

1 Military Auxiliary Radio System Navy-Marine Corps MARS

MARS Operator Course

3.01.a

06 SEP 2008

Unit Four General Communication Operating Instructions

Contents:

- * Lesson 1 -- Basic Message Forms
- * Lesson 2 -- Basic Message Types
- * Lesson 3 -- Precedence and Punctuation

LESSON 1 BASIC MESSAGE FORMS

600. Message Definition

A message is any thought or idea expressed briefly in plain or cryptic language, prepared in a form suitable for transmission by any means of communication. Take this definition in it's broadest sense. Technically, any transmission to another station is a message. For the remainder of this training, unless otherwise stated, we will be referring to formal record traffic.

601. Basic Message Forms

PLAINDRESS -- A message in which the originator and addressee designations are external to the text. A PLAINDRESS message always must include the following elements:

- Precedence
- Date-Time-Group

ABBREVIATED PLAINDRESS -- Operational requirement for speed of handling a message may require abbreviation of PLAINDRESS message headings. In such a case, any or all of the following may be omitted:

- Precedence
- Date
- Date-Time-Group
- Group count.

CODRESS -- A CODRESS message carries in the encrypted text the entire address, i.e., originator and all addressees. CODRESS messages will not normally be handled by NAVMARCORMARS.

602. Message Schematic Diagram

Messages prepared for transmission will be either PLAINDRESS, ABBREVIATED PLAINDRESS, or CODRESS and will have three parts: heading, text, and ending

Parts	Components	Elements	Format Line	Contents
HEAD-ING		Handling Instructions	1	
	Procedure	Call	2, 3	Station(s) called (prosign XMT, exempted calls) prosign DE and station calling
		Transmission Identification		Station Serial number
		Transmission Instructions	4	Prosign T, G, F, operating signals, call signs, address groups, plain language
	Preamble	Precedence, date-time group, message instructions	5	Precedence prosign, date and time expressed in digits and zone suffix, month and year; operating signals and prosign DE
	Address	Originator's call sign, originator	6	Prosign FM, originator's designator (call sign) or plain language
		Action addressee call sign, action addressee	7	Prosign TO; action addressee designator (call sign or plain language)

		Information addressee callsign; information addressee	8	Prosign INFO, information addressee designator (callsign or plain language)
		Exempted addressee callsign; exempted addressee	9	Prosign XMT; exempted addressee designator (callsign or plain language)
	Prefix	Accounting information; group count	10	Accounting symbol; group count
BREAK			11	Prosign BT
TEXT	Text	Subject matter	12	Internal instructions; basic idea of the originator
BREAK			13	Prosign BT
END-ING	Procedure	Time group	14	Hours and minutes expressed in digits and zone suffix when appropriate
		Final Instructions	15	Prosigns B, AS, C; operating signals
		Ending sign	16	Prosign K, AR

There is just a whole lot to proper message formatting and usage. Members should thoroughly read all of Chapter 6 and develop a working knowledge of what is there. Refer to it often, DON'T GUESS!

LESSON 2 BASIC MESSAGE TYPES

611. Service Messages

A service message is a short, concise message between communication personnel which is used to obtain or provide information regarding the handling of communication matters. Prosigns and operating signals will be used to the maximum extent to obtain and provide corrections, or repetitions. A service message will normally refer to another message which may be identified by one of the following:

- Reference to an original message.
- Reference to another service message.

The abbreviation SVC is the first word of the text following, and on the same line as, the classification. Example:

(message heading)

BT

UNCLAS SVC

612. Message Readdressal

When an addressee of a message believes additional addressee(s) require the information contained in a particular message, the message recipient may readdress that message to additional addressee(s) by a supplemental heading. The readdressal header will show the readdressing addressee as the originator, action and/or information addressees, a precedence prosign, a date-time-group, and, when necessary, message instructions and transmission instructions.

The following rules apply to any message readdressal:

- That part of the original message preceding the preamble is omitted.
- The new precedence assigned applies to the supplementary heading.
- The preamble of the original message indicates the beginning of the original message.
- Readdressed messages are filed under the original DTG. The READDRESSAL DTG will not be used as a message reference.
- A message received by an addressee who was listed as information addressee (INFO) may only be readdressed as INFO. No TO line is used. A message received for action may be readdressed for action (TO) or information (INFO).
- If it is necessary to inform any of the original addressees or the originator that a message has been readdressed, they may be included in the supplementary heading.
- An originator desiring to add addressees to a message previously transmitted will normally do so by READDRESSAL.

