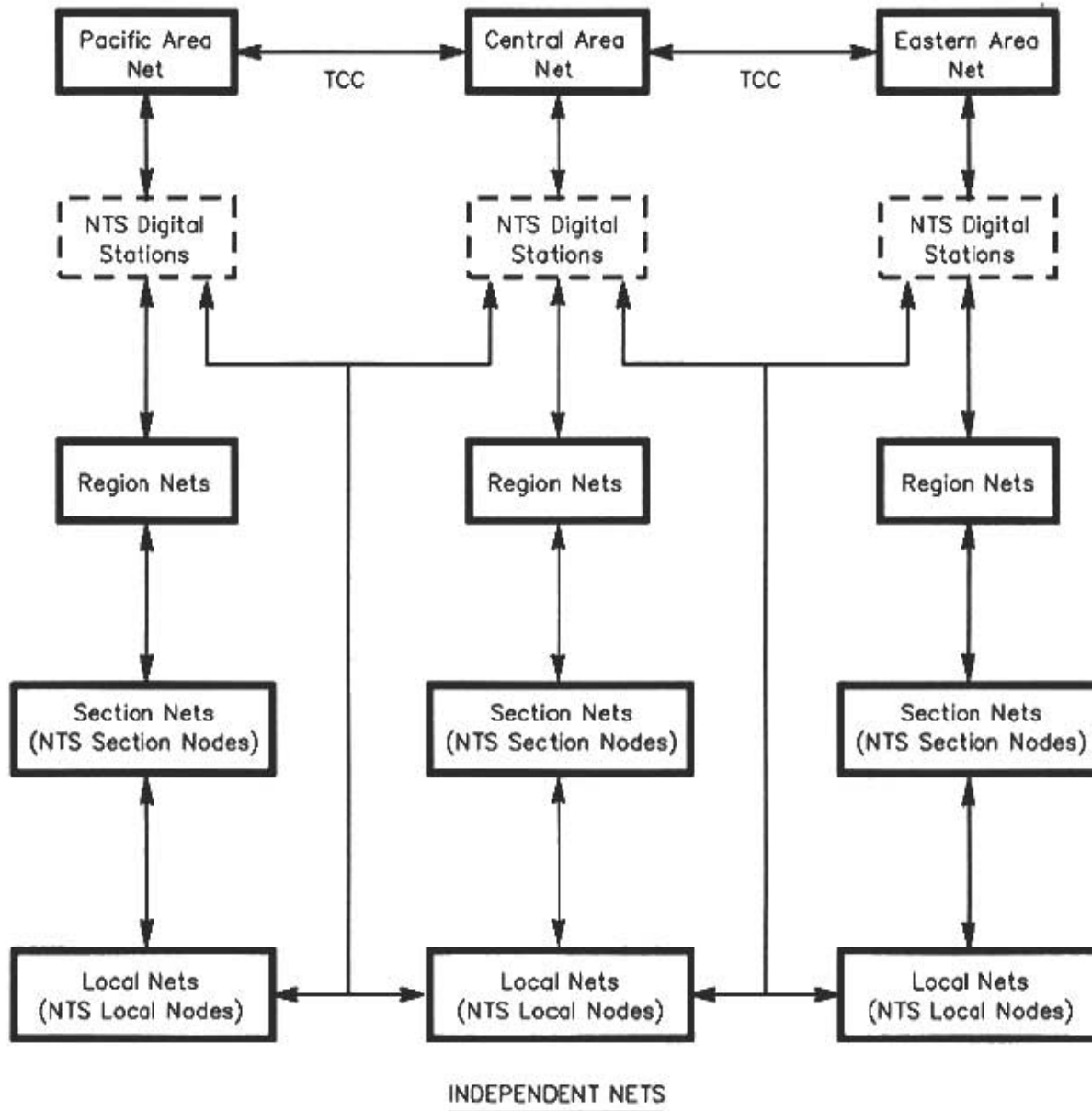
- A. Methods
- B. Protocols

### **OBJECTIVES:**

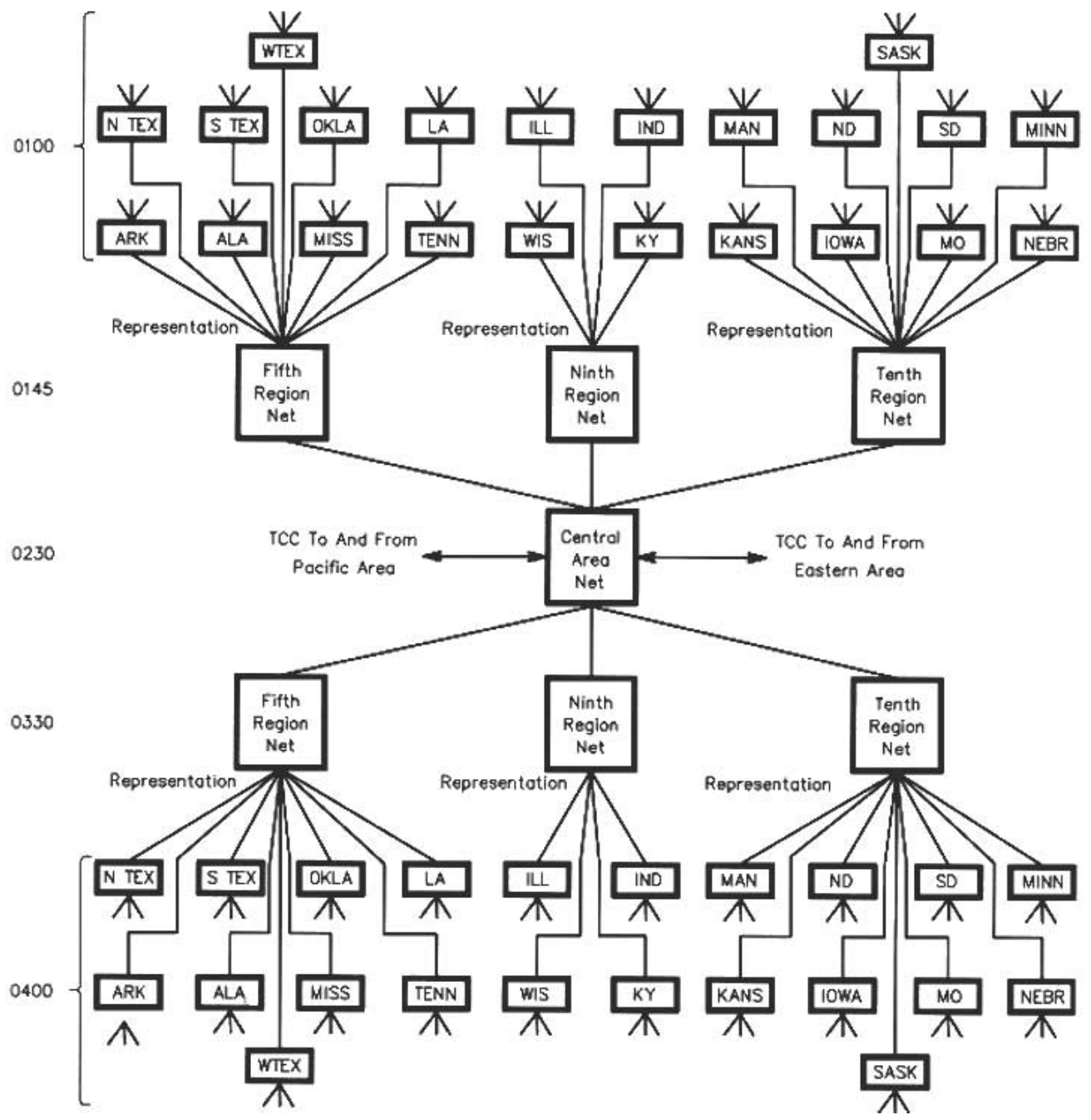
- 1) The primary objective is to facilitate transmission of a properly formatted written formal message from point A to point B such that it arrives exactly as written on the original copy, group for group, character for character, space for space.
- 2) Messages filed in the NTS must be capable of being transmitted by any mode without message alteration being required.
  - a) Voice and CW nets must be run to operate effectively and uniformly.
  - b) Traffic must be exchanged with efficiency.

