

MCI 25.62

MARINE CORPS INSTITUTE



THE MARS OPERATOR

MARINE BARRACKS
WASHINGTON, D.C.



UNITED STATES MARINE CORPS
MARINE CORPS INSTITUTE
ARLINGTON, VA 22222-0001

IN REPLY REFER TO
25.62
2 April 1987

MCI 25.62 THE MARS OPERATOR

1. Purpose. MCI course 25.62, The MARS Operator, has been published to provide instruction to all operators of the Navy-Marine Corps Military Affiliate Radio System.
2. Scope. MCI 25.62 addresses the MARS mission and organization, membership and administration, along with the general operating instructions. Additionally, the course emphasizes radiotelegraph, radiotelephone, and radioteletype procedures. Finally, the course addresses emergency communications.
3. Applicability. This course is intended for instructional purposes only. It is designed for use by the operators of military, individual, and club stations.
4. Recommendations. Comments and recommendations on the contents of the course text are invited and will aid in subsequent course revisions. Please complete the student suggestion form located at the end of the text and return it to:

Director (CDD #2)
Marine Corps Institute
Arlington, Virginia 22222-0001

A handwritten signature in cursive script, appearing to read "R. A. Maloney".

R.A. MALONEY
Major, U.S. Marine Corps
Deputy Director

THE MARS OPERATOR

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STUDENT INFORMATION

TITLE: THE MARS OPERATOR

NUMBER: MCI 25.62

STUDY
HOURS: 10

COURSE
MATERIALS: TEXT

REVIEW
AGENCY: Chief, Navy-Marine Corps MARS, Naval Communication Unit,
Washington, D.C.

RESERVE
RETIREMENT
CREDITS: 3

ACE: This course is scheduled for review by the American Council on
Education during 1987.

MCI
ASSISTANCE: For administrative assistance have your training officer or NCO use
the Unit Activity Report (UAR) or MCI Hotline: Autovon 288-4175 or
Commercial (202) 433-4175.

For assistance concerning course content matters have your training
officer or NCO call the course developer at Autovon 288-3604 or
Commercial (202) 433-3604.

SOURCE
MATERIALS: NTP 8() U.S. Navy-Marine Corps Military Affiliate Radio System (MARS)
Communications Instructions

COURSE STUDY GUIDE

Congratulations for enrolling in a Marine Corps Institute specialized skill training correspondence course! By enrolling in this course, you have shown a desire to improve the skills that you need to enhance your job performance.

Since 1920, MCI has been helping tens of thousands of hard-charging Marines, like yourself, to achieve educational goals by teaching necessary new skills or reinforcing existing skills. MCI will do everything possible to help you reach your individual goals.

Before you begin your course of instruction, you may be asking yourself, "How much will I benefit from a correspondence training program?" The answer to this depends upon you, "YOUR PROFESSIONAL TRAITS" (what you bring to the learning situation).

Because you have enrolled in an MCI course, your professional traits are evident and we know that:

YOU ARE PROPERLY MOTIVATED. You made a positive decision to get training on your own. Self-motivation is perhaps the most important force in learning or achieving anything. Doing whatever is necessary to learn is MOTIVATION.

YOU SEEK TO IMPROVE YOURSELF. You enrolled to learn new skills and develop special abilities.

YOU HAVE THE INITIATIVE TO ACT. By acting on your own, you have shown that you are a self-starter, willing to reach out for opportunities.

YOU ACCEPT CHALLENGES. You have self-confidence and believe in your ability to gain training in your areas of interest.

YOU ARE ABLE TO SET PRACTICAL GOALS. You are willing to commit time, effort, and resources toward accomplishing what you set out to do. These professional traits will help you achieve success in your MCI specialized skill training course.

You have 12 months from the date of enrollment to complete your correspondence course. One 6-month extension may be granted if approved by your commanding officer. If you require an extension, please complete the Student Request/Inquiry form (MCI-R11) located at the back of your text, and deliver it to your training officer or training NCO.

Before you begin your course of study, read the Student Information page, then check the course materials against the inventory listed on that page. If any course materials are missing, notify your training officer or training NCO. If you have the required materials, you are ready to begin.

To begin your course of study, familiarize yourself with the structure of the course text. One way to do this is to read through the table of CONTENTS. Note the various subjects covered in the course and the order in which they are presented. You should find that the text is divided into several study units and a review lesson. Each study unit is composed of one or more lessons, lesson or unit exercises, and exercise responses/solutions. Leaf through the text and look at the illustrations. Read a few lesson exercise items (questions) to get an idea of the type of items that are asked. If MCI provides other study aids, such as a plotting board, familiarize yourself with them. Now, you are ready to begin work on your MCI course.

Turn to the first page of study unit 1. On this page you will find the first lesson. Study unit lessons contain either learning objectives or a lesson purpose statement and lesson text. Read the purpose statement or objectives for each lesson and then read the lesson text. Make notes on the ideas you feel are important.

Exercises may be contained within a lesson, at the end of a lesson, or at the end of the study unit. Without referring to the text, complete the items in each exercise. Check your responses against those listed at the end of the study unit. If your responses do not match those provided, restudy the lesson or lessons until you understand the correct responses.

Go on to the next lesson, repeating the above process until you have completed all the lessons in the study unit. Follow the same procedures for each study unit of the course. If you have problems with the text or exercise items that you cannot solve on your own, ask your training officer or training NCO for assistance. If they cannot aid you, request assistance from MCI on the Content Assistance Request Form included with this course.

When you have finished all the study units, complete the course review lesson. Try to complete the review lesson without referring to the text. For those items you are unsure of, restudy the text. When you have finished the review lesson and are satisfied with your responses, take the preprinted answer sheet to your training officer or training NCO for mailing to MCI.

MCI will grade the review lesson and provide you with a feedback sheet (MCI-R69). The MCI-R69 identifies items answered incorrectly and provides a reference within the text for those items. You must pass the review lesson before the final examination will be issued. If your grade is below 65 percent, you are not prepared to take the final examination. MCI will provide you with another answer sheet to resubmit your review lesson. When you pass the review lesson, MCI will forward a final examination to your commanding officer. He will arrange for the examination to be administered.

To prepare for your final examination, you must review what you learned in the course. The following suggestions will help make your reviewing not only interesting but also challenging.

CHALLENGE YOURSELF. Reconstruct the learning event in your mind. Try to recall and recapture an entire learning sequence, without referring to your notes or to the text. Can you do it? Now you just have to **look back** at the text to see if you have left anything out, and that will be an interesting read-through (review) for you. Undoubtedly, you'll find that you were not able to recall everything. But with a little effort you'll be able to recall a great deal of the information. Also, knowing that you are going to conduct a **"reconstruct-review"** will change the way you approach your learning session. You will try to learn so that you will be able to **"reconstruct the event."**

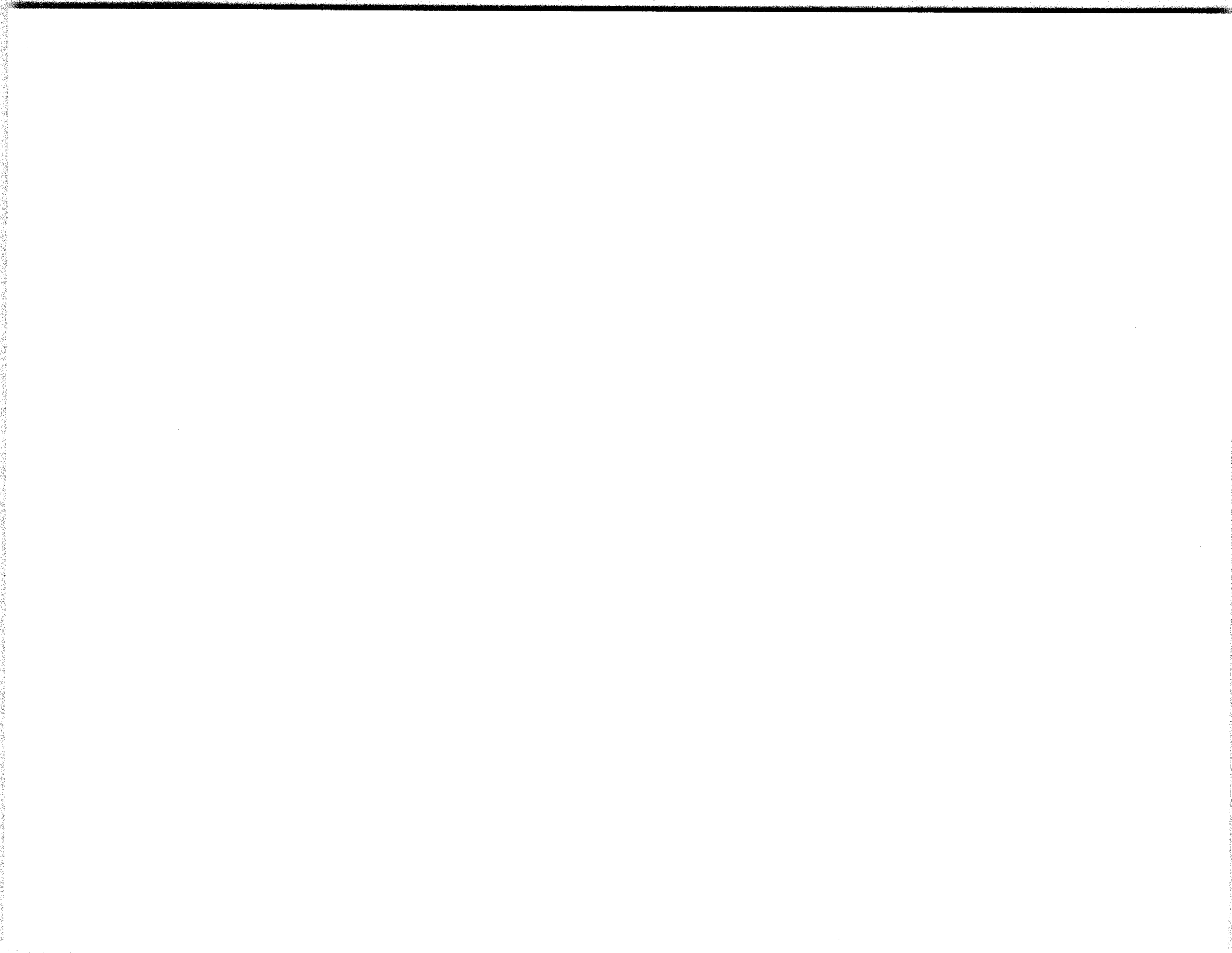
USE UNUSED MINUTES. While waiting at sick bay, riding in a truck or bus, or just waiting to muster--use these minutes to review. Read your notes or a portion of a study unit, recalculate problems, do self-checks a second time; you can do many of these things during **"unused"** minutes.

APPLY WHAT YOU HAVE LEARNED. Always, it is best to do the thing you've learned. Even if you cannot immediately put the lesson to work, sometimes you can **"simulate"** the learning situation. For example, make up and solve your own problems. Make up problems that take you through most of the elements of a study unit.

USE THE "SHAKEDOWN CRUISE" TECHNIQUE. Ask a fellow Marine to lend a hand and have him ask you questions about the course. Give him a particular study unit and let him **"fire away."** It can be interesting and challenging.

The point is, reviews are necessary for good learning, but they don't have to be long and tedious. Several short reviews can be very beneficial.

Semper Fi



STUDY UNIT 1

MISSION AND ORGANIZATION

Lesson 1. HISTORY OF NAVY-MARINE CORPS MARS

PURPOSE

This lesson provides an overview of the Military Affiliate Radio System (MARS) program from its inception.

1101. Navy's Early Associations

The U.S. Navy's association with amateur radio dates back to the very inception of the art of wireless communications. You will realize immediately the immense potential to be gained by a close relationship with amateur radio. Within ten days of the United States entry into World War I, 500 of the 6,000 U.S. radio amateurs were enlisted in the U.S. Navy and by the end of the war, another 3,500 had joined the ranks. World War II saw over 25,000 amateur radio operators serving with the armed forces and many thousands more assisting in research to support the war.

1102. Navy-Marine Corps MARS Authorized

On 17 August 1962, the Secretary of the Navy approved a recommendation made by the Chief of Naval Operations to organize a Navy-Marine Corps MARS program. This program was implemented on 1 January 1963.

1103. Department of Defense Support

On 30 November 1968, DOD issued a directive formalizing the following:

- Composition
- Mission
- Functions
- Organization of the Military Affiliate Radio System (MARS)
- DOD support of both MARS and civil amateur radio activities

On 17 January 1986, the Department of Defense reissued Directive Number 4650.2 reaffirming the role of MARS.

1104. Today's Composition

At present, approximately 3,000 participating stations with 160 military sponsored stations, 400 U.S. Navy/Coast Guard ships, and 2,450 volunteer affiliate member stations exist. Today's Navy-Marine Corps MARS program stresses quality vice quantity.

Lesson 2. MISSION

LEARNING OBJECTIVES

1. Without the aid of references, state the mission of MARS in accordance with NTP 8().
2. Without the aid of references, list three fundamental requirements of MARS communications in accordance with NTP 8().

1201. Mission

The mission of the Military Affiliate Radio System (MARS) is to provide Department of the Navy sponsored **emergency communications** on a local, national, and international basis as an adjunct to normal naval communications. Keeping this mission of emergency communications in mind, let's look at the functions of MARS.

1202. Functions

Our MARS program functions as follows:

- Provides auxiliary communications available to military, civil, and/or disaster officials during periods of emergency.

- Assists in effecting normal naval communications under emergency conditions.
- Handles morale and quasi-official record and voice traffic for armed forces and authorized U.S. Government civilian personnel assigned throughout the world.
- Creates interest and furnishes a means of training members in naval communication procedures.
- Provides a potential reserve of trained radio communications personnel for military duty when needed.
- Conducts, in conjunction with the MARS programs of the Army and Air Force, an appropriate amateur radio program as part of the annual celebration of Armed Forces Day.

Now that you have seen the functions of MARS (never forgetting that you are in the business of emergency communications), take a look at the fundamental requirements of your job as a MARS operator.

1203. Fundamental Requirements

The primary concept of day-to-day traffic passing and phone patching operations is to train for emergency communications. To this end, our organization, operating methods, and equipment must be able to meet any emergency requirement. Our daily operating methods must be such that only minor changes will be necessary when shifting to an actual emergency mode. Based on this concept, the principles of Reliability, Security, and Speed are the three fundamental requirements of MARS communications. Reliability is always paramount. It must never be sacrificed to achieve security or speed.

Exercise: Complete items 1 and 2 by performing the action required. Check your responses against those listed at the end of this study unit.

1. What is the mission of MARS?

2. List (in any order) the three fundamental requirements of MARS communications.

a. _____ b. _____ c. _____

Lesson 3. ACTIVE DUTY ORGANIZATION

LEARNING OBJECTIVE

1. Without the aid of references, list the active duty structure of MARS in accordance with NTP 8().

1301. Active Duty Structure

The MARS active duty structure/organization is headed by an individual designated by the Commander, Naval Telecommunications Command as Chief, Navy-Marine Corps MARS (fig 1-1). A Marine Corps MARS Liaison Officer is assigned to coordinate Marine Corps participation and assist Chief, MARS in the administration of the program. Chief, MARS receives communications support from the Headquarters, MARS station (NAV) located at the Naval Communication Unit, Cheltenham, MD. A MARS Cognizant Officer is assigned as a collateral duty on the staff of each Fleet Commander-in-Chief, Naval Force Commander, and CNO area coordinator for the purpose of maintaining liaison between the Commander and COMNAVTELCOM. Now that you have seen the senior MARS leaders, you will delve into the remainder of the active structure who manage our program.

1302. Region Level

Although the MARS active duty structure is one continuous chain, the day-to-day training has its roots at the region level beginning with the region director (fig 1-1). The directors are active duty naval personnel, normally from the Radioman rating. They are assigned to COMNAVTELCOM billets but come under various Commanders/Coordinators for administrative and military jurisdiction. MARS Region Directors are responsible for the administration and operation of the MARS program within their assigned region. Each base that sponsors a MARS

station has a MARS officer (assigned as a collateral duty) who provides the necessary supervision for the operation of that station. The Chief Operator (CHOP) provides the direct supervision for operating the station.

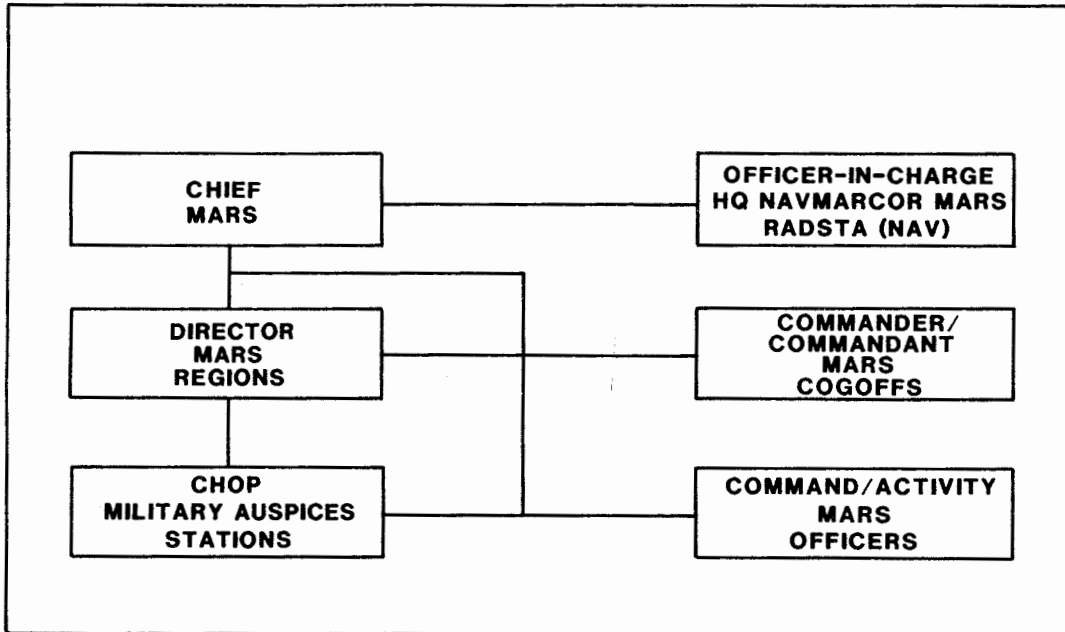


Fig 1-1. Active duty structure.

Exercise: Complete item 1 by performing the action required. Check your response against the one listed at the end of this study unit.

1. List (in any order) the active duty structure of MARS.

Lesson 4. VOLUNTEER ORGANIZATION

LEARNING OBJECTIVES

1. Without the aid of references, list the volunteer structure of MARS in accordance with NTP 3().
2. Without the aid of references, list the four types of MARS stations in accordance with NTP 3().

1401. Volunteer Structure

The volunteer structure (fig 1-2), like the active duty structure/organization, is headed by Chief, MARS. To refresh your memory, refer to paragraph 1301 to determine who the Chief works for. Chief, MARS may appoint qualified volunteer members as special assistants (such as training or emergency communications) to his advisory staff. The Chief will also appoint a Specialty Network Coordinator to handle each network such as Radiotelephone or Slow Scan TV.

You have just covered the special assistants and specialty network coordinators. Let's move on to the region level of the MARS volunteer structure/organization.

1402. Region Level

As with the active duty structure, the vast amount of our emergency communications training (day-to-day traffic handling) is conducted at the region level. This is where the individual station comes into play as the "backbone" of the MARS program. The region director appoints qualified individuals as special assistants to advise him and to provide the necessary coordination for the following positions:

- Assistant Director
- Area Coordinator(s)
- Assistant to the Director for Emergency Communications
- Assistant to the Director (Net Operations)
- Assistant to the Director (VHF FM Repeater Systems)
- Assistant to the Director (Frequency Management)
- Assistant to the Director (Training)
- Other assistants as necessary

As stated earlier, the individual station is the "backbone" of the MARS program. The stations appointed to fill these positions have many responsibilities. See NTP 8() chapter 2 for their duties and required qualifications.

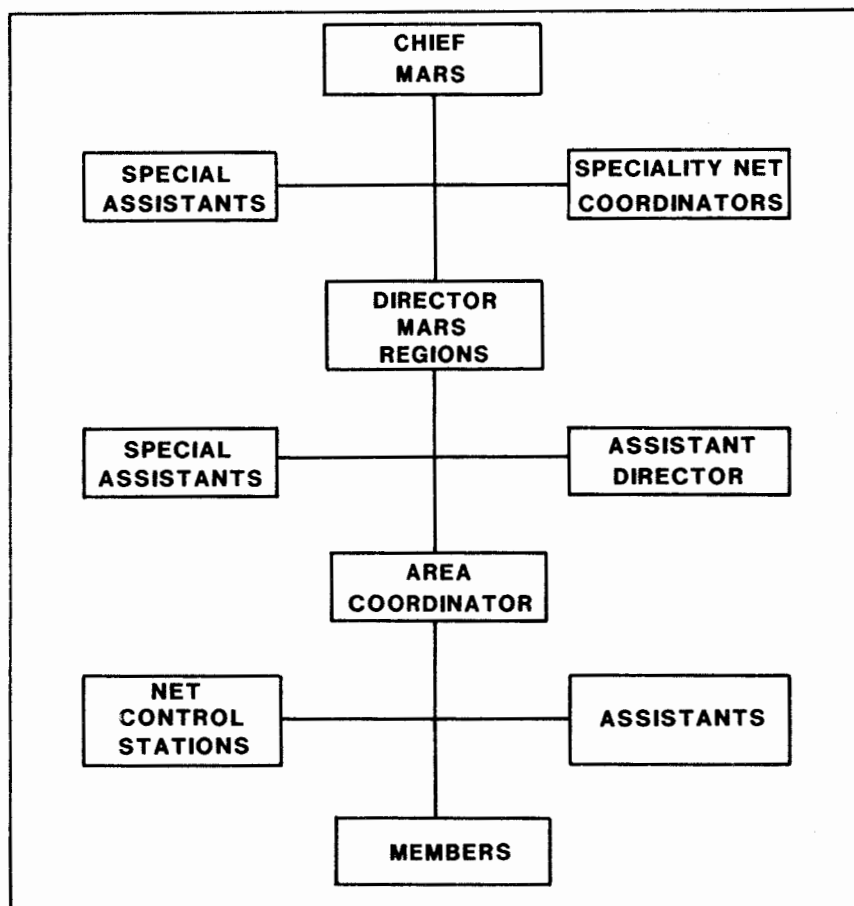


Fig 1-2. Volunteer structure.

Now that you are up to speed on the active duty and volunteer structures (regardless of two structures; still one team), let's look at the four types of MARS stations.

1403. Station Types

The Navy-Marine Corps MARS program consists of the following four types of stations:

- Military Unit - station operated by active duty military or civilian personnel serving in a MARS billet as a primary duty; also called 602 stations.
- Military Auxiliary - station manned by volunteer military personnel.
- Individual - station operated by an individual who is an affiliate member of MARS.
- Club Station - station operated by members of an amateur radio club.

Exercise: Complete items 1 and 2 by performing the action required. Check your responses against those listed at the end of this study unit.

1. List (in any order) the volunteer structure of MARS.

2. List (in any order) the four types of MARS stations.

- a. _____ c. _____
b. _____ d. _____

Lesson 2 Exercise Solutions

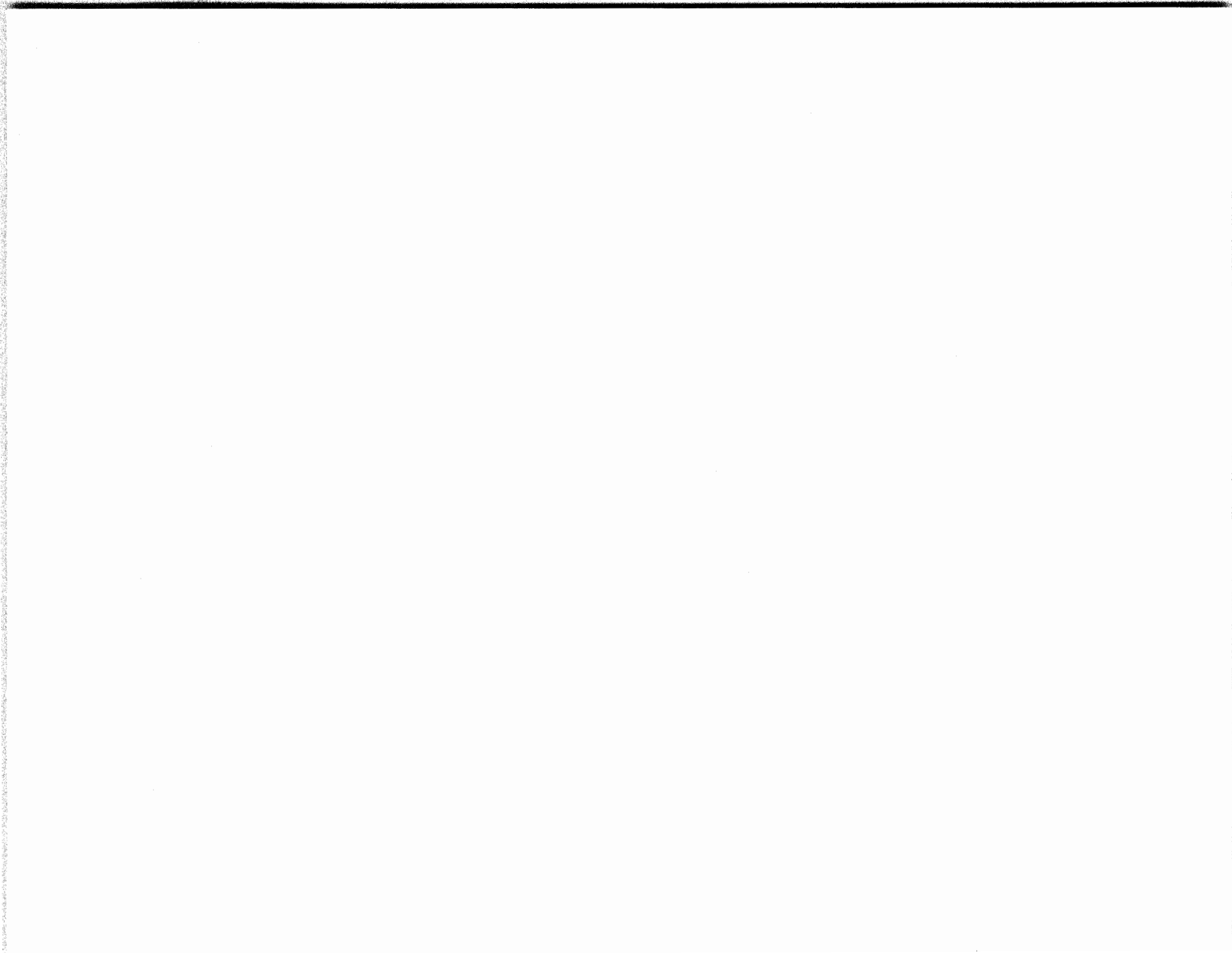
- | | <u>Reference</u> |
|--|------------------|
| 1. To provide Department of the Navy sponsored emergency communications on a local, national, and international basis as an adjunct to normal naval communications | 1201 |
| 2. a. Reliability
b. Security
c. Speed | 1203 |

Lesson 3 Exercise Solution

- | | |
|---|---------------------|
| 1. Chief, MARS; region directors; command/activity MARS officers; and Chief Operators | 1301, 1302, Fig 1-1 |
|---|---------------------|

Lesson 4 Exercise Solutions

- | | |
|--|---------------------|
| 1. Region directors, assistant directors, and area coordinators | 1401, 1402, Fig 1-2 |
| 2. a. Military Unit
b. Military auxiliary
c. Individual
d. Club | 1403 |



STUDY UNIT 2

MEMBERSHIP AND ADMINISTRATION

Lesson 1. MEMBERSHIP CRITERIA AND APPLICATIONS

LEARNING OBJECTIVES

1. Without the aid of references, state the membership criteria for military stations in accordance with NTP 8().
2. Without the aid of references, state the membership criteria for individual stations in accordance with NTP 8().
3. Without the aid of references, state the membership criteria for club stations in accordance with NTP 8().
4. Without the aid of references, state the procedure for membership renewal in accordance with NTP 8().
5. Without the aid of references, state when modification applications are submitted in accordance with NTP 3().
6. Without the aid of references, state the number of months that a trial member has to meet the minimum training requirements in accordance with NTP 8().

2101. Military Station Criteria

An amateur radio license is not required for MARS affiliation. However, all military stations are encouraged to maintain a valid amateur radio license. As stated earlier, the individual station is considered the "backbone" of the program. You will find that the membership criteria for their stations is very stringent.

2102. Individual Station Criteria

Acceptance of membership is subject to the needs of MARS and the satisfactory completion of a 90-day trial period. The term of membership is concurrent with the member's valid amateur radio license, unless sooner modified or revoked. In order to meet the criteria for membership, the applicant must:

- Possess a valid amateur radio license, which will remain valid for a minimum of one year subsequent to the date of application.
- Not be a member of Army or Air Force MARS.
- Possess a station capable of operating on a minimum of two MARS frequencies within the 2-30 MHz range.
- Agree to operate, in accordance with the rules and regulations governing MARS, for a minimum of 18 hours per quarter (12 of which must be on established Region/Area HF nets). No more than 12 hours per month may be credited toward the 18 hours.

In addition to the criteria above, the following applies:

- Must be at least 14 years of age.
- Must be a citizen of the United States or have been lawfully admitted.
- A 180-day trial period will be granted to novice class license holders to upgrade to a technician or higher class. A novice will not exceed his transmit power limitation, and he must spend one half of his 18-hour minimum requirement using the CW mode.

As noted above, the membership criteria for an individual station is very stringent.

2103. Club Station Criteria

To enable an amateur radio club to obtain MARS affiliation, the club trustee and at least two club members must be members of the MARS program. The designated MARS station trustee will be responsible for the proper administration and operation of the station. Now that you have seen the criteria for the military, individual, and club stations, let's move on to some of the paperwork that is required to become a member of Navy-Marine Corps MARS.

2104. Membership Renewal

When a station applies for or wants to renew its membership in the MARS program, the following two forms must be submitted to the area coordinator in duplicate:

- DD Form 630 "Application for Membership in Military Affiliate Radio System (MARS)."
- Form NM-630-3 MARS Questionnaire.

Figures 2-1 (a & b) are examples of the DD Form 630. Since military stations have an indefinite membership, the renewal information will be directed toward the individual and club stations. Local region information from your Area Coordinator will help you to complete the NM-630-3.

Please print all entries and sign reverse. DO NOT FOLD OR BEND.						Form Approved OMB No. 0704-0013 Expires May 31, 1989	
THIS SPACE FOR OFFICIAL USE ONLY		AMATEUR LICENSE / STATION DATA			9. APPLICATION FOR	10. TYPE	
1. MARS CALL	2. INITIAL ENTRY DATE	6. AMATEUR CALL W6YDK	7. CLASS GEN	8. EXPIRATION DATE 3-12-87	ARMY	<input checked="" type="checkbox"/> NEW	
3. AREA/DISTRICT		<input checked="" type="checkbox"/> 11. PERSONAL STATION	TRUSTEE:		AIR FORCE	RENEWAL	
4. APPROVING AUTHORITY		12. MILITARY STATION		MEMBER:	<input checked="" type="checkbox"/> NAVY/ MARINE CORPS	MODIFY	
DATE		13. CLUB STATION		MEMBER:	14. DO YOU POSSESS A STATION, IN OPERATION, CAPABLE OF OPERATING ON AT LEAST TWO MARS FREQUENCIES WITHIN THE 2 TO 30 MHz RANGE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
5. MEMBERSHIP TERMINATION		NOTE: Trustee and two club members must be affiliated with the MARS program for which this application is submitted. Enter MARS call signs above.			16. TELEPHONE (Area Code, prefix & number)		
15. MILITARY STATUS OF APPLICANT, CUSTODIAN OR TRUSTEE		15. MILITARY STATUS OF APPLICANT, CUSTODIAN OR TRUSTEE			OFFICE 202-433-3604		
17. FORMER MARS AFFILIATION (if Any)		GRADE/RANK			HOME 202-574-3625		
18. STATION LOCATION (Mailing Address)		REGULAR			AUTOVON (if applicable) 288		
19. REMARKS		RESERVE			OTHER		
20. NAME IN FULL (Individual, Military Unit or Club)		ACTIVE DUTY			18. STATION LOCATION (Mailing Address) 5616 N. NOEL DR TEMPLE CITY, CA 91780		
21. MAILING ADDRESS (Number, Street, City, State, 9-digit Zip Code)		INACTIVE DUTY			19. REMARKS		
21. MAILING ADDRESS (Number, Street, City, State, 9-digit Zip Code) 5616 N. NOEL DR TEMPLE CITY, CA 91780-5001		RETIRED			19. REMARKS		
		OTHER			19. REMARKS		

DD Form 630, 11/19 Draft

Previous editions are obsolete.