Example of a readdressal:

Original message-
R 011345Z JAN 2006
TO NNN0ALD
INFO NNN0ALA
BT
UNCLAS

ALD refers to all area directors. If Director, Central Area wants to readdress to all the region directors in Central Area it would look like this

R 030220Z JAN 2006
FM NNN0ASG IL
TO NNN0ALR CENTRAL AREA
R 011345Z JAN 2006
TO NNN0ALD
INFO NNN0ALA
BT
UNCLAS

ALA refers to area assistant directors (ONE). If the ONE wished to forward it, it would have to be as INFO rather than TO since the ONE is an INFO addee.

613. Single Address Messages

A single address message is destined for only one recipient, or addressee.

614. Multiple Address Messages

A multiple address message is destined for two or more addressees, each of whom must be informed of all the addressees.

615. Book Messages

A book message is destined for two or more addressees and is of such a nature that the originator considers that addressees need not be informed of other addressees. However, each addressee will be indicated as an action or information recipient. A book message is identified by the operating signal "ZEX" (and ZEZ if appropriate). Each book message is assigned a new station serial number but retains the same date-time-group for all books of the same message.

616. General Messages

A general message has a wide distribution and is assigned an identifying title. Each message of a given title carries a serial number in a sequence which covers a calendar year. For example SUBJ: REGION TWO BCST 01/04 is the first broadcast message of 2004 from the Director, Region Two. The content of a general message may be directive in nature or promulgate information to the addressees.

Where possible collective call signs are used to address a predetermined group. For example, NNN0ALL CENTRAL AREA addresses all members within the Central Area. See NTP-8 Annex K for instructions and limitations on the use of collective call signs

Broadcasts sent by state and region directors, or Specialty Network Coordinators, shall follow a format similar to that for area broadcasts, except the action addressee shall use the collective call sign appropriate for the state, the region, or the specialty network.

Broadcasts remain effective until cancelled by the originator.

The first broadcast of each calendar year (from state, region, and area directors and from Chief MARS) shall list all broadcasts which remain in effect from previous years. All previous years broadcasts which are not in this listing are cancelled and need no longer be retained.

Broadcast messages are generally available on the respective national, area, or region web site. Some may be in a secure area requiring a login. Tango members are not permitted to login information. If you need or desire past broadcast messages that are in the secure area contact your state director or state or region FIVE for help

621. Tracer Messages

A tracer message is a service message to determine the reason for inordinate delay in delivery, or the non-delivery, of a message. Tracer action must commence within 30 days from the date of the message being traced. All tracer messages shall include Chief, NAVMARCORMARS and the appropriate Area and Region Directors as information addressees. Tracer action is always started by the originator of the delayed or missing message. He or she drafts and addresses the tracer to the first station they passed the message to. In the case where the originator placed the message on an MBO (switch) the tracer will be addressed to the sysop of that switch.

622. Delayed Messages

The MARS Station making the ultimate delivery to the addressee will initiate tracer action by notifying the originator of an inordinate delay of a message. The stations will first carefully examine their records and the message heading to determine if the cause can be ascertained and adequately explained prior to commencing tracer action.

623. Lost Messages

Upon verification of non-receipt of a message, the originating station will retransmit the message as a duplicate (ZFG) to the station(s) claiming non-delivery and transmit a service message tracer to the first relay station involved with the original transmission.

624. Undeliverable Messages

A message that cannot be delivered due to incorrect or incomplete addressing will be serviced back to the originating station.

LESSON 3 PRECEDENCE and CONSTRUCTION TECHNIQUES

631. Precedence Assignment

Assigning the precedence to a message is the originator's responsibility. The originator will base his/her determination on the subject matter of the message and time factor involved.

The precedence assigned to multiple address messages having both action and information addressees may be assigned a single precedence, which indicates the precedence is for all addressees, or it can have dual precedence, one precedence for all action addressees and a lower precedence for all information addressees.

Precedence levels include:

FLASH (Z):

FLASH precedence is reserved for initial enemy contact messages or operational combat messages of extreme urgency. Brevity is mandatory. FLASH messages will be hand carried, processed, transmitted and delivered in the order received and ahead of all other messages. Messages of lower precedence will be interrupted on all circuits involved until handling of the FLASH message is completed. It is extremely unlikely MARS would be asked to handle a message of Flash precedence. It is even less likely MARS members would ever have a need to use this precedence on a message.