### **RESPONSIBILITIES:**

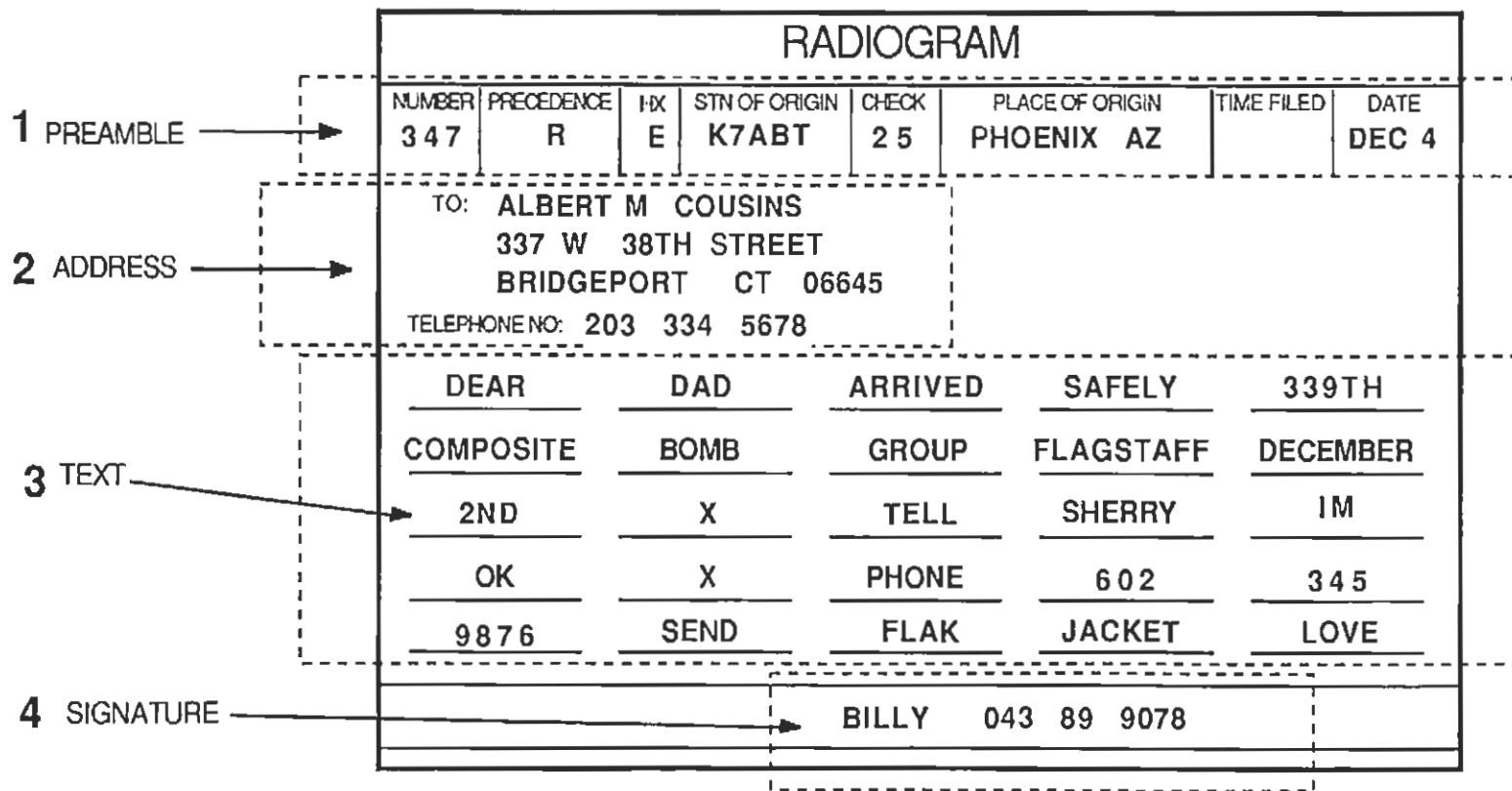
- 1) Stations operating in the NTS have the responsibility to promptly relay messages along, deliver messages in a timely fashion, or service undeliverable messages back to the originator. Stations must honor this responsibility.
- 2) Stations operating in the NTS interface directly with the public and served agencies representing all of Amateur Radio. Stations must represent us all well.
- 3) The methods and protocols of the NTS MPG are intended to facilitate achieving these objectives.



0100  
0000



THIS IS A FORMAL MESSAGE. FORMAL MEANS THAT THE MESSAGE FOLLOWS A PRE-ESTABLISHED FORM OR CONVENTION. A FORMAL MESSAGE CONTAINS ALL THE NECESSARY "RECORDKEEPING" ELEMENTS THAT ARE REQUIRED TO KEEP A HISTORY OF THE MESSAGE AS IT IS SENT THROUGH THE NTS. ALL FORMAL MESSAGES CONSIST OF FOUR PARTS: THE PREAMBLE, THE ADDRESS, THE TEXT AND THE SIGNATURE.



EACH OF THE ELEMENTS OF THE FORMAL MESSAGE HAS CERTAIN FORMAT REQUIREMENTS WHICH MUST BE MET IN ORDER TO AVOID CONFUSION ON THE AIR AS THE MESSAGE IS SENT, AND ALSO TO ASSURE THAT A SENDER-TO-RECEIVER TRACE CAN ALWAYS BE DONE ON THE MESSAGE.