Fig 2-1a. DD Form 630, Application for Membership in Military Affiliate Radio System MARS (front).

THIS SPACE FOR OFFICIAL USE ONLY		
PRIVACY ACT STATEMENT		
AUTHORITY:	5 USC 301 and 10 USC 133.	PRINCIPAL PURPOSES:
ROUTINE USES:	The form is maintained as part of the MARS members records and as such, records the MARS radio call sign, the approving authority, termination date, current data concerning the members amateur radio license, station location and mailing address. The information on the form will not be divulged without your written consent to anyone other than established MARS officials.	Application for membership in the Military Affiliate Radio System (MARS). The form is also for the renewal or modification of current MARS membership.
		DISCLOSURE:
		Voluntary; however, failure to provide this requested information may result in refusal of membership or inordinate delays resulting from additional research required to establish satisfactory eligibility.
RELEASE CLAUSE		
In consideration of the permission extended to me by the United States through its officers and agents to engage in activities of the Military Affiliate Radio System, I do hereby, for myself, my heirs, executors and administrators, remise, release, and forever discharge the government of the United States, its officers, agents and employees, acting officially or otherwise, from any claims, demands, actions or cause of action, on account of all damage to property and personal injuries, or death, suffered by me directly or indirectly resulting		from my participation in the activities of the Military Affiliated Radio System. I certify that I will abide by all the governing rules and regulations now and herein after prescribed by the Department of Defense for the Military Affiliated Radio System. (This release is not intended to apply and shall not be construed to apply to statutory rights of personnel in the military service, nor to any other rights of individuals under policies of life insurance (E.G., NSLI) or other forms of contracts with the United States.)
22. DATE OF BIRTH (Applicant)	23. SIGNATURE OF APPLICANT (Individual, Custodian or Trustee)	24. DATE SIGNED
430123	M. T. M. M.	970109
25. SIGNATURE OF PARENT OR GUARDIAN (If applicant is under 18 years of age)		

DD Form 630 Reverse, 11/19 Draft

Fig 2-1b. DD Form 630, Application for Membership in Military Affiliate Radio System (MARS) (back).

Remember that MARS membership is concurrent with your valid amateur radio license. Therefore, MARS membership must be renewed upon receipt of the renewed amateur license. You will be allowed to continue MARS operations for 60 days after the expiration of the license. If your amateur license renewal has not been received during the 60-day grace period, contact your area coordinator for an extension. You have covered the basic requirements for application and renewal. You should review chapter 3 of the NTP 8 () for more in-depth information. Now, let's look at the basic application modification procedures.

2105. Modification Applications

Whenever there is a change to the information on your DD Form 630; two new 630's must be completed, indicating "modify" on the forms. They are then submitted as follows:

- Military station 630's are sent to Chief, MARS via the Region Director.
- Individual and Club station 630's are (if not involving a move outside the area) sent to the Area Coordinator.
- Individual and club stations moving outside the area 630's are sent to the former Area Coordinator, accompanied with an NM-630-3.

Now that you have covered the membership application and the times that it is modified, let's look at the new member.

2106. Trial Member

Once the new member has been accepted, he is assigned a call sign by the Area Coordinator. The letter "T" indicating "Trial member" is added as the fourth suffix of the new member's call sign. This enables other members to immediately identify the operator as a new member and to render assistance when necessary.

The expiration date of a member's trial period will always be on the last day of the month which will allow a minimum of four consecutive months. This allows the new member a minimum of 30 days for receipt of his assignment/preparation and 90 days to meet the minimum training requirements to become a member.

Example: You were approved for membership on 10 April, the expiration date of your trial membership would be 31 August.

The trial member will be notified of his acceptance as a member subject to the satisfactory completion of the 90-day trial period. The first 18 hours must include successful completion of a basic training program. This training program may consist of completing this course and participation in on-the-air training nets. After you have been notified of your successful completion, the Region Director will issue you a MARS license (fig 2-2) and the Membership Card NM-630-2 (fig 2-3).

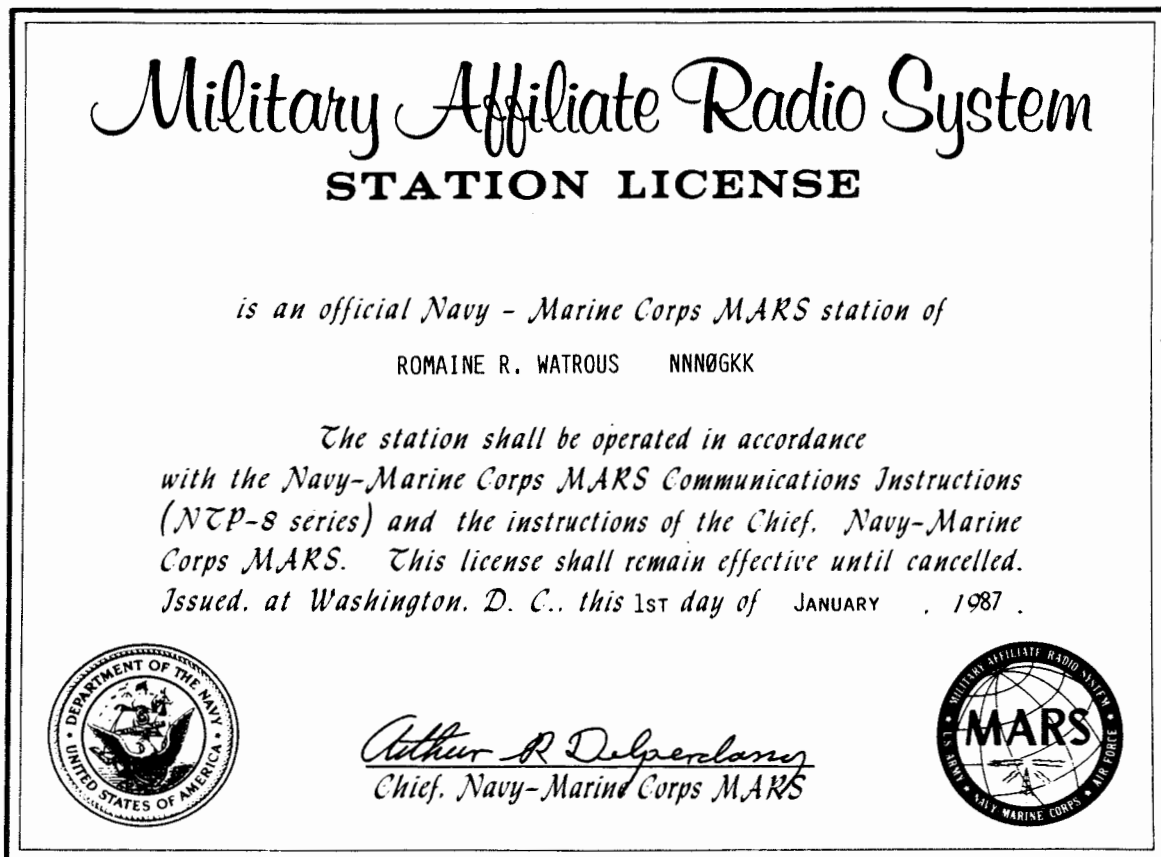
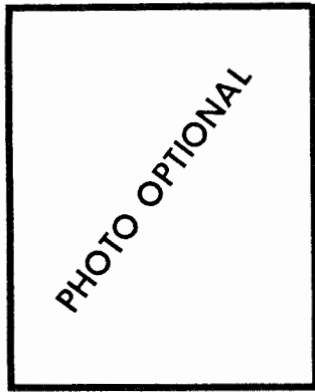


Fig 2-2. MARS license.



MEMBERSHIP CARD
U. S. NAVY/MARINE CORPS
MILITARY AFFILIATE RADIO SYSTEM



JOHN D. OLSON

This card certifies that the above named person
is a member of **NAVMARCORMARS**

NNNØBKK

CALL

9-26-90

EFFECTIVE UNTIL

P. D. Blouin

DIRECTOR, NAVMARCORMARS REGION

J. D. Olson

CHIEF, NAVMARCORMARS

Fig 2-3. Membership card.

Exercise: Complete items 1 through 6 by performing the action required. Check your responses against those listed at the end of this study unit.

1. What is the membership criteria for military stations?

2. An individual station membership is concurrent with _____

3. In a club station, the club trustee and how many club members must hold MARS membership? _____

4. What DD form must be sent in to renew your membership?

5. When must a modification application be submitted?

6. How many months does the trial member have to complete the minimum training requirements? _____

Lesson 2. MEMBER PARTICIPATION

LEARNING OBJECTIVES

1. Without the aid of references, name the authority that assigns military stations to networks in accordance with NTP 8().
2. Without the aid of references, name the authority that assigns individual and club stations to networks in accordance with NTP 8().
3. Without the aid of references, state the participation requirements for individual stations in accordance with NTP 8().
4. Without the aid of references, state who the NM-2070-1 (participation report) is forwarded to in accordance with NTP 8().
5. Without the aid of references, list the three ways that disenrollment may be effected in accordance with NTP 8().
6. Without the aid of references, list the two special membership categories in accordance with NTP 8().

2201. Military Station Assignment

Military station network assignments will normally be made by the Region Director and/or Chief, MARS. Once these assignments are accepted, they will be regarded as bonafide communication responsibilities.

If your station needs to be relieved from an assignment such as an RTTY or phone patch schedule, you must give the maximum amount of notice possible to the authority that assigned you to the net. The time limit usually is at least 72 hours. While the different special network coordinators may need more or less time to obtain a replacement, the bottom line is "DO NOT MISS A SCHEDULE." Now that the military station assignments have been discussed, let's move on to the individual and club station assignments.

2202. Individual and Club Station Assignments

When a new member or a current member arrives in an area, the Area Coordinator will assign the member (individual) to a network. You are expected to be an active participant and to make worthwhile contributions to both the network and the MARS program as a whole. Club stations are assigned in the same manner as individual stations. The recommendations of the net control stations and Area Coordinators will be the determining factor in evaluating a member's contribution to MARS. While MARS membership does not impose a "MOBILIZATION ASSIGNMENT," each member does have a moral obligation to participate as directed by competent authorities during periods of national crisis. Let's now move on to the participation requirements.

2203. Participation Requirements

It is the responsibility of the individual station to report net participation to the Area Coordinator. If a member participates from a station other than his own (military or club station), he must ensure that this period of participation is also reported to obtain proper credit.

It is also the responsibility of the individual to report other forms of activity, such as:

- Copying broadcast - list type (NAVMARCORMARS, AREA; etc.), appropriate broadcast number(s), date/time of receipt of each, and number of hours of credit claimed.
- Monitoring activity - list net designator, NECOS, date/time and number of hours of credit claimed.
- Studying NTP 8 and other MARS-related instructions - list chapter(s)/annex(es), etc., and number of hours of credit claimed.
- Correspondence courses - list course title, NAVPERS or MCI number, lesson number(s) grade(s) attained, and number of hours of credit prorated per lesson of the total credit allowed for completion of the course.

As shown on the previous page, there are many kinds of participation. The important point to remember is that no more than six hours per quarter of OFF-the-air activity can be credited toward meeting the minimum 18 hours required per quarter. You have just taken a good look at the kinds and requirements of participation. Now, let's go forward to the report used to obtain your credit for all this work.

2204. Participation Report NM-2070-1

It is the responsibility of you, the individual member, to report net activity and other participation (monthly) to your Area Coordinator. The form used to report your participation is NM-2070-1 (fig 2-4).

MARS CALL ①	PARTICIPATION REPORT FOR MONTH ②	DATE ③
NET ACTIVITY: LIST NET DESIGNATOR, DATES, HOURS AND MODES		
④		
OTHER PARTICIPATION: LIST TYPE, HOURS AND DATES		
⑤		
I certify that to the best of my knowledge the information herein is correct and true.		⑥ <i>(Signature)</i>

NM-2070-1

Fig 2-4. NM-2070-1, Participation Report.

The participation report should be completed as follows:

- ① Place your call sign here.
- ② Place month of participation in this block.
- ③ Place today's date here.
- ④ Place "Net Activity" in this block.
- ⑤ Place other participation in this block (refer to paragraph 2203).
- ⑥ Place your signature here.

As you can see, the form is rather simple to complete but very important to your career in MARS. Now that participation has been covered, let's move on to a rather negative aspect--disenrollment/termination.

2205. Three types of Disenrollment/Termination

Disenrollment/termination can be effected through resignation, nonparticipation, or cause.

- a. When you, as a member, decide that you can no longer participate in the MARS program, a letter of resignation should be addressed to the Region Director via your Area Coordinator.

b. A member is terminated when he or she fails to maintain the minimum 18 hours of creditable participation per quarter, without giving prior notification. If you know that your job or health, etc., will preclude you from participating for at least 18 hours on your assigned net, notify your Area Coordinator ahead of time.

Remember: The Area Coordinator can not read your mind. Communicators must communicate.

c. Disenrollment/termination for cause (failure to abide by the rules and regulations governing MARS) includes, but is not limited to, the following:

- (1) Excessive reports on violation of frequency tolerance and/or operating rules.
- (2) "On-the-air" conduct or other actions causing embarrassment to, or being not in the best interest of, the government.

To avoid any type of disenrollment/termination let "common sense" prevail. "Think" prior to keying the microphone. You have covered the ways of quitting or being "booted out" of the MARS program. Let's next go over the special membership categories.

2206. Special Membership Categories

In recognition of substantial contributions made to the Navy-Marine Corps MARS program, the Chief is authorized to make the following appointments:

- Associate member - is a member who has contributed substantially to MARS in the past as a Director, Assistant Director, Area Coordinator, other assistant, or as a devoted/dedicated member, who because of circumstances can not meet participation requirements for continued membership.
- Honorary member - is a person who does not possess the required amateur radio license or otherwise does not meet membership criteria and is contributing substantially to MARS directly or indirectly. An honorary member may be authorized to participate in MARS networks, but will not be eligible for equipment issue.

A member may submit nominations for this award by completing DD-630's in duplicate and submitting them to the Area Coordinator.

Exercise: Complete items 1 through 6 by performing the action required. Check your responses against those listed at the end of this study unit.

1. Who assigns military stations to networks?

2. What authority assigns individuals and club stations to networks?

3. How much "OFF-THE-AIR" time can be credited toward your 18 hours per quarter minimum participation requirement? _____

4. Once your participation report is completed, who is it sent to? _____

5. List the three ways that you may be disenrolled or terminated from the MARS program.

a. _____ b. _____ c. _____

6. List the two special membership categories.

a. _____ b. _____

Lesson 3. SPECIAL QUALIFICATIONS

LEARNING OBJECTIVES

1. Without the aid of references, list in order the six classes of NAVMARCORMARS OPERATORS (NMO) in accordance with NTP 8().
2. Without the aid of references, state the number of code groups the speedkey operator candidate must send and receive using a handkey within 70 seconds in accordance with NTP 8().
3. Without the aid of references, state the time limit for the 60 and 100 wpm TTY operator examination in accordance with NTP 8().

2301. NAVMARCORMARS Operator (NMO)

In recognition of a member's achievements and operating ability, one may be designated as a NAVMARCORMARS Operator (NMO) upon meeting the requirements for the class operator listed below. There are six classes of the NMO. The rating of NMO is for recognition only and does not give you any added responsibility or authority in the program.

- Third Class NAVMARCORMARS Operator (NM03)
 - A member of MARS for at least 3 months
 - A minimum of 40 hours participation recorded in your record within the past 3 months
 - Complete the Navy Correspondence Course, Naval Electronics, Part IA with a grade point average of 3.4
 - Send/receive CW at a speed of 13 wpm for a period of 2 minutes each with a maximum of three uncorrected errors
- Second Class NAVMARCORMARS Operator (NM02)
 - A member of MARS for at least 6 months
 - Designated as an NM03 for at least 3 months
 - Possess a General Class or higher license
 - Complete the Navy Correspondence Course, "Radioman 3 and 2" with a grade point average of 3.4
 - Send/receive CW at a speed of 15 wpm for a period of 2 minutes each with three uncorrected errors allowed
- First Class NAVMARCORMARS Operator (NM01)
 - A member of MARS for at least 1 year
 - Designated as an NM02 for 6 months
 - You must attain and record at least 80 hours of participation within the past 6 months
 - Complete the Navy Correspondence Course, "Naval Electronics, Part 1B" with a grade point average of at least 3.4 or possess an advanced class license or higher
 - Send/receive CW at a speed of 18 wpm for a period of 2 minutes each with three uncorrected errors allowed
- Chief NAVMARCORMARS Operator (NMOC)
 - A member of MARS for at least 2 years
 - Designated as an NM01 for at least 1 year
 - You must attain and record at least 80 hours of participation within the past 6 months
 - Complete the Navy Correspondence Course, "Electronic Technician 3 and 2" with a grade point average of 3.4 or possess an Extra Class license and/or FCC First Class Radiotelegraph License
 - Send/receive CW at a speed of 20 wpm for a period of 2 minutes each with three uncorrected errors allowed
- Senior Chief NAVMARCORMARS Operator (NMOSC)
 - A member of MARS for at least 3 years
 - Designated as an NMOC for at least 1 year
 - Possess either the Morse Radiotelegraph Speed-Key Certificate or the Teletypewriter Certificate
 - Successful candidates will be assigned a special MARS call sign

- Master Chief NAVMARCORMARS Operator (NMOMC)
 - A member of MARS for at least 4 years
 - Designated as an NMOSC for 1 year
 - Possess both the Morse Radiotelegraph Speed key and Teletypewriter Certificates
 - Successful candidates will be assigned a special MARS call sign

2302. Morse Radiotelegraph Speedkey Operator

To be designated as a Morse Radiotelegraph Speedkey Operator, a member must meet the following qualifications using a semiautomatic nonelectric speedkey or a semiautomatic electronic speedkey (less computerized):

- Send and receive clearly the headings of messages, with hand or speedkey, at 15 wpm, for a period of one minute. One error, properly corrected, may be allowed in each transmission.
- Send and receive distinctly with handkey 20 code groups in 70 seconds. One error, properly corrected, may be allowed, provided the total time of transmission, including corrections, does not exceed 70 seconds.
- Send and receive distinctly with speedkey 25 code groups in 75 seconds. Two errors, properly corrected, may be allowed, provided the total time of transmission does not exceed 75 seconds. Code groups shall consist of five letters/digits each.
- Send and receive distinctly with speedkey 60 words of plain language in two minutes. Two errors, properly corrected, may be allowed, provided the total time of text does not exceed two minutes. Five consecutive letters of plain language shall be counted as one word.

The speedkey used to complete the above requirements must be adjusted to make not more than twelve dots per second.

In the interest of morale and pride of accomplishment, sequentially numbered speedkey certificates will be awarded by Chief, MARS. Figure 2-5 is an example of this certificate.

CERTIFICATE NO. _____

This is to certify that:

NAME _____ NAVMARCORMARS CALL SIGN _____

having met all the requirements is hereby designated a
MORSE RADIOTELEGRAPH SPEEDKEY OPERATOR.

DATE _____

CHIEF, NAVAL MARINE CORPS
 MILITARY AFFILIATE RADIO
 SYSTEM (MARS)

Fig 2-5. Morse Radiotelegraph Speedkey certificate.

Speedkey certificates issued by competent authority within the past two years may qualify the member for the MARS certificate without an examination.

The examination may be conducted over radio. The examiner (appointed by Chief, MARS) will transmit the examination information to the examinee just before conducting the examination.

2303. Teletypewriter Operator

A sequentially numbered certificate (fig 2-6) of accomplishment with endorsements for 60 and 100 words per minute operations will be awarded to members who meet the following qualifications:

- The examination will consist of 600 words or 3000 teletypewriter functions (five functions to a word) in three messages. Three uncorrected errors will be allowed.
- 60 wpm teletypewriter = 14 minutes
- 100 wpm teletypewriter = 10 minutes
- Format lines 2 and 3 must be letter perfect.
- Format lines 5-13, a maximum of three uncorrected errors will be allowed, provided they are not numbers, symbols, or unpronounceable words. Transposed characters will count as one error only.
- Examinee may correct any errors detected in format lines 5-13 by making the error sign and typing the correct version correctly.
- The examinee will not have to place endorsements such as TUD.

CERTIFICATE NO. _____

This is to certify that:

_____ NAME _____ NAVMARCORPMARS CALL SIGN _____

having met all the requirements is hereby designated a

TELETYPEWRITER OPERATOR

for the speed indicated by the below endorsement.

_____ DATE _____

CHIEF, NAVY-MARINE CORPS
MILITARY AFFILIATE RADIO
SYSTEM (MARS)

Fig 2-6. Teletypewriter Operator Certificate.

The examination may be conducted by radio. See chapter 4 of the NTP 8() for more information. You have covered the CW and teletype special qualifications. The next area of study will be "reporting" periods.

Exercise: Complete items 1 through 3 by performing the action required. Check your responses against those listed at the end of the study unit.

1. List (in any order) the six classes of NAVMARCORMARS operators.

- | | |
|----------|----------|
| a. _____ | d. _____ |
| b. _____ | e. _____ |
| c. _____ | f. _____ |

2. You are taking the examination for the Morse Radiotelegraph SpeedKey Operator. In the second part, you realize that you must send and receive _____ code groups using a handkey within 70 seconds.

3. To complete the 60 and 100 wpm "Teletypewriter Operators" examination, an operator has _____ and _____ minutes, respectively.

Lesson 4. REPORTING PERIODS

LEARNING OBJECTIVES

1. Without the aid of references, state the reporting period for frequency usage and traffic reports in accordance with NTP 8().
2. Without the aid of references, state the reporting period for equipment inventory reports in accordance with NTP 8().

2401. Frequency Usage and Traffic Reports

Each military station, except those overseas where there is a military Area Coordinator assigned, will submit a report of all MARS frequency usage by the station to their MARS Director. Stations overseas where a military Area Coordinator is assigned will report to him. Also, the stations will report message and radiotelephone traffic handled. The frequency usage and traffic reports may be combined into one report. The appropriate Area Coordinator should prescribe the format. However, one item is always standard--the reporting period. The report shall be submitted for the period from the 26th (previous month) to the 25th of the next month.

Example: Report for July 1986 - would contain all traffic and frequency usage from 26 June through 25 July 1986.

2402. Equipment Inventory Reports

An inventory of equipment received through the MARS Equipment Program (by each military station) is conducted by category in accordance with Annex India of the NTP 8(). The inventory is conducted annually (31 December) and/or upon the occasion of a change in station custodian. The inventory list and the results will be forwarded to the Region Director no later than 15 days after the completion of the inventory.

Exercise: Complete items 1 and 2 performing the action required. Check your responses against those listed at the end of this study unit.

1. What is the reporting period for frequency usage and traffic reports?

2. How often are equipment inventory reports submitted?

Lesson 5. Correspondence, Postage, and News Media

LEARNING OBJECTIVES

1. Without the aid of references, state how correspondence will be handled in accordance with NTP 8().
2. Without the aid of references, state the rule for using "postage paid" envelopes in accordance with NTP 8().
3. Without the aid of references, state the rule for dealing with the news media in accordance with NTP 8().

2501. Correspondence

Correspondence concerning MARS shall be handled within the framework of the MARS program. As a member or military station, you should correspond with the lowest echelon from which an answer can be expected. In other words, do not forward a request to the Region Director when the Area Coordinator can answer the question. You must remember to inform the chain of command and to include your call sign. The correspondence procedures above are concise and to the point, as all such correspondence should be. Now, let's take a look at postage paid envelopes.

2502. Postage

Postage and Fees Paid envelopes and labels will be provided to individual and club members by the Region Director on an "as needed basis." These envelopes and labels are used for MARS business. They will have the activity and Region Director's address appearing in the return address portion. The member will insert his call sign under the return address. Military stations should use envelopes and labels in accordance with local command guidelines. Next, you will look at the rules for news releases.

2503. News Media

The local news release of information concerning MARS to the news media by an individual MARS member will be accurate and factual to preclude incorrect interpretation by the public and will be reviewed/approved by the Region Director before release. Military stations should use the command's Public Affairs Office for releasing information and should review the release with the Region Director before publication. Information concerning MARS of a national interest or proposed release to national news media should be forwarded to Chief, MARS for appropriate coordination and release.

Exercise: Complete items 1 through 3 by performing the action required. Check your responses against those listed at the end of this study unit.

1. How is MARS correspondence handled?

2. Where is your address and call sign placed on a postage paid envelope?

3. Who approves local news releases?

Lesson 1 Exercise Solutions

	<u>Reference</u>
1. License not required but activities are encouraged to maintain a license	2101
2. its amateur license.	2102
3. Two	2103
4. 630	2104
5. When information on current DD-630 changes	2105
6. Three	2106

Lesson 2 Exercise Solutions

1. Region Director and/or Chief, MARS	2201
2. Area Coordinator	2202
3. Six hours	2203
4. Area Coordinator	2204
5. a. Resignation	2205
b. Nonparticipation	
c. Cause	
6. a. Associate	2206
b. Honorary	

Lesson 3 Exercise Solutions

1. a. NM03	d. NMOC	2301
b. NM02	e. NMOSC	
c. NM01	f. NMOMC	
2. 20		2302
3. 14--10		2303

Lesson 4 Exercise Solutions

1. 26th to the 25th of each month	2401
2. Annually and/or upon change of station custodian	2402

Lesson 5 Exercise Solutions

1. Correspondence concerning MARS shall be handled within the MARS framework	2501
2. Under the return address portion	2502
3. Region Director	2503

STUDY UNIT 3
OPERATIONAL CONCEPT

Lesson 1. NETWORKS AND NETS

LEARNING OBJECTIVES

1. Without the aid of references, list the types of MARS nets/networks in accordance with NTP 8().
2. Without the aid of references, define a "directed" and "free" net in accordance with NTP 8().
3. Without the aid of references, list the responsibilities of a net control in accordance with NTP 8().
4. Without the aid of references, state how net designators are derived in accordance with NTP 8().

3101. Network Types

To enable MARS to fulfill its mission, it is necessary that both intra (inside the region) and inter (between regions) region networks be established and maintained (fig 3-1) to meet the requirements for effective and efficient MARS operations. Networks are categorized by the use for which they were primarily established; however, all networks are to be available to meet the requirements of the MARS mission. MARS uses the following types of nets/networks:

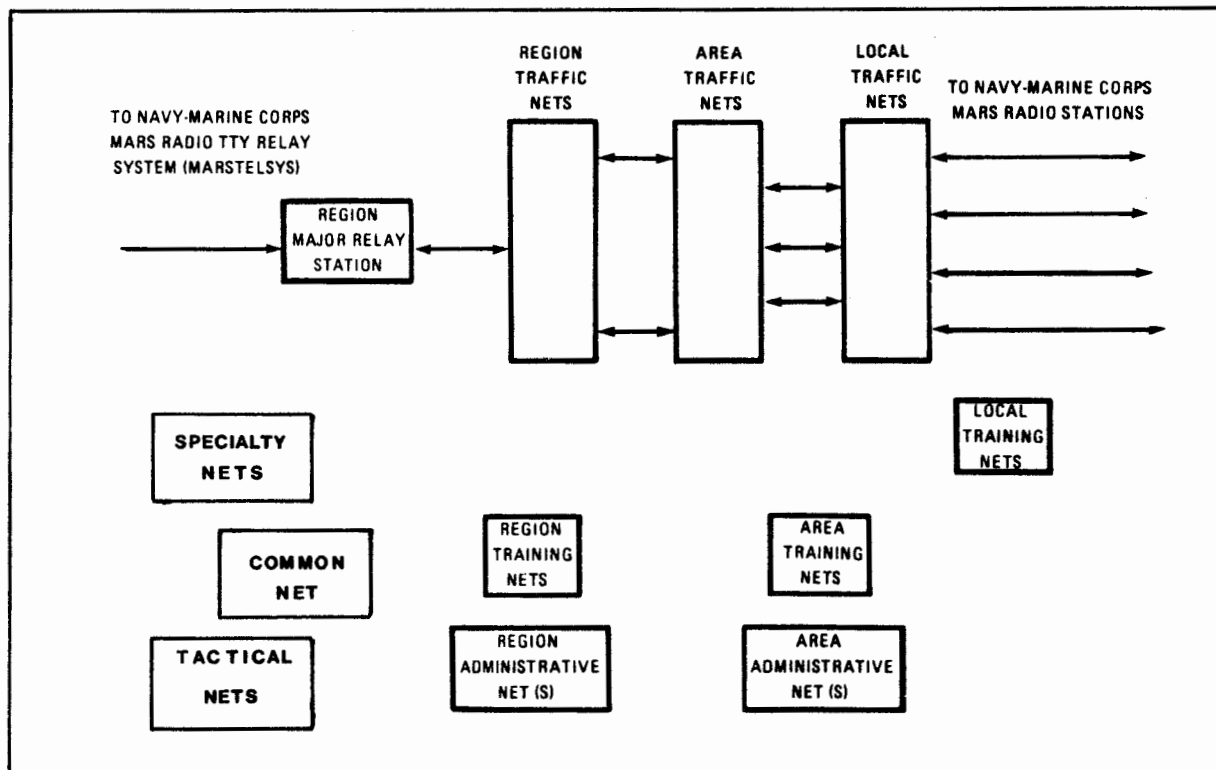


Fig 3-1. MARS nets.

- Administrative net - a net established for administrative purposes linking any echelon of authority with its immediate subordinates and such other stations as deemed necessary.
- Training net - a net established to promote technical and procedural training in matters pertaining to military communications.
- Traffic net - a net established to handle record message traffic.
- Specialty net - a net primarily established for a purpose other than administrative, traffic, or training. Phone patch, slow scan TV, facsimile operations, hi-tec, and the antarctica net are examples of MARS operations that fall within this category. Specialty nets are established only under the cognizance of Chief, MARS. You should review Annex G NTP 8() for a more in-depth study of the MARS specialty nets.
- Common net - a net established by Chief, MARS for coordination between all MARS region directors and major/primary radio stations.
- Tactical net - this net may be established during actual or exercise emergencies only to provide point-to-point communications between stations when other MARS facilities do not meet the requirements. The tactical net will be discussed in greater detail in study unit 6.

You have been introduced to the six types (administrative, traffic, training, specialty, common, and tactical) of MARS networks. You will now move on to "directed" and "free" nets.

3102. Directed Net

Stations must obtain permission of the Net Control Station (NECOS) before transmitting traffic on a directed net. This is by far the most efficient type of operation for a traffic net during times of heavy traffic. All MARS nets will start (when opened) as directed nets.

3103. Free Net

When operating conditions permit, the NECOS may direct that the net be operated as a free net. Member stations are then authorized to transmit traffic to other net stations without obtaining prior permission from the NECOS. Now that you have learned the difference between a directed and a free net, let's take a look at the individual who controls the net.

3104. Net Control Responsibilities

The Net Control Station (NECOS) is a station designated by appropriate authority to direct and control the operation and flow of all traffic on the net. The station serving as the NECOS will function to exercise circuit discipline and expedite traffic. He is also charged with the following responsibilities:

- Expediting traffic on the net.
- Maintaining circuit discipline.
- Limiting transmissions to the minimum essential.
- Monitoring traffic to determine and correct procedural discrepancies.

Authority of the NECOS extends only to the net operations. His decisions are final. Administrative jurisdiction over the net members is limited to reporting net participation.