IMMEDIATE (O):

IMMEDIATE (or Operational Immediate) is the precedence reserved for very urgent messages relating to situations which gravely affect the security of national forces or populace. IMMEDIATE precedence may be used on messages concerning the amplification of initial enemy contacts, logistical support when essential to sustain operations, widespread civil disturbance, warning of grave natural disaster (earthquake, flood, storm, etc.), and distress assistance. This is the highest precedence level expected to be handled on MARS circuits.

PRIORITY (P):

PRIORITY is the precedence reserved for messages concerning the conduct of operations in progress and for other important and urgent matters when ROUTINE precedence will not suffice. This is the highest precedence which normally may be assigned to administrative or personal messages.

ROUTINE (R):

ROUTINE is the precedence to be used for all types of messages which justify transmission by rapid means but are not of sufficient urgency and importance to require a higher precedence.

632. Speed of Service Objectives

The established goal of these objectives is to ensure the fastest communications support possible based on the precedence level. The following guidelines apply:

<u>Precedence</u>	<u>Prosign</u>	<u>Speed Objective</u>
FLASH	Z	As fast as possible; ideally under 10 minutes.
IMMEDIATE	O	30 minutes - 3 hours
PRIORITY	P	18 - 24 hours
ROUTINE	R	24 - 48 hours

640. Message Construction Techniques

Always be aware of key points in every message you handle. Here are a few of the more common mistakes made by MARS operators.

Use primary ASCII characters only. Most word processing programs add a variety of control characters (usually invisible) that are not transmittable by all modes used in MARS. The characters can produce a variety of undesirable effects including cutting off lines of text, or even the remainder of the message. They have even been known to affect a station's connectivity to another station, or take the station down.

It is best to use a software program that utilizes only the primary ASCII characters and control codes and with fixed spacing of letters, numbers, and punctuation.

Note that even in a pure ASCII text program such as notepad, a tab character will cut off part of a message in some modes. Always use spaces instead of the tab key. When fixed character spacing is used columns will line up properly.

Begin every line at the far left margin, especially in the header. Never use centering or right flush formatting features. Make sure you place only one space, when a space is needed, especially in the header of a message. For example
TO NNN0AAA NNY
one space only between each. If you put in two or more the system will not read the line correctly. It will either get routed the wrong place, or may end up in a "dead letter" folder on some MBO.

Use punctuation as necessary for clarity, but keep it to the few basic punctuation marks that readily work in all modes. Spell out all others using assigned abbreviations. See NTP-8, para 641 for details. Some characters on your keyboard are not acceptable. They produce characters that will not transmit correctly on some modes. The most common mistake here is the "at sign" (@) used in e-mail addresses. You must replace the at sign with exactly this, "(AT)", minus the quotation marks.

When sending a message via any digital mode limit characters used to those listed in NTP-8 (D) Chapter 8, Para 802.b. Suggested additional reading: para 800 and 801.

All letters in messages must always be in upper case.

Another common mistake is to enter e-mail addresses or Internet web site URLs in lower case. Generally, e-mail addresses are not case sensitive, but URLs are. Where something is case sensitive you will have to explain in your message what parts are lower case. If all of it is lower case, simply add the phrase, "ALL LOWER CASE".

Many typists learned to use the lower case L and the upper case O for one and zero. If you learned that way, you will need to break that habit. ASCII characters are very specific. Being sure you use the correct character, especially in any part of the header (TO line, FM line, DTG, etc) is critical. Additionally, some modes, such as teletype, will not transmit lower case characters. Even though most MARS members use computers these days to receive teletype, it must be transmitted such that traditional hardware teletype can print the message correctly.

Most word processor programs use "word wrap" to keep text from flowing off the end of the screen. Each line in a MARS messages must always be no more than 69 characters long, including spaces. Word wrap uses what is referred to as a soft return. Unless you convert the word wrap to a hard return at the end of each line your message may look like it is properly formatted, but in reality it is not. Here again, parts of the message may be cut off due to incorrect line formatting.