LET'S TAKE APART THE MESSAGE PIECE BY PIECE TO LEARN HOW TO WRITE AND SEND A FORMAL MESSAGE.

THE PREAMBLE: THIS PART OF THE MESSAGE IS THE RECORD-KEEPING PART. IT IS READ ON THE AIR FIRST, FROM LEFT TO RIGHT AND ALWAYS IN THIS ORDER. ONLY THE HANDLING INSTRUCTIONS AND TIME OF FILE BLOCKS ARE OPTIONAL AND MAY, IF NOT NEEDED, BE ELIMINATED BY THE ORIGINATING STATION ONLY. THIS IS HOW THE ORIGINATING STATION WRITES OUT THE PREAMBLE FOR A FORMAL MESSAGE:

**1 PREAMBLE**

RADIOGRAM							
NUMBER	PRECEDENCE	HX	STN OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
347	R	G	K7ABT	25	PHOENIX AZ		DEC 4
TO:							
TELEPHONE NO.:							

(1) NUMBER: The message number is the stn of origin's serial number; start each year with 1 and count up

(2) PRECEDENCE: This is a code letter that tells how critical a message is and how fast it must be handled:

\*EMERGENCY: life and death, handle at top speed. Code

EMERGENCY (always spelled out in full) VERY RARE !

\*PRIORITY: urgent, handle only EMERGENCY msgs faster. Code P.

\*WELFARE: health of a person inquiry by addressee; handle after E and P msgs. Code W

\*ROUTINE: day-to-day urgency, handle ASAP. Code R. Most msgs are ROUTINE at most.

This message is a ROUTINE one. •

• means that definitions for these terms are found on the PINK CARD -- Amateur Message Form ARRL FSD-218 (585)

TO:

TELEPHONE NO.:

(3) HANDLING INSTRUCTIONS (HX): These are optional instructions to the operators regarding special needs in handling the message. •

(4) STATION OF ORIGIN: This is the station that first wrote the message

(5) CHECK: This is a count of the actual number of words, number, or character groups and separators (X's) in the text of the message. We'll learn how to count the check when we do the text.

(6) PLACE OF ORIGIN: This is the actual place where the message started from, not necessarily the location of the station of origin. For example, if you send a message for a person in a town that is not your own, you use the person's own town. Otherwise, use your own location in this box.

(7) TIME OF FILE: This is the time (UTC) that the message was written; not necessary in ROUTINE tlc, but may be found in EMERGENCY/ P tlc.

(8) DATE: This is the date the message was written; must be consistent with UTC if UTC used as the time format.

1 PREAMBLE

RADIOGRAM							
NUMBER	PRECEDENCE	HX	STN OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
347	R	G	K7ABT	25	PHOENIX AZ		DEC 4
TO:							
TELEPHONE NO:							

SEND THE PREAMBLE THIS WAY, ON PHONE: "THIS IS K1ABC (YOUR CALL)...FOLLOWS MESSAGE NUMBER THREE FORTY SEVEN ROUTINE, HOTEL XRAY GOLF, KILO SEVEN ALPHA BRAVO TANGO, TWENTY FIVE, PHOENIX, ARIZONA, DECEMBER 4." IT IS BAD FORM TO SAY THE HEADINGS (CHECK 25, STATION OF ORIGIN K7ABT, ETC.) BECAUSE ALL FORMAL MESSAGES ARE SENT IN A STANDARD WAY. ALSO, USE THE WORD FOR THE MONTH, NOT A NUMERICAL DATE: DECEMBER 4 AND NOT 12/4.

REMEMBER TO LET UP ON YOUR MIKE BUTTON EVERY FEW SYLLABLES OR SO TO ALLOW THE RECEIVING STATION TO "BREAK" YOU IF NEEDED.

### REMEMBER.....

IF THE MESSAGE DOESN'T HAVE A NUMBER, PRECEDENCE, STN OF ORIGIN, CHECK, PLACE OF ORIGIN OR DATE IT'S NOT A FORMAL MESSAGE!!!

THE ADDRESS: THIS PART OF THE MESSAGE IS INFORMATION ABOUT THE PARTY TO WHOM THE MESSAGE IS BEING SENT (THE ADDRESSEE OR ADEE, ABBREVIATED). THE ADDRESS CONSISTS OF THE STANDARD THREE LINE POSTAL ADDRESS, WITH ZIP CODE, AND A FOURTH LINE LISTING THE ADEE'S COMPLETE PHONE NUMBER. THE ZIP CODE IS IMPORTANT IF THE MESSAGE WILL GO VIA PACKET AT ANY POINT, AND A COMPLETE PHONE NUMBER WILL SAVE THE DELIVERING STATION TIME AND EFFORT.