The Alternate Net Control Station (ALNECOS) will assume the duties of NECOS when directed or when NECOS has failed to answer after three successive calls. If both NECOS and ALNECOS are not present, a member of the net should assume the duties of NECOS until such time as the NECOS or ALNECOS report aboard.

3105. Net Designators

Net designators are assigned to each net and shall be derived as follows:

- First numeral of the designator will denote the MARS Region in which the net is located. Networks under the cognizance of Chief, MARS shall be designated by the numeral "Ø."

- Second letter, as assigned by the Region Director, will indicate the area in which the net is located. The letters "X" and "Z" shall only be used to denote region nets and those under the cognizance of Chief, MARS, respectively.
- Third digit will denote the first, second, third etc., net within the region or area, regardless of its purpose or mode of operation. The third digit in designators for nets under the cognizance of Chief, MARS will denote the first, second, third etc., net within each specialty network.
- Fourth letter will denote the type of net. They are as follows:

Administrative	"A"
Traffic	"B"
Training	"C"
Radio-telephone	"V"
Radio-teletype	"W"
Slow-scan TV	"X"
Facsimile	"Y"
Other	"Z"

Example 1: The second Specialty Radio-Telephone Net: ØZ2V

Example 2: The first traffic net in the FIFTH Navy-Marine Corps MARS Region: 5X1B

Example 3: The third training net in the Virginia Area, SECOND Navy-Marine Corps MARS Region: 2B3C

Exercise: Complete items 1 through 5 by performing the action required. Check your responses against those listed at the end of this study unit.

1. List (in any order) the types of MARS nets/networks.

- a. _____ c. _____ e. _____
 b. _____ d. _____ f. _____

2. Define a directed net.

3. Define a free net.

4. List (in any order) the responsibilities of a net control.

- a. _____ c. _____
 b. _____ d. _____

5. What does the fourth letter denote in a net designator?

Lesson 2. SUB-SYSTEMS

LEARNING OBJECTIVES

1. Without the aid of references, state the purpose of the Radio Teletypewriter Relay System (MARSTELSYS) in accordance with NTP 8().
2. Without the aid of references, state the purpose of the MARS VHF FM Repeater System (MARSREPSYS) in accordance with NTP 8().

3201. MARSTELSYS

The MARS Radio Teletypewriter Relay System (MARSTELSYS) functions to handle record message traffic among MARS major geographical areas. A functional diagram of the MARSTELSYS is shown in figure 3-2. MARS regions are shown in figure 3-3.

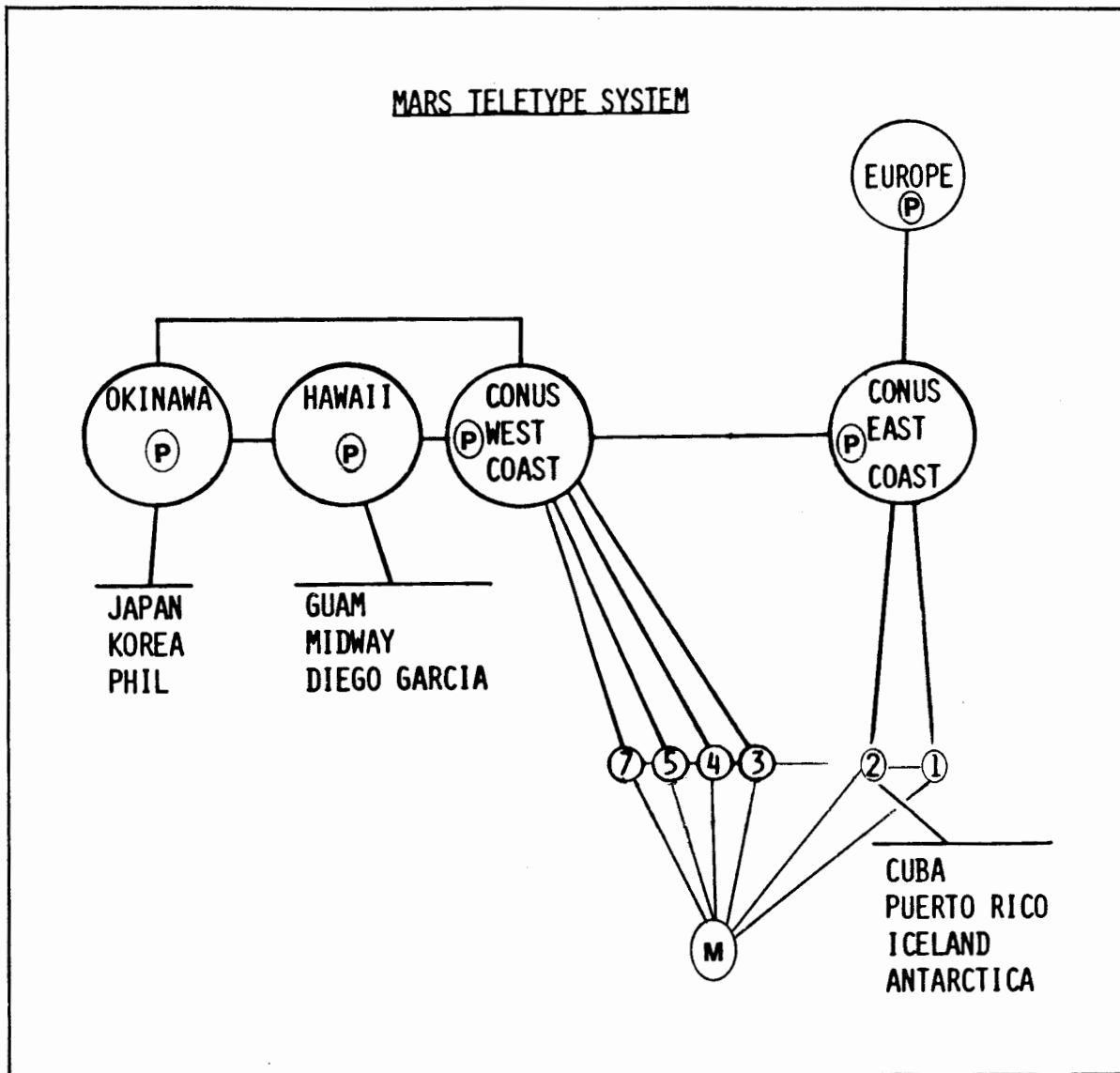


Fig 3-2. MARSTELSYS.

The system is made up of Primary and Major relay stations. The Primary relay stations (shown as **P** in fig 3-2) are designated by Chief, MARS and act as a link between major stations. The Major relay stations (shown as **M** in fig 3-2) are designated by the Region Director. Each region has at least one Major relay station that acts as a collecting point for both incoming and outgoing traffic.

Navy-Marine Corps MARS Regions

AND

Radio Teletypewriter Relay System Routing

REGIONS

FIRST-NOASI

CT, DE, MA, ME, NH,
NJ, NY, OH, PA, RI,
VT

SECOND-NOASC

AL, DC, FL, GA, KY,
MD, MS, NC, SC, TN,
VA, WV, CARIBBEAN,
EUROPE AND ICELAND
ANTARCTICA

THIRD-NOASF

AR, LA, NM, OK, TX,
PANAMA

FOURTH-NOASG

CO, IA, IN, IL, KS,
MI, MN, MO, ND, NE,
SD, WI, WY

FIFTH-NOASE

AZ, CA, NV, UT

SEVENTH-NOASK

AK, ID, MT, OR, WA

EIGHTH-NOASL

HI, PACIFIC AREA
and INDIAN OCEAN

NOGCG--CUBA
NOGCI--PHILLIPINES
NOGCJ--JAPAN
NOGCK--KOREA
NOGCM--GUAM

OVERSEAS AREAS

NOGCO--OKINAWA
NOGCR--PUERTO RICO
NOGCY--ICELAND
NOICE--ANTARCTICA
NOGCN--DIEGO GARCIA

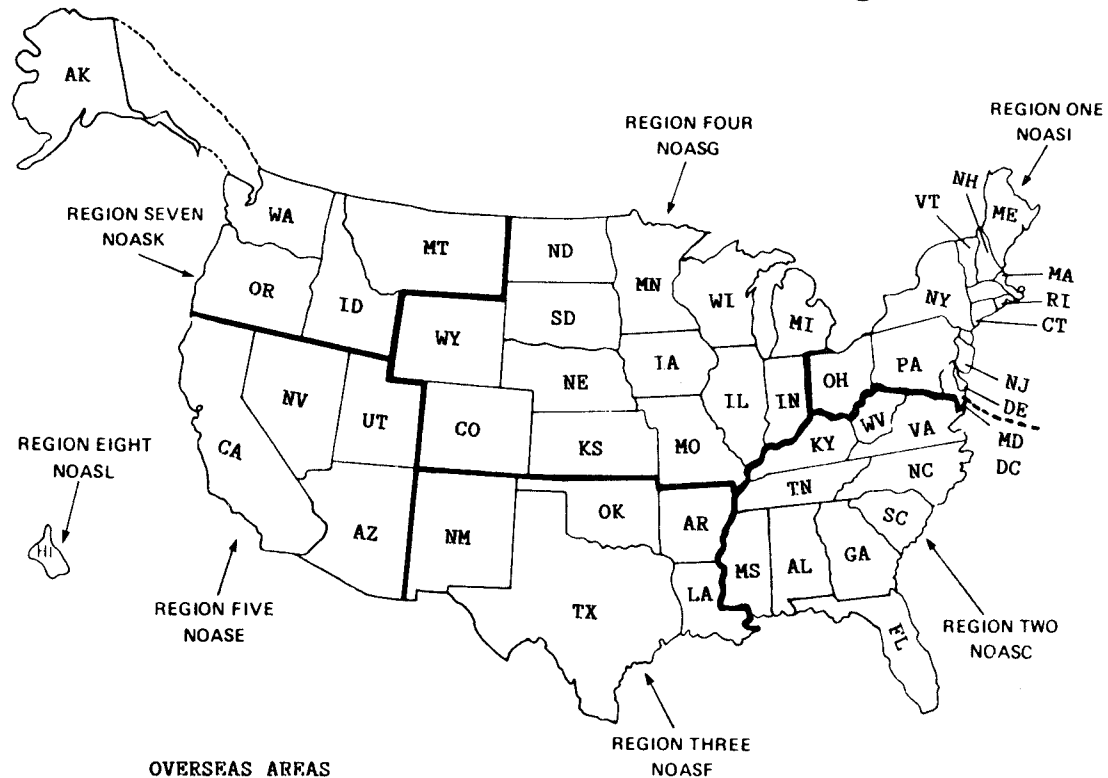


Fig 3-3. MARS regions.

3202. MARS VHF FM Repeater Systems (MARSREPSYS)

The concept of the MARS VHF Repeater System is to extend the line of sight communications range of fixed, portable, and mobile VHF communication facilities, thereby providing a more efficient use of the limited frequency allocations and reducing congestion in the prime lower frequencies. Additionally, the MARSREPSYS significantly improves the potential of MARS to provide telecommunications support for the Department of the Navy disaster control operations, as well as local civil disaster control, by providing a highly mobile and effective quick reaction communications capability for local area communications.

Exercise: Complete items 1 and 2 by performing the action required. Check your responses against those listed at the end of this study unit.

1. What is the purpose of the MARSTELSYS?

2. What is the purpose of the MARSREPSYS?

Lesson 3. REFILE NETWORKS

LEARNING OBJECTIVES

1. Without the aid of references, state the purpose of the Traffic Exchange Network (TEXN) in accordance with NTP 8().
2. Without the aid of references, state the purpose of the Amateur Refile Points/Stations in accordance with NTP 8().
3. Without the aid of references, state the purpose of the MARS/Naval Telecommunication System Refile Points in accordance with NTP 8().

3301. Traffic Exchange Network (TEXN)

Recent Department of Defense interest has centered upon interservice operability and has resulted in a requirement for an operational interservice (Army, Air Force, and Navy MARS) traffic exchange network.

a. The Traffic Exchange Network (TEXN) is in business to provide a means to expedite the delivery of record traffic on a local, state, or MARS area basis. It is not to be used to circumvent other established record traffic networks. Traffic originated by a MARS service will be routed within that service for as long as possible and only transferred to another service when that action will result in enhanced delivery time. Refile of traffic into the amateur radio service is authorized, but not encouraged.

b. The following procedures will be used when establishing traffic exchange network operations:

- (1) Cognizant Region Director will authorize the establishment/disestablishment of all TEXN operations.
- (2) Area Coordinator will coordinate with their MARS service counterparts.
- (3) Area Coordinators will assign stations to act as service representatives, and only those stations will be authorized to enter another service MARS network. Entry into networks will be limited to the absolute minimum number of stations required to effect efficient traffic exchange.
- (4) Other service MARS stations will only be allowed on NAVMARCORMARS frequencies while TEXN operations are in progress.
- (5) Any MARS station may be authorized to operate on any other MARS service frequency after coordination has been accomplished and the operation approved by appropriate MARS officials.

- (6) Stations entering a net will use the same emission and mode being used by the net.
- (7) Frequencies to be used will be identified by the "ASSIGNED FREQUENCY" only.
- (8) Frequency usage reports will be submitted using established procedures by the MARS service having control of the frequency.
- (9) TEXN operations should take place on, but are not limited to, already established nets.
- (10) Directors may treat areas within their regions as single entities or combine them into sections.
- (11) Traffic exchange under normal conditions, is limited to state/area/sections only.

Now that you have looked at our newest method of traffic exchange, let's address another method of passing third party traffic.

3302. Amateur Refile Points/Stations

MARS members may engage in MARS/Amateur refile for the purpose of accepting amateur radio service messages addressed to armed forces personnel. Messages accepted for refile must meet the same rigid standards as those originated by a MARS station. Those members participating in this activity shall provide the Region Director with the following information:

- Amateur Radio Call Sign
- Frequency(ies)
- Schedule(s), (date and times in ZULU)
- Name of Amateur Network (if any)

This type of MARS activity may be credited for participation.

This concludes the amateur refile point information. You will now move on to the MARS/NAVTELCOMMSYS refile points.

3303. MARS/Naval Telecommunication System Refile Points

The Region Directors, coordinating with their CNO area coordinators and Navy and Marine Corps command/activities, will designate Region and Major Area primary MARS/Naval Telecommunication System refile points to facilitate message refile in time of need. The Headquarters MARS radio station (NAV) is the designated World-Wide Primary MARS/NAVTELCOMMSYS refile station.

Exercise: Complete items 1 through 3 by performing the action required. Check your responses against those listed at the end of this study unit.

1. State the purpose of TEXN.

2. State the purpose of Amateur refile points/stations.

3. State the purpose of MARS/NAVTELCOMMSYS refile points.

Lesson 4. CALL SIGNS, FREQUENCIES, EMISSIONS, AND POWER OUTPUT

LEARNING OBJECTIVES

1. Without the aid of references, name the block of call signs assigned to MARS in accordance with NTP 8().
2. Without the aid of references, state the rule for the usage of MARS frequencies in accordance with NTP 8().
3. Without the aid of references, state how emissions are designated in accordance with NTP 8().
4. Without the aid of references, state the rule for power output in accordance with NTP 8().

3401. Call signs

MARS has been assigned the block of call signs with the NNNØ prefix. All MARS stations will be assigned a call sign from this block. Requests for special assignments are not desired. Special blocks have been set aside by Chief, MARS to help identify the following stations:

● Marine Corps Stations	NNNØMAA-NNNØMZZ
● Navy Stations	NNNØNAA-NNNØNZZ
● Area Coordinators	NNNØGAA-NNNØGEZ
● Senior Chief NAVMARCORMARS Operators	NNNØGFA-NNNØGJZ
● Master Chief NAVMARCORMARS Operators	NNNØGKA-NNNØGOZ
● Chief, MARS, Staff, Directors, and Assistants	NNNØASA-NNNØASZ
● Specialty Net Coordinators	NNNØPPA-NNNØPPZ

a. MARS call signs are authorized for use on MARS networks only, except when needed during actual communication emergencies or when otherwise authorized by competent authority. The use of Amateur Radio call signs on MARS networks is not authorized. Military call signs may be used on MARS networks during actual or exercise communication emergencies and when otherwise authorized by competent authority.

b. The Region Director may authorize call signs for assistants by using his administrative call sign with a number suffix. The following titles and corresponding suffix numbers are prescribed.

ONE	Assistant Director
TWO	Emergency Communications Planning
THREE	Net Operations/Reports
FOUR	Training
FIVE	Technical Matters
SIX	Special Projects
SEVEN	VHF FM Repeaters
EIGHT	Public Affairs/Bulletin
NINE	Library
TEN	RTTY Operation
ELEVEN	Logistics
TWELVE	Equipment Administration
THIRTEEN	Personnel Administration
FOURTEEN	Computers/Data Processing
FIFTEEN	Army/Air Force MARS Liaison
SIXTEEN	Frequency Monitoring

c. Other assistants, as necessary, may be assigned with suffix numbers SEVENTEEN through TWO NINE upon approval by Chief, MARS. The Director may temporarily assign his administrative call sign with a suffix number of THREE ZERO through THREE FIVE when necessary during emergencies. The Director will inform Chief, MARS, by priority message when assigned and circumstances under which the assignment was made. Lastly, the Area Coordinator may also use the suffix numbers to assign call signs to their assistants by adding the number to his call sign such as NNNØGAF TWO. Now that the call signs are fresh in your mind, let's take a look at the rules for frequency usage.

3402. Frequencies

MARS frequencies are assigned by the Director, Naval Electromagnetic Spectrum Center to Chief, MARS. Chief, MARS, coordinates the usage of all MARS frequencies. Frequency assignments are made on a strict "Not to Interfere" basis (NIB) with operational users. One of the fundamentals of a frequency allocation plan is assurance that the maximum sharing of frequencies is affected. This is accomplished as follows:

- Geographical sharing - this method is one of the more effective means of frequency sharing. However, it is subject to the variable nature of radio wave propagation conditions, especially with regard to the ionosphere. These variations may result in periodic harmful interference among users of the same or adjacent frequencies. An example of geographical sharing would be to allow Region 5 and Region 1 to use 7346.5 KHZ at the same time. See figure 3-3 for region locations.
- Time sharing - this method requires that stations operate on a schedule so that two stations or nets do not use the same frequency at the same time. Time sharing is effective in avoiding interference but is somewhat limited in military applications.
- Combinations - certain frequencies, because of the large number of MARS Regions and Areas for which they are authorized, are subject to combinations of geographical and time sharing. In making such assignments, propagation characteristics and time zone differences between Regions/Areas are major factors to be considered. Because of the dense use of the radio spectrum and the resultant close spacing of frequency assignments, some adjacent channel interference can be expected.

The Federal Communications Commission and Communications security activities forward reports of violations to the Commander, Naval Telecommunications Command. Reports involving MARS stations are referred to Chief, MARS, who forwards them to the appropriate Region Director for corrective action. NAVMARCORMARS Frequency Monitors (FYMON) are appointed by Chief, MARS, and Region Directors as Staff assistants. Area level assistants may also be appointed at the discretion of the Region Directors. Frequency Monitors will report off-frequency operation or spurious emissions to the offending station on a MARS MONITORING REPORT (NM 2070-50) (fig 3-4), or by message. Information copies are sent to the Director and Area coordinator concerned. Numerous violations will be considered as grounds for termination.

MARS MONITORING REPORT NM - 2070 - 50 (Mar. 79)	
From:	To:
Your station _____ was monitored operating on/near frequency _____ by Frequency Monitoring Station (FYMON) at _____ Z, _____ 19___. The results of this observation disclose:	
SECTION I	<input type="checkbox"/> Your station is operating in complete compliance with NTP-8 Annex B. Your operation is a credit to the MARS program. <input type="checkbox"/> Your station is generally complying with NTP-8 Annex B. However, your attention is invited to discrepancy(ies) shown in Section II. Request this minor infraction be corrected as soon as possible. <input type="checkbox"/> Your station is in non-compliance with NTP-8 Annex B. Details are contained in Section II and III below. Your immediate action to correct this infraction is required.
	Your station was observed as follows: <i>(amplifying information contained in Section III)</i> . <input type="checkbox"/> FREQUENCY ACCURACY (Measured Frequency _____ Assigned Frequency _____) <input type="checkbox"/> Well within authorized tolerance <input type="checkbox"/> Barely within authorized tolerance <input type="checkbox"/> In excess of authorized tolerance by approximately _____ Hertz
	<input type="checkbox"/> PURITY OF EMISSION <input type="checkbox"/> OTHER
SECTION III	Details and amplifying information pertaining to this infraction/problem are:
SECTION IV	The following actions are required by your station: <input type="checkbox"/> Take immediate corrective action to resolve the cited discrepancy(ies). Reply is not required. <input type="checkbox"/> Advise this office immediately upon correction of cited discrepancy(ies), giving details of corrective action. <input type="checkbox"/> Immediately cease and desist operation of your station on MARS frequencies until cited discrepancy(ies) is/are corrected. <input type="checkbox"/> Immediately cease and desist operation of your station on MARS frequencies until approval is provided for reactivation by this office. <input type="checkbox"/> OTHER
Remarks:	

Fig 3-4. MARS Monitoring Report.

MARS frequencies must be used as to avoid interference with other military communications which take precedence. If such interference develops and the military station affected requests that you cease operation on the frequency in use, such action shall be taken immediately, until the frequency is clear. However, if you do experience interference while operating on an assigned MARS frequency, it must be reported using the following format.

Station Causing Interference

- A. Call sign or other identification
- B. Measured frequency (Center of intelligence)
- C. Type of emission and traffic being transmitted
- D. Measured bandwidth of interfering signal (Indicate lowest and highest frequencies. Give type of measuring equipment.)
- E. Signal strength (If field meter not available, use scale of 1 to 5.)
- F. Severity of interference (Indicate percentage of copy or intelligence lost due to interference.)

Transmitting Station Being Interfered With

- G. Call sign or name of station
- H. Assigned frequency
- I. Measured frequency
- J. Type of emission or signals being transmitted
- K. Measured bandwidth
- L. Signal strength

Receiving Station Experiencing Interference

- M. Call sign or name of station
- N. Location. Give coordinates in latitude and longitude if possible. Indicate nearest major city, and state or country.
- O. Date and time of interference and duration in minutes (Example: 251030Z(22), 261143Z(5); etc.)
- P. Other particulars
- Q. Requested action

Note: An X will be inserted after any of the above letters if no information on that item is reported.

The above facts should be reported to Chief, MARS, Special Assistant for Frequency Management, Region Director, and other addressees as appropriate. Next, you will see how emissions are designated.

3403. Emission Designations

Emissions are designated according to their classification and the width of the frequency band occupied. Classification is made according to type of modulation, mode of transmission, and supplementary characteristics. You should refer to Annex B NTP 8() for a more in-depth study of emission designations. Now that call signs, frequencies, and emissions have been discussed, you will move on to power output.

3404. Power Output

Since we share our limited resource of frequencies, you must always use the minimum power necessary for reliable communications. Just because 1,000 watts is authorized for a frequency, that doesn't mean you must use it. Start out at the lowest power level and gradually increase it if no one is receiving you clearly. Remember, most of the time a simple swing of the antenna or lowering of the mike gain will clear up the problem.

Exercise: Complete items 1 through 4 by performing the action required. Check your responses against those listed at the end of this study unit.

1. What block of call signs is assigned to MARS?

2. State the rule for the usage of MARS frequencies.

3. How are emissions designated?

4. State the rule for power output.

Lesson 5. MESSAGE CRITERIA, MINIMIZE, AND COMMUNICATIONS SECURITY

LEARNING OBJECTIVES

1. Without the aid of references, list the types of messages that may be transmitted via MARS in accordance with NTP 8().
2. Without the aid of references, list the types of messages that will not be transmitted via MARS in accordance with NTP 8().
3. Without the aid of references, state the rule for message solicitation in accordance with NTP 8().
4. Without the aid of references, name the station that may cancel a message in accordance with NTP 8().
5. Without the aid of references, state how messages are filed in a message or station file in accordance with NTP 8().
6. Without the aid of references, list the contents of a general message file in accordance with NTP 8().
7. Without the aid of references, state the role for message disposal in accordance with NTP 8().
8. Without the aid of references, state the purpose of a communications improvement memorandum (CIM) in accordance with NTP 8().
9. Without the aid of references, name the only authority that can impose minimize in accordance with NTP 8().
10. Without the aid of references, list the three elements of communications security in accordance with NTP 8().

3501. Authorized Messages For Transmission

MARS operators must consider the capabilities of MARS facilities when accepting messages for transmission. The following types of messages are authorized for transmission:

- Administrative traffic pertaining to MARS.
- Traffic of an official, semi or quasi official nature.
- Exercise traffic (drill messages).
- During periods of local, national, or international emergencies, any message relative to the emergency may be transmitted.
- Personal and third party messages addressed to and/or from Armed Forces personnel and authorized government employees.
- Only personal and third party record messages in the English language that are of a nonbusiness nature and which would not normally be sent by available commercial means may be handled. The "FROM LINE" of such messages must always contain the name, city and state of the person who actually originated the contents of the text.

3502. Messages Not Authorized For Transmission

The following types of messages are not authorized for transmission via MARS:

- Serious Illness or Death
 - Messages concerning the initial notification of serious illness or death of a member of the immediate family (wife, child, mother, father, brother, sister, or guardian) are not authorized for transmission via MARS. Refer personnel desiring to originate a message of this type to the American Red Cross.
 - Messages concerning funeral plans or inquiries concerning the death in the immediate family may be handled via MARS.
 - Messages concerning notification of serious illness or death of other relatives or close friends may also be handled by MARS, but they must be addressed to the Commanding Officer or Chaplain.
 - For civilian addresses, deliver to a clergyman for personal delivery or consult the local law enforcement officials and request that they assume responsibility for delivery.
 - Under no circumstances will a MARS member deliver such messages directly to the addressee.
- Legislative matters - no messages will be handled by MARS which relate to legislative matters.
- Military operations - personal and third party messages which relate to military operations will not be handled by MARS.
- Military information - pertaining to unit designation, strength, composition, function, or logistical matters will not be handled by MARS.
- Location and movement - of units, aircraft, ships, supplies, and personnel will not be handled by MARS.
- Information of economic, political, or morale nature - pertaining to troops or nationals of the United States or any country will not be handled by MARS.
- Casualty information - relating to injuries and deaths from enemy action will not be handled by MARS.
- Business matters - any message which may result in financial or material gain is considered business in nature and will not be handled via MARS networks.
- Avoidance of postage fees - messages deemed to be an obvious attempt to avoid postage fees will not be accepted by the originating MARS station.
- Messages to ships - due to the constantly changing location of ships and their operational schedules no messages will be accepted for transmission to ships. However, ships do send messages from time to time. If you receive a message that must be serviced, the service message would be sent to the afloat specialty net coordinator. The above restriction also applies to phone patch operations.

3503. Message Solicitation

A MARS member may publicize his personal message handling capabilities but will not actively solicit third party messages. Members may request permission to establish a portable station for the purpose of accepting message traffic, provided that such a station is co-located with an appropriate MARS display that depicts the purpose of MARS. This portable station must be in conjunction with a convention or program sponsored by national or local government or sanctioned civilian amateur radio organization. Refer to chapter 5 of the NTP 8() for the information needed to complete the request.

3504. Cancellation of Messages

A message can only be cancelled by the originating station. Cancellation of a message which has been transmitted may be accomplished only by a new message.

3505. Station Files

Stations involved in message relay may establish a station file. This file will contain a copy of each message relayed. Messages will be filed in date-time group order. Messages that do not have a date-time group will be filed behind messages handled that same day.

3506. General Message File

The general message file contains a copy of all general messages that require retention by the member. This file is subdivided by title of each general message and filed in serial number order.

3507. Message Disposal

Communication files and logs shall be retained for the following periods of time:

- Messages incident to distress or disaster - 3 years.
- Messages incident to or involved in any claim or complaint of which the station has been notified - 2 years, or until the complaint or claim has been fully satisfied.
- Messages of historical or continuing interest - permanently. When no longer needed for local reference, these messages shall be transferred to Chief, MARS.
- General messages - until superseded or cancelled.
- All other messages - 6 months.
- Tape relay station monitoring tapes or page copies of outgoing messages and service rerun records (relay station log records of all messages) - 30 days.
- Monitor tapes of page copies and incoming messages (relay stations), message tapes for relay purposes - 24 hours.

3508. Communication Improvement Memorandum

Communication Improvement Memorandums (CIM's) are exchanged between stations to point out message discrepancies and procedural errors. CIM's are intended to aid training by indicating where improvement is needed, not as a means for criticism. CIM's must include complete identification of the message or incident involved and a concise explanation of the errors made. The appropriate paragraph of NTP 8() should be cited as the reference. Mail the original CIM to the station concerned, and mail copies to the Region Director and his training assistant. The information will be used to compile data for training purposes only.

3509. Minimize

MINIMIZE is a condition wherein normal message and radiotelephone traffic is drastically reduced so that messages connected with an actual or simulated emergency are not delayed. Chief, MARS, is the only authority who may impose or cancel MINIMIZE on MARS networks. The decision to impose MINIMIZE shall be based upon the following considerations:

- Region Director's information and advice
- Impact of incoming traffic on local MARS stations
- Degree of operational necessity, based upon present indications or past experience.

MINIMIZE may be imposed in a specific area or system-wide, to include either or both record message and radiotelephone traffic. It may also include both incoming and outgoing traffic. The message originated by Chief, MARS, imposing MINIMIZE shall include the word "MINIMIZE" and give the reason and duration if known.

When MINIMIZE is imposed on MARS networks, the criteria set forth below shall be followed by all stations:

- The release of welfare and routine traffic destined for the emergency area shall be forbidden.
- Routine traffic already in the system and destined for the emergency area shall be held until the MINIMIZE is lifted.

- Stations shall continue to transmit any message that is classified as Priority or above via normal channels.
- Official communications will be handled ahead of personal third party messages regardless of precedence.

3510. Communication Security

Communication security is the protected condition of communications resulting from the application of various measures to prevent or delay the unauthorized disclosure of military information from U.S. communications. Communication security contains three distinct elements.

- Transmission security - that component of communication security which results from all measures designed to protect transmissions from unauthorized interception, traffic analysis, and imitative deception.
- Cryptographic security - that component of communication security which results from the provision of technically sound cryptosystems and their proper use.
- Physical security - that component of communication security which results from all physical measures necessary to safeguard classified equipment, material, and documents from access or viewing by unauthorized persons.

Now that you have learned about the three elements of security, let's look at communication security monitoring procedures.

At least one party to every MARS phone patch must be aware that periodic communication security (COMSEC) monitoring will occur. Use of the NAVMARCORMARS communications systems constitute consent to such monitoring. The following procedures are required to comply with the consent requirement for COMSEC monitoring of MARS:

- Each MARS station will retain on file for a period of 1 year a consent form signed by prospective MARS users that states "I understand that periodic COMSEC monitoring of MARS conversations will occur and that the use of MARS equipment constitutes consent to such monitoring."
- Before a phone patch is connected, the MARS operator will ensure that the caller has a current consent form on file and orally advise the caller that "MARS communications are subject to periodic COMSEC monitoring and that the use of MARS constitutes consent to that monitoring." After the caller acknowledges this statement, a log entry will be made and the call completed.
- A sign stating "MARS communications are subject to communications security monitoring at all times." "Use of MARS constitutes consent to communications security monitoring" shall be displayed in full view of MARS users.

In cases of emergency in which the call must be placed immediately, the following procedures will apply:

- Orally advise the caller that "MARS communications are subject to periodic COMSEC monitoring and use of MARS constitutes consent to that monitoring."
- After the caller acknowledges this statement, a log entry will be made and the call completed. The log entry shall note the nature of the emergency, oral notification, and acknowledgement by the caller.

Exercise: Complete items 1 through 13 by performing the action required. Check your responses against those listed at the end of this study unit.

1. List (in any order) the types of messages that may be transmitted via MARS.

- a. _____ c. _____ e. _____
 b. _____ d. _____

2. List (in any order) the types of messages that may not be transmitted via MARS.

- a. _____ c. _____
 b. _____ d. _____

3. What is the rule for message solicitation?

4. What station may cancel a message?

5. How are messages filed in a message or station file?

6. What must your station's general message file contain?

7. Your station has received a message involving a complaint against its operation. How long must this message be retained?