641. Punctuation

Punctuation shall be used. It is essential for clarity. Punctuation marks used in Naval messages shall be limited to the symbols which appear on standard typewriter, teletypewriter and computer keyboards. Punctuation marks shall be processed and transmitted exactly as drafted, provided the means of communication permits. Otherwise, communication personnel shall substitute authorized abbreviations or spell out the punctuation mark. (see 640 above, in case you skipped over it) See also NTP-8 (D) Chapter 8, Para 802.b.

642. Phonetic Alphabet

The means by which any letter of the alphabet is identified in voice transmission is by use of the standard phonetic alphabet. This means the military phonetics only. When letters stand alone, are together in non-word groups, or it is a word that is hard to pronounce, or where there could be confusion about what the word is if spoken via voice transmission, the phonetic alphabet is to be used preceded by the proword I SPELL. If the word can be pronounced, but you want to spell it for clarity then say the word, say I SPELL, spell it phonetically, then say the word again. For example the word "their", transmit the following

THEIR I SPELL TANGO HOTEL ECHO INDIA ROMEO THEIR

Personal initials shall be spoken phonetically prefixed by the word "INITIAL" or "INITIALS". Letter-figure or figure-letter combinations are spoken phonetically

The one time you do not spell a group phonetically is the Date-Time-Group of a message. DTGs are transmitted using the proword TIME. DTG consists of two figures

for the date (day), four figures for the time of day, one letter for the time zone (MARS messages should always be in Zulu time, therefore use the letter "Z"), a space, three letter abbreviation for the month, a space, and four figures for the year. So, a message being dated January 23, 2006 at 1530 Zulu would have this DTG
231530Z JAN 2006.

When sending the message it would be spoke as follows:

TIME TWO THREE ONE FIVE THREE ZERO ZULU JANUARY TWO ZERO ZERO SIX

The figure "0" is always spoken as "zero", never as "oh"

A common mistake made by newcomers when referring to the DTG is to include the precedence of the message with the DTG. Although they are on the same line the precedence is not part of the DTG. Do not included it when referencing a message.

644. Month Abbreviations

Standard three-letter groups shall be used as abbreviations for the months. They are JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV and DEC

645. State Abbreviations

Every state has a standard 2 or 3 letter designator assigned. (Remember MARS states and geographical states of the U. S. are sometimes different). If you are using a civilian address or location it will always be the 2 letter abbreviation for the geographical state. If you are referring to the MARS state where a member is located it will be one of the MARS 2 or 3 letter abbreviations. This may seem confusing at first, but you will get the hang of it very quickly. The correct abbreviation for a state shall be used. Exception: some collective call signs require the state be spelled out. For example NNN0ALL IDAHO. As a new member you won't need to worry too much about collective call signs. Their use is limited to authorized stations. More info can be found on collective calls in NTP-8, Annex K.

646. Foreign Countries

As with states, there are designated abbreviations for foreign countries.

650. Refiling Messages

A message retransmitted by a means different from that by which it was received must be converted into the proper format. This does not mean receiving a message by AMTOR and wanting to forward it by teletype. It means a message formatted for use in another organization and which does not conform to MARS message formatting.

652. Amateur Radio to MARS Refile

An Amateur Radio message will not be accepted for refile into MARS unless it meets the message criteria. In converting the message to the proper format, it is essential that the place of origin and the time and date of origination be indicated.

653. MARS to Amateur Radio Refile

The refile of MARS messages into Amateur Radio Service shall be in accordance with

the criteria. All NMAT texts shall be expanded, i.e. converted to what the abbreviated text actually means. Only personal messages may be refiled to Amateur Radio, never MARS admin messages or messages of official or quasi-official nature. If there is any doubt seek guidance from higher authority or a more experienced and trusted MARS member, but keep in mind the responsibility that the message was proper for refiling is solely that of the MARS member who refiles it.

654. NAVMARCORMARS to Army/Air Force MARS Refile

Air Force MARS has a class of abbreviated text messages similar to the NMAT messages but which instead are based on the ARL numbered messages. These messages are distinguished one from the other solely by the group count. Similar to NMAT message procedure, these messages must be expanded into full written form before being refiled into the NAVMARCORMARS system.

There are three significant areas where Navy-Marine Corps MARS and Army and Air Force MARS messages differ from each other, and the refile process must address each of these three areas.