## 2 ADDRESS

The address is the simplest part of the message except for the signature, and yet many hams do not do this part of the message correctly.

Get complete info from the person for whom you are sending the message if possible. This will help get the message to the right person.

For messages to hams in the military, remember that the MARS system, into which your message may be refiled, needs the service-person's Social Security Number and complete military address. Many MARS programs also require the sender's complete address, so it is recommended that you put this information on any MARS message.

**REMEMBER:** The accurate delivery of a message depends on an accurate address--be as complete as possible!!

RADIOGRAM							
NUMBER	PRECEDENCE	HX	STN OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
<div style="border: 1px dashed black; padding: 5px;"> <p>TO: <b>ALBERT M COUSINS</b>  <b>337 W 38TH STREET</b>  <b>BRIDGEPORT CT 06645</b></p> <p>TELEPHONE NO: <b>203 334 5678</b></p> </div>							
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>FOR MESSAGES GOING TO FOREIGN COUNTRIES:            MAKE ABSOLUTELY SURE THAT THE US HAS            A THIRD-PARTY AGREEMENT WITH THE COUNTRY TO WHICH THE MESSAGE IS GOING OR CAN            BE ROUTED FROM THE US TO A COUNTRY THAT            DOES HAVE A THIRD-PARTY AGREEMENT WITH            THE COUNTRY OF DESTINATION.</b></p> </div>							
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>MAKE ABSOLUTELY SURE THAT THE            MESSAGE IS OF A NONCOMMERCIAL            NATURE AND THAT ITS CONTENT IS            ACCEPTABLE MATTER FOR TRANSMISSION            BEFORE YOU ACCEPT IT FOR            SENDING.</b></p> </div>							

# RADIOGRAM

NUMBER	PRECEDENCE	HX	STN OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
--------	------------	----	---------------	-------	-----------------	------------	------

2 ADDRESS

TO: ALBERT M COUSINS  
337 W 38TH STREET  
BRIDGEPORT CT 06645  
TELEPHONE NO: 203 334 5678

SEND THE ADDRESS IN THE FOLLOWING WAY: (PICK IT UP FROM THE DATE):  
"DECEMBER 4, (PAUSE) ALBERT INITIAL M AS IN MIKE COUSINS, I SPELL  
C, O, U, S, I, N, S, (PAUSE) FIGURES THREE, THREE, SEVEN INITIAL W  
AS IN WHISKEY MIXED GROUP THREE EIGHT TANGO HOTEL STREET, (PAUSE)  
BRIDGEPORT, CONNECTICUT ZIP FIGURES ZERO, SIX, SIX, FOUR, FIVE,  
(PAUSE) PHONE FIGURES TWO, ZERO, THREE,--THREE, THREE, FOUR,--  
FIVE, SIX, SEVEN, EIGHT BREAK." AT EACH (PAUSE) AND THE BREAK, UNKEY  
YOUR RIG AND LISTEN FOR A WHILE IN CASE THE RECEIVING STN NEEDS A FILL.  
NOTE THAT SAYING "GOING TO" BEFORE SENDING THE ADDRESS IS BAD FORM.

USE ICAO PHONETICS SPARINGLY--THEY CAN ACTUALLY BE HARDER TO COPY UNDER SOME CONDITIONS THAN THE LETTER NAME ALONE. ALSO, AVOID INANITIES IN THE READING LIKE MRS--A MARRIED LADY, ETC. IF THE NAME IS SPELLED COMMONLY, E.G., SMITH VS SMYTHE, THEN TELL THE OP "COMMON SPELLING" AFTER YOU SAY THE NAME. USE THE PAUSES FOR FILLS.

THE TEXT: THE TEXT IS WHAT THE SENDER OF THE MESSAGE WANTS TO TELL THE ADDRESSEE. GOOD AMATEUR RADIO TEXTS SOUND LIKE TELEGRAPH MESSAGES, ARE CLEAR AND SUCCINCT AND WRITTEN IN SUCH A WAY THAT THEIR MEANING CANNOT BE MISCONSTRUED OR INTERPRETED IN MORE THAN ONE WAY. GOOD AMATEUR MESSAGE WRITING TAKES PRACTICE!!