8. How long must a message concerning historical information be retained?

9. How long must general messages be retained?

10. Your station handled 320 routine third party messages during July 1986. How long must they be retained?

11. Why are CIM's exchanged?

12. Who can impose MINIMIZE on MARS networks?

13. List (in any order) the three elements of communication security.

a. _____ b. _____ c. _____

Lesson 1 Exercise Solutions

	<u>Reference</u>	
1. a. Administrative	d. Specialty	3101
b. Traffic	e. Common	
c. Training	f. Tactical	
2. Must obtain permission of net control before transmitting traffic		3102
3. Permission to contact other stations not needed		3103
4. a. Expediting traffic	c. Limiting transmissions	3104
b. Maintaining circuit discipline	d. Monitoring traffic	
5. Type of net		3105

Lesson 2 Exercise Solutions

1. Handles the record message traffic among MARS major geographical areas	3201
2. It extends line-of-sight of VHF communication facilities, and it is also used for local disaster control.	3202

Lesson 3 Exercise Solutions

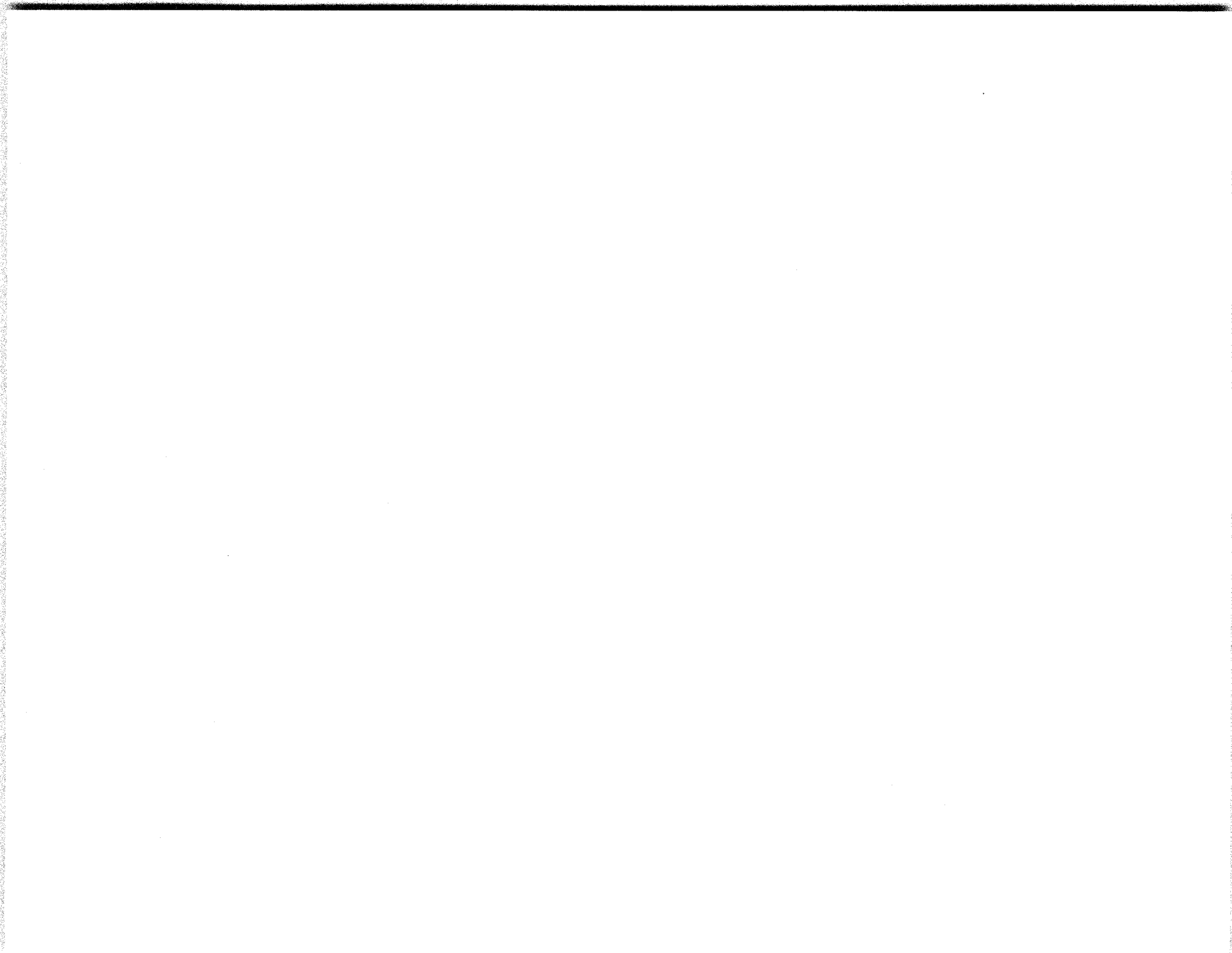
1. It expedites delivery of record traffic on a local, state, or area basis.	3301
2. They allow MARS to accept amateur messages addressed to armed forces personnel and authorized government officials.	3302
3. They allow refile of traffic from the Naval Communication Units to MARS during times of emergency.	3303

Lesson 4 Exercise Solutions

1. NNNØ	3401
2. It is used on a strict not to interfere basis.	3402
3. Classification and width of the frequency band occupied	3403
4. Always use minimum power required	3404

Lesson 5 Exercise Solutions

1. a. Personal and third party	3501
b. Exercise	
c. Administrative	
d. Official	
e. Semi or quasi official	
2. a. Serious illness or death	3502
b. Military operations	
c. Business	
d. Legislative	
3. May publicize but not actively solicit	3503
4. Originating	3504
5. Date-time group order	3505
6. A copy of all required messages	3506
7. 2 years or until complaint is satisfied	3507
8. Permanently	
9. Until superseded	
10. 6 months	
11. To point out message discrepancies and procedural errors	3508
12. Chief, MARS	3509
13. a. Transmission Security	3510
b. Cryptographic Security	
c. Physical Security	



STUDY UNIT 4

GENERAL OPERATING INSTRUCTIONS

Lesson 1. BASIC MESSAGE FORMS AND PARTS

LEARNING OBJECTIVES:

1. Without the aid of references, name the three basic message forms in accordance with NTP 8().
2. Without the aid of references, name the three basic parts of a message in accordance with NTP 8().

4101. Message Forms

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 communications. All messages should be kept as short and to the point as possible.

A message may be drafted in one of the following three (forms) formats:

- Plaindress - A message in which the originator and addressee(s) are indicated externally of the text. Unless the call serves as the address, a Plaindress message contains all the components shown in the basic message schematic diagram in table 4-1, except that the prefix may be omitted. A Plaindress message must always include the precedence and date-time group.
- Abbreviated Plaindress - Operational requirements for speed may require abbreviation of plaindress message headings. The precedence, and/or date, group count, and date-time group may be omitted. A time-group consisting of the hour and minutes may be used either in the message heading or at the ending, following the prosign BT.
- Codress - A Codress message contains in the encrypted text the entire address; i.e., originator and all addressees. The heading contains all components shown in table 4-1, except the address. When Codress messages are handled via MARS, they will be refiled into the Naval Communication System at/or by one of the MARS/Naval Communication System refile points/stations.

4102. Message Parts

MARS messages consist of three parts: heading, text, and ending. Message parts are divided into "components" which are further divided into "elements." Table 4-1 shows the basic message format which contains these parts, components, and elements. Note every element is indicated in the order of appearance in the message. But also note that the contents of the various elements are not necessarily indicated as they will appear and that all elements may or may not be used in a message. For radiotelephone operations (sending messages by voice), the prosigns and operating signals are substituted with the corresponding prowords and phrases. Refer to chapter 6 of the NTP 8 () for a more detailed description of the basic message format.

Table 4-1. Basic Message Format

PARTS	COMPONENTS	ELEMENTS	FORMAT LINE	CONTENTS
H E A D I N G	Procedure	Handling Instructions	1	
		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.

H E A D I N G	Preamble	Precedence date-time group; message instructions	5	Precedence prosign; date and time expressed in digits, and zone suffix; month & year, operating signals and prosign IX.	
	H E A D I N G	Address	Originator's sign; Originator	6	Prosign FM; Originator's designator. (Call sign or plain language)
		Action addressee sign; action addressee	7	Prosign TO; action addressee designator. (Call sign or plain language)	
		Information addressee sign; information addressee	8	Prosign INFO, information addressee designator. (Call sign or plain language)	
		Exempted addressee sign; exempted addressee	9	Prosign XMT; exempted addressee designator. (Call sign or plain language)	
	Prefix	Accounting information; group count	10	Accounting symbol; group count	
	BREAK		11	Prosign \overline{BT}	
T E X T	Text	Subject Matter	12	Internal instructions; basic idea of the originator.	
	BREAK		13	Prosign \overline{BT}	
E N D I N G	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; \overline{AR}	

Exercise: Complete items 1 and 2 by performing the action required. Check your responses against those listed at the end of this study unit.

1. Name (in any order) the three basic message forms.

a. _____ b. _____ c. _____

2. Name (in any order) the three basic message parts.

a. _____ b. _____ c. _____

Lesson 2. MESSAGE TYPES

LEARNING OBJECTIVES

1. Without the aid of references, state the purpose of a service message in accordance with NTP 8().
2. Without the aid of references, state the purpose of message readdressal in accordance with NTP 8().
3. Without the aid of references, define single address messages in accordance with NTP 8().
4. Without the aid of references, define multiple address messages in accordance with NTP 8().
5. Without the aid of references, describe a book message in accordance with NTP 8().
6. Without the aid of references, describe a general message in accordance with NTP 8().
7. Without the aid of references, describe a tracer message in accordance with NTP 8().
8. Without the aid of references, state the action taken by the originating station upon verification of nonreceipt in accordance with NTP 8().
9. Without the aid of references, state the procedure for handling an undeliverable message in accordance with NTP 8().
10. Without the aid of references, state the rule for MARSGRAMS in accordance with NTP 8().
11. Without the aid of references, prepare a MARSGRAM for delivery in accordance with NTP 8().
12. Without the aid of references, prepare a MARSGRAM for transmission in accordance with NTP 8().

4201. Service Messages

A service message is a short, concise message between communication personnel (MARS operators), used to obtain information regarding the handling of communications matters. A service message is a bonafide message and shall be accorded prompt attention. If action cannot be completed within a responsible time, the station originating the service message must be notified. Prosigns and operating (Q & Z) signals will be used as much as possible to obtain and provide corrections or repetitions. Service messages are normally assigned the same precedence as the message being serviced.

Example: Request

```
R 120803Z MAR 86
FM NNN0AAA VA
TO NNN0BBB VA
BT
UNCLAS SVC
ZUI YOUR 112210Z MAR 86 ZDE4 ZE1. HAROLD W SMITH ARLINGTON VA 22040
TELEPHONE 703-555-3515
BT
(ZDE 4 - Message ... undeliverable. Give more complete address)
```

Reply

```
R 130011Z MAR 86
FM NNN0BBB VA
TO NNN0AAA VA
BT
UNCLAS SVC
ZUI YOUR 120803Z MAR 86 HAROLD W SMITH 2212
JONES STREET ARLINGTON VA 22040 TELEPHONE
703-524-3515
BT
(ZUI Your attention is invited to...)
```

4202. Message Readdressal

When you determine that additional addressees require or need to have the information contained in a message, the message may be addressed to the additional addressee(s) by a supplemental heading. It 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. Use the following information for a 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 for information (INFO) may only be readdressed for information (INFO). 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 indicated in the supplementary heading.

<u>Example:</u> Original message:	Readdressal:
R 130505Z MAR 86	R 141122Z MAR 86
FM NNN0ASE SCA	FM NNN0ASC SC
TO NNN0ASC SC	TO NNN0XXX SC
INFO NNN0ASF TX	R 130505Z MAR 86
NNN0ASK WA	... etc ...
BT	

4203. Single Address Message

A single address message is a message destined for only one addressee. It will have only one addressee on format line 7 and none on line eight (table 4-1).

Example: R 012100Z OCT 86
FM NNN0TII SCA
TO NNN0ASE SCA
BT
UNCLAS
RCVD INFO TODAY
BT

4204. Multiple Address Message

A multiple address message is a message destined for two or more addressees, each of whom must be informed of all the other addressees. Originators of messages should limit the number of addressees to the minimum essential. Overaddressing of messages leads to a burden on the traffic system. Remember "short and to the point" covers all areas of communication.

Example: R 021400Z OCT 86
FM NAV FIVE SCA
TO NNN0ASE ONE SCA
INFO NNN0ASE TWO SCA
NNN0ASE THREE SCA
BT
... etc ...

4205. Book Messages

A book message is one that is destined for two or more addressees and whose addressees need not be informed of the other addressees. However, each addressee will be indicated as an action or information recipient. A book message is identified by the operating signal "ZEX."

Addressees of book messages are divided into groups according to the relay centers that serve them. For each group of addressees, a separate message is prepared and transmitted. Each book message is assigned a new station serial number but retains the same date-time group. A relay station may further reduce the book message to a single address message to its stations of responsibility.

Addressees shall not readdress a book message outside their area of responsibility.

Example: As originated:

```
R 132218Z OCT 86 ZEX (This is a book message and may be delivered as a  
FM NNNØASC SC       single address message to addresses for whom you are  
TO NNNØASI EPA      responsible.)  
NNNØASE SCA  
NNNØASF TX  
NNNØASG IL  
BT ... etc ...
```

As prepared for transmission over different channels:

```
R 132218Z OCT 86 ZEX  
FM NNNØASC SC  
TO NNNØASE SCA  
BT ... ETC ...
```

```
R 132218Z OCT 86 ZEX  
FM NNNØASC SC  
TO NNNØASF TX  
BT ... ETC ...
```

```
R 132218Z OCT 86 ZEX  
FM NNNØASC SC  
TO NNNØASG IL  
BT ... ETC ...
```

4206. General Messages

A general message has a wide distribution. It is assigned an identifying title. Each message of a given title carries a serial number in a sequence which covers a calendar year. General messages may be directive in nature or promulgate information to the addressees.

- NAVMARCORMARS ... Addressee: All Navy-Marine Corps MARS Stations (NNNØALL)
Originator: Chief, MARS
Content: Directive and general information

- ALNAVMARCORMARSTA ... Addressee: NNNØALL
Originator: Chief, MARS
Content: Message changes to NTP 8 series

- ALNAVMARCORMARSREG (Region number) ... Addressee: All Navy-Marine Corps Mars Stations in Region indicated. (NNNØALL)

The first general message of the new year (Chief, MARS broadcast, Region Director broadcast; etc.) will contain a list of the past general messages (broadcast) that remain valid.

4207. Tracer Messages

A tracer message is a form of a service message, initiated to determine the reason for inordinate delay in delivery or nondelivery of a message. Tracer messages must begin within 30 days from the date-time group of the message being traced. All tracer messages must be acted upon promptly. Chief, MARS and the appropriate Region Directors will be included as information addressees.

The station delivering a delayed message should take the following actions:

- Notify originator of delayed message.
- Examine their records and message heading to ascertain reason for delay. Adverse traffic or circuit conditions shall be taken into consideration before starting further tracer action.
- If cause for delay cannot be determined, the originating station will transmit a routine tracer message to the first relay station that the delayed message was transmitted to. See examples below for tracer format.
- Tracer action will continue on a station by station basis until the reason for delay has been determined.

Example: Excessive delay tracer to first relay by originating station

R 160230Z OCT 86
 FM NNN0AAB SCA
 TO NAV MD/DC
 NNN0EFB SC
 NNN0ASA MD/DC
 BT
 UNCLAS SVC
 ZUI NNN0AAB 101425Z OCT 86 NNN0EFB TOR
 15/1028Z. 5 DAYS DELAY. ZDN
 BT

(ZDN - REPORT DISPOSAL OF MESSAGE YOUR STATION WITH ANY REASON FOR DELAY)

R 160205Z OCT 86
 FM NAV MD/DC
 TO NNN0RSE SC
 INFO NNN0AAB SC
 NNN0ASE SCA
 NNN0EFB SC
 NNN0ASA MD/DC
 BT
 UNCLAS SVC
 ZUI AVE015 NNN0AAB 101425Z OCT 86 NNN0EFB TOR
 15/1028Z. 5 DAYS DELAY. TOR 10/1438Z ZDQ NNN0RSE
 10/2347Z. 9 HOURS DELAY THIS STA DUE SKED. ZDN
 BT

4208. Nonreceipt

Upon verifying that a message has not been received, the originating station will take the following actions:

- Retransmit the message as a duplicate (ZFG) to the station(s) claiming nondelivery and transmit a service message (tracer) for the first relay station involved with the original message.
- The first relay station, after determining that mishandling was not involved (on his part), will then transmit a service message (tracer) to the following stations:
 - To the next relay station for action.
 - To the originating station, station(s) claiming nondelivery, Chief, MARS, and Region Director for information.
- This action will continue from station to station until the cause for the lost message has been determined and reported to all stations concerned.

The following is an example of a service (SVC) message.

R 141521Z NOV 86
 FM NNN0JPJ SCA
 TO NNN0TEF ND
 INFO NNN0ASE SCA
 NNN0PPC SCA
 BT
 UNCLAS SVC
 NNN0PPC CLAIMS NON DLVY NNN0JPH 091410Z NOV 86. MRS JOHN SMITH 2001 NO
 WHERE STREET SOMEWHERE USA 22204 202-574-3625.
 ZDQ NNN0TEF 09/1422Z 4001.5 KHZ. TRACE TO
 DESTINATION AND ADVISE
 BT

4209. Undeliverable Message



A message that can not be delivered due to an incorrect/incomplete address must be serviced back to the originating station. The service message will state that the message was not delivered and will show the portion of the heading in question as received (with maximum use of "Q" and "Z" signals).

Example: R 111522Z DEC 86
FM NNN0AAA SCA
TO NNN0BBB WI
BT
UNCLAS SVC
1. ZUI YOUR 100001Z AUG 86 ZDE4 ZEI. MRS JOHN
SMITH 2001 NOWHERE STREET SOMEWHERE USA 22204.
WE ZOB.
BT

4210. MARSGRAM Rules

The following common sense rules apply to the use of (fig 4-1) MARSGRAMS:

- A maximum of five MARSGRAMS may be sent per day per individual user.
- A maximum of three Navy-Marine Corps MARS abbreviated texts (NMAT) (table 4-2) or American Radio Relay League (ARRL) numbered radiograms may be used in any one message.
- For text word counting purposes, NMATS and ARRL numbered radiograms will be counted in abbreviated formats, e.g., "NMAT ONE" is two words, not seven words.
- In personal health and welfare messages where a notification of address is provided, the complete address will be counted as one word for text counting purposes.
- The maximum length for personal health and welfare messages is 25 words of text.

	MILITARY AFFILIATE RADIO SYSTEM NAVY-MARINE CORPS MARSGRAM	
THIS MESSAGE HANDLED FREE OF CHARGE BY A STATION OF THE MILITARY AFFILIATE RADIO SYSTEM. HANDLING MESSAGES BETWEEN MILITARY PERSONNEL AND THEIR FAMILIES AND FRIENDS IS ONE OF THE MISSIONS OF MARS. ANY REPLY OR INQUIRY SHOULD BE DIRECTED TO THE STATION DELIVERING THIS MESSAGE. ULTIMATE DELIVERY OF MESSAGES CANNOT BE GUARANTEED.		
TO: _____		DATE: _____
_____		PLACE OF ORIGIN: _____
_____		_____
PHONE: _____		
MESSAGE TEXT:		

SIGNATURE: _____		
THIS MESSAGE HANDLED BY NAVY-MARINE CORPS MARS RADIO STATION: _____		MESSAGE IDENTIFICATION:
_____		PRECEDENCE: _____
_____		DATE-TIME-GROUP: _____
_____		STATION OF ORIGIN: _____
_____		TOR/TOD: _____
_____		FREQUENCY: _____
SENDER INFORMATION:		
THE PRIVACY ACT OF 1974 DIRECTS THAT YOU ARE NOT REQUIRED TO PROVIDE THE FOLLOWING INFORMATION. HOWEVER WITHOUT IT THE MESSAGE CANNOT BE TRANSMITTED.		
NAME: _____	RATE/RANK: _____	BRANCH SERVICE: _____
ADDRESS: _____	CITY: _____	STATE: _____ ZIP: _____
PHONE NUMBER: _____	SSN: _____	

Fig 4-1. MARSGRAM.

Navy-Marine Corps MARS abbreviated text (NMAT) has been established to enhance the transmission of messages in a standard text. When using NMAT's, ensure that they are transposed into the proper meaning before delivering it to the addressee. Never deliver a message without converting it into plain language.

NMAT's are used as listed in table 4-2. The NMAT shall never be filed into TEXN or amateur radio networks since the NMAT meanings are not widely disseminated.

Table 4-2. Navy-Marine Corps MARS Abbreviated Text

NMAT ONE	Arrived safely Marine Corps Recruit Depot, San Diego, CA.
NMAT TWO	Arrived safely Naval Training Center, Great Lakes, IL.
NMAT THREE	Arrived safely Marine Corps Recruit Depot, Parris Island, SC.
NMAT FOUR	Arrived safely Naval Recruit Training Command, Women, Orlando, FL.
NMAT FIVE	Arrived safely Naval Recruit Training Command, San Diego, CA.
NMAT SIX	Arrived safely Marine Corps Air Station, El Toro, CA.
NMAT SEVEN	Arrived safely Marine Air Ground Combat Center, Twenty Nine Palms, CA.
NMAT EIGHT	Arrived safely Okinawa.
NMAT NINE	Arrived safely Naval Air Station, Moffett Field, CA.
NMAT TEN	Arrived safely Service School Command, Naval Training Center, San Diego, CA.
NMAT ELEVEN	Arrived safely Naval Submarine Base, New London, Groton, CT.
NMAT TWELVE	Reply via Navy-Marine Corps MARS.

The ARRL numbered radiograms can be used in MARS messages and such use is encouraged. The numbers shall always be spelled out. Refer to current ARRL publications for numbered radiogram definitions.

Example: BT
UNCLAS
NMAT ONE ARL FIFTY SEVEN
BT



4211. Preparing a MARSGRAM for Delivery

When your station receives a third party message for delivery, every effort should be made to pass it on to the intended addressee by phone. If the message can not be delivered by phone, transpose the message contents on to a MARSGRAM (fig 4-1) for delivery by mail.

Example: Your station has just received the following message for delivery. The message was received at 1300Z 01 NOV 1986 on 4001.5 KHZ.

R 311300Z OCT 86
FM YNC RON DETER SAN DIEGO CA/NNN0MSD SCA
TO MRS BEV DETER
12 HELM GREEN SW
WASHINGTON DC 20032
202-574-3625
BT
UNCLAS
WILL ARRIVE HOME AT 2 PM IMI 2 PM EIGHT NOV RON
BT

The message on the previous page will be transposed as follows.



MILITARY AFFILIATE RADIO SYSTEM	
	
NAVY-MARINE CORPS MARSGRAM	
<small>THIS MESSAGE HANDLED FREE OF CHARGE BY A STATION OF THE MILITARY AFFILIATE RADIO SYSTEM. HANDLING MESSAGES BETWEEN MILITARY PERSONNEL AND THEIR FAMILIES AND FRIENDS IS ONE OF THE MISSIONS OF MARS. ANY REPLY OR INQUIRY SHOULD BE DIRECTED TO THE STATION DELIVERING THIS MESSAGE. ULTIMATE DELIVERY OF MESSAGES CANNOT BE GUARANTEED.</small>	
TO: <u>MRS. BEV DETER</u>	DATE: <u>31 OCT 1986</u>
<u>12 HELM GREEN SW</u>	PLACE OF ORIGIN: <u>SAN DIEGO CA</u>
<u>WASHINGTON DC 20032</u>	
PHONE: <u>202-574-3625</u>	
MESSAGE TEXT:	
<u>WILL ARRIVE HOME AT 2 PM EIGHT NOV.</u>	
SIGNATURE: <u>RON</u>	
THIS MESSAGE HANDLED BY NAVY-MARINE CORPS MARS RADIO STATION: <u>NNNAMS</u>	MESSAGE IDENTIFICATION: PRECEDENCE: <u>ROUTINE</u>
<u>MR JOHN BROWN</u>	DATE-TIME-GROUP: <u>313002 OCT 86</u>
<u>1423 HILL ST</u>	STATION OF ORIGIN: <u>NNNMSD SCA</u>
<u>BLUES VA 21113</u>	TOR/NO: <u>NAV/0113002 NOV 86</u>
<u>703-555-1212</u>	FREQUENCY: <u>4001.5 KHZ</u>
SENDER INFORMATION: THE PRIVACY ACT OF 1974 DIRECTS THAT YOU ARE NOT REQUIRED TO PROVIDE THE FOLLOWING INFORMATION. HOWEVER WITHOUT IT THE MESSAGE CANNOT BE TRANSMITTED.	
NAME: _____	RATE/RANK: _____ BRANCH SERVICE: _____
ADDRESS: _____	CITY: _____ STATE: _____ ZIP: _____
PHONE NUMBER: _____	SSN: _____

Remember to fill out a MARSGRAM when delivering a message by mail. Under no circumstances will a teletype or written copy of a third party message be sent to the addressee.

4212. Preparing a MARSGRAM for Transmission

When an authorized user of MARS desires to send a MARSGRAM, you must make sure the message meets the message criteria discussed in study unit 3. You must also ensure that all of the information on the MARSGRAM prepared by the sender (originator) is correct.

Example:

MILITARY AFFILIATE RADIO SYSTEM	
	
NAVY-MARINE CORPS MARSGRAM	
<small>THIS MESSAGE HANDLED FREE OF CHARGE BY A STATION OF THE MILITARY AFFILIATE RADIO SYSTEM. HANDLING MESSAGES BETWEEN MILITARY PERSONNEL AND THEIR FAMILIES AND FRIENDS IS ONE OF THE MISSIONS OF MARS. ANY REPLY OR INQUIRY SHOULD BE DIRECTED TO THE STATION DELIVERING THIS MESSAGE. ULTIMATE DELIVERY OF MESSAGES CANNOT BE GUARANTEED.</small>	
TO: <u>MRS. SANDY WALTON</u>	DATE: <u>16 NOV 1986</u>
<u>1775 MARINE DRIVE</u>	PLACE OF ORIGIN: <u>CAMP HANSON</u>
<u>OCEANSIDE CA 92055</u>	<u>OKI.</u>
PHONE: <u>619-755-4515</u>	
MESSAGE TEXT:	
<u>I WILL BE HOME ON 7 DEC 1986. MORE INFORMATION TO FOLLOW BY LETTER</u>	
SIGNATURE: <u>BOB WALTON</u>	
THIS MESSAGE HANDLED BY NAVY-MARINE CORPS MARS RADIO STATION: <u>NNN MOB</u>	MESSAGE IDENTIFICATION:
	PRECEDENCE: _____
	DATE-TIME-GROUP: _____
	STATION OF ORIGIN: _____
	TOR/TOD: _____
	FREQUENCY: _____
SENDER INFORMATION:	
<small>THE PRIVACY ACT OF 1974 DIRECTS THAT YOU ARE NOT REQUIRED TO PROVIDE THE FOLLOWING INFORMATION. HOWEVER WITHOUT IT THE MESSAGE CANNOT BE TRANSMITTED.</small>	
NAME: <u>BOB WALTON</u>	RATE/RANK: <u>CAPT</u> BRANCH SERVICE: <u>USMC</u>
ADDRESS: <u>BLT 3/4</u>	CITY: <u>FPO</u> STATE: <u>SFC</u> ZIP: <u>96602</u>
PHONE NUMBER: <u>573-3604</u>	SSN: <u>309-58-3901</u>

The following is an example of the MARSGRAM prepared for transmission.

R 161200Z NOV 86
FM CAPT BOB WALTON OKINAWA JA/NNN MOB OA
TO MRS SANDY WALTON
1775 MARINE DR
OCEANSIDE CA 92055
619-755-4515
BT
UNCLAS
I WILL BE HOME ON 7 DEC 1986. MORE INFORMATION TO FOLLOW BY LETTER. BOB
BT

Once the MARSGRAM has been transposed into a message form, the message identification section can be completed and the original MARSGRAM retained in the station files for 6 months.

Exercise: Complete items 1 through 10 by performing the action required. Check your responses against those listed at the end of this study unit.

1. What is the purpose of a service message?

2. What is the purpose of readdressing a message?

3. How would you determine that a message is a "single addressee" message?

4. A message addressed to two or more addressees who must each be informed of the other addressee is a _____ message.

5. Your station has just received a message with thirty addressees, and the message has the operating signal "ZEX" on format line five. What type of message is this?

6. Describe a general message.

7. What is a tracer message?

8. What action will the originating station take upon verifying that a message has not been received?

9. After trying every means possible to deliver a third party message, who would the message be serviced back to?

10. What is the rule for MARSGRAMS?

Lesson 3. PRECEDENCE AND PUNCTUATION

LEARNING OBJECTIVES

1. Without the aid of references, list the four precedences and their speed-of-service objectives in accordance with NTP 8().
2. Without the aid of references, state when punctuation is used in a message in accordance with NTP 8().

4301. Precedence

The assignment of the precedence to a message is the responsibility of the originator (originating station for third party messages). The precedence is determined by the subject matter of the text and the time factor involved. Precedence designations are employed to indicate the relative order in which a message of one precedence is handled with respect to all other precedences. The following precedences are used by naval communicators:

- FLASH (Z) - reserved for initial enemy contact messages or operational combat messages of extreme urgency. Flash messages will be handled 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.
- IMMEDIATE (O) - 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 contact, logistical support when essential to sustain operations, wide-spread civil disturbance, warning of grave natural disaster (earthquake, flood, or storm), and distress assistance. Immediate messages are handled in the order received and ahead of all messages of lower precedence. If possible, messages of lower precedence will be interrupted on all circuits involved until the handling of the immediate message is completed.
- PRIORITY (P) - 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 will be assigned to administrative or third party messages. Priority messages will be handled in the order received and ahead of all messages of ROUTINE precedence. Routine messages being transmitted should not be interrupted unless they are extra long and a substantial portion remains to be transmitted.
- ROUTINE (R) - used for all types of messages which justify transmission by rapid means (radio, CW, or RTTY) but are not of sufficient urgency to require a higher precedence. Routine messages will be handled in the order received and after all messages of a higher precedence.

The precedence assigned to a message relates to the considerations of the following personnel:

- Originator - required speed of delivery
- Communication personnel - relative order of handling and delivery
- Addressee - relative order in which he should note the message

Messages having both action and information addressees may either be assigned a single precedence, which indicates the precedence is for all addressees, or they may be assigned two precedences, one for action addressee's and a lower precedence for information addressees. The higher precedence will always be placed first in the preamble.

Example: PR 050500Z NOV 86
FM NAV FIVE SCA
TO NAV ONE EPA
INFO NAV TWO SC
BT
UNCLAS
etc ...

NAV ONE would take for priority action and
NAV TWO would take for routine information.

The following speed-of-service objectives are established to ensure the fastest communications support possible.

<u>Precedence</u>	<u>Prosign</u>	<u>Objective</u>
FLASH	Z	As fast as humanly possible with an objective of less than 10 minutes.
IMMEDIATE	O	30 minutes - 1 hour
PRIORITY	P	1-6 hours
ROUTINE	R	3 hours - next working day

Regardless of the speed-of-service objective, all MARS traffic should be handled as fast as possible.

4302. Punctuation

Punctuation shall be used only when essential for clarity. Punctuation marks used shall be limited to those symbols that appear on a standard teletypewriter or which have Morse equivalents. Punctuation symbols authorized for use by MARS appear in chapter 6 NTP 8 (). Punctuation marks shall be processed and transmitted exactly as drafted.

Another important part of our communications training and operations is the phonetic alphabet. When it becomes necessary to identify a letter of the alphabet while transmitting on a MARS circuit, (radiotelephone mode) it's phonetic equivalent will be used as listed below.