- Message serial (sequence) number:
In Army and Air Force MARS the station serial number is considered an important and an integral part of all messages. In Air Force MARS it is a sequential number which begins at zero at 0001Z on the first of every month and ends at 2359Z on the last day of the month. Army MARS follows a similar procedure. Acknowledgment (ROGERing) for a message on an Air Force MARS net is always done by message serial number.
- Group Count:
In Army and Air Force MARS the group count is considered an essential part of all messages. Before one ROGERS for a message, the number of groups copied is compared to the message group count. In Navy-Marine Corps MARS the group count is (almost) never used.
- Classification Line:
In Air Force MARS neither the classification line nor the classification designator UNCLAS are ever used in a message. In Army MARS they would not normally be found on any traffic subject to refile. In Navy-Marine Corps MARS the classification line, the first line of the text immediately following the first break and the classification designator UNCLAS are always used.

655. Army and Air Force MARS to NAVMARCORMARS Refile

There are seven steps required to refile an Army and Air Force MARS message into the Navy-Marine Corps MARS system:

- Delete the message number field if not transmitting via WinLink.
- Copy everything as is, from precedence up to but not including the group count field.
- Delete the group count field.
- Copy the first break (BT).
- Insert a new line, the classification line, between the first break and what was originally the first line of text.

- On this classification line, place the classification designator UNCLAS Copy the text portion of the message expanding all Air Force MARS Special ARL numbered messages to the full written version through the second break (BT) and the end of the message. Do not expand the ARRL numbered messages.

C100. Operating Signals ("Q" and "Z")

Operating signals are intended for digital modes only (teletype, Amtor, etc). They are concise codes designed primarily for use by communication personnel in exchanging information incident to the handling of messages or in establishing communications.

Communication personnel also use them in service messages. Operating signals provide no security and therefore must be regarded as the equivalent of plain language. The "Z" signals are designed to cover military requirements and should be used whenever necessary in military communications. "Q" signals may be used in military communications where no suitable "Z" signal exists. "Q" signals only will be used in non-military communications. Meaning of "Q" and "Z" operating signals may be amplified or completed by the addition of appropriate call signs, time groups, complementary groups, etc. Call signs used to complement an operating signal normally follow the signal, but under certain conditions, such as to achieve clarity or to effect separation, they may be placed ahead of the operating signal. Plain language is prohibited except when no other method is provided to complete the meaning. When desired, an operating signal may be given an interrogative sense:

Complete details on "Q" and "Z" signals may be found in Annex C. I highly encourage you to read through these. No one expects any operator to memorize them all, but a good understanding of how they are used, and where to find them, is important to clear and proper communications.

C201. Procedural Signs and Words, Definitions

Prosigns are procedural signs consisting of one or more characters. They are used to facilitate rapid communication by conveying certain frequently used orders, instructions, requests, reports, and information related to communications in condensed standard forms. Do not confuse prosigns with operating signals ("Q" and "Z"). Prosigns are used only in digital modes. Prowords are the spoken equivalent of prosigns and are used in place of prosigns during voice transmissions. For example, R is the prosign, ROGER is the proword. They have exactly the same meaning, "I received your last transmission correctly."

One of the most common mistakes made by MARS members, even long time operators, is the misuse of a proword. For example, ROGER means you copied the last transmission correctly and completely. It has nothing to do with agreeing with, or understanding the content of that transmission. DO NOT USE IT INCORRECTLY. This, above all prowords, has become the most commonly misused, probably because of the wide (and incorrect) use of the word in movies, TV, etc. Another is the proword CORRECT. CORRECT does not mean to make a change, as in to correct an error. It means the sender is telling you the portion of the message you asked about and read

back is correct as you read it. There are other ways to tell someone to make a change. One is using the proword WRONG and repeating the correct version. If the sender made a mistake he will use the proword CORRECTION and start from the last word or phrase properly transmitted. If the message has already been received for the send will have to make up a service message addressed to the receiving station and make in corrections that way.

Other prowords also get misused so be careful you select THE correct proword for your purpose.

L101. Abbreviated Texts

We have already mentioned in several places the existence of abbreviated texts. They are established to enhance the transmission of messages of a standard text. They take up fewer words in a word count, transmit faster, are less prone to error, and save time. When using an abbreviated text, members are cautioned to ensure correct transposition. Abbreviated texts shall be transposed to the proper meaning prior to delivery to addressees or prior to refiling to Amateur Radio or another MARS service. The messages shall never be presented to addressees in abbreviated form.

END OF UNIT 4 proceed to unit Five.

You may start the review test at any time.