RADIOGRAM							
NUMBER	PRECEDENCE	HX	STN OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
DEAR DAD			ARRIVED	SAFELY	339TH		
COMPOSITE		BOMB	GROUP	FLAGSTAFF	DECEMBER		
2ND		X	TELL	SHERRY	IMV		
OK		X	PHONE	602	345		
9876		SEND	FLAK	JACKET	LOVE		
Closings, like LOVE, REGARDS, etc. are ALWAYS a part of the text.							

Putting a letter-like greeting or closing (Dear Dad, Your Son, etc.) into the text is bad form, but if you must, it belongs in the text and is part of the check.

### 3 TEXT

Separators are X's, read as "initial X-RAY" when sending msg for relay. THEY ARE NEVER READ AS X-RAY TO THE PERSON TO WHOM THE MESSAGE IS BEING DELIVERED!! Just pause slightly when reading for delivery.

Phone numbers in the text are broken up like so, and have a check count of three.

Spell words that can have more than one spelling when relaying msg.

Use no punctuation in messages, even apostrophes; just spell it out when relaying

Closings, like LOVE, REGARDS, etc. are ALWAYS a part of the text.

AMATEUR RADIOGRAMS SHOULD BE LIMITED TO 25 WORDS OR LESS. THEY MUST BE NONCOMMERCIAL IN NATURE AND THUS ACCEPTABLE FOR HAM RADIO TRANSMISSION. THE TEXT NEVER CONTAINS ANY ELEMENTS OF THE PREAMBLE, ADDRESS OR SIGNATURE, NO PUNCTUATION, AND NO "50 CENT" WORDS !! LETTER-LIKE GREETINGS OR CLOSINGS, ALWAYS IN BAD FORM, BELONG IN THE TEXT IF THE NEED ARISES. THE TEXT IS ALWAYS SET OFF FROM THE REST OF THE MESSAGE BY USE OF THE WORD "BREAK" (BT WHEN SENDING MESSAGES BY CW/RTTY/AMTOR/PACKET) BEFORE SENDING THE TEXT AND IMMEDIATELY AFTER SENDING THE TEXT, BEFORE THE SIGNATURE IS SENT.

**THE DREADED CHECK:** the CHECK is why many hams never get to be at ease with traffic handling, and yet it is so easy. The CHECK is simply a count of the number of WORDS or LETTER/FIGURE/MIXED GROUPS IN THE TEXT of the message---not the preamble, address or signature---EVERYTHING, IN OTHER WORDS, BETWEEN THE BREAKS!  
**IF YOU CAN COUNT TO 25, YOU HAVE ABSOLUTELY NOTHING TO FEAR IN COUNTING THE CHECK. IF YOU GET STUCK, ASK AN EXPERIENCED NET TRAFFIC HANDLER FOR HELP IN COUNTING THE CHECK BEFORE NET STARTS.**

The check is simply a count of the number of words in the TEXT of the msg. THIS MSG HAS A COUNT OF 25.

EACH word, initial group (OK), mixed group (339TH), figure group, (9876), city, state, name, etc., is ONE count.

Phone numbers are broken up into three parts; area, prefix and four digit suffix and are counted as THREE text counts.

SEPARATORS (X-rays) get a count of ONE, also. If a word belongs apart from another word, it should be split up and counted as if each part of a word were put on a separate text line (for example, the word well-being should be well being for a count of 2.) if the word parts stay together (e. g., the word makeshift), the word count is one for that word.

**HINT!!:** Use ARRL RADIOGRAM pads for message writing until you get familiar with the structure and count of standard NTS format messages. Order ARRL pads from League HQ or your radio supplier.

RADIOGRAM																																
NUMBER	PRECEDENCE	HX	STN OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE																									
				25																												
<p>3 TEXT</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">DEAR</td> <td style="text-align: center;">DAD</td> <td style="text-align: center;">ARRIVED</td> <td style="text-align: center;">SAFELY</td> <td style="text-align: center;">339TH</td> </tr> <tr> <td style="text-align: center;">COMPOSITE</td> <td style="text-align: center;">BOMB</td> <td style="text-align: center;">GROUP</td> <td style="text-align: center;">FLAGSTAFF</td> <td style="text-align: center;">DECEMBER</td> </tr> <tr> <td style="text-align: center;">2ND</td> <td style="text-align: center;">X</td> <td style="text-align: center;">TELL</td> <td style="text-align: center;">SHERRY</td> <td style="text-align: center;">IM</td> </tr> <tr> <td style="text-align: center;">OK</td> <td style="text-align: center;">X</td> <td style="text-align: center;">PHONE</td> <td style="text-align: center;">602</td> <td style="text-align: center;">345</td> </tr> <tr> <td style="text-align: center;">9876</td> <td style="text-align: center;">SEND</td> <td style="text-align: center;">FLAK</td> <td style="text-align: center;">JACKET</td> <td style="text-align: center;">LOVE</td> </tr> </table>								DEAR	DAD	ARRIVED	SAFELY	339TH	COMPOSITE	BOMB	GROUP	FLAGSTAFF	DECEMBER	2ND	X	TELL	SHERRY	IM	OK	X	PHONE	602	345	9876	SEND	FLAK	JACKET	LOVE
DEAR	DAD	ARRIVED	SAFELY	339TH																												
COMPOSITE	BOMB	GROUP	FLAGSTAFF	DECEMBER																												
2ND	X	TELL	SHERRY	IM																												
OK	X	PHONE	602	345																												
9876	SEND	FLAK	JACKET	LOVE																												