<u>Letter</u>	<u>Phonetic</u>	<u>Spoken</u>	<u>Letter</u>	<u>Phonetic</u>	<u>Spoken</u>
A	ALPHA	AL-FAH	N	NOVEMBER	NO-VEM-BER
B	BRAVO	BRAH-VOH	O	OSCAR	OSS-CAH
C	CHARLIE	CHAR-LEE	P	PAPA	PAH-PAH
D	DELTA	DELL-TAH	Q	QUEBEC	KEH-BECK
E	ECHO	ECK-OH	R	ROMEO	ROW-ME-OH
F	FOXTROT	FOKS-TROT	S	SIERRA	SEE-AIR-RAH
G	GOLF	GOLF	T	TANGO	TANG-OOH
H	HOTEL	HOH-TELL	U	UNIFORM	YOU-NEE-FORM
I	INDIA	IN-DEE-AH	V	VICTOR	VIK-TAH
J	JULIETT	JEW-LEE-ETT	W	WHISKEY	WISS-KEY
K	KILO	KEY-LOH	X	XRAY	ECKS-RAY
L	LIMA	LEE-MAH	Y	YANKEE	YANK-KEY
M	MIKE	MIKE	Z	ZULU	ZOO-LOO

Note: Underlined syllable carries accent.

Along with the phonetic equivalents for letters, you also have the following phonetic pronunciations for numbers.

<u>WRITTEN</u>	<u>SPOKEN</u>	<u>WRITTEN</u>	<u>SPOKEN</u>	<u>WRITTEN</u>	<u>SPOKEN</u>
<u>NUMERAL</u>	<u>AS</u>	<u>NUMERAL</u>	<u>AS</u>	<u>NUMERAL</u>	<u>AS</u>
1	WUN	4	FO WER	7	SEV EN
2	TOO	5	FIFE	8	AIT
3	THUH-REE	6	SIX	9	NIN-ER

These letter and number equivalents are desirable in expressing lettered designations and in spelling out words in radiotelephone operations.

Example: Your call sign will be pronounced as follows - (NNNØMAL) NNN ZERO MIKE AL-FAH LEE-MAH

To distinguish the letters I and Z from the numbers 1 and 2, the letters should be written as I and Z.

The decimal point is spoken as "DAY SEE MAL."

Example: 123.4 is spoken as "FIGURES WUN TOO THUH REE DAY SEE MAL FO WER.

To distinguish the letters O (OSCAR) and 0 (ZERO) a slant sign (/) is placed through the Ø (Zero).

The above letter and number equivalents will not be used for the following:

- When the actual word might be used; 26 degrees West instead of 26 degrees Whiskey.
- When the abbreviation is readily recognizable and authorized; such as USN, USMC, MARS, NMAT, ARL; etc..
- Personal initials shall be spoken phonetically prefixed by the work "INITIAL" or INITIALS."

Example: "GM SMITH" shall be spoken "INITIALS GOLF MIKE SMITH."

Exercise: Complete items 1 and 2 by performing the action required. Check your responses against those listed at the end of this study unit.

1. List (in any order) the four precedences and their speed-of-service objectives.

- a. _____
- b. _____
- c. _____
- d. _____

2. When is punctuation used in a message?

Lesson 4. PROSIGNS, PROWORDS, AND OPERATING SIGNALS

LEARNING OBJECTIVES

1. Without the aid of references, define prosigns in accordance with NTP 8().
2. Without the aid of references, define prowords in accordance with NTP 8().
3. Without the aid of references, define operating signals in accordance with NTP 8().

4401. Prosigns

Prosigns are procedure signs consisting of one or more letters/characters. They are used to facilitate rapid communication by conveying in condensed standard form certain frequently used orders, instructions, requests, reports, and information related to communications.

Example: \overline{AA} Unknown station

4402. Prowords

Prowords are word equivalents of prosigns, for use in radiotelephone procedures. Operators shall not under any circumstances substitute prosigns, prowords, or combinations of these signs for the text of a message.

The following is a list of prosigns used by MARS with their proword descriptions.

- \overline{AA} UNKNOWN STATION - used in lieu of a call sign in establishing communication with a station whose call sign is not known or is not recognized.

Example: NAV hears its own call sign but misses the call sign of the calling station.

NAV transmits: UNKNOWN STATION ... THIS IS NOVEMBER ALPHA VICTOR OVER

Note: The line (\overline{AA}) over two letters is called an overscore and denotes that no pause shall be placed between the letters while transmitting in the CW mode.

Note: The examples in this section show prosigns and prowords used together. This is done to shorten the amount of space used. However, always use prowords in radiotelephone procedures and prosigns in CW and radioteletype.

- AA, ALL AFTER; AB, ALL BEFORE - used after the prosigns IMI, INT, C, J, and certain operating signals to identify a portion of a message. If a word or group used to identify part of a message occurs more than once in the message, it is to be assumed that the first occurrence of that word or group is implied. If otherwise intended, you must identify the particular word or group. Parts of the messages are identified as follows:

Example: AB \overline{BT} denotes all before the text.

AA PLUXO \overline{BT} denotes the message ending, where PLUXO is the last group in the message.

AA \overline{BT} denotes the complete text and the message ending.

- \overline{AR} OUT - this is the end of my transmission to you and no response is required or expected. When \overline{AR} is used, although no station may receipt, it does not preclude requests if necessary for repetitions or verifications.

Example: NAV DE NNNØRAL R \overline{AR}

- \overline{AS} WAIT - used when the called station is not prepared to accept traffic. When transmitted without an ending sign (K or \overline{AR}) indicates a short pause. \overline{AS} followed by the prosign \overline{AR} means to wait for an indefinite time. \overline{AS} (5) \overline{AR} means the expected delay in minutes is represented by the numeral following \overline{AS} . Once you have received the prosign \overline{AS} , you shall wait for the prosign K (over) before transmitting, unless in the meantime you receive a message of high precedence to transmit or it appears your station has been overlooked.

Example: NNNØRRZ DE NAV
T
R 1821ØØZ NOV 86
FM NNNØMAL GA
TO NNNØAAA MA
 \overline{BT}
UNCLAS
WILL BE \overline{AS}

When NAV is ready to resume, he begins with a repetition of the last word already sent.

DE NAV BE Home 26 NOV \overline{BT} K

- B MORE TO FOLLOW - in the final instructions means more to follow.

Example: NAV indicates that he has more to send to NNNØTUG by transmitting:

NNNØTUG DE NAV
R 1918ØØZ NOV 86
FM NNNØTII SCA
TO NNNØTUG MD/DC
 \overline{BT}
UNCLAS
TEXT
 \overline{BT}
B
K

After receiving the above message, NNNØTUG realizes that he has traffic for NAV. He will receipt for the message and inform NAV of traffic as follows.

Example: NAV DE NNNØTUG R B K

NNNOTUG could have indicated the precedence of the message also.

Example: NAV DE NNNØTUG R B P K

Remember the precedence of priority (P) or above can be given. A routine (R) might be confused with the prosign for roger (R). See chapter 6 of the NTP 8 () for more in-depth information on the prosign B.

- BT BREAK - used to indicate the separation between the text and other parts of a message. It immediately precedes and follows the text.

Example: R 202100Z NOV 86
FM NNN0MSD SCA
TO NNN0MPN SCA
BT
UNCLAS
SEND ALL TRAFFIC FOR 5X1B AT 2200Z TODAY
BT
K

- C CORRECT - the prosign C used alone means you are correct.

Example: NNN0EYD transmits a message to NNN0GKE who questions the accuracy of the text.

BT
UNCLAS
NEED A 12BY7 TUBE
BT

NNN0EYD DE NNN0GKE IS THIS CORRECT
NEED A 12BY7 TUBE K
DE NNN0EYD CORRECT K

Example: Correcting a portion of the message in the final instructions.

BT
UNCLAS
TUBE WILL BE SHIPPED TODAY
BT
CORRECT WA BE SHIPPED
K

Example: NNN0ABC has received the above message and questions the word after shipped.

NNN0BBB DE NNN0ABC WORD AFTER SHIPPED
TODAY
K
NNN0BBB checks and finds the word is incorrect.
NNN0ABC DE NNN0BBB WORD AFTER SHIPPED
TODAY
K

- AR OUT - used to end transmission when no reply is desired.
- FM FROM - means the originator of this message is indicated by the designation immediately following.
- G READ BACK - means repeat back entire message. It is placed in the transmission instructions. It is used to ensure that the receiving station has received the message as transmitted.
- HM HM HM SILENCE SILENCE SILENCE - HM transmitted three times or the proword silence transmitted three times means cease transmission on this or indicated frequency immediately. Stations do not answer or receipt for a transmission imposing emergency silence. Emergency silence may be imposed or lifted only by component authority. Emergency silence may be lifted by transmitting emergency silence lifted AR.
- IMI SAY AGAIN (I SAY AGAIN) - means repeat or I repeat message or portions of a message as indicated.

Example: NNNØRBL request repetition of the entire transmission just completed by NNNØRZZ:

NNNØRZZ DE NNNØRBL SAY AGAIN OVER

IMI followed by identification data means repeat the indicated portion of your transmission.

Example: NNNØRGG DE NNNØRZO IMI ALL BEFORE MOVEMENT K ____

DE NNNØRGG IMI
DE NNNØRGG 001
T
ROUTINE TIME 010100Z NOV 86
FM NNNØMTP SCA
TO NNNØRCC VA
INFO NNNØASC SC
BT
UNCLAS
MOVEMENT
K

Example: NNNØRZO desires a repeat of that portion of the heading between TO and INFO:

NNNØRGG DE NNNØRZO IMI TO TO INFO K

DE NNNØRGG IMI TO TO INFO
TO NNNØRCC VA
INFO
K

In the text of a message, IMI means I am going to say again the difficult portion just transmitted.

Example: BT
TRANSFER RADIO TO ZCSHZISKI IMI ZCSHZISKI
BT

IMI cannot be used to obtain a repetition of a message or a portion thereof for which a receipt has been given. A new (service) message must be used for this purpose.

- INFO - means the addressee(s) immediately following will take this message for information only.
- J VERIFY - means verify the portion of a message. You can only verify a message with the originator.
- K OVER - means go ahead or this is the end of my transmission and a reply is necessary.
- R ROGER - used to indicate that a transmission has been received. Identification of the message(s) may be included if necessary.
- T RELAY (TO) - the prosign T, when used, shall appear in the transmission instructions. Individual instructions to a specific station may be indicated by use of call signs following the T, as appropriate. T alone means station called relay this message to all addressees in the address component.

Example: NNNØPNI directs NNNØGKA to relay the message to all addressees:

NNNØGKA DE NNNØPNI 001
T
R 311615Z DEC 86
FM NNNØWUF SCA
TO NNNØSRM SCA
NNNØHAN SCA
NNNØASE SCA
BT
UNCLAS
TEXT
BT

T followed by a call sign means station called relay this message to the station indicated.

Example: NNNØRGG directs NNNØRBL to relay the message to NNNØRZZ:

```
NNNØRBL DE NNNØRGG 001
T NNNØRZZ
R 161600Z DEC 86
FM NNNØRGG NJ
TO NNNØRZZ DE
INFO NNNØRAA MD/DC
BT
UNCLAS
TEXT
BT
```

T preceded and followed by a call sign means station whose call sign precedes T transmit this message to the station whose call sign follows T.

Example: NNNØRBA calls both NNNØZZZ and NNNØRBL and request NNNØRZZ to relay the message to NNNØRZL, NNNØRBL to relay the message to NNNØRZK.

```
NNNØZZZ NNNØRBL DE NNNØRBA 001
NNNØZZZ T NNNØRZL
NNNØRBL T NNNØRZK
R 181927Z DEC 86
FM NNNØRBA SCA
TO NNNØRZK NC
NNNØZZZ GA
NNNØRBL AL
INFO NNNØRZL TN
BT
UNCLAS
TEXT
BT
```

- TO - means addressee following this designation will take the message for action.
- WA (WORD AFTER) WB (WORD BEFORE) - used after the prosigns IMI, INT, C, J, and certain operating signals to identify a portion of a message text.

Example: NNNØGKA DE NNNØTII 001
T
R 012112Z DEC 86
FM NNNØTII SCA
TO NNNØTEI SCA
BT
UNCLAS
TEST WILL BE GIVEN AT 1415 21 DEC
BT

Request: NNNØTII DE NNNØGKA IMI WA BE K

Answer: DE NNNØTII IMI WA BE GIVEN K

Request: NNNØTII DE NNNØGKA IMI WB TEST K

Answer: DE NNNØTII IMI WB TEST UNCLAS K

DE NNNØGKA R AR

- XMT EXEMPT - the station(s) immediately following are exempted from the collective call or address.

Example: In the call:
NNNØMSD DE NNNØEYD 001
T XMT NNNØGKE
R 212121Z DEC 86
FM
etc...

Example: In the address:
R 121212Z DEC 86
FM NNNØASA MD/DC
TO NNNØALD
XMT NNNØASI NNY
BT
etc...

4403. Operating Signals Q + Z

Operating signals are a concise code designed primarily for use by communication personnel in exchanging information incident to the handling of messages or in establishing communications. They are also used in service messages.

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.

When desired, an operating signal may be given an interrogative sense. When communicating with military stations, place the prosign INT before the "Z" or "Q" signal. When communicating with nonmilitary stations, insert the prosign IMI after the "Q" signal and data used with it. Operating signals shall not normally be used in radiotelephone operations. Instead, the operating information will be conveyed by concise phrases.

Blank spaces in the meaning of "Q" and "Z" signals will be completed in the order in which they appear; however, blank spaces enclosed in parentheses normally will be completed on an optional basis only.

Example: ZDE means message undelivered

1. Will continue efforts to effect disposal.
2. Advise disposition.
3. Will not continue further efforts. Request cancel and file.
4. Give more complete address.

It is suggested that you review annex C of the NTP 8() for a more in-depth study of operating signals.

Exercise: Complete items 1 through 3 by performing the action required. Check your responses against those listed at the end of this study unit.

1. What are prosigns?

2. What are prowords?

3. Define operating signals.

Lesson 1 Exercise Solutions

	<u>Reference</u>
1. (In any order)	4101
a. Plaindress	
b. Abbreviated plaindress	
c. Codress	
2. (In any order)	4102
a. Heading	
b. Text	
c. Ending	

Lesson 2 Exercise Solutions

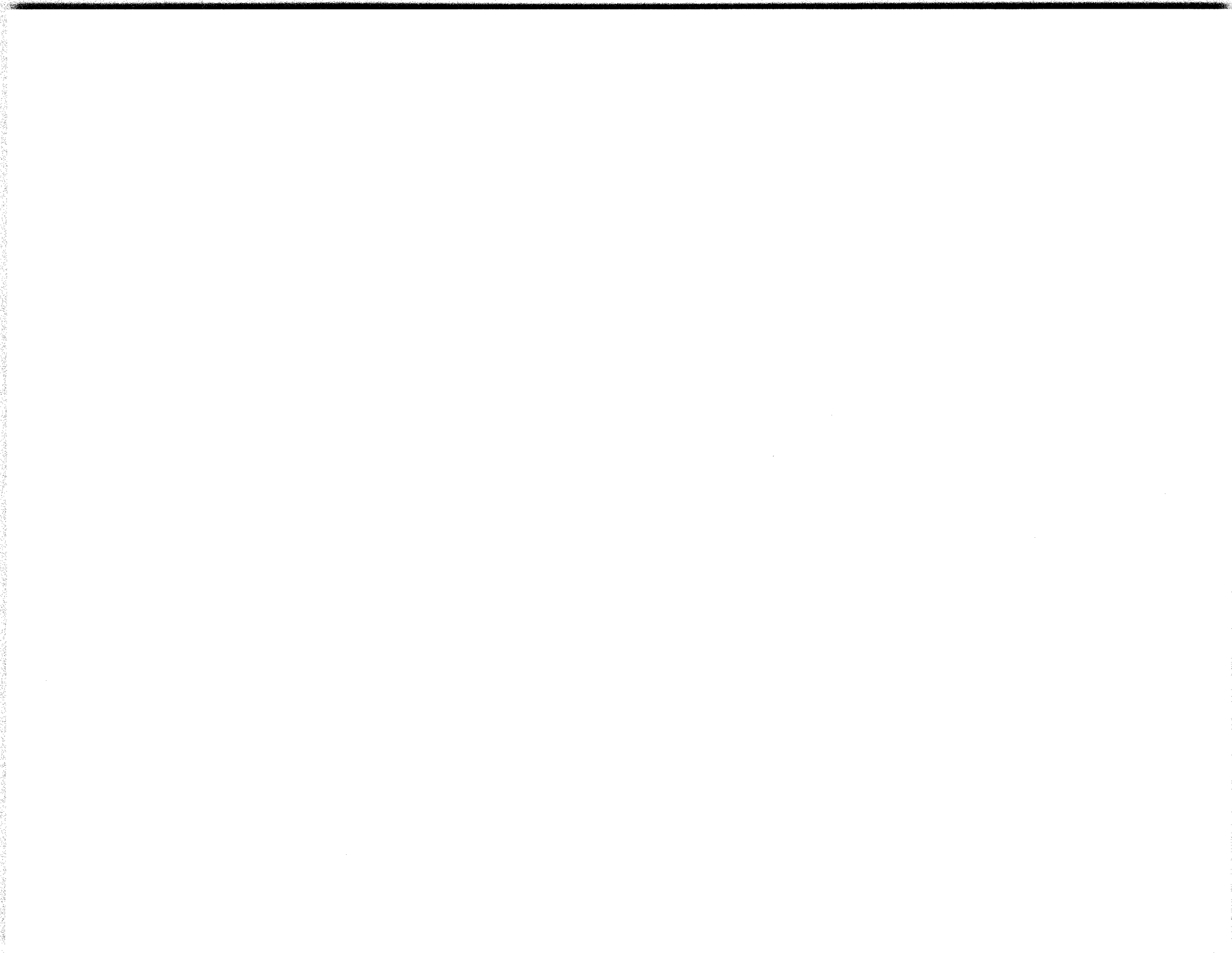
1. A service message is used to obtain information regarding the handling of communication matters.	4201
2. To give an additional addressee information contained in a message not originally sent to him	4202
3. It will have one addressee on format line 7 and none on line 8.	4203
4. multiple address	4204
5. Book message	4205
6. It has a wide distribution, is assigned an identifying title, and may be directive in nature.	4206
7. A form of a service message, initiated to determine the reason for inordinate delay or nondelivery of a message	4207
8. Retransmit the message as a duplicate (ZFG) to the station(s) claiming nondelivery and transmit a service message (tracer) to the first relay station involved with the original message	4208
9. Must be serviced back to the originating station	4209
10. Limited to 25 words of text and permitted to send 5 per day.	4210

Lesson 3 Exercise Solutions

1. (In any order)	4301
a. Flash - As fast as humanly possible, less than 10 minutes.	
b. Immediate - 30 minutes to 1 hour	
c. Priority - 1-6 hours	
d. Routine - 3 hours - next working day	
2. Only when essential for clarity	4302

Lesson 4 Exercise Solutions

1. Procedure signs consisting of one or more letters or characters or combinations thereof	4401
2. Word equivalents of prosigns, for use in radiotelephone procedures	4402
3. "Z" signals are designed for military use. "Q" signals may be used where no suitable "Z" signals exist.	4403



STUDY UNIT 5

RADIOTELEGRAPH, RADIOTELEPHONE, AND RADIOTELETYPE

Lesson 1. RADIOTELEGRAPH

LEARNING OBJECTIVES

1. Without the aid of references, name the three radiotelegraph principal operating methods in accordance with NTP 8().
2. Without the aid of references, name the three types of calls used to establish communications in accordance with NTP 8().
3. Without the aid of references, state the procedure for answering a preliminary call in accordance with NTP 8().
4. Without the aid of references, describe the method used to break into a radiotelegraph transmission in accordance with NTP 8().
5. Without the aid of references, state the procedure for obtaining repetitions prior to receipt of a message in accordance with NTP 8().
6. Without the aid of references, state who is responsible for "netting" a CW net in accordance with NTP 8().
7. Without the aid of references, state the role for transmitting a message containing more than 100 groups in accordance with NTP 8().
8. Without the aid of references, state how a station is notified of the number and precedence of messages in accordance with NTP 8().
9. Without the aid of references, state the reason for using the broadcast method of traffic delivery in accordance with NTP 8().
10. Without the aid of references, list the contents of a radiotelegraph log in accordance with NTP 8().

5101. Operating Methods

There are three principal operating methods available for passing messages from one station to another. The method used is determined by operational requirements. The three methods are

- Receipt - requires the receiving station to give a receipt for each message received to the transmitting station. This is the most common operating method for MARS operations.
- Broadcast - employed to give wide dissemination of information for general use, (Chief, Mars Broadcast, etc.) normally on specified frequencies and at specified times.
- Intercept - stations copy along with the designated receiving station and receipt for their portion of the traffic at a later time.

5102. Establishing Communication

In establishing communication, a call is required. Under difficult operating conditions, the call sign(s) in the call may be transmitted twice.

The three types of call signs are

- Single - only one call sign precedes the prosign DE.
- Collective - identifies a predetermined group of stations.
- Multiple - two or more call signs precede the prosign DE.

5103. Answering a Preliminary Call

To answer a preliminary call, you will transmit the call sign of the calling station, the prosign DE, your call sign, and the prosign K.

Example: NNNØAAA DE NNNØAAB K

After good communication has been established, an answer may consist of the prosign DE, the call sign of the answering station, and the prosign K.

Example: DE NNNØAAB K

5104. Breaking into a Transmission

Break-in procedure is the method used by a receiving station to interrupt a transmission to request the transmitting station to wait, shift frequency, repeat, etc. This procedure will not be used to obtain repetitions when more than one station is involved in the reception of a message.

The station desiring to break-in transmits a series of dashes. When the transmitting station hears these dashes, he stops transmitting to ascertain the reason for the break-in.

Example: NNNØYEB is transmitting to NNNØASI
"AND WILL PROCEED IMMEDIATELY"

NNNØASI missed the word Immediately.

NNNØASI transmits:

Proceed

NNNØYEB then transmits:

PROCEED IMMEDIATELY etc...

As in radiotelephone and radioteletype, any station may break-in to transmit a higher precedence message. However, if the net is a directed net, permission must be obtained from the NECOS before transmitting the message.

5105. Obtaining Repetitions

During transmission, corrections are made by the use of the error prosign (EEEEEEEE's) and repetitions by the prosign (IMI).

After receipt has been obtained for a message, all requests for repetition must be in the form of a new message. When in direct communication, this may be accomplished by use of a service message in the abbreviated form. If not in direct communication, a normal service message must be used.

5106. Netting Procedure

Tuning several stations when establishing a net, or tuning one or more stations joining a net is known as "netting." Ordering and controlling netting is a responsibility of the NECOS.

The tuning signal for use with the operating signal ZRF (Am about to send tuning signal on my frequency) will consist of the transmission of the tuning stations call sign repeated for 2Ø seconds followed by a 1Ø-second dash. After transmitting the tuning signals, the tuning station (NECOS) will direct the stations on the net to send their call signs twice in order to check their frequency.

5107. Messages with more than 1ØØ Groups

When a group count is used, messages containing more than 1ØØ groups shall be transmitted as follows:

- First 1ØØ groups
- Second 1ØØ groups
- Third 1ØØ and subsequent groups

Example: NAV is transmitting a message containing 16Ø groups to NAV EIGHT. He stops after transmitting the 1ØØth group and indicates that there is more to follow. He requests a receipt for the portion transmitted, as follows:

NAV EIGHT DE NAV -
R - 231611Z DEC 86
GR16Ø
BT
(. . . FIRST 1ØØ groups) . . .
B 6Ø
K

NAV EIGHT, having received the first 100, transmits:

DE NAV EIGHT R K

NAV resumes transmission after a short pause

NAV EIGHT DE NAV -
(101 to 160 inclusive)

BT
K

In the above examples, if NAV EIGHT had required any repetitions, they would have been asked for and given before receipting for the portion sent. Messages without group counts shall be transmitted as above but without GR and number of groups. The second portion shall always start with the last word sent of the previous portion.

5108. Messages in Strings

When radio communication is good, frequently it facilitates the handling of traffic for one station to send several messages to another station without interruption. The transmitting station will indicate the number of messages to be transmitted in a given sequence.

Example: NNNØRSE has ten messages for NNNØEFB. NNNØRSE transmits:
NNNØEFB DE NNNØRSE ZBO 6P - 4R K

5109. Broadcast Method

The broadcast method is a means of transmitting traffic to radio stations over a wide area without the necessity of answering. The broadcast method is also used when time does not permit individual station receipt. Just before sending a MARS broadcast, a general call tape will be transmitted for approximately 5 minutes before the scheduled broadcast time. The call tape contains the following information:

- Broadcast designation M (made three times)
- VVV (made three times)
- Prosign DE (made once)
- Broadcast station call sign (made three times)

5110. Radiotelegraph Log

Morse Radiotelegraph (CW) logs will contain a record of every radiotelegraph transmission on each frequency guarded, covered, or copied. The logs shall be retained as follows:

- Logs incident to distress or disaster - 3 years
- Logs incident to any claim or complaint against your station - 2 years or until fully satisfied
- Logs of historical or continuing interest - permanently

Exercise: Complete items 1 through 10 by performing the action required. Check your responses against those listed at the end of this study unit.

1. What are the three radiotelegraph principal operating methods (in any order)?

a. _____ b. _____ c. _____

2. Name the three types of calls used to establish communications (in any order)?

a. _____ b. _____ c. _____

3. What is the procedure for answering a preliminary call?

4. What method is used to break into a radiotelegraph transmission?

5. What procedure is used to obtain repetitions prior to receipt of a message?

6. Who is responsible for "netting" a CW net?

7. You are transmitting a 200 group message. How many groups are sent in a message before breaking? _____

8. Your call sign is NNNØRAG. You have 1Ø priority messages for NNNØBBB. How would you notify NNNØBBB of the number of messages in the string?

9. What is achieved by using the broadcast method of traffic delivery?

10. What must a CW log contain?

Lesson 2. RADIOTELEPHONE

LEARNING OBJECTIVES

1. Without the aid of references, state the rule for making a radio check in accordance with NTP 8().
2. Without the aid of references, state when a preliminary call is made in accordance with NTP 8().
3. Without the aid of references, state the procedures for transmitting letters and numbers in accordance with NTP 8().
4. Without the aid of references, define the proword "relay" in accordance with NTP 8().
5. Without the aid of references, state how a correction is made during transmission in accordance with NTP 8().
6. Without the aid of references, transmit a MARS message in accordance with NTP 8().
7. Without the aid of references, obtain a receipt for a transmitted message in accordance with NTP 8().

The radiotelegraph procedure contained in lesson 1 of this study unit and in the NTP 8 (), is equally applicable to the radiotelephone procedure contained in this lesson. However, the prosigns and letters are spoken as the equivalent prowords or phonetics. In no case shall a proword or a combination of prowords be substituted for the text of a message.

Transmissions by radiotelephone shall be as short and concise as practical. The use of standard phraseology enhances brevity. Transmissions should be clear with natural emphasis on each word except the prescribed pronunciation of numerals. To use net time more efficiently, all messages should be written down prior to transmission.

Operating Signals ("Q and Z") are not designed for radiotelephone transmissions. In radiotelephone procedure, the operating information will normally be conveyed in concise phrases. However, the use of operating signals is permissible when they are part of a message being transmitted or when there are language difficulties. In such instances, operating signals are transmitted by using the authorized phonetic equivalents.

5201. Radio Checks

A station is understood to have good signal strength and readability unless otherwise notified. Radio checks will not be made unless one station cannot clearly hear the other station.

The prowords listed below are for use when initiating and answering (radio checks) queries concerning signal strength and readability.

- Roger - I have received your last transmission satisfactorily. The omission of comment on signal strength and readability is understood to mean that reception is loud and clear.
- Report of signal strength
 - LOUD- Your signal is very strong.
 - GOOD- Your signal strength is good.
 - WEAK- Your signal strength is weak.
 - VERY WEAK- Your signal strength is very weak.
 - FADING- Your signal strength fades to such an extent that continuous reception cannot be relied upon.
- Report of readability
 - CLEAR- Excellent quality.
 - READABLE- Quality is satisfactory.
 - UNREADABLE- The quality of your transmission is so bad that I cannot read you.
 - DISTORTED- Having trouble reading you because your signal is distorted.
 - WITH INTERFERENCE- Having trouble reading you due to interference.

Example: NNN ZERO ALFA ALFA DELTA THIS IS NNN ZERO
BRAVO BRAVO DELTA RADIO CHECK OVER

NNN ZERO BRAVO BRAVO DELTA THIS IS NNN ZERO
ALFA ALFA DELTA ROGER OVER

Note: At this point NNNØBBD would continue communicating with NNNØAAD in a normal manner.

Example: NNN ZERO ALFA ALFA DELTA THIS IS NNN ZERO
BRAVO BRAVO DELTA RADIO CHECK OVER

NNN ZERO BRAVO BRAVO DELTA THIS IS NNN
ZERO ALFA ALFA DELTA WEAK BUT READABLE OVER

Note: At this point communications would continue in a normal manner between the two stations. However, due to difficult conditions, both stations should speak slowly.

Note: Reports such as "Q-5", "Five by Five", etc., will not be used.

5202. Preliminary Calls

When communication is difficult or when the calling station wants to find out if the called station is ready to receive a message, a preliminary call is made.

Example: NNNØREE wishes to transmit a routine message to NNNØAAB and desires to know if he is ready to accept it.

NNN ZERO ALFA ALFA BRAVO THIS IS NNN
ZERO ROMEO ECHO ECHO ONE ROUTINE YOUR STATION OVER

THIS IS NNN ZERO ALFA ALFA BRAVO OVER

THIS IS NNN ZERO ROMEO ECHO ECHO
MESSAGE FOLLOWS ROUTINE TIME etc . . .

If on a directed net, you would first contact the NECOS for permission to send your traffic.

5203. Transmitting Letters and Numbers

When transmitting a group of random letters, abbreviations, numbers, or words that cannot be pronounced, precede the groups with the proword "I SPELL." When sending a group of figures; e.g., telephone numbers, zip codes, social security numbers, dates, etc., precede them by saying "FIGURES."

Example: 3RD - FIGURES THREE ROMEO DELTA
RM2 - I SPELL ROMEO MIKE TWO
12BE6 - FIGURES ONE TWO BRAVO ECHO SIX

When using "I SPELL" for the spelling of an unusual name, say the name first, then say "I SPELL" followed by the phonetic spelling, and then say the word again.

Example: WATROUS, I SPELL WHISKEY ALFA TANGO ROMEO OSCAR UNIFORM SIERRA, WATROUS

5204. Relaying Messages

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

Example: NNNØMSD wishes NNNØRAG to relay the following message to all addressees.

R 112119Z DEC 86
FM NNNØMSD SCA
TO NNNØGAF SCA
NNNØPPC SCA
NNNØRPB SCA
BT
UNCLAS
CANNOT MEET 25 DEC PHONE PATCH NET
BT

NNN ZERO ROMEO ALFA GOLF THIS IS NNN ZERO
MIKE SIERRA DELTA MESSAGE FOLLOWS RELAY
ROUTINE TIME ONE ONE etc...

The proword "relay" followed by a call sign indicates the station called is to relay the message to the station indicated by the call sign.

Example: NNNØMSD wishes NNNØRAG to relay the message to NNNØPPC only.

NNN ZERO ROMEO ALFA GOLF THIS IS NNN
ZERO MIKE SIERRA DELTA MESSAGE FOLLOWS
RELAY TO NNN ZERO PAPA PAPA CHARLIE ROUTINE
TIME ONE ONE TWO ONE etc...

When more than one station is called, the call sign of the station designated to perform the relay will precede the proword "relay."

Example: NNNØMSD wishes NNNØRAG to relay the message to NNNØPPC, NNNØMET to relay the message to NNNØRPB.

NNN ZERO ROMEO ALFA GOLF NNN ZERO MIKE ECHO
TANGO THIS IS NNN ZERO MIKE SIERRA DELTA
MESSAGE FOLLOWS NNN ZERO ROMEO ALFA GOLF RELAY
TO NNN ZERO PAPA PAPA CHARLIE NNN ZERO MIKE
ECHO TANGO RELAY TO NNN ZERO ROMEO PAPA
BRAVO ROUTINE TIME ONE ONE TWO etc...