**IF THE MESSAGE CONTAINS ONE OR MORE ARL NUMBERS FROM THE STANDARD ARL NUMBERED RADIOGRAM LIST, THE CHECK ALWAYS READS ARL (#), WHERE (#) IS THE NUMBER OF WORDS IN THE TEXT INCLUDING THE ARL AND ARL NUMBERS IN THE COUNT. FOR EXAMPLE, "ARL SIXTY ONE LOVE TO ALL" WOULD BE COUNTED AS SIX COUNTS FOR THE CHECK. THE CHECK WOULD BE LISTED AND READ AS "ARL 6, FOR EXAMPLE. ARL NUMBERS ARE ALWAYS SPELLED OUT IN THE TEXT: ARL SIXTY ONE AND NOT ARL 61 !!**

READING THE TEXT: REQUIREMENTS FOR READING TEXT ARE DIFFERENT DEPENDING ON WHETHER YOU ARE SENDING THE TEXT TO ANOTHER HAM FOR RELAY OR READING THE TEXT TO THE ADDRESSEE UPON DELIVERY

\*WHEN RELAYING THE MSG: SEND the text using standard amateur message practice, with phonetics and special notation (figures, initials, etc) SPOKEN to assist clarity and accuracy of receiving.

\*WHEN DELIVERING TO ADDRESSEE: READ the message clearly more like a letter, omitting the special notation; just read it straight!

**REMEMBER: THE WORD "BREAK" ON FONE SETS OFF TEXT FROM ALL OTHER PARTS OF THE MESSAGE.**

**ON CW/RTTY/AM-TOR/PACKET USE THE SYMBOL BT AS THE BREAK INDICATION.**

RADIOGRAM							
NUMBER	PRECEDENCE	HX	STN OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
3 TEXT							
DEAR		DAD		ARRIVED		SAFELY	
COMPOSITE		BOMB		GROUP		FLAGSTAFF	
2ND		X		TELL		SHERRY	
OK		X		PHONE		6 0 2	
9 8 7 6		SEND		FLAK		JACKET	
						3 3 9 T H	
						D E C E M B E R	
						I M	
						3 4 5	
						L O V E	

TO SEND THE MESSAGE FOR RELAY (NOT DELIVERY), USE THE WORD "BREAK" TO SEPARATE TEXT FROM THE REST OF THE MESSAGE: "BREAK (PAUSE/LISTEN). DEAR DAD ARRIVED SAFELY MIXED GROUP THREE THREE NINE TANGO HOTEL COMPOSITE BOMB I SPELL BOMB B, O, M, B, GROUP FLAGSTAFF ONE WORD FLAGSTAFF DECEMBER MIXED GROUP TWO NOVEMBER DELTA INITIAL X-RAY TELL SHERRY I SPELL SHERRY S, H, E, R, R, Y, I'M INITIALS I, M OK INITIAL GROUP OSCAR KILO, INITIAL X-RAY PHONE FIGURES SIX, ZERO, TWO, THREE, FOUR, FIVE, NINER, EIGHT, SEVEN, SIX SEND FLAK I SPELL FLAK F,L,A,K JACKET LOVE BREAK" (PAUSE/LISTEN). REMEMBER TO UNKEY YOUR RIG FREQUENTLY DURING SENDING TO LISTEN IN CASE THE RECEIVING OP NEEDS FILLS.