5205. Corrections During Transmission

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

Example: NNN ZERO PAPA PAPA CHARLIE THIS IS NNN ZERO
ROMEO TANGO WHISKEY MESSAGE FOLLOWS
ROUTINE TIME TWO TWO ONE TWO TWO ONE
ZULU DEC EIGHT SIX FM NNN ZERO PAPA
PAPA CHARLIE SOUTHERN CALIFORNIA TO NNN ZERO ROMEO TANGO
WHISKEY SOUTHERN CALIFORNIA BREAK UNCLAS YOU ARE NOT
"CORRECTION" YOU ARE ASSIGNED TO THE PHONE
PATCH NET BREAK OVER

When an error is made during the transmission of a message heading, the proword "Correction" will be transmitted followed by the last proword correctly transmitted.

Example: NNN ZERO GOLF BRAVO ALFA THIS IS NNN
ZERO ALFA BRAVO CHARLIE MESSAGE FOLLOWS
ROUTINE TIME ONE ONE TWO TWO NINER
NINER "CORRECTION" ROUTINE TIME
ONE ONE TWO TWO ONE NINER ZULU
DECEMBER EIGHT SIX etc...

5206. Transmitting a Message

When transmitting a message on a MARS net, you must use the correct procedure. Sending a message slowly and concisely the first time will preclude requests for repetitions. The following example shows the correct procedure used to send a message. The prowords will appear as darker print and the three dots will indicate where a pause should occur.

Example: R ~~092300Z~~ DEC 86
FM CARON COLT OXFORD NY/NNN0GKK NNY
TO LT DAVID F COLT ~~070~~-22-9622 USMC
1ST PLT B CO 1ST BN 5TH MAR
FPO SFC 96602
635-3888
BT
UNCLAS
SENT TAPES AND PICTURES 7 DEC LET MET KNOW WHEN THEY ARRIVE
BT

MESSAGE FOLLOWS ... ROUTINE ... TIME ... ZERO NINER TWO THREE ZERO ZERO ZULU ... DECEMBER
EIGHT SIX ... FROM CARON ... I SPELL CHARLIE ALFA ROMEO OSCAR NOVEMBER ... CARON
COLT ... I SPELL CHARLIE OSCAR LIMA TANGO ... COLT ... OXFORD NEW YORK ... SLANT NNN ZERO
GOLF KILO KILO NORTHERN NEW YORK ... TO ... I SPELL ... LIMA TANGO DAVID INITIAL FOXTROT
... COLT ... FIGURES ZERO SEVEN ZERO DASH TWO TWO DASH NINER SIX TWO TWO ... I SPELL
UNIFORM SIERRA MIKE CHARLIE ... FIGURE ONE SIERRA TANGO ... I SPELL ... PAPA LIMA TANGO
... I SPELL BRAVO I SPELL CHARLIE OSCAR ... FIGURE ONE SIERRA TANGO ... I SPELL BRAVO
NOVEMBER ... FIGURE FIVE TANGO HOTEL ... I SPELL MIKE ALFA ROMEO I SPELL FOXTROT PAPA
OSCAR ... I SPELL SIERRA FOXTROT CHARLIE ... FIGURES NINER SIX SIX ZERO TWO FIGURES SIX
THREE FIVE DASH THREE EIGHT EIGHT EIGHT ... BREAK ... UNCLAS ... SENT TAPES AND PICTURES ...
FIGURE SEVEN ... I SPELL DELTA ECHO CHARLIE ... LET ME KNOW WHEN THEY ARRIVE ... BREAK
... OVER

5207. Obtaining a Receipt

Receipt is employed in station-to-station traffic handling. No message is considered delivered until a receipt is obtained. A receipt may be effected as follows: the receiving station transmits a receipt after each message or string of messages by the proword "Roger."

Example: NNN ZERO LIMA MIKE ALFA THIS IS NNN ZERO
CHARLIE BRAVO WHISKEY MESSAGE FOLLOWS
ROUTINE TIME ...etc...

After receiving the message NNNOCBW transmits:

THIS IS NNN ZERO CHARLIE BRAVO WHISKEY ROGER OUT

Exercise: Complete items 1 through 5 by performing the action required. Check your responses against those listed at the end of this study unit.

1. What is the rule concerning radio checks?

2. When is a preliminary call made (in any order)?

a. _____

b. _____

3. How would the group 1X1AB be transmitted by voice?

4. Your station is sent a message with one call sign following the proword "relay". However, the message has six additional addressees. Who would you deliver the message to?

5. State how a correction is made during transmission.

Lesson 3. RADIOTELETYPE

LEARNING OBJECTIVES

1. Given a list of basic teletype machine functions and a list of definitions, match the function with its definition in accordance with NTP 8().
2. Without the aid of references, state the procedure for message alignment in accordance with NTP 8().
3. Without the aid of references, construct a test tape in accordance with NTP 8().
4. Without the aid of references, correct an error during tape preparation in accordance with NTP 8().
5. Without the aid of references, state the number of lines that may be transmitted in one section of a message in accordance with NTP 8().
6. Without the aid of references, state the rule for transmitting priority or higher precedence messages in accordance with NTP 8().
7. Without the aid of references, state the purpose of a "Routing Indicator" in accordance with NTP 8().
8. Without the aid of references, prepare a message transmission identification in accordance with NTP 8().
9. Without the aid of references, state the rule for routine messages in accordance with NTP 8().

Teletypewriter procedures are identical to basic telegraph procedures, including prosigns, operating signals, and message format. Therefore, this lesson will not include that material already covered, except when it is necessary to amplify or show relationship. Tape relay procedures are a variation of teletypewriter procedures used between stations of the MARSTELSYS.

5301. Machine Functions

All machine functions listed below must be available to the operator regardless of the type of terminal equipment (automated message processor, "home" computer, or mechanical teletypewriter) being used. Nonstandard sequences of functions are prohibited.

- Shift - operators must always depress the "LTRS" key when going from uppercase (FIGURES) to lowercase (LETTERS) and the "FIGS" key when going from lowercase to uppercase.
- Carriage return "CR" - used to reset the receiving (mechanical) equipment to the left margin. Always use two carriage returns. This allows equipment time to return to the left margin before the next print command.

- Line feed "LF" - employed to advance the copy (paper) vertically.
- Space - advances the copy from left to right without printing a character.
- Bell signal - either an upper case "S" or upper case "J." In NAVMARCORMARS both will be encountered. Used to attract the attention of the receiving operator. Transmitted as a series of ten characters (JJJJJSSSSS) upper case "J" and "S."

5302. Message Alignment

Specific machine functions are necessary to ease the handling of messages and to align receiving page teletypewriters. All transmissions must be preceded by at least two letters functions ("LTRS"), five space functions (space bar), two carriage returns ("CR"), and one line feed ("LF"). The end of line function will be two carriage returns and one line feed. The end of message function consists of two carriage returns, four line feeds, the letter N repeated four times (NNNN), and twelve letter functions.

Example: (2 LTRS) (5 SPACES) (2CR) (1 LF)
 NNN(FIGS)(LTRS) AAB DE etc...
 BT (2CR) (4 LF)

 NNNN (12 LTRS)

No line shall exceed 69 characters, including spaces.

5303. Constructing Test Tapes

When a station wishes to test on a net or circuit, the following test will be used:

(2 LTRS) (5 SPACES) (2CR) (LF)
 THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890 DE (Call sign of station testing) (2CR)
 THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890 DE (Call sign of
 station testing) (2CR) (LF) RYRYRYRYRYRYRYRY (Total of 64 characters) (2CR) (LF)

Note: The omission of the (LF) following the (2CR) at the end of the first line is intentional. The test is designed so that the second line of "THE QUICK BROWN FOX" will overprint the first line. In this manner, any malfunction or bad band conditions are more immediately apparent, and a sizeable savings in paper is realized.

5304. Correcting Errors During Tape Preparation

When an error is detected during keyboard transmission, it shall be corrected by typing 8 EEEEEEE's and the prosign out AR.

Errors made in preparing tape will be corrected by backspacing the tape and "lettering out" the error using the "LTRS" Key. If the errors occur in a message heading, a new tape will be prepared.

If the transmitting operator discovers an error which was not corrected as indicated above, you may correct the error at the message ending. Such corrections will be separated from the prosign BT by (2CR) (LF) and will be preceded by the prosign "C."

Example: WILL ARRIVE ON TODAY AT AIRPORT
 BT (2CR) (LF)
 C ARRIVE TODAY (2CR) (3LF)

5305. Message Sections

Up to 100 lines of continuous text may be transmitted in one section. Messages which exceed 100 lines are considered to be long messages. Since long messages monopolize circuit time when transmitted in their entirety, it is advisable to separate them into transmission sections even though they may be below the prescribed length. Messages to be forwarded in sections will be divided as follows:

- At a convenient point, but not beyond the maximum number of lines prescribed, separate the text at the end of a sentence.

- Before the text and following the security classification, insert the plain language: "SECTION ONE OF _____." Each additional transmission section will be preceded by an identical message heading and identical date-time group, except that it will contain a different station serial number for that particular transmission section. Repeat the process as required. The final transmission section is identified "FINAL SECTION OF _____."

Example: BT
 UNCLAS
 SECTION ONE OF TWO
 (TEXT)
 BT

NNNSDN001
 RR NOASC
 DE MSD 001
 R 111300Z DEC 86
 FM NNN0MSD SCA
 TO NNN0PPE VA
 BT
 UNCLAS
 FINAL SECTION OF TWO

5306. Transmitting High Precedence Messages

When messages of Priority precedence or higher are to be transmitted, they shall be preceded by:

PRIORITY PRIORITY PRIORITY (FIGS) (JJJJJSSSS) (LTRS) (2CR) (LF)

Substitute the higher precedence as appropriate.

5307. Routing Indicators

Routing indicators are a group of letters (fig 5-1) that identify a station or area within the MARSTELSYS to help in routing traffic.

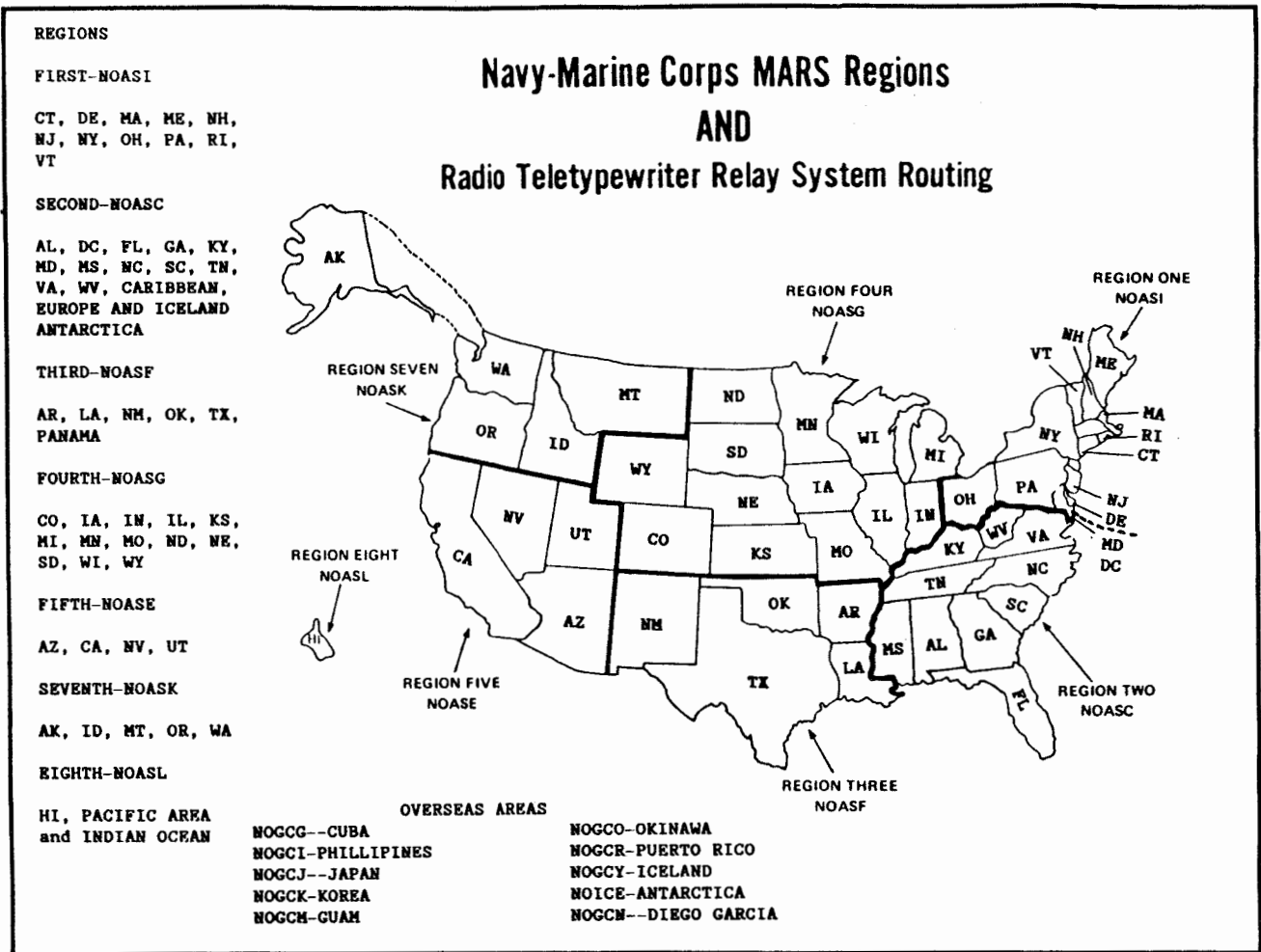


Fig 5-1. Routing indicators.

MARS routing indicators are derived by taking the Region Directors call sign and changing the prefix to read "NO" vice "NNNØ."

Example: The Region Director's call sign for region five is NNNØASE. The routing indicator for region five is NOASE.

Overseas areas such as Okinawa are assigned a routing indicator derived from the Area Coordinator's call sign.

5308. Routing Messages

In multiple address messages, all routing indicators associated with a single relay station shall be grouped together in format line 2. They shall not be intermingled.

When two or more addressees of a message are served by a single station or are within the same area, the routing indicator of that area shall appear only once in format line 2 regardless of the number of times it appears in format line 7 and/or 8.

5309. Message Transmission Identification

The formulation of station designator letters associated with transmission identification within MARS will be determined by the following:

- The last two letters of the transmitting stations call sign
- The last letter of the receiving stations call sign

- A three number message identification from 001 to 999

Example: NNN0DER is sending message number 001 to NNN0CBA.

ERA001

NNN0CBA is sending the above message to NNN0MAL. BAL001ERA001

Exercise: Complete items 1 through 11 by performing the action required. Check your responses against those listed at the end of this study unit.

In the group of items below (1 through 5), match the basic teletype machine functions in column 1 with the appropriate definition in column 2. Place your answers in the spaces provided.

Column 1	Column 2
<u>Machine functions</u>	<u>Definition</u>
— 1.Shift	a. Depress "LTRS" when going to lowercase and depress "FIGS" when going to uppercase
— 2.Carriage return	b. Used to attract attention of receiving operator
— 3.Line feed	c. Used to return machine to the left margin
— 4.Space	d. Used to advance the machine laterally without printing a character
— 5.Bell signal	e. Used to advance the paper vertically
6. What is the procedure for proper message alignment?	

7. What is the procedure for correcting an error during tape preparation?	

8. How many lines may be transmitted in a message without going to a multiple section message?	

9. State the rule for transmitting a priority or higher precedence message?	

10. What is the purpose of a routing indicator?	

11. What is the rule pertaining to routing messages?	

Lesson 1 Exercise Solutions

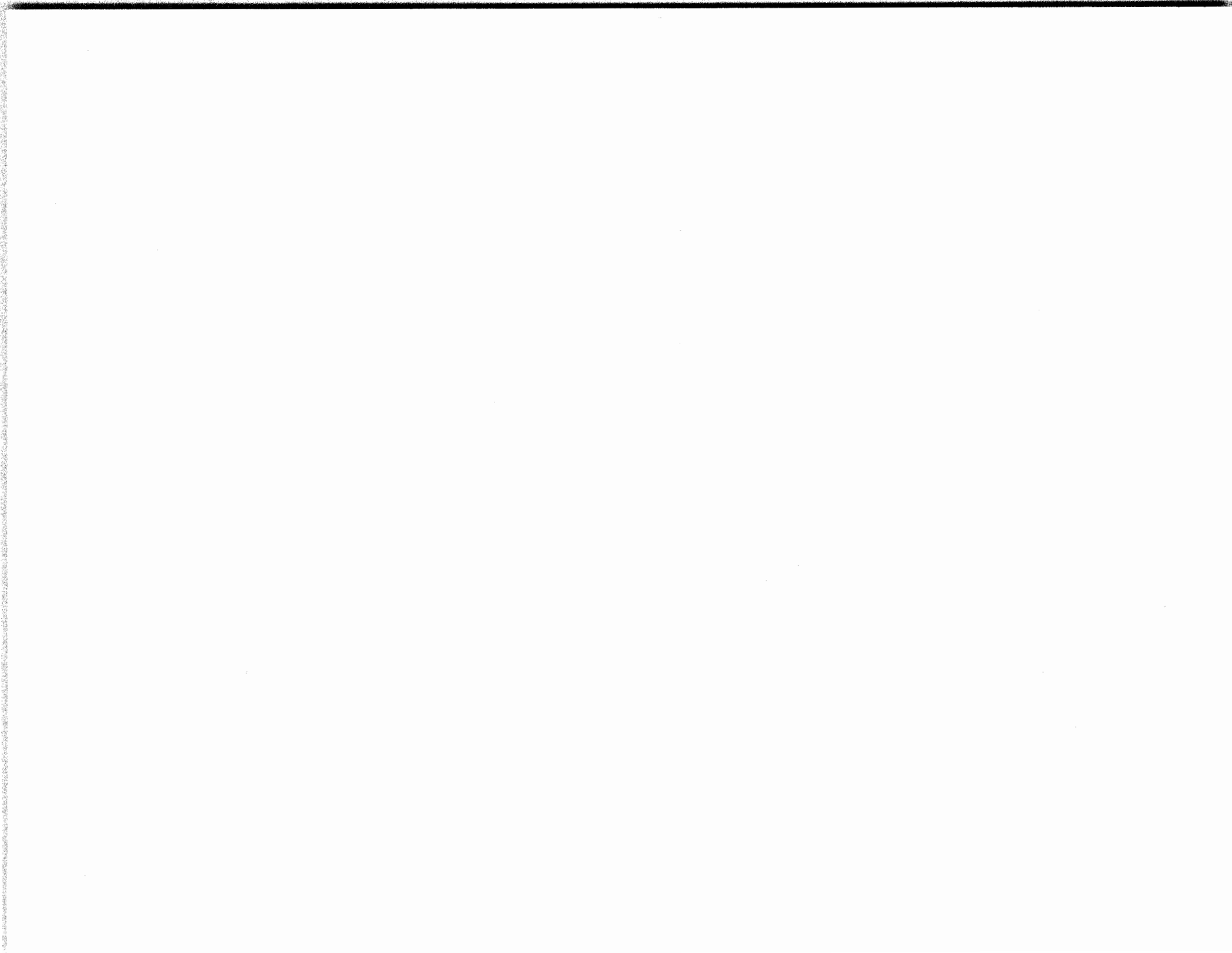
	<u>Reference</u>
1. a. Receipt b. Broadcast c. Intercept	5101
2. a. Single b. Collective c. Multiple	5102
3. Transmit the call sign of the calling station, the prosign "DE" your call sign, and the proword "OVER."	5103
4. Succession of dashes	5104
5. Corrections are made during transmission by use of the error prosign and repetitions by the repeat prosign.	5105
6. Net control station	5106
7. Up to 100	5107
8. NNN0BBB DE NNN0RAG ZBO 10 P K	5108
9. Wide dissemination for information of general use	5101, 5109
10. A record of every CW transmission on each frequency guarded, covered, or copied	5110

Lesson 2 Exercise Solutions

1. A station is understood to have good signal strength and readability unless otherwise notified.	5201
2. a. When communication is difficult b. When the calling station wants to find out if the called station is ready to receive traffic	5202
3. FIGURE ... ONE XRAY ONE ALFA	5203
4. To the station whose call sign follows the proword relay	5204
5. Proword "correction" will be transmitted followed by the last proword correctly transmitted.	5205

Lesson 3 Exercise Solutions

1. a.	5301
2. c.	
3. e.	
4. d.	
5. b.	
6. All transmissions preceded by (2 "LTRS"), (5 spaces), (2 "CR"), and (1LF)	5302
7. Letter out the error, unless it occurs in the heading. If so, a new tape must be prepared.	5304
8. 100	5305
9. Message shall be preceded by PRIOTITY PRIORITY PRIORITY (FIGS) (JJJJJSSSS) (LTRS) (2CR) (LF)	5306
10. To identify a station or area within the MARSTELSYS	5307
11. In multiple address messages, all routing indicators associated with a single relay station shall be grouped together in format line 2.	5308



STUDY UNIT 6

EMERGENCY COMMUNICATIONS

Lesson 1. EMERGENCY COMMUNICATION PROCEDURES

LEARNING OBJECTIVES

1. Without the aid of references, list the three types of emergency communications in accordance with NTP 8().
2. Given a list of communication conditions and a list of actions to perform during emergencies, match the condition with the appropriate action in accordance with NTP 8().
3. Without the aid of references, state where an Auxiliary Radio Team (ART) is dispatched to in accordance with NTP 8().
4. Without the aid of references, state the reason for the establishment of a Station Augmentation Team (SAT) in accordance with NTP 3().
5. Without the aid of references, name the stations that must receive the emergency communications implementation message in accordance with NTP 3().
6. Without the aid of references, state how often situation reports are sent during an emergency in accordance with NTP 8().

6101. Types of Emergency Communication

Emergency communication is a sudden, generally unexpected occurrence demanding an immediate system for sending and receiving messages. Emergencies can be roughly divided into three basic types. The actions to be taken are basically the same in any case, with modifications as necessary to meet the particular situation. The three types of emergencies are:

- Civil riot or uprising
- Natural disaster (flood, fire, hurricane, tornado, etc.)
- Hostile action

MARS communication resources may be used to support civil defense/disaster requirements as long as the MARS resources are not needed to support requirements of the Department of the Navy. MARS resources are subject to the following:

- MARS resources should be requested by civil and/or disaster control officials. Requests should be made to Chief, MARS, via the Region Director. This does not preclude the use of MARS resources pending the official request and the acknowledgment.
- MARS assistance will complement and not substitute for other emergency communication resources.
- MARS support shall be provided only as long as necessary or until normal communications is restored.

MARS military stations should ensure that the command/activity includes the MARS organization in their emergency communication and disaster control plans and:

- Provide the necessary coordination between the MARS organization and the command/activity.
- Advise and make recommendations to the MARS Director in matters concerning emergency communications.
- Prepare an Emergency Communications Plan for their station as outlined in Annex D NTP 8() and Region/Area emergency communications plans.

Each individual MARS member should keep the Area Coordinator informed of his participation in other emergency communication programs, e.g. AREC, Civil Defense, Red Cross, etc.

6102. Communication Conditions

To provide a phased response to emergency situations, the following alerting conditions and actions required will apply:

<u>Conditions</u>	<u>Action Required</u>
<u>Communication Condition - III</u> An emergency or disaster situation expected to develop within 48 hours.	Alert stations to monitor primary frequencies to the extent feasible. Take preliminary precautions. Test emergency power, locate essential items such as flashlights, etc. Continue normal operations in conjunction with two items above.
<u>Communication Condition - II</u> An emergency or disaster situation anticipated within 24 hours.	Effect all measures necessary to activate on short notice. Modify routine operations as necessary for readiness.
<u>Communication Condition - I</u> An emergency or disaster situation imminent.	Suspend all normal operations as necessary. Activate emergency networks and Emergency Communication Plan (ECP) as necessary. Take appropriate precautions.
<u>Communication Condition - Ø</u> An emergency or disaster situation exists.	Same as condition I.

6103. Auxiliary Radio Team (ART)

At least one Auxiliary Radio Team (ART) that may be dispatched to a scene or area of a disaster or for support in naval disaster control should be operational in each MARS area. Each ART shall be designated by the region number and sequentially numbered (ART 4-1, 4-2). Also, each team should be organized and equipped with the following capabilities:

- Each team should be made up at least six members, and headed by a team captain.
- Portable and/or mobile VHF FM R/T equipment with coverage to operate simplex or repeater
- Emergency power
- HF equipment capable of CW and SSB operation
- Such other supplies as needed for self-support

6104. Station Augmentation Team (SAT)

During an emergency, message traffic increases and requires expedient handling. In addition, operations are normally extended. Therefore, multi-operator stations provide an effective means for emergency communication operations.

In view of the many single-operator (individual) stations within the MARS program, SAT's shall be established to meet the above requirements. These teams should be established to assist in operating the Region Primary/Major relay stations and military stations, especially those assigned to the MARSTELSYS.

The Commanding Officer of a command/activity sponsoring a military station may request the establishment of a SAT to support their station. Such requests should be addressed to the Region Director and list the number of members required.

6105. Implementation Messages

Any MARS member may effect local implementation when requested by military or civilian authorities pending official request and acknowledgment. Upon implementing MARS emergency communication support, a report shall be made by an immediate message to Chief, MARS, the Region Director and Area Coordinator using the following format:

O _____ DTG
FM NNNØ
TO NNNØASA MD/DC
NNNØAS _____
NNNØG
BT
UNCLAS

Emerg Comm Implementation

- A. Circumstances requiring implementation.
- B. MARS services requested (yes/no). If yes, requested by name and title of the requestor.
- C. Additional Communication support required (yes/no). If yes, to what extent and scope.
(Note: If additional support indicated within:)
 - (1) Area - action to be taken by Area Coordinator
 - (2) Region - action to be taken by Region Director
 - (3) Outside Region - action to be taken by Chief, MARS

Example: NNNØQMY located in Pasadena, California, has just felt a medium earthquake. All telephone communications have been knocked out. A local police official is dispatched to QMY's address by the Civil Defense Director for that area. Mr. Art Smith (the Civil Defense official) has requested that MARS emergency communication support be provided until phone service can be repaired or another agency can respond. NNNØQMY implements emergency communication support and sends the following implementation message:

O 120900Z Dec 86
FM NNNØQMY SCA
TO NNNØASA MD/DC
NNNØASE SCA
NNNØGAF SCA
BT
UNCLAS

EMERG COMM IMPLEMENTATION

- A. MEDIUM EARTHQUAKE PASADENA AREA. ALL PHONE SWITCHES DISABLED.
 - B. YES, MR ART SMITH CIVIL DEFENSE DIRECTOR L.A. AREA.
 - C. REQUEST ART TEAM 5-1 TO REPORT FOR OVERFLOW PHONE PATCH COMMUNICATIONS. REPORT TO L.A.
 - P.D. SUB-STATION 23 IMI 23 AS PER ECP.
- BT

6106. Situation Reports

During an emergency, the roll of MARS is to provide emergency communication services. Members should not become involved directly in the emergency activities except for providing communication services unless requested by proper authority.

During an emergency, situation reports (SITREPS) pertaining to MARS communication shall be sent by the station at the scene. The SITREPS will be transmitted every 6 hours or sooner, if necessary. SITREPS will be sent to the area Coordinator and Region Director. The Region Director will consolidate these reports and forward to Chief, MARS.

The first or initial SITREP will be UNCLAS SITREP ONE; the next, UNCLAS SITREP TWO, etc. They will be numbered consecutively until the emergency is over.

Standard categories of information (1 through 5 in the text) will not be omitted. Lack of information or a negative report will be made by using the following terms:

- NO CHANGE - used to indicate that the item is the same as previously reported.
- NEGATIVE - used to indicate this category not applicable, not being used, or nothing to report.

- NOT AVAILABLE - information requested by this category is not available at this time.

SITREPS will be transmitted using the following format:

P _____ DTG _____
 FM NNNØ _____
 TO NNNØ _____
 INFO NNNØ _____

BT

UNCLAS

SITREP (ONE, TWO, THREE, etc.)

1. (Brief resume of situation in disaster area)
2. (Designator of Net(s) and number of stations participating in the emergency)
3. (Advisory information, recommendations, needs, etc. Be brief.)
4. (Prognosis for next 2 hours)
5. (Other pertinent information - problems, equipment performance, etc.)

BT

Example: NNNØQMY after arriving at the disaster site has determined that all emergency communication switches in the L.A. area have been damaged. He has activated an outgoing net to NNNØMSD in San Diego on 4ØØ1.5 kHz and NNNØWUE on 7375 kHz. The ART team has arrived on site and will need more emergency power sources than available. The next 2 hours will be used to establish a link with FEMA officials located in San Francisco. In addition to the power sources needed by the ART, he will need a resupply of generator fuel by 15ØØZ. NNNØQMY transmits the following initial SITREP:

P 1212ØØZ DEC 86
 FM NNNØQMY SCA
 TO NNNØASE SCA
 INFO NNNØGAF SCA

BT

UNCLAS

SITREP ONE

1. ALL ECOM SWITCHES HAVE BEEN DAMAGED.
2. 5X1V NET ESTABLISHED WITH NNNØMSD ON 4ØØ1.5 KHZ. 5X2V NET ESTABLISHED WITH NNNØWUE ON 7375 KHZ.
3. ART TEAM ARRIVED. WILL NEED MORE EMERGENCY POWER.
4. LINK TO BE ESTABLISHED WITH (FEMA) OFFICIALS IN SAN FRANCISCO.
5. NEED RESUPPLY OF GENERATOR FUEL BY 15ØØZ.

BT

Exercise: Complete items 1 through 9 by performing the action required. Check your responses against those listed at the end of this study unit.

1. List (in any order) the three types of emergency communications.

a. _____ b. _____ c. _____

In the group of items below (2 through 5), match the communication conditions in column 1 with the action required in column 2. Place your answers in the spaces provided.

Column 1	Column 2
<u>Communication Conditions</u>	<u>Action Required</u>
_____ 2. Zero	a. Suspend all normal operations as required and activate emergency networks/ECP, as necessary.
_____ 3. III	b. Alert stations to monitor primary frequencies to the extent feasible; test emergency power, locate essential items and continue normal operations commensurate with above items.
_____ 4. II	c. Same as Condition I
_____ 5. I	d. Effect all measures necessary to activate on short notice and curtail routine operations, as necessary for readiness.

6. Where is an ART dispatched to?

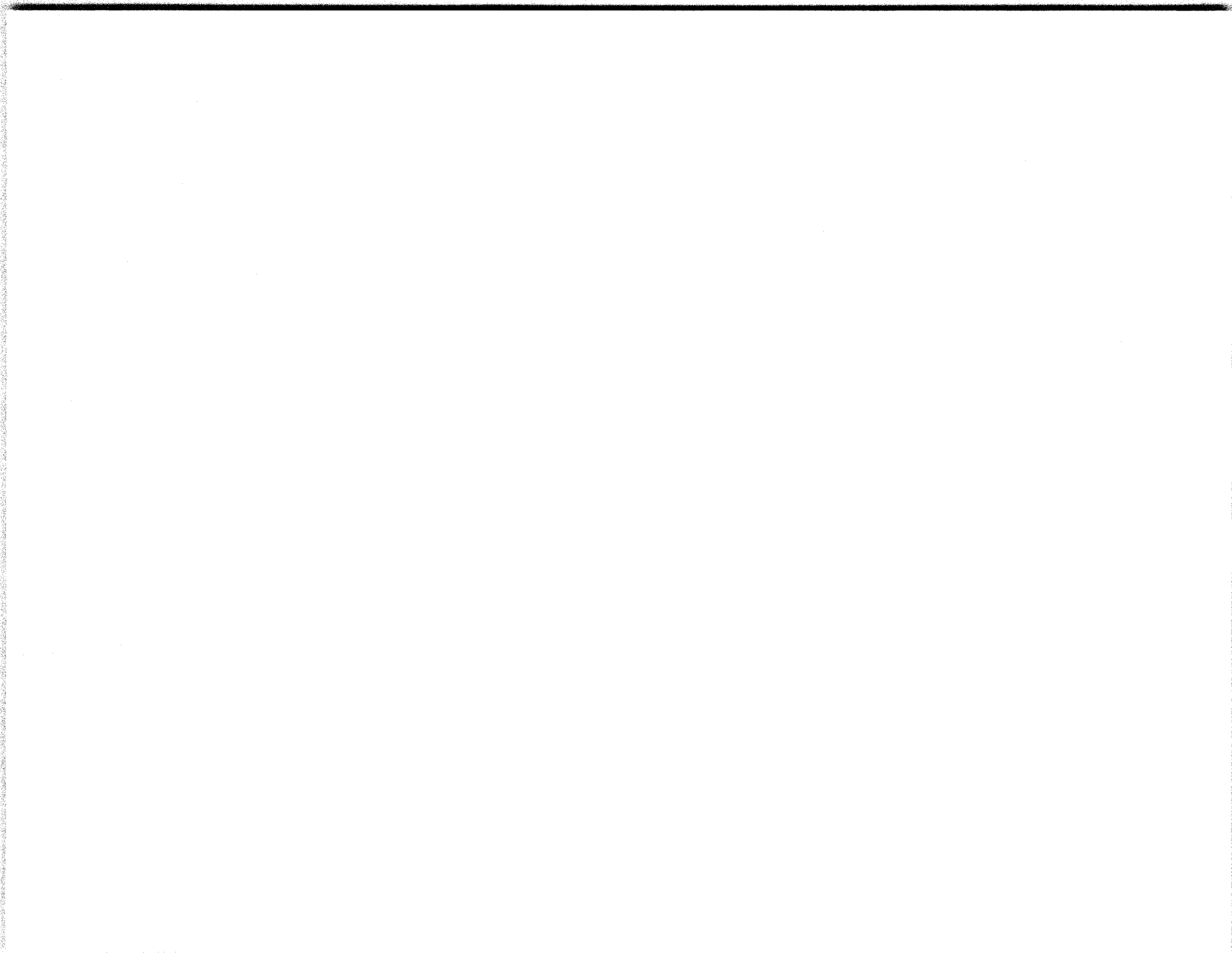
7. Why are SAT's established?

8. What stations must the emergency communications implementation message be sent to?

9. How often are situation reports sent during an emergency?

Lesson 1 Exercise Solutions

	<u>Reference</u>
1. a. Civil riot or uprising	6101
b. Natural disaster	
c. Hostile action	
2. c.	6102
3. b.	
4. d.	
5. a.	
6. An ART may be dispatched to the scene or area of a disaster.	6103
7. To augment a single (individual) or military station	6104
8. (In any order) Chief MARS, Region Director, and Area Coordinator	6105
9. Sent every 6 hours or more often, if necessary.	6106



THE MARS OPERATOR

REVIEW LESSON

INSTRUCTIONS: This review lesson is designed to aid you in preparing for your final examination. You should try to complete this lesson without the aid of reference materials, but if you do not know an answer, look it up and remember what it is. The enclosed answer sheet must be filled out according to the instructions on its reverse side and mailed to MCI using the envelope provided. The items you miss will be listed with references on a feedback sheet (MCI-R69) which will be mailed to your commanding officer with your final examination. You should study the reference material for the items you missed before taking the final examination.

Select the ONE answer which BEST completes the statement or answers the item. After the corresponding number on the answer sheet, blacken the appropriate circle.

1. The mission of the Navy-Marine Corps MARS program is to provide Department of the Navy-sponsored emergency communications on a _____, _____, and international basis as an adjunct to normal naval communications.
 - a. local -- national
 - b. local -- state
 - c. local -- county
 - d. county -- state
2. What are the three fundamental requirements of MARS communications?
 - a. Reliability, radio, and wire
 - b. Reliability, security, and speed
 - c. Security, speed, and radio
 - d. Security, speed, and wire
3. The active duty structure of MARS is composed of Chief, MARS; region directors; command/activity MARS officers; and _____ operators.
 - a. radio
 - b. phone patch
 - c. area
 - d. chief
4. The volunteer structure of MARS contains 10 positions. Seven of these positions are the members; net controls; area coordinator assistants; region director special assistants; specialty net coordinators; special assistants to Chief, MARS; and Chief, MARS. What are the remaining three?
 - a. Region directors, assistant directors, and area coordinators
 - b. Chief operators, assistant directors, and area coordinators
 - c. Radio operators, phone patch operators, and teletype operators
 - d. Phone patch operators, teletype operators, and net controls
5. What are the four types of MARS stations?
 - a. Military unit, military auxiliary, individual, and club
 - b. Phone patch, teletype, auxiliary, and individual
 - c. Military unit, military auxiliary, individual, and teletype
 - d. Phone patch, individual, club, and teletype relay
6. What is the membership criteria for military stations?
 - a. License required for daytime operations only
 - b. License required and activities are encouraged to maintain a license
 - c. Military stations are not encouraged to maintain a license
 - d. License not required, but activities are encouraged to maintain a license
7. What is the length (in days) of the individual station's trial period?
 - a. 90
 - b. 120
 - c. 180
 - d. 190
8. An individual station's membership is concurrent with its _____ license.
 - a. broadcast
 - b. amateur
 - c. teletype
 - d. phone patch

9. In a club station, the trustee is responsible for its operation. The club trustee and at least _____ club members must be members of the MARS program.
- a. five
b. four
c. three
d. two
10. What DD form must be completed and sent to the area coordinator to renew your membership, if you are an individual or club station?
- a. 630
b. 640
c. 650
d. 660
11. When must a modification application be submitted?
- a. Before information on current DD-630 changes
b. When information on current DD-630 changes
c. When information on current NM-2070-1 changes
d. When information on traffic reports change
12. As a trial member, you have used one month to complete one half of your minimum training requirements. How many total months do you have to complete your training?
- a. Five
b. Four
c. Three
d. Two
13. Who assigns military stations to networks?
- a. Area coordinator and/or region director
b. Region director and/or Chief, MARS
c. Unit MARS officer and/or chief operator
d. Area coordinator and/or chief operator
14. Who assigns individual or club stations to networks?
- a. Chief operator
b. Net control
c. Area coordinator
d. Region director
15. As a member of Region One, you know that a minimum of 18 hours of participation are required per quarter. How much "OFF THE AIR TIME" can be credited to meet this minimum requirement?
- a. 6
b. 8
c. 15
d. 18
16. You have just completed your participation report. What station will you forward it to?
- a. Area coordinator
b. Region director
c. Chief, MARS
d. Report coordinator
17. Three ways you can be disenrolled from the MARS program are by
- a. resignation, nonparticipation, and cause.
b. resignation, cause, and too much participation.
c. nonparticipation, cause, and by not sending traffic.
d. cause, resignation, and not receiving teletype.
18. What are the two types of special membership?
- a. Associate and honorary
b. Associate and special
c. Honorary and club
d. Associate and club
19. Three of the six classes of NAVMARCORMARS operators (NMO) are NM03, NM01, and NMOC. What are the other three?
- a. Sgt, SSgt, and GySgt
b. NM04, NM0SC, and NM0MC
c. NM02, NM0SC, and NM0MC
d. NM09, NM0SS, and NM0MC
20. You are taking the examination for the "MORSE RADIOTELEGRAPH SPEED KEY OPERATOR." On the second part, you realize that you must send and receive _____ code groups using a handkey within 70 seconds.
- a. 20
b. 25
c. 30
d. 35

21. To complete the 60 and 100 wpm "TELETYPE OPERATORS" examination, an operator has _____ and _____ minutes, respectively.
- a. 8 -- 16
b. 9 -- 15
c. 10 -- 14
d. 14 -- 10
22. While operating your station on 26 July 1986, you discover that a frequency usage and traffic report is due for the last operating period. What will be the starting and stopping dates of your report?
- a. 26 June - 25 July
b. 26 June - 25 August
c. 25 July - 26 August
d. 26 June - 26 September
23. How often are equipment inventory reports required?
- a. Annually
b. Monthly
c. Weekly
d. Daily
24. Correspondence concerning MARS shall always be handled _____ the MARS framework.
- a. below
b. above
c. within
d. outside
25. Your station has just received a message for delivery by mail. What call sign will appear in and under the "return address portion" of the "postage paid" envelope?
- a. NECO'S call sign
b. Area coordinator's call sign
c. Director's address and call sign
d. Your call sign
26. Local news releases are approved by the
- a. region director.
b. area coordinator.
c. net control station.
d. alternate net control.
27. MARS networks consist of administrative, traffic, training, _____, and tactical nets.
- a. radio, teletype
b. radio, Morse
c. specialty, common
d. wire, telephone
28. Your station is checked into the 5X1B net. This is a directed net. Who must give permission for your station to contact another station?
- a. Net control
b. Chief operator
c. Region director
d. Area coordinator
29. Your station is checked into the 5X1B net. Net control has declared it a free net. You discover that you are holding a message for a station also checked into the net. Who would you contact to receive permission to send the message?
- a. First the net control station
b. Station who the message is to
c. Military unit station
d. Alternate net control
30. As the NECOS of the 4X3B net, you are responsible for limiting transmissions, monitoring procedural errors in traffic, _____ on the net.
- a. expediting traffic, and maintaining circuit discipline
b. and giving all stations a fair share of traffic handling
c. and giving senior stations more traffic to handle
d. and requiring all stations to pass one message in CW
31. While looking at the list of net designators for Region Two, you find the following 2X1A designator. What type of region net is this?
- a. Administrative
b. Traffic
c. Training
d. Specialty

32. The MARSTELSYS eases the handling of record traffic among MARSTELSYS _____ geographical areas.
- a. minor
b. major
- c. small
d. overseas
33. The MARSREPSYS extends the line of sight VHF communications facilities and is also used for _____ civil disaster control.
- a. military
b. world wide
- c. long haul
d. local
34. What is the purpose of TEXN?
- a. To expedite delivery of record traffic on a local, state, or area basis
b. To pass traffic to the nearest naval communication unit
c. To allow military stations to exchange traffic
d. To help reduce the number of errors in message headings
35. The amateur refile points/stations allow MARS members to accept _____ radio messages addressed to armed forces personnel.
- a. military
b. amateur
- c. government
d. Army
36. MARS/NAVCOMMSYS refile points are established to allow the refiling of traffic from the _____ to MARS during times of emergency.
- a. naval communication units
b. military relay centers
- c. commercial communication units
d. amateur radio units
37. MARS is assigned the block of call signs with the _____ prefix.
- a. AAAØ
b. CCCØ
- c. NNNØ
d. MMMØ
38. While conducting phone patch operations on 14385 KHZ with NNNØMOB, you are contacted by an Army engineer unit in the field. The Army engineer unit informs you that you are causing interference with his military operation. Which unit has priority on the frequency?
- a. Army unit
b. Your station
- c. NNNØMOB
d. Must share
39. Emission designators are assigned according to _____ and width of the frequency band occupied.
- a. region
b. classification
- c. area
d. station
40. What is the "common sense" rule for power output?
- a. Always use the minimum power required.
b. Never use the minimum power required.
c. Use the power assigned in the region directory.
d. Use enough power to be the strongest station.
41. Personal and third party messages addressed to and/or from military personnel and authorized government employees, exercise, MARS administrative, and _____ are the types of messages that may be transmitted via MARS.
- a. official, semi or quasi official
b. government
- c. western relay
d. northern relay
42. Initial notification of serious illness or death in the immediate family and military operations are two of the four types of messages that may not be transmitted via MARS. What are the other two?
- a. Business and exercise
b. Business and legislative
- c. Legislative and exercise
d. Morse code and teletype

43. A MARS station may publicize its message handling capability, but it will not actively _____ third party traffic.
- a. solicit
 - b. handle
 - c. deliver
 - d. mail
44. Which station may cancel a message?
- a. Originating
 - b. Delivering
 - c. Receiving
 - d. Transmitting
45. Messages are filed in a message or station file by
- a. date-time group order.
 - b. time of delivery.
 - c. time of transmission.
 - d. the number of groups.
46. Your station's general message file must contain a copy of all required messages. It must be subdivided by _____ and filed in _____ order.
- a. month -- date-time group
 - b. day -- serial number
 - c. title -- serial number
 - d. year -- serial number
47. Your station provided communication support during the recent earthquake in Mexico. How many years should the messages be retained?
- a. 12
 - b. 9
 - c. 6
 - d. 3
48. Why are CIM's exchanged?
- a. To point out message discrepancies and procedural errors
 - b. To assign stations making errors to the training net
 - c. To provide a concise means of passing MARS messages
 - d. To correct message and traffic reports
49. Who can impose "Minimize" on MARS networks?
- a. Region director
 - b. Chief, MARS
 - c. Area coordinator
 - d. Net control
50. The three elements of communications security are transmission, cryptographic, and
- a. teletype.
 - b. telegraph.
 - c. physical.
 - d. voice.
51. What are the three basic message forms?
- a. Plaindress, abbreviated plaindress, and codress
 - b. Abbreviated plaindress, codress, and uppercase
 - c. Codress, uppercase, and lowercase
 - d. Official, codress, and lowercase
52. What are the three basic parts of a message?
- a. Heading, text, and NNNN
 - b. Date-time group, heading, and ending
 - c. Heading, text, and ending
 - d. Text, ending, and BT
53. A service message is used to obtain information regarding _____ matters.
- a. communications
 - b. emergency
 - c. military
 - d. civil
54. Messages may be readdressed when additional addressees
- a. cannot be contacted.
 - b. require the information.
 - c. do not require the information.
 - d. wish to cancel a message.

55. You have just received a message that has one addressee on format line seven and none on line eight. What type of message is this?
- a. Single
b. Multiple
c. Block
d. Triple
56. A message addressed to two or more addressees each of whom must be informed of the other addressees is a _____ address message.
- a. multiple
b. single
c. book
d. general
57. You have just received a message with twenty addressees. The message has the operating signal "ZEX" on format line five. What type of message is this?
- a. General
b. Book
c. Single
d. Multiple
58. A general message has a wide distribution and is assigned an identifying title and serial number. What other feature identifies a general message?
- a. May be directive in nature.
b. May be a single address message.
c. May have no more than twenty groups.
d. May have no more than five groups.
59. A tracer message is a type of _____ message which is used to determine the reason for delay or nondelivery of a message.
- a. book
b. routine
c. general
d. service
60. Your station sent a message (Ø113ØØZ AUG 86) to NNNØMSD for relay to NNNØASE THREE. Three days later, NNNØASE THREE informs you of nonreceipt of your (Ø113ØØZ AUG 86) message. What action would you take first to trace your message?
- a. Retransmit your (Ø113ØØZ AUG 86) message as a duplicate (ZFG).
b. Transmit a service message to NNNØASE THREE requesting action.
c. Transmit a service message to NNNØASE requesting a CIM.
d. Cancel your (Ø113ØØZ AUG 86) and transmit a new message.
61. After trying every means possible to deliver a third party message, who would the message be serviced back to?
- a. Region director
b. Area coordinator
c. Originating station
d. Chief, MARKS
62. A third party message text is limited to _____ words (excluding an address), and the sender is permitted to send no more than _____ third party messages per day.
- a. 25 -- 5
b. 3Ø -- 5
c. 4Ø -- 1Ø
d. 5Ø -- 15



(Refer to the following two pages for the remainder of item 63 and to select your answer.)

63. Your station (NNNØAAJ) received the following message at 14ØØZ Ø1 AUG 1986 on 4ØØ1.5 KHZ.



R 3113ØØZ JUL 86
FM GLENDA SEALE SAN DIEGO CA/NNNØMSD SCA
TO CAPT AL TURK
14Ø1 HILL ST
BLUES VA 22222-5ØØ1
7Ø3-555-1212
BT
UNCLAS
WILL ARRIVE BACK IN WASHINGTON AT Ø4ØØ 4 AUG GLENDA
BT

b.

a.

MILITARY AFFILIATE RADIO SYSTEM	
	
NAVY-MARINE CORPS MARSGRAM	
THIS MESSAGE HANDLED FREE OF CHARGE BY A STATION OF THE MILITARY AFFILIATE RADIO SYSTEM. HANDLING MESSAGES BETWEEN MILITARY PERSONNEL AND THEIR FAMILIES AND FRIENDS IS ONE OF THE MISSIONS OF MARS. ANY REPLY OR INQUIRY SHOULD BE DIRECTED TO THE STATION DELIVERING THIS MESSAGE. ULTIMATE DELIVERY OF MESSAGES CANNOT BE GUARANTEED.	
TO: <u>MR TURK</u>	DATE: <u>01 Aug 1986</u>
<u>1401 HILL ST</u>	PLACE OF ORIGIN: <u>SAN DIEGO CA</u>
<u>BLUES VA 22222</u>	
PHONE: _____	
MESSAGE TEXT: <u>WILL ARRIVE BACK IN WASHINGTON AT 1400 4 AUG</u>	
SIGNATURE: <u>GLENDA</u>	
THIS MESSAGE HANDLED BY NAVY-MARINE CORPS MARS RADIO STATION:	MESSAGE IDENTIFICATION:
<u>NNNDAAJ DAVID J. VEAZEY</u>	PRECEDENCE: <u>ROUTINE</u>
<u>1986 RADIO AVE</u>	DATE-TIME-GROUP: <u>1400 4 AUG 86</u>
<u>ALEXANDRIA VA 22311</u>	STATION OF ORIGIN: <u>NNNDAAJ</u>
<u>202-574-3625</u>	TOR/____: <u>31 JULY 1986</u>
	FREQUENCY: <u>4001.5 KHZ</u>
SENDER INFORMATION: THE PRIVACY ACT OF 1974 DIRECTS THAT YOU ARE NOT REQUIRED TO PROVIDE THE FOLLOWING INFORMATION, HOWEVER WITHOUT IT THE MESSAGE CANNOT BE TRANSMITTED.	
NAME: _____	RATE/RANK: _____
ADDRESS: _____	CITY: _____
PHONE NUMBER: _____	STATE: _____
	ZIP: _____
	SSN: _____

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MILITARY AFFILIATE RADIO SYSTEM	
	
NAVY-MARINE CORPS MARSGRAM	
THIS MESSAGE HANDLED FREE OF CHARGE BY A STATION OF THE MILITARY AFFILIATE RADIO SYSTEM. HANDLING MESSAGES BETWEEN MILITARY PERSONNEL AND THEIR FAMILIES AND FRIENDS IS ONE OF THE MISSIONS OF MARS. ANY REPLY OR INQUIRY SHOULD BE DIRECTED TO THE STATION DELIVERING THIS MESSAGE. ULTIMATE DELIVERY OF MESSAGES CANNOT BE GUARANTEED.	
TO: <u>CAPT A L TURK</u>	DATE: <u>31 JULY 1986</u>
<u>1401 HILL ST</u>	PLACE OF ORIGIN: <u>SAN DIEGO CA</u>
<u>BLUES VA 22222-5001</u>	
PHONE: <u>703-555-1212</u>	
MESSAGE TEXT: <u>WILL ARRIVE BACK IN WASHINGTON AT 0400 14 AUG</u>	
SIGNATURE: <u>GLENDA</u>	
THIS MESSAGE HANDLED BY NAVY-MARINE CORPS MARS RADIO STATION:	MESSAGE IDENTIFICATION:
<u>NNNDAAJ DAVID J. VEAZEY</u>	PRECEDENCE: <u>ROUTINE</u>
<u>1986 RADIO AVE</u>	DATE-TIME-GROUP: <u>313000 Z JUL 86</u>
<u>ALEXANDRIA VA 22311</u>	STATION OF ORIGIN: <u>NNND MSD SCA</u>
<u>202-574-3625</u>	TOR/____: <u>1400 Z 1 AUG 86</u>
	FREQUENCY: <u>4001.5 KHZ</u>
SENDER INFORMATION: THE PRIVACY ACT OF 1974 DIRECTS THAT YOU ARE NOT REQUIRED TO PROVIDE THE FOLLOWING INFORMATION, HOWEVER WITHOUT IT THE MESSAGE CANNOT BE TRANSMITTED.	
NAME: _____	RATE/RANK: _____
ADDRESS: _____	CITY: _____
PHONE NUMBER: _____	STATE: _____
	ZIP: _____
	SSN: _____

d.



MILITARY AFFILIATE RADIO SYSTEM	
NAVY-MARINE CORPS MARSGRAM	
<p>THIS MESSAGE HANDLED FREE OF CHARGE BY A STATION OF THE MILITARY AFFILIATE RADIO SYSTEM. HANDLING MESSAGES BETWEEN MILITARY PERSONNEL AND THEIR FAMILIES AND FRIENDS IS ONE OF THE MISSIONS OF MARS. ANY REPLY OR INQUIRY SHOULD BE DIRECTED TO THE STATION DELIVERING THIS MESSAGE. ULTIMATE DELIVERY OF MESSAGES CANNOT BE GUARANTEED.</p>	
TO: <u>CAPT A L TURK</u>	DATE: <u>31 JULY 1986</u>
<u>1401 HILL ST</u>	PLACE OF ORIGIN: <u>ALEXANDRIA VA</u>
<u>BLUES VA 22222-5001</u>	
PHONE: <u>703-555-1212</u>	
MESSAGE TEXT:	
<u>WILL ARRIVE BACK IN WASHINGTON AT 1400 4 AUG</u>	
SIGNATURE: <u>GLENDA</u>	
THIS MESSAGE HANDLED BY NAVY-MARINE CORPS MARS RADIO STATION:	MESSAGE IDENTIFICATION:
<u>NNN0AAJ DAVID J. VEAZEY</u>	PRECEDENCE: <u>ROUTINE</u>
<u>1986 RADIO AVE</u>	DATE-TIME GROUP: <u>311300Z AUG 86</u>
<u>ALEXANDRIA VA 22311</u>	STATION OF ORIGIN: <u>NNN0 MSA SCA</u>
<u>202-574-3625</u>	TOR/SSN: <u>1400Z 1 AUG 86</u>
	FREQUENCY: <u>4001.5 KHZ</u>
SENDER INFORMATION: THE PRIVACY ACT OF 1974 DIRECTS THAT YOU ARE NOT REQUIRED TO PROVIDE THE FOLLOWING INFORMATION. HOWEVER WITHOUT IT THE MESSAGE CANNOT BE TRANSMITTED.	
NAME: _____	RATE/RANK: _____
ADDRESS: _____	CITY: _____
PHONE NUMBER: _____	SSN: _____

c.

MILITARY AFFILIATE RADIO SYSTEM	
NAVY-MARINE CORPS MARSGRAM	
<p>THIS MESSAGE HANDLED FREE OF CHARGE BY A STATION OF THE MILITARY AFFILIATE RADIO SYSTEM. HANDLING MESSAGES BETWEEN MILITARY PERSONNEL AND THEIR FAMILIES AND FRIENDS IS ONE OF THE MISSIONS OF MARS. ANY REPLY OR INQUIRY SHOULD BE DIRECTED TO THE STATION DELIVERING THIS MESSAGE. ULTIMATE DELIVERY OF MESSAGES CANNOT BE GUARANTEED.</p>	
TO: <u>CAPT A L TURK</u>	DATE: <u>31 JUL 1986</u>
<u>1401 HILL ST</u>	PLACE OF ORIGIN: <u>SAN DIEGO CA</u>
<u>BLUES VA 22222-5001</u>	
PHONE: <u>703-555-1212</u>	
MESSAGE TEXT:	
<u>WILL ARRIVE BACK IN WASHINGTON AT 1400 4 AUG</u>	
SIGNATURE: <u>GLENDA</u>	
THIS MESSAGE HANDLED BY NAVY-MARINE CORPS MARS RADIO STATION:	MESSAGE IDENTIFICATION:
<u>NNN0AAJ DAVID J. VEAZEY</u>	PRECEDENCE: <u>ROUTINE</u>
<u>1986 RADIO AVE</u>	DATE-TIME GROUP: <u>311300Z JUL 86</u>
<u>ALEXANDRIA VA 22311</u>	STATION OF ORIGIN: <u>NNN0 MSD SCA</u>
<u>202-574-3625</u>	TOR/SSN: <u>1400Z 01 AUG</u>
	FREQUENCY: <u>4001.5 KHZ</u>
SENDER INFORMATION: THE PRIVACY ACT OF 1974 DIRECTS THAT YOU ARE NOT REQUIRED TO PROVIDE THE FOLLOWING INFORMATION. HOWEVER WITHOUT IT THE MESSAGE CANNOT BE TRANSMITTED.	
NAME: _____	RATE/RANK: _____
ADDRESS: _____	CITY: _____
PHONE NUMBER: _____	SSN: _____

R-3

64. Your station has just received the MARSGRAM below. Your call sign is NNNØXUZ.

MILITARY AFFILIATE RADIO SYSTEM	
	
NAVY-MARINE CORPS MARSGRAM	
THIS MESSAGE HANDLED FREE OF CHARGE BY A STATION OF THE MILITARY AFFILIATE RADIO SYSTEM. HANDLING MESSAGES BETWEEN MILITARY PERSONNEL AND THEIR FAMILIES AND FRIENDS IS ONE OF THE MISSIONS OF MARS. ANY REPLY OR INQUIRY SHOULD BE DIRECTED TO THE STATION DELIVERING THIS MESSAGE. ULTIMATE DELIVERY OF MESSAGES CANNOT BE GUARANTEED.	
TO: <u>MRS. CATHY ANDERSON</u>	DATE: <u>2 AUG 1986</u>
<u>12 HAMMOCK GREEN SW</u>	PLACE OF ORIGIN: <u>ELMENDORF AFB</u>
<u>WASHINGTON DC 20032-4001</u>	<u>AK</u>
PHONE: <u>202-574-3625</u>	
MESSAGE TEXT:	
<u>I WILL ARRIVE AT SEVEN PM ON 10 AUG 1986</u>	
SIGNATURE: <u><i>Cathy Anderson</i></u>	
THIS MESSAGE HANDLED BY NAVY-MARINE CORPS MARS RADIO STATION:	MESSAGE IDENTIFICATION:
PRECEDENCE:	DATE-TIME-GROUP:
STATION OF ORIGIN:	TOR/TOD:
FREQUENCY:	
SENDER INFORMATION: THE PRIVACY ACT OF 1974 DIRECTS THAT YOU ARE NOT REQUIRED TO PROVIDE THE FOLLOWING INFORMATION. HOWEVER WITHOUT IT THE MESSAGE CANNOT BE TRANSMITTED.	
NAME: <u>GARY ANDERSON</u>	RATE/RANK: _____ BRANCH SERVICE: _____
ADDRESS: <u>PSC 2 BOX 4000</u>	CITY: <u>ELMENDORF</u> STATE: <u>AK</u> ZIP: <u>99506</u>
PHONE NUMBER: <u>808-555-1212</u>	SSN: <u>309-58-3901</u>

How would you prepare the MARSGRAM for voice transmission?

- | | |
|---|--|
| <p>a. R 021300Z AUG 86
FM GARY ANDERSON ELMENDORF AFB AK/NNNØXUZ AK
TO MRS CATHY ANDERSON
12 HAMMOCK GREEN SW
WASHINGTON DC 20032-4001
202-574-3625
BT
UNCLAS
I WILL ARRIVE AT SEVEN PM ON 10 AUG 86
BT</p> | <p>c. R 021300Z AUG 86
FM GARY ANDERSON/NNNØXUZ AK
TO MRS CATHY ANDERSON
12 HAMMOCK GREEN SW
WASHINGTON DC 20032-5304
202-574-3625
BT
UNCLAS
I WILL ARRIVE AT SEVEN PM ON 10 AUG 86
BT</p> |
| <p>b. R 021300Z AUG 86
FM GARY ANDERSON ELMENDORF AFB/NNNØXUZ AK
TO MRS CATHY ANDERSON
12 HAMMOCK GREEN SW
WASHINGTON DC 20032-5304
BT
UNCLAS
I WILL ARRIVE AT SEVEN PM ON 10 AUG 86
BT</p> | <p>d. R 021300Z AUG 86
FM GARY ANDERSON ELMENDORF AFB
AK/NNNØXUZ AK
TO MRS CATHY ANDERSON
12 HAMMOCK GREEN SW
WASHINGTON DC 20032-5304
202-574-3625
BT
I WILL ARRIVE AT SEVEN PM ON 10 AUG 86
BT</p> |

65. When is punctuation used in a message?

- | | |
|--|---|
| <p>a. When essential for clarity
b. Only in routine messages</p> | <p>c. Only in priority messages
d. Never in teletype messages</p> |
|--|---|

66. Procedure signs consisting of one or more letters/characters are called
- prosigns.
 - operating signs.
 - prowords.
 - precedences.
67. A proword is the word equivalent of a
- number.
 - letter.
 - precedence.
 - prosign.
68. Operating signals (Q&Z) are a concise code designed for use by communication personnel. "Q" signals may be used in military communications where no suitable " _____ " signal exists.
- B
 - C
 - Z
 - A
69. What are the three radiotelegraph principal operating methods?
- Receipt, broadcast, and intercept
 - Receipt, broadcast, and radio
 - Broadcast, radio, and wire
 - Radio, wire, and telephone
70. Single, collective, and _____ calls are used to establish communications.
- net
 - multiple
 - directed
 - free
71. Your call sign is NNNØEYD. The station calling you (by voice) is NNNØGKE. Answer the following preliminary call: NNNØ ECHO YANKEE DELTA THIS IS NNNØ GOLF KILO ECHO OVER.
- THIS IS NNNØ ECHO YANKEE DELTA ROGER OUT
 - NNNØ GOLF KILO ECHO THIS IS NNNØ ECHO YANKEE DELTA ROGER OUT
 - NNNØ GOLF KILO ECHO THIS IS NNNØ ECHO YANKEE DELTA OVER
 - NNNØ GOLF KILO ECHO THIS IS NNNØ ECHO YANKEE DELTA ROGER OVER
72. What procedure is used to break into a radiotelegraph transmission?
- Transmit a series of dashes
 - Transmit a series of dots
 - Use radiotelephone in USB
 - Transmit a series of V's
73. To obtain a repetition prior to receipt of a message, you may use the proword _____, and after receipt, you must request repetitions in the form of a _____ message.
- ZKA -- BOOK
 - INI -- NEW
 - SAY AGAIN -- BOOK
 - SAY AGAIN -- NEW
74. Who is responsible for "netting" a CW net?
- Region director
 - Area coordinator
 - Net control
 - Member stations
75. You have a message with 152 groups. The only transmission means at your disposal is radiotelegraph. How many groups will you transmit before asking the receiving station for a "QSL"?
- 100
 - 75
 - 50
 - 25
76. NNNØTEI has ten messages in a string for NNNØRAG. Six are priority and four are routine. How would NNNØRAG be notified by radiotelegraph of the number of messages in the string?
- NNNØRAG DE NNNØTEI ZBO 6P-4R K
 - DE NNNØTEI I HAVE 6P-4R K
 - NNNØTEI DE NNNØRAG ZBO 6P-4R K
 - NNNØRAG DE NNNØTEI INT ZKA ZKB K
77. What is achieved by using the broadcast method?
- Concise station-to-station exchange of information
 - General dissemination of area coordinator information
 - Wide dissemination for information of specific use
 - Wide dissemination for information of general use