TO READ FOR DELIVERY, JUST READ IT LIKE A LETTER, BUT DON'T SAY X-RAY AS PUNCTUATION--JUST PAUSE NATURALLY AS IF THE X-RAY WERE A PERIOD IN A SENTENCE. YOU ALSO DON'T SAY BREAK, OR USE ANY OF THE OTHER NOTATIONS OR VERBAL SYMBOLS YOU WOULD USE IF YOU WERE RELAYING THE MESSAGE TO A HAM. IF THE TEXT CONTAINS ARL NUMBERS, "DECODE" THEM BEFORE DELIVERY !!! SEE YOUR NET MANAGER FOR A COPY OF THE LATEST ARL NUMBERED RADIOGRAM LIST.

THE SIGNATURE: THE SIGNATURE IDENTIFIES THE PERSON THAT IS SENDING THE MESSAGE. IT COULD BE A THIRD-PARTY SIGNATURE OR THAT OF THE STATION OF ORIGIN ITSELF. THE SIGNATURE SHOULD BE COMPLETE ENOUGH FOR THE ADDRESSEE TO UNDERSTAND WHO IS SENDING THE MESSAGE. FOR MORE OFFICIAL TRAFFIC OR FOR MARS MESSAGES , ADDITIONAL IDENTIFYING DATA MAY BE PLACED IN THE SIGNATURE.

THE SIGNATURE, LIKE THE ADDRESS, SHOULD BE AS COMPREHENSIVE AS NEEDED TO COMPLETELY IDENTIFY THE SENDER TO THE ADEE. FAMILY MEMBERS MAY USE SINGLE NAME SIGNATURES. FOR OTHER MESSAGES, IT IS BEST TO USE FIRST NAME AND SURNAME BOTH. REMEMBER, FOR MARS MESSAGES, A COMPLETE ADDRESS IS A RECOMMENDED PART OF THE SIGNATURE.

AVOID CUTESY-PIE SIGNATURES.

RADIOGRAM							
NUMBER	PRECEDENCE	HX	STN OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
TO:				Additional signature data such as service numbers, SSN's, membership numbers, etc, are OK but care must be taken to preserve the data in relaying, particularly for EMERGENCY/P/W messages.			
TELEPHONE NO:							
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
4 SIGNATURE →				BILLY 043 89 9078			

TO SEND THE SIGNATURE, AFTER THE BREAK/PAUSE FOLLOWING THE TEXT, SIMPLY SEND: "BILLY" (PAUSE) FIGURE GROUP ZERO, FOUR, THREE, EIGHT, NINER, NINER, ZERO, SEVEN, EIGHT ". USE NO PUNCTUATION WHEN SENDING THE SIGNATURE.

TO END THE RELAY SAY: "END OF MESSAGE, NO MORE" IF THAT IS ALL YOU HAVE TO SEND TO THE RECEIVING OP. SAY "END OF MESSAGE- (#) MORE" IF YOU HAVE MORE MESSAGES TO SEND TO THE RECEIVING OP, WHERE (#) IS THE NUMBER YOU STILL NEED TO SEND. THEN USE FILL PROCEDURE AFTER SENDING THE MESSAGE TO ASSURE AN ACCURATE RELAY.

**GO AHEAD AND TRY IT. JUST USE WHAT YOU HAVE LEARNED FROM THIS TEACHING TEXT AND SEND YOUR OWN MESSAGE TODAY. YOU CAN SEND A GREETING TO A FRIEND, A NOTE TO A FAMILY MEMBER ON A SPECIAL OCCASION, OR PRACTICE BY SENDING THE NET MANAGER A MESSAGE TELLING HIM THAT YOU FINISHED THE TEACHING TEXT.**

RADIOGRAM							
NUMBER	PRECEDENCE	HX	STN OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
TO:							
TELEPHONE NO:							
SIGNATURE:							

**MORE IMPORTANTLY, YOU ARE NOW BETTER PREPARED TO BE AN EMERGENCY COMMUNICATOR, TO FULFILL THE NEED FOR RADIO SERVICES IN TIMES OF DISASTER, TO SERVE YOUR COMMUNITY AND NATION, TO ASSIST NTS IN RELAYING MESSAGES ON A DAILY BASIS, WITHOUT BEING AFRAID OF NOT KNOWING HOW TO DO IT !! CONGRATULATIONS, AND DO SEND TRAFFIC OFTEN. REMEMBER--PRACTICE MAKES PERFECT !!**

# NTS Message Traffic 1.0



By: Rich Davis, N2NMH [EC@Norfolk-ARES.org](mailto:EC@Norfolk-ARES.org)

<http://www.arrl.org/FandES/field>

[/nts-mpg](#) [/pscm](#) [radiogram](#) [/forms](#) -> [fsd-3](#) [fsd-218](#)

<http://www.Norfolk-ARES.org/>