78. A radiotelegraph log must contain a record of each transmission on each frequency guarded, covered, and
- a. tuned.
 - b. secured.
 - c. copied.
 - d. "rogered."
79. A station is understood to have good _____ and _____ unless otherwise notified.
- a. signal strength -- readability
 - b. signal strength -- traffic
 - c. readability -- power out
 - d. signal strength -- power out
80. Your station (NNNØAAD) has just been asked by NNNØAAS for a radio check (NNNØ ALFA ALFA DELTA THIS IS NNNØ ALFA ALFA SIERRA RADIO CHECK OVER). Conditions are difficult. You are receiving NNNØAAS weak but readable. Answer the radio check.
- a. THIS IS NNNØ ALFA ALFA DELTA WEAK BUT READABLE OVER
 - b. NNNØ ALFA ALFA SIERRA THIS IS NNNØ ALFA ALFA DELTA WEAK BUT READABLE OVER
 - c. THIS IS NNNØ ALFA ALFA SIERRA ROGER OUT
 - d. NNNØ ALFA ALFA SIERRA THIS IS NNNØ ALFA ALFA DELTA WEAK BUT READABLE OUT
81. A preliminary call is made when conditions are difficult and to determine if a station is
- a. ready to receive traffic.
 - b. about to send traffic.
 - c. ready to close down.
 - d. about to open the net.
82. How would you transmit (by voice) the group 12BE6?
- a. Figures, I spell 12BE6
 - b. I spell one two bravo echo six
 - c. Figures one two bravo echo six
 - d. I spell 12BE6
83. While transmitting a message (by voice), you find the word "PAVLANSKI" and decide it should be spelled out. How would this word be transmitted?
- a. PAVLANSKI I spell PAPA ALFA VICTOR LIMA ALFA NOVEMBER SIERRA KILO INDIA PAVLANSKI
 - b. I spell PAPA ALFA VICTOR LIMA ALFA NOVEMBER SIERRA KILO INDIA
 - c. I spell PAVLANSKI PAPA ALFA VICTOR LIMA ALFA NOVEMBER SIERRA KILO INDIA
 - d. Figures PAVLANSKI PAPA ALFA VICTOR LIMA ALFA NOVEMBER SIERRA KILO INDIA
84. Your call sign is NNNØANY. NAV FOUR has sent you the following message: RELAY TO NNNØAMY R 31Ø915Z JUL 86 FM NAV FOUR TO NNNØAMY MI NNNØAKT IN INFO NNNØAKK MN BT UNCLAS NIGHT TANGO INFO MAILED TODAY BT. Which station(s) will you deliver the message to?
- a. All stations
 - b. NNNØAMY
 - c. NNNØAKT
 - d. NNNØAKK
85. You have just transmitted a message date-time group (Ø11299Z AUG 86) and made an error. The correct version is Ø11219Z AUG 86. How would you make this correction during a radiotelephone transmission?
- a. Time Ø11219Z AUG 86
 - b. Correction Ø11219Z AUG 86
 - c. Correction time Ø11219Z AUG 86
 - d. Correction Routine Ø11219Z AUG 86

86. Using radiotelephone procedure, transmit the following message.

R 012230Z APR 85
FM RMCM JON JONES OA/NNN0MOC OA
TO MARI ANNE EKE
45 WINSOR STREET
BINGHAMTON NY 13902
607-772-4139
BT
UNCLAS
WE WILL BE HOME IN LATE JUNE OR
EARLY JULY SAY HI TO JODY
BT

- a. MESSAGE FOLLOWS ... ROUTINE . . . TIME ZERO ONE TWO TWO THREE ZERO ZULU ... APRIL EIGHT FIVE FROM ... I SPELL ROMEO MIKE CHARLIE MIKE JON ... I SPELL JULIET OSCAR NOVEMBER ... JON JONES OKINAWA SLANT ... N N N ZERO MIKE OSCAR CHARLIE OKINAWA ... TO MARI I SPELL MIKE ALPHA ROMEO INDIA ... MARI ANNE I SPELL ALPHA NOVEMBER NOVEMBER ECHO ... ANNE EKE I SPELL ECHO KILO ECHO ... EKE ... FIGURES FOUR FIVE WINSOR I SPELL WHISKY INDIA NOVEMBER SIERRA OSCAR ROMEO ... WINSOR STREET ... BINGHAMTON NEW YORK ... FIGURES ONE THREE NINER ZERO TWO ... FIGURES SIX ZERO SEVEN DASH SEVEN SEVEN TWO DASH FOUR ONE THREE NINER ... BREAK ... UNCLAS WE WILL BE I SPELL BRAVO ECHO ... BE HOME IN LATE I SPELL LIMA ALPHA TANGO ECHO ... LATE JUNE OR EARLY JULY ... SAY HI I SPELL HOTEL INDIA ... HI TO JODY I SPELL JULIET OSCAR DELTA YANKEE ... JODY BREAK ... OVER
- b. TIME ZERO ONE TWO TWO THREE ZERO ZULU ... APRIL EIGHT FIVE FROM ... I SPELL ROMEO MIKE CHARLIE MIKE JON ... I SPELL JULIET OSCAR NOVEMBER ... JON JONES OKINAWA SLANT ... N N N ZERO MIKE OSCAR CHARLIE OKINAWA ... TO MARI I SPELL MIKE ALPHA ROMEO INDIA ... MARI ANNE I SPELL ALPHA NOVEMBER NOVEMBER ECHO ... ANNE EKE I SPELL ECHO KILO ECHO ... EKE ... FIGURES FOUR FIVE WINSOR I SPELL WHISKY INDIA NOVEMBER SIERRA OSCAR ROMEO ... WINSOR STREET ... BINGHAMTON NEW YORK ... FIGURES ONE THREE NINER ZERO TWO ... FIGURES SIX ZERO SEVEN DASH SEVEN SEVEN TWO DASH FOUR ONE THREE NINER ... BREAK ... UNCLAS ... WE WILL BE I SPELL BRAVO ECHO ... BE HOME IN LATE I SPELL LIMA ALPHA TANGO ECHO ... LATE JUNE OR EARLY JULY ... SAY HI I SPELL HOTEL INDIA ... HI TO JODY I SPELL JULIET OSCAR DELTA YANKEE ... JODY BREAK ... OVER
- c. ROUTINE ... TIME ZERO ONE TWO TWO THREE ZERO ZULU ... APRIL EIGHT FIVE FROM ... I SPELL ROMEO MIKE CHARLIE MIKE JON ... I SPELL JULIET OSCAR NOVEMBER ... JON JONES OKINAWA SLANT ... N N N ZERO MIKE OSCAR CHARLIE OKINAWA ... TO MARI I SPELL MIKE ALPHA ROMEO INDIA ... MARI ANNE I SPELL ALPHA NOVEMBER NOVEMBER ECHO ... ANNE EKE I SPELL ECHO KILO ECHO ... EKE ... FIGURES FOUR FIVE WINSOR I SPELL WHISKY INDIA NOVEMBER SIERRA OSCAR ROMEO ... WINSOR STREET ... BINGHAMTON NEW YORK ... FIGURES ONE THREE NINER ZERO TWO SIX ZERO SEVEN DASH SEVEN SEVEN TWO DASH FOUR ONE THREE NINER ... BREAK ... UNCLAS ... WE WILL BE I SPELL BRAVO ECHO ... BE HOME IN LATE I SPELL LIMA ALPHA TANGO ECHO ... LATE JUNE OR EARLY JULY ... SAY HI I SPELL HOTEL INDIA ... HI TO JODY I SPELL JULIET OSCAR DELTA YANKEE ... JODY BREAK ... OVER
- d. MESSAGE FOLLOWS ... ROUTINE ... ZERO ONE TWO TWO THREE ZERO ZULU ... APRIL EIGHT FIVE FROM ... I SPELL ROMEO MIKE CHARLIE MIKE JON ... I SPELL JULIET OSCAR NOVEMBER ... JON JONES OKINAWA SLANT ... N N N ZERO MIKE OSCAR CHARLIE OKINAWA ... TO MARI I SPELL MIKE ALPHA ROMEO INDIA ... MARI ANNE I SPELL ALPHA NOVEMBER NOVEMBER ECHO ... ANNE EKE I SPELL ECHO KILO ECHO ... EKE ... FIGURES FOUR FIVE WINSOR I SPELL WHISKY INDIA NOVEMBER SIERRA OSCAR ROMEO ... WINSOR STREET ... BINGHAMTON NEW YORK ... FIGURES ONE THREE NINER ZERO TWO ... FIGURES SIX ZERO SEVEN DASH SEVEN SEVEN TWO DASH FOUR ONE THREE NINER ... BREAK ... UNCLAS ... WE WILL BE I SPELL BRAVO ECHO ... BE HOME IN LATE I SPELL LIMA ALPHA TANGO ECHO ... LATE JUNE OR EARLY JULY ... SAY HI I SPELL HOTEL INDIA ... HI TO JODY I SPELL JULIET OSCAR DELTA YANKEE ... JODY ... OVER

87. Your station (NNN0CDC) has sent a message to NNN0BLU by voice on the 5A1B net. It is a directed net. Abbreviated call signs have not been authorized. How would NNN0BLU receipt for the message?

- a. THIS IS BRAVO LIMA UNIFORM ROGER OVER.
b. THIS IS NNN0 BRAVO LIMA UNIFORM ROGER OVER.
c. THIS IS NNN0 BRAVO LIMA UNIFORM ROGER OUT.
d. THIS IS BRAVO LIMA UNIFORM ROGER OUT.

88. For proper teletype message alignment, all transmissions must be preceded by at least _____ letter function(s), _____ spaces, two carriage returns, and one line feed.
- a. zero -- two
b. one -- five
c. two -- five
d. five -- five
89. What is the correct method of constructing a teletype test tape?
- a. (2 LTRS) (5 spaces) (2CR) (LF)
THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG
1234567890 DE (call sign of station testing) (2CR)
THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG
1234567890 DE (call sign of station testing) (2CR) (LF)
RYRYRYRYRYRYRYRY (Total of 64 characters) (2CR) (LF)
- b. (2 LTRS) (5 spaces) (2CR)
THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG
1234567890 DE (call sign of station testing) (2CR) (LF)
THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG
1234567890 DE (call sign of station testing) (2CR) (LF)
RYRYRYRYRYRYRYRY (Total of 64 characters) (2CR) (LF)
- c. THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG
1234567890 DE (call sign of station testing) (2CR)
THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG
1234567890 DE (call sign of station testing) (2CR) (LF)
RYRYRYRYRYRYRYRY (Total of 64 characters) (2CR) (LF)
- d. (2 LTRS) (5 spaces) (2CR) (LF)
THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG
1234567890 DE (call sign of station testing)
THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG
1234567890 DE (call sign of station testing) (2CR) (LF)
RYRYRYRYRYRYRYRY (Total of 64 characters)
90. What is the procedure for correcting an error while preparing the message heading during RTTY operations?
- a. Backspace the tape and letter out the error.
b. A new tape must be prepared.
c. Backspace the tape and use a figures function.
d. Type in "C" and the correction.
91. While constructing a message, you discover that it will contain 284 lines. How many sections must this message be transmitted in?
- a. 3
b. 4
c. 5
d. 6
92. When preparing a priority precedence message (for RTTY), it must be preceded by PRIORITY PRIORITY PRIORITY
- a. (FIGS)(JJJJJSSSSS)(FIGS)(2CR)(LF).
b. (LTRS)(JJJJJSSSSS)(LTRS)(2CR)(LF).
c. (FIGS)(JJJJJSSSSS)(LTRS)(2CR)(LF).
d. (JJJJJSSSSS)(LTRS)(2CR)(LF).
93. What is the purpose of a routing indicator?
- a. To identify a station or area within the MARSTELSYS
b. To identify each state within the MARSTELSYS
c. To allow the region director to identify new stations
d. To allow area coordinators to supervise traffic delivery

94. You have just received the following message in the MARSTELSYS.

FBL001
RR NOASA
DE EFB 001
R 011400Z AUG 86
ETC...

Your call sign is NNN0MSD. You will be sending the message to NNN0MPN for relay. It is your third message in the string. What station designator letters and message identification numbers will you add to the message?

- a. MPN003
 - b. SDN003
 - c. MSD001
 - d. SDN001
95. All routing indicators associated with a single relay station will be grouped together in format line
- a. five.
 - b. four.
 - c. three.
 - d. two.
96. The three types of emergency communications are civil riot or uprising, natural disaster, and
- a. power outage.
 - b. hostile action.
 - c. HF operations.
 - d. traffic overloading.
97. During an emergency, ART's are sent to
- a. the scene or area of the disaster.
 - b. military stations as a backup.
 - c. support the area coordinator.
 - d. the region headquarters.
98. Why are SAT's established?
- a. As on-site emergency support
 - b. To augment a single or military station
 - c. To augment the ART team at the disaster site
 - d. To support the area coordinator
99. The emergency communications implementation message must be sent to the _____, region director, and Chief, MARS.
- a. net control
 - b. alternate net control
 - c. area coordinator
 - d. operations officer
100. You are assigned to an auxiliary radio team at a disaster site. How often (in hours) will you send a situation report concerning MARS communications?
- a. Every hour
 - b. Six
 - c. Twelve
 - d. Sixteen

Read the following directions carefully for each of the groups of items below. For each item select the one letter (a., b., c., or d.) indicating your choice. After the corresponding number on the answer sheet, blacken the appropriate circle.

In the group of items below (101-104), match the precedences in column 1 with their speed of service objective in column 2.

GROUP 1

Column 1	Column 2
<u>Precedence</u>	<u>Speed of Service Objective</u>
101. Routine (R)	a. Less than 10 minutes
102. Priority (P)	b. Three hours to next working day
103. Immediate (0)	c. One to six hours
104. Flash (Z)	d. 30 minutes to one hour

In the group of items below (105-109), match the machine functions in column 1 with their appropriate definition in column 2.

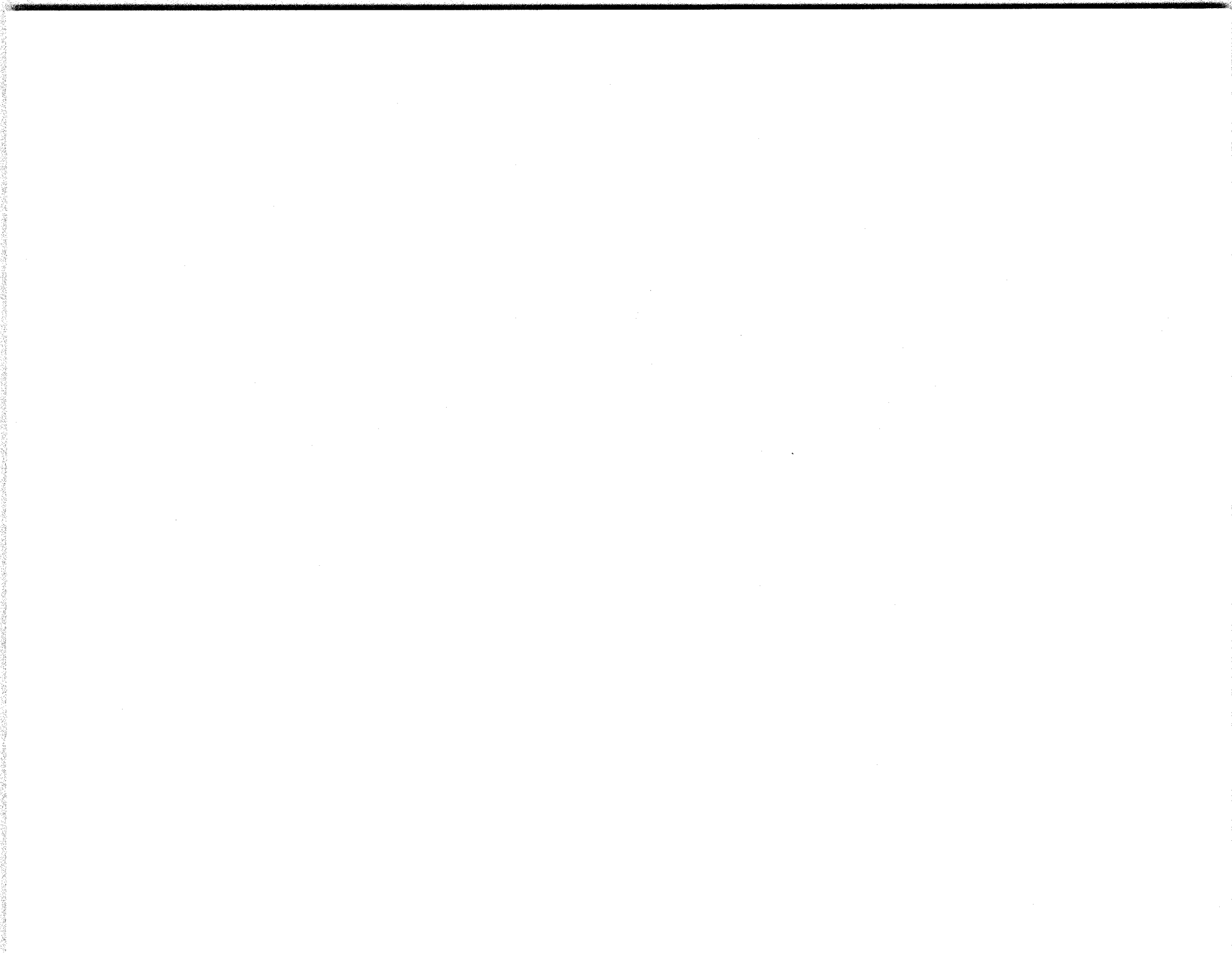
GROUP 2

Column 1	Column 2
<u>Machine Functions</u>	<u>Definition</u>
105. Shift	a. Depress "LTRS" when going to lowercase and
106. Carriage return	and depress "FIGS" when going to uppercase
107. Line feed	b. Used to attract attention of receiving
108. Space	operator
109. Bell signal	c. Employed to return machine to the left
	margin
	d. Employed to advance the machine laterally
	without printing a character
	e. Employed to advance the paper vertically

In the group of items below (110-113), match the communication condition in column 1, with the action required in column 2.

GROUP 3

Column 1	Column 2
<u>Communication Condition</u>	<u>Action Required</u>
110. III	a. Alert stations to monitor primary
111. II	frequencies to the extent feasible test
112. I	emergency power, locate essential items and
113. Zero	continue normal operations commensurate
	with above items
	b. Same as for condition I
	c. Effect all measures necessary to activate
	on short notice and curtail routine
	operations as necessary for readiness
	d. Suspend all normal operations as warranted
	and activate emergency networks and ECP, as
	necessary



COURSE CONTENT ASSISTANCE REQUEST

MCI 25.62 THE MARS OPERATOR

NAME	RANK	MOS
SOCIAL SECURITY NUMBER		
COMPLETE MILITARY ADDRESS (INCLUDING RUC IF KNOWN)		
UNIT PHONE NUMBER	Autovon _____	Commercial _____ (Include Area Code)

Use this form for any questions you may have about this course. Write out your questions and refer to the study unit, lesson or exercise question which you are having a problem with. Before mailing, fold the form and staple it so that MCI's address is showing. Additional sheets may be attached to this side of the form. Your questions will be answered promptly by the MCI course developer responsible for this course.

 (Fold on dotted line)
 YOUR QUESTION:

OUR RESPONSE:

 (Fold on dotted line)

DATA REQUIRED BY THE PRIVACY ACT OF 1974
 (5 U.S.C. 522A)

- AUTHORITY:** Title 5, USC, Sec. 301. Use of your Social Security Number is authorized by Executive Order 9397 of 22 Nov 43.
- PRINCIPAL PURPOSE:** The Course Content Assistance Request is used to transmit information concerning student participation in MCI courses.
- ROUTINE USE:** This information is used by MCI personnel to research student inquires. In some cases information contained therein is used to update correspondence course and individual student records maintained by the Marine Corps Institute.

DEPARTMENT OF THE NAVY

**UNITED STATES MARINE CORPS
MARINE CORPS INSTITUTE
ARLINGTON, VA 22222-0001**

**OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300**

NAME	RANK	SSN
MILITARY ADDRESS		

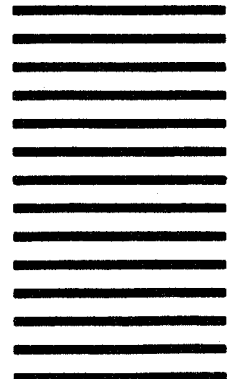
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IF MAILED
IN THE
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ARLINGTON, VA 22222-0001**



STUDENT SUGGESTION FORM

MCI 25.62 THE MARS OPERATOR

Directions

In order to continue to provide effective and efficient instruction, the Marine Corps Institute invites your suggestions/comments concerning proposed changes to the course you have just completed. Indicate if possible, the study unit, lesson and page number affected by the change.

PROPOSED CHANGE(S).

REASON FOR PROPOSED CHANGE

(CHECK ONE)

- Outdated Procedures/Process _____
- Outdated Equipment/Material _____
- Information not accurate _____
- Other (Please describe) _____

The nature of your proposed change may result in a need for the course developer to contact you. To assist us please provide the following information:

Name

Rank

Telephone Autovon _____

Commerical _____
(Include Area Code)

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COURSE TITLE

COURSE NUMBER

Section 1. Student Identification

RANK	INITIALS	LAST NAME	MOS
SSN	REPORTING UNIT CODE (RUC)		
MILITARY ADDRESS		INSTRUCTIONS: Print or type name, rank, and address clearly. Include ZIP CODE. Only Class III Reservists may use civilian address.	

Section 2. Circle the appropriate number and fill in the appropriate spaces. FOR REGULAR AND CLASS II RESERVE MARINES, THIS FORM MUST BE SIGNED BY THE COMMANDING OFFICER OR HIS REPRESENTATIVE, e.g. TRAINING OFFICER.

1. CHANGE. The following information needs correction:

	From	To
Name	_____	_____
Rank	_____	_____
SSN	_____	_____
RUC	_____	_____

2. MATERIALS. The following materials are needed: Lessons _____ Manual _____ Answer Sheets _____ Other _____

3. EXAM OVERDUE. The last lesson was sent in on _____.

4. MISSING RESULTS. The exam was sent in on _____ (If not received at MCI a new exam will be issued).

5. MISSING DIPLOMA. The course was completed in _____ 19_____.

6. EXTEND. (Students are only eligible for one extension prior to their CCD).

7. REENROLL. (Students are only eligible for reenrollment once and only after their CCD. If already reenrolled and disenrolled, a new enrollment must be requested).

8. OTHER (EXPLAIN): _____

NOTE: This form will not be returned by MCI. If the request is valid, the transaction will show on next UAR or on MCI-R-1 Form.

SIGNATURE - TITLE OR RANK
(MUST BE CO. OR REPRESENTATIVE)
ATV _____

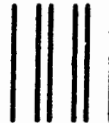
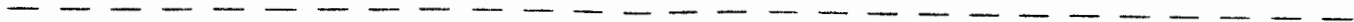
DATA REQUIRED BY THE PRIVACY ACT OF 1974
(5 U. S. C. 522A)

1. **AUTHORITY:** Title 5 USC Sec. 301 Use of your Social Security Number is authorized by Executive Order 9397 of 22 Nov 43.

2. **PRINCIPLE PURPOSE:** The Student Request/Inquiry is used to transmit information concerning student participation in MCI courses.

3. **ROUTINE USES:** This information is used by MCI personnel to research student inquiries. In some cases information contained therein is used to update individual student records maintained by the Marine Corps Institute.

4. **MANDATORY OR VOLUNTARY DISCLOSURE AND EFFECT ON INDIVIDUAL NOT PROVIDING INFORMATION:** Disclosure is voluntary. Failure to provide information may result in the provision of incomplete service to your inquiry. Failure to provide your Social Security Number will delay the processing of your inquiry/request.



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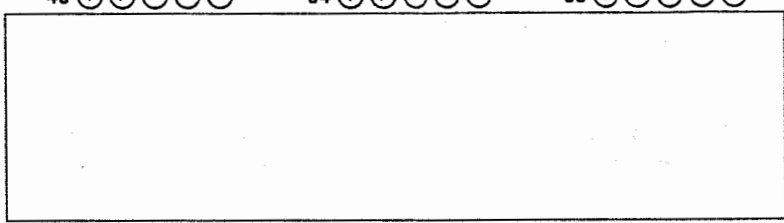
READ INSTRUCTIONS ON THE REVERSE OF THIS ANSWER SHEET BEFORE BEGINNING TO ANSWER QUESTIONS.

STUDENT SSN P P P P P P P P P P 8 8 8 8 8 8 8 8 8 8 4 4 4 4 4 4 4 4 4 4 2 2 2 2 2 2 2 2 2 2 1 1 1 1 1 1 1 1 1 1	COURSE NO. P P P P P P P P 8 8 8 8 8 8 8 8 4 4 4 4 4 4 4 4 2 2 2 2 2 2 2 2 1 1 1 1 1 1 1 1	EXAM FORM P P P P P P P P 8 8 8 8 8 8 8 8 4 4 4 4 4 4 4 4 2 2 2 2 2 2 2 2 1 1 1 1 1 1 1 1	DIRECTIONS FOR MARKING ANSWERS <ul style="list-style-type: none"> ● Use No. 2 or softer pencil only for marking. ● Make marks that fill the circle completely. ● Erase completely any answer you wish to change. ● Make no stray marks on this sheet. 				
			REFER TO THE EXAMPLES BEFORE STARTING.				

A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E																	
1	T	F					17	T	F						33	T	F						49	T	F						65	T	F						81	T	F					
2	T	F					18	T	F						34	T	F						50	T	F						66	T	F						82	T	F					
3	T	F					19	T	F						35	T	F						51	T	F						67	T	F						83	T	F					
4	T	F					20	T	F						36	T	F						52	T	F						68	T	F						84	T	F					
5	T	F					21	T	F						37	T	F						53	T	F						69	T	F						85	T	F					
6	T	F					22	T	F						38	T	F						54	T	F						70	T	F						86	T	F					
7	T	F					23	T	F						39	T	F						55	T	F						71	T	F						87	T	F					
8	T	F					24	T	F						40	T	F						56	T	F						72	T	F						88	T	F					
9	T	F					25	T	F						41	T	F						57	T	F						73	T	F						89	T	F					

FOLD CAREFULLY ON THIS LINE ONLY

A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E																	
10	T	F					26	T	F						42	T	F						58	T	F						74	T	F						90	T	F					
11	T	F					27	T	F						43	T	F						59	T	F						75	T	F						91	T	F					
12	T	F					28	T	F						44	T	F						60	T	F						76	T	F						92	T	F					
13	T	F					29	T	F						45	T	F						61	T	F						77	T	F						93	T	F					
14	T	F					30	T	F						46	T	F						62	T	F						78	T	F						94	T	F					
15	T	F					31	T	F						47	T	F						63	T	F						79	T	F						95	T	F					
16	T	F					32	T	F						48	T	F						64	T	F						80	T	F						96	T	F					



IF THE DATA CONTAINED IN THE ADDRESS BLOCK ABOVE IS INCORRECT PLEASE PRINT THE CORRECT INFORMATION BELOW.

NAME _____ RANK _____ SSN _____

ADDRESS _____ NEW RUC NUMBER _____

EXAM VALIDATION: I certify that this examination has been administered in accordance with the instructions given on the reverse side of this answer sheet. EXAM ADMINISTRATOR NOTE: Exam will be RETURNED UNGRADED if not properly validated.

PRINTED NAME _____ RANK OR TITLE _____

SIGNATURE _____ DATE EXAM GIVEN _____

**INSTRUCTIONS FOR MARKING YOUR ANSWER SHEET.
TO RECEIVE CREDIT FOLLOW THESE INSTRUCTIONS CAREFULLY.**

1. Use only the answer sheet issued to you. Your name must appear in the address block.
2. The course number on the answer sheet must agree with the course number on your lesson/examination booklet.
3. Mark only one answer for each question. Make sure your answer does not spill into the area outside the circle.
4. If you use envelopes other than those provided, address the envelope to Director, Marine Corps Institute, Box 1775, Arlington, VA 22222-0001.
5. Fold the answer sheet ONLY on the line indicated in the middle.

97	A B C D E T F ○ ○ ○ ○	115	A B C D E T F ○ ○ ○ ○	132	A B C D E T F ○ ○ ○ ○	149	A B C D E T F ○ ○ ○ ○	166	A B C D E T F ○ ○ ○ ○	183	A B C D E T F ○ ○ ○ ○
98	T F ○ ○ ○ ○	116	T F ○ ○ ○ ○	133	T F ○ ○ ○ ○	150	T F ○ ○ ○ ○	167	T F ○ ○ ○ ○	184	T F ○ ○ ○ ○
99	T F ○ ○ ○ ○	117	T F ○ ○ ○ ○	134	T F ○ ○ ○ ○	151	T F ○ ○ ○ ○	168	T F ○ ○ ○ ○	185	T F ○ ○ ○ ○
100	T F ○ ○ ○ ○	118	T F ○ ○ ○ ○	135	T F ○ ○ ○ ○	152	T F ○ ○ ○ ○	169	T F ○ ○ ○ ○	186	T F ○ ○ ○ ○
101	T F ○ ○ ○ ○	119	T F ○ ○ ○ ○	136	T F ○ ○ ○ ○	153	T F ○ ○ ○ ○	170	T F ○ ○ ○ ○	187	T F ○ ○ ○ ○
102	T F ○ ○ ○ ○	120	T F ○ ○ ○ ○	137	T F ○ ○ ○ ○	154	T F ○ ○ ○ ○	171	T F ○ ○ ○ ○	188	T F ○ ○ ○ ○
103	T F ○ ○ ○ ○	121	T F ○ ○ ○ ○	138	T F ○ ○ ○ ○	155	T F ○ ○ ○ ○	172	T F ○ ○ ○ ○	189	T F ○ ○ ○ ○
104	T F ○ ○ ○ ○	122	T F ○ ○ ○ ○	139	T F ○ ○ ○ ○	156	T F ○ ○ ○ ○	173	T F ○ ○ ○ ○	190	T F ○ ○ ○ ○
105	T F ○ ○ ○ ○	123	T F ○ ○ ○ ○	140	T F ○ ○ ○ ○	157	T F ○ ○ ○ ○	174	T F ○ ○ ○ ○	191	T F ○ ○ ○ ○
106	T F ○ ○ ○ ○	124	T F ○ ○ ○ ○	141	T F ○ ○ ○ ○	158	T F ○ ○ ○ ○	175	T F ○ ○ ○ ○	192	T F ○ ○ ○ ○

----- FOLD CAREFULLY ON THIS LINE ONLY -----

107	A B C D E T F ○ ○ ○ ○	125	A B C D E T F ○ ○ ○ ○	142	A B C D E T F ○ ○ ○ ○	159	A B C D E T F ○ ○ ○ ○	176	A B C D E T F ○ ○ ○ ○	193	A B C D E T F ○ ○ ○ ○
108	T F ○ ○ ○ ○	126	T F ○ ○ ○ ○	143	T F ○ ○ ○ ○	160	T F ○ ○ ○ ○	177	T F ○ ○ ○ ○	194	T F ○ ○ ○ ○
109	T F ○ ○ ○ ○	127	T F ○ ○ ○ ○	144	T F ○ ○ ○ ○	161	T F ○ ○ ○ ○	178	T F ○ ○ ○ ○	195	T F ○ ○ ○ ○
110	T F ○ ○ ○ ○	128	T F ○ ○ ○ ○	145	T F ○ ○ ○ ○	162	T F ○ ○ ○ ○	179	T F ○ ○ ○ ○	196	T F ○ ○ ○ ○
111	T F ○ ○ ○ ○	129	T F ○ ○ ○ ○	146	T F ○ ○ ○ ○	163	T F ○ ○ ○ ○	180	T F ○ ○ ○ ○	197	T F ○ ○ ○ ○
112	T F ○ ○ ○ ○	130	T F ○ ○ ○ ○	147	T F ○ ○ ○ ○	164	T F ○ ○ ○ ○	181	T F ○ ○ ○ ○	198	T F ○ ○ ○ ○
113	T F ○ ○ ○ ○	131	T F ○ ○ ○ ○	148	T F ○ ○ ○ ○	165	T F ○ ○ ○ ○	182	T F ○ ○ ○ ○	199	T F ○ ○ ○ ○
114	T F ○ ○ ○ ○								200	T F ○ ○ ○ ○	

INSTRUCTIONS FOR ADMINISTERING EXAMINATIONS

1. The examination should be administered within 30 days of receipt.
2. The examination **MUST** be administered by a staff NCO or above (or equivalent for other services), a school principal, a foreign service officer, an employee career development officer, a director of civilian personnel, or a member of the clergy.
3. The examination administrator will:
 - a. Comply with the instructions on the first page of the examination.
 - b. Maintain continuous supervision of the examinee.
 - c. Take necessary precautions to protect the security of this examination.
 - d. Ensure that reference materials are used only when provided for in examination instructions.
4. The completed answer sheet and Examination Booklet **MUST** be returned together in the envelope provided. Failure to return the examination booklet will result in the return of the **UNGRADED** answer sheet.
5. The examination answer sheet **MUST** be returned and graded before the student's Course Completion Deadline (CCD) to avoid disenrollment.

THANK YOU FOR YOUR COOPERATION. IF YOU HAVE ANY QUESTIONS CALL THE MCI HOTLINE (AUTOVON 288-4